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CHEMICAL ANALYSES OF 877 ROCKS FROM THE RODEO CREEK NORTHEAST AND WELCHES CANYON QUADRANGLES, EUREKA COUNTY, NEVADA

By

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This report is preliminary and has not been edited or reviewed for conformity with Geological Survey standards and nomenclature.

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INTRODUCTION

The Rodeo Creek Northeast and Welches Canyon quadrangles are located in the southern Tuscarora Range in northernmost Eureka County (fig. 1). The Lynn window, noted for the Carlin gold deposit, occurs on parts of both quadrangles and lies about 30 km north of the town of Carlin. The geology of the two quadrangles was mapped in order to determine the geologic setting of the gold deposit (see Evans, 1974a, b; figs. 2, 3, 4).

Juxtaposition of the carbonate, siliceous, and transitional assemblages along the Roberts Mountains thrust in the study area occurred during the Late Devonian-Early Mississippian Antler Orogeny. The authochthon exposed in the Lynn window consists of 2,711 m of strata of the carbonate assemblage, ranging in age from Cambrian to Late Devonian (see figs. 2, 4). The section includes the Pogonip Group (at least 975 m), Eureka Quartzite (508 m), Hanson Creek Formation (329 m), Roberts Mountains Formation (474 m), and Popovich Formation (at least 425 m). The allochthon of the Roberts Mountains thrust consists of siliceous and transitional assemblages. Most of the allochthon is chert and shale with lesser amounts of quartzite, limestone, siltstone, and dolomite. Two partial sections of the siliceous rocks, one at least 2,480 m thick, include strata correlative with the Ordovician Vinini Formation. Siliceous shales of Silurian age and Late Devonian limestone of the transitional assemblage (at least 915 m) are also present in the allochthon.

The earliest intrusions are andesite sills emplaced in siliceous assemblage no earlier than Ordovician and possibly as late as Tertiary. Granodiorite and quartz monzonite intruded the Paleozoic sedimentary rocks in the Cretaceous. Later, in late Cretaceous or early Tertiary, rhyodacite flows (greater than 276 m) were deposited. Granodiorite and quartz latite intruded sometime in late Eocene or early Oligocene. Intrusive breccia sills were emplaced sometime after mid-Tertiary. In the late Miocene-early Pliocene rhyolitic welded tuff (more than 214 m) was deposited on the west side of the Tuscarora range, approximately contemporaneously with the deposition of siltstone, sandstone, and conglomerate of the Carlin Formation (at least 268 m) on the east side. Other siltstone and conglomerate (110 m) were deposited on the west side of the range sometime in late Tertiary and (or) Quaternary. Quaternary deposits include chert fanglomerate on the east side of the Tuscarora Range, landslide deposits and alluvium in the Maggie Creek, Boulder Valley, and Little Boulder basins and along the many stream channels in the range.

See Evans (1980) for detailed descriptions of the rocks of the Lynn window and vicinity.

Gold was discovered in the Lynn district in 1907 (Johnson, 1973, p. 27) in placers in intermittent stream channels draining terrain underlain by siliceous rocks immediately north of the Lynn window. Shortly thereafter, lode mining commenced in quartz veins in chert and shale of the siliceous assemblage in the source area.

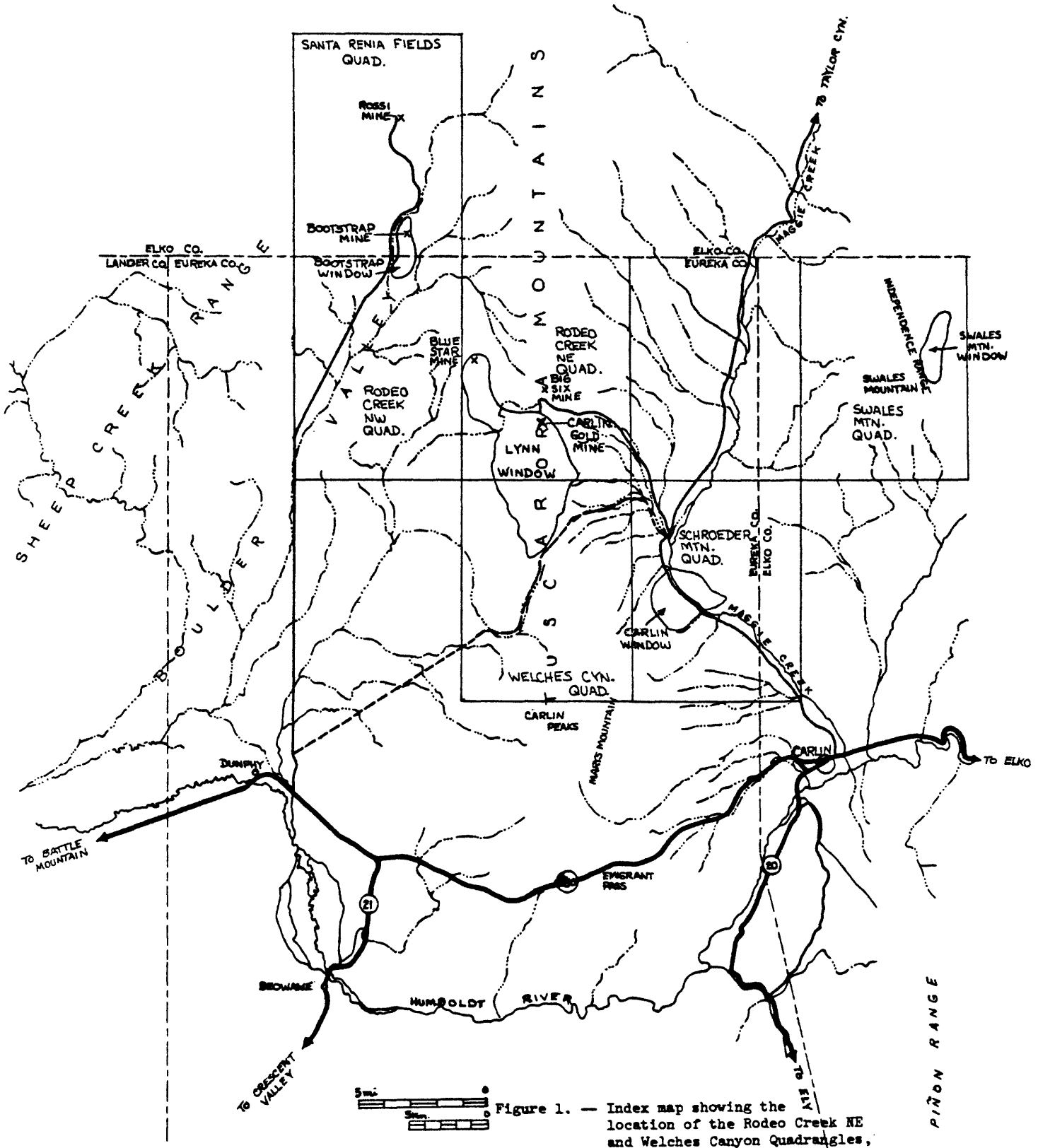

Figure 1. — Index map showing the location of the Rodeo Creek NE and Welches Canyon Quadrangles, Eureka County, Nevada

The most important mine of the district, the Carlin gold mine, in 1965 began production of gold disseminated in the intensely fractured and altered Roberts Mountains and Popovich Formations below the Roberts Mountains thrust at the northeast margin of the Lynn window. This deposit has been described in detail by Hardie (1966), Hausen (1967), Hausen and Kerr (1968), Akright and others (1969), Radtke and Scheiner (1970), and Radtke (1973, 1974, and unpub. data).

Other gold deposits occur in and around the Lynn window: low-grade gold ore occurs in siliceous rocks at the Blue Star mine; small, relatively high grade auriferous quartz veins occur in the Hanson Creek Formation in the central part of the window; small concentrations of gold are encountered in the Cretaceous granodiorite at the Gold Strike claims.

Numerous prospect pits and tunnels occur in the southern Lynn window near the abandoned camp of Richmond, shown on maps of Emmons (1910, pl. 2). Chemical analyses of rocks from this area suggest that silver was the chief exploration target in the contact metamorphosed Cambrian-Devonian carbonate rocks exposed there.

ANALYTICAL DATA

During the course of geologic mapping in the Lynn window and vicinity (1968-71), 877 rock samples of mineralized, hydrothermally altered, and unaltered sedimentary, igneous, and metamophic rocks ranging in age from Cambrian to Tertiary were taken by J. G. Evans for chemical analysis. This report presents the minor element composition of the major rock types as part of a multi-faceted study of the Carlin gold deposit. Geologic setting of the samples is provided by geologic maps, after plates 1 and 2 of Evans (1980), with superimposed sample sites (figs. 2, 3, 4). Associations of gold and silver with selected elements are also investigated. J. A. Peterson prepared the analytical data for computer analysis.

All of the 877 samples were analyzed for 29 elements (Fe, Mg, Ca, Ti, Mn, Ag, As, B, Ba, Be, Bi, Cd, Co, Cr, Cu, La, Mo, Nb, Ni, Pb, Sb, Sc, Sn, Sr, V, W, Y, Zn, and Zr) by spectrographic methods (Grimes and Marranzino, 1968). Spectrographic results are reported to the nearest number in the series 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, etc. Precision of a reported spectrographic value is approximately plus 100 percent or minus 50 percent.

Table 1 is a list of the 23 rock units sampled and the number of samples taken from each unit.

Table 2 contains the limits of detection and the analytical data grouped according to rock unit. The first part of table 2 lists analysts, analytical symbols, and limits of detection.

Table 3 contains the frequency distributions of the minor elements in 18 of the rock units. Element frequencies were not determined for units represented by ten or fewer samples. The U.S. Geological Survey Professional Paper 574B mentioned in table 3 is listed in the references at the end of the paper after the author, Miesch.

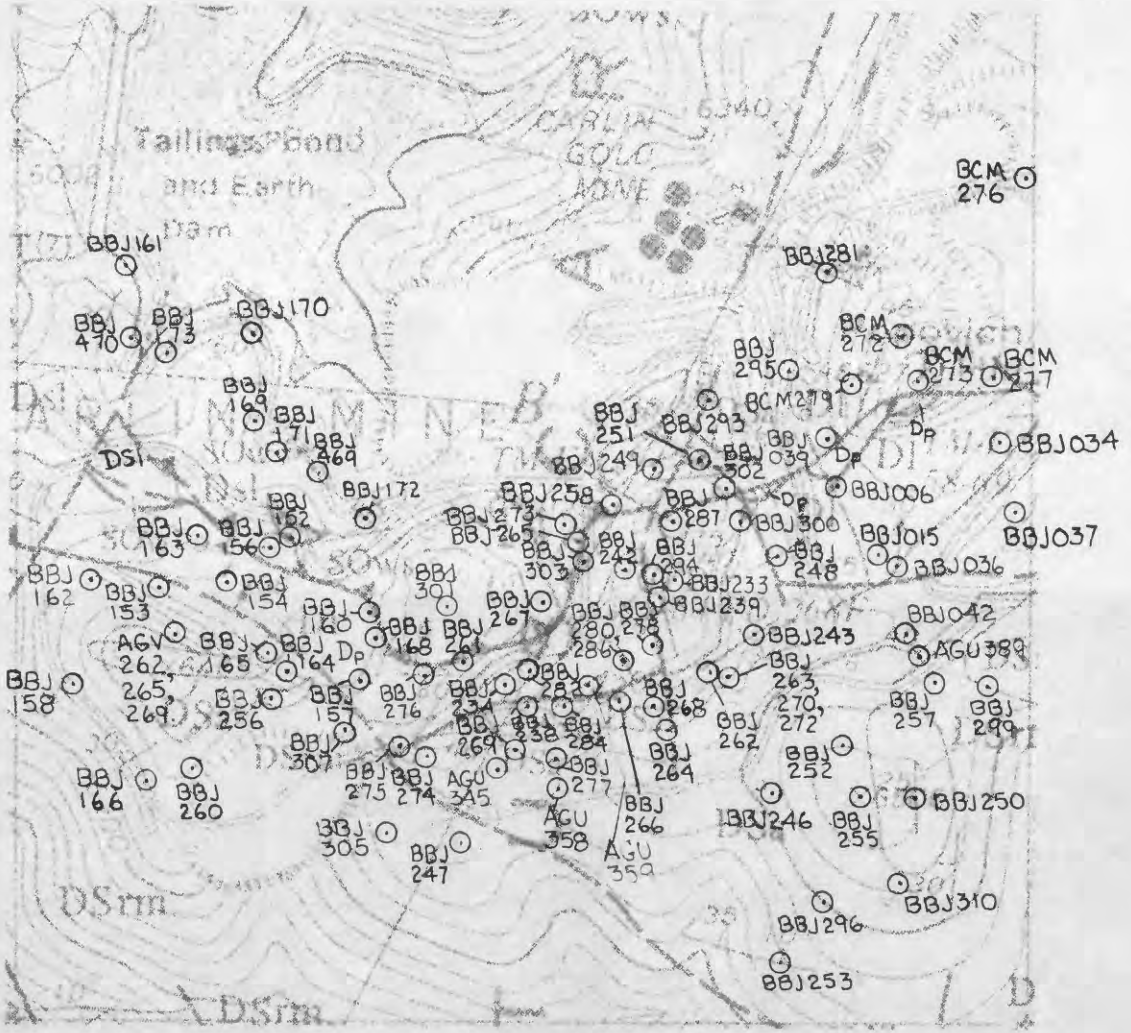

Figure 3. -- Geologic map of the Carlin Gold Mine and vicinity in Section 14, T. 35 N., R. 50 E.

ELEMENT ASSOCIATIONS

Strengths of associations between elements was determined by Spearman's rank correlation techniques (Siegel, 1956; Lovering, 1963). The elements having statistically significant correlations with gold and silver are given in table 4. Correlation coefficients of these elements with gold and silver greater than .50 are significant at a 99 percent confidence level. Significant element associations with gold occur in quartz veins in the siliceous assemblage and Hanson Creek Formation, and in the Roberts Mountains and Popovich Formations. Element associations with silver occur in quartz veins in the Hanson Creek Formation. At a 98 percent confidence level mercury is associated with gold (corr. coef. .63) in quartz veins inthe siliceous assemblage, and antimony is associated with silver (corr. coeff. .70) in quartz veins in the Hanson Creek Formation.

Table 1.--Lithologic units and number of samples within each unit

	Lithologic Unit	Number of samples
1.	Chert in Ordovician-Silurian western assemblage	255
2.	Quartzite, siliceous assemblage	22
3.	Shale, siliceous assemblage	34
4.	Limestone, siliceous assemblage	21
5.	Quartz veins, siliceous assemblage	22
6.	Hamburg Dolomite	35
7.	Pogonip Group (chiefly metalimestone)	23
8.	Eureka Quartzite	18
9.	Hanson Creek Formation (chiefly dolomite)	40
10.	Mineralized veins, Hanson Creek	28
11.	Roberts Mountains Formation (chiefly silty dolomitic limestone)	78
12.	Jasperoid (Hydrothermally altered, chiefly silicified, Roberts Mountains and Popovich Formations)	108
13.	Silurian and Devonian limestone (Undifferentiated Roberts Mountains and Popovich Formations)	28
14.	Popovich Formation (limestone)	46
15.	Devonian limestone, transitional assemblage	12
16.	Cretaceous granodiorite	21
17.	Cretaceous quartz monzonite	7
18.	Cretaceous or Tertiary rhyodacite	7
19.	Tertiary or older andesite	13
20.	Tertiary granodiorite	9
21.	Tertiary quartz latite	35
22.	Tertiary intrusive breccia	10
23.	Tertiary rhyolitic welded tuff	5

Table 2.--Semiquantitative spectrographic analyses and chemical analyses for gold and mercury of 877 rocks from the Rodeo Creek NE and Welches Canyon quadrangles.

["Spectrographic analyses by R. N. Babcock., E. F. Cooley, G. W. Day, D. J. Grimes, R. T., Hopkins, and D. Siems. Gold was analyzed by atomic absorption methods (Thompson and others, 1968) by R. N. Babcock, S. Erickson, J. G. Frisken, K. E. Kulp, R. M. O'Leary, Z. L. Stephenson, A. W. Wells, and C. L. Whittington. Mercury was analyzed by detector (Vaughn and McCarthy, 1964) by S. Erickson, J. Fowlkes, J. G. Frisken, J. R. Hassemer, D. G. Murrey, and R. M. O'Leary."] [N, not detected at limit of detection or at value shown; L, detected but below limit of determination or below value shown.]

Fe ppm	Mg ppm	Ca ppm	Ti ppm	Mn ppm	Ag ppm
500	200	500	20	20	0.5
As ppm	Au ppm	B ppm	Ba ppm	Be ppm	Bi ppm
200	.02	10	20	1	10
Co ppm	Cr ppm	Cu ppm	La ppm	Mo ppm	Nb ppm
5	5	5	20	5	10
5	10	100	5	10	100
V ppm	W ppm	Y ppm	Zn ppm	Zr ppm	Hg ppm
10	50	10	200	10	.01
Cd PPM					
20					

(Tabular material follows)

DATE 3/17/80

CHERT - SIL. ASSEMBLAGE

SAMPLE	AU	HG	FE	MG	CA	TI	MN	AG	AS	B
AGV256	0.10	0.45	1000.	700.	2000.	1000.	70.	0.0N	0.N	20.
AGV284	0.02	0.26	3000.	2000.	2000.	1000.	150.	0.0N	200.	50.
AGV285	0.06	7.50	1000.	500.	1000.	500.	200.	0.0N	0.L	0.N
AGV286	0.12	0.55	2000.	500.	500.	700.	50.	0.0N	200.	50.
AGV290	1.80	1.20	7000.	500.	1000.	200.	200.	0.0L	1500.	0.N
AGV293	0.00L	3.50	7000.	1000.	2000.	3000.	50.	0.0N	500.	0.N
AGV314	0.80	3.00	10000.	700.	5000.	2000.	100.	0.0N	2000.	0.N
AGV315	0.00L	0.22	15000.	1000.	5000.	2000.	100.	0.0N	700.	10.
AGV316	0.08	7.50	15000.	7000.	500.	5000.	50.	0.0N	500.	100.
AGV317	0.04	0.28	2000.	1000.	1000.	1000.	50.	0.0N	0.N	0.N
AGV319	0.00L	0.75	5000.	1000.	2000.	1000.	50.	0.0N	200.	20.
AGV333	0.00L	0.03	20000.	50000.	100000.	2000.	500.	0.0N	0.N	10.
AGV337	0.00L	9.00	50000.	500.	3000.	5000.	50.	0.0N	5000.	10.
AGV339	0.02	0.03	5000.	1000.	2000.	2000.	100.	0.0N	0.N	50.
AGV344	0.14	0.10	20000.	2000.	2000.	2000.	70.	0.0N	3000.	100.
AGU346	0.00L	0.24	10000.	3000.	1000.	1500.	100.	0.0L	0.N	20.
AGU351	0.00L	0.26	5000.	2000.	10000.	2000.	100.	0.0N	0.N	0.L
AGU355	0.02	0.00L	30000.	70000.	200000.	7000.	1000.	0.0N	0.N	10.
AGU412	0.00L	0.12	10000.	2000.	15000.	500.	100.	0.0N	0.N	10.
AGU461	0.00L	0.15	3000.	1000.	500.	700.	20.	0.0N	0.N	30.
AGU462	3.30	0.00G	7000.	1000.	1000.	500.	0.L	7.0	300.	15.
AGU464	0.02	0.50	150000.	2000.	1000.	1000.	200.	0.0N	2000.	150.
AGU465	0.00L	0.18	7000.	1000.	7000.	700.	100.	10.7	0.N	15.
AGU466	20.00	1.40	200000.	1500.	700.	700.	700.	0.0L	700.	0.L
AGU468	0.02	2.60	15000.	3000.	0.L	3000.	20.	0.5	200.	300.
AGU470	0.00L	0.09	5000.	5000.	700.	1500.	20.	0.0N	0.N	50.
AGU472	0.00L	0.09	50000.	20000.	20000.	3000.	700.	0.0N	0.N	15.
AGU473	0.00L	0.75	5000.	700.	500.	500.	70.	0.5	0.N	50.
AGU474	0.00L	0.10	5000.	1500.	700.	700.	0.L	0.0N	0.N	50.
AGU504	0.06	0.09	7000.	1000.	7000.	500.	20.	0.0L	0.N	30.
AGU511	0.00L	0.08	7000.	2000.	500.	500.	0.N	0.0N	0.N	30.
BCM272	0.00N	4.50	3000.	500.	0.L	700.	20.	3.0	0.N	50.
BCM273	0.00L	0.00G	10000.	1500.	700.	1000.	30.	1.5	0.L	70.
BCM274	0.00N	0.24	15000.	1500.	500.	700.	30.	0.5	0.N	50.
BCM276	0.00N	0.00G	5000.	200.	700.	300.	20.	0.7	0.N	10.
BCM277	0.00N	0.00G	3000.	1000.	700.	700.	20.	1.5	0.N	70.
BCM279	0.04	0.00G	15000.	1500.	1000.	700.	20.	1.0	0.L	150.
BCM293	0.00N	0.24	5000.	500.	700.	300.	30.	0.0N	0.N	20.
BCM294	0.00N	2.00	20000.	1500.	700.	500.	200.	0.0N	0.N	50.
BCM296	0.00N	0.28	7000.	2000.	500.	1000.	20.	0.0N	0.N	50.
BCM297	0.00N	0.30	7000.	1000.	500.	500.	30.	0.0N	0.N	30.
BCM298	0.00N	0.28	20000.	5000.	15000.	1000.	3000.	0.0N	0.N	150.
BCM299	0.00N	0.24	10000.	2000.	700.	1000.	500.	0.0N	0.N	70.
BCM300	0.00N	0.24	30000.	500.	700.	300.	700.	0.0N	0.N	70.
BCM301	0.00N	0.26	5000.	1500.	10000.	500.	100.	0.0N	0.N	30.
BCM302	0.00N	0.26	5000.	2000.	0.L	700.	20.	0.0N	0.N	70.
BCM303	0.00N	0.35	1000.	200.	0.L	300.	30.	0.0N	0.N	10.
BCM304	0.00N	0.40	5000.	500.	1000.	700.	20.	1.0	0.N	30.
BCM305	0.00N	0.40	10000.	3000.	700.	1000.	30.	0.5	0.N	50.
BCM306	0.00N	0.11	7000.	5000.	500.	700.	100.	0.0N	0.N	20.

CHERT - SIL. ASSEMBLAGE-continued

SAMPLE	BA	BE	BI	CD	CO	CR	CU	LA	MO	NB
AGV256	500.	0.N	0.N	0.N	0.N	15.	50.	0.N	0.N	0.L
AGV284	3000.	1.	0.N	0.N	0.N	20.	5.	20.	10.	0.L
AGV285	0.G	0.L	0.N	0.N	0.N	7.	5.	20.	20.	0.L
AGV286	500.	0.N	0.N	0.N	0.N	10.	7.	20.	7.	0.L
AGV290	500.	1.	0.N	0.N	0.N	10.	10.	20.	0.N	0.L
AGV293	500.	0.L	0.N	0.N	0.N	30.	10.	20.	0.N	10.
AGV314	2000.	0.N	0.N	0.N	0.N	20.	50.	0.N	15.	15.
AGV315	1000.	1.	0.N	0.N	0.N	70.	50.	0.L	15.	15.
AGV316	1000.	1.	0.N	0.N	0.N	70.	50.	50.	0.N	30.
AGV317	200.	0.L	0.N	0.N	0.N	50.	15.	0.N	7.	15.
AGV319	500.	0.L	0.N	0.N	0.N	10.	20.	0.N	10.	15.
AGV333	300.	0.L	0.N	0.N	10.	50.	15.	20.	0.N	0.L
AGV337	500.	0.L	0.N	0.N	5.	50.	50.	0.N	0.N	15.
AGV339	500.	1.	0.N	0.N	0.N	50.	15.	20.	0.N	0.L
AGV344	500.	1.	0.N	0.N	0.N	30.	20.	50.	0.N	15.
AGU346	1000.	0.L	0.N	0.N	0.L	20.	30.	50.	0.L	10.
AGU351	500.	0.L	0.N	0.N	0.L	0.L	15.	30.	7.	10.
AGU355	100.	0.L	0.N	0.N	30.	70.	10.	50.	0.L	15.
AGU412	200.	1.	0.N	0.N	0.L	0.L	5.	50.	0.L	0.L
AGU461	300.	0.N	0.N	0.N	0.N	0.L	7.	0.N	0.N	0.N
AGU462	1500.	0.L	30.	0.N	10.	20.	0.G	0.L	0.N	0.N
AGU464	700.	5.	0.N	0.N	30.	50.	70.	0.N	20.	0.L
AGU465	500.	0.L	0.N	0.N	15.	30.	70.	50.	0.N	0.N
AGU466	1000.	2.	0.N	0.L	70.	70.	150.	0.N	70.	0.N
AGU468	700.	1.	0.N	0.N	0.N	70.	15.	50.	0.N	10.
AGU470	700.	0.L	0.N	0.N	0.L	20.	15.	0.N	0.N	0.L
AGU472	700.	1.	0.N	0.N	30.	150.	15.	70.	0.N	0.L
AGU473	2000.	0.L	0.N	0.N	0.N	15.	10.	0.N	0.N	0.N
AGU474	500.	0.L	0.N	0.N	0.N	10.	7.	0.N	0.N	0.N
AGU504	300.	0.N	0.N	0.N	0.N	0.N	20.	0.N	30.	0.N
AGU511	700.	0.L	0.N	0.N	0.N	20.	0.L	0.N	0.N	0.L
BCM272	200.	0.L	0.N	0.N	0.L	15.	70.	0.L	30.	0.N
BCM273	500.	0.L	0.N	0.N	0.N	30.	70.	20.	15.	0.N
BCM274	200.	0.L	0.N	0.N	0.N	0.L	20.	0.L	0.N	0.N
BCM276	200.	0.N	0.N	0.N	0.L	0.L	30.	20.	30.	0.N
BCM277	300.	0.L	0.N	0.N	0.L	20.	20.	30.	15.	0.N
BCM279	300.	0.L	0.N	0.N	0.L	50.	100.	20.	15.	0.N
BCM293	200.	0.L	0.N	0.N	0.N	0.N	15.	0.N	0.N	0.N
BCM294	0.G	0.L	0.N	0.N	7.	0.L	50.	0.N	5.	0.N
BCM296	500.	0.L	0.N	0.N	0.N	20.	15.	0.L	0.N	0.N
BCM297	500.	0.L	0.N	0.N	0.N	0.L	20.	0.L	0.N	0.N
BCM298	300.	2.	0.N	0.N	15.	50.	500.	20.	0.N	0.N
BCM299	300.	0.L	0.N	0.N	15.	15.	70.	0.L	0.N	0.N
BCM300	150.	0.L	0.N	0.N	15.	0.L	15.	0.N	10.	0.N
BCM301	500.	0.L	0.N	0.N	0.N	20.	15.	0.L	0.N	0.N
BCM302	200.	0.L	0.N	0.N	0.N	20.	10.	0.L	0.N	0.N
BCM303	200.	0.L	0.N	0.N	0.N	0.L	15.	0.N	0.N	0.N
BCM304	200.	0.L	0.N	0.N	0.N	15.	30.	0.N	7.	0.N
BCM305	500.	0.L	0.N	0.N	0.L	15.	70.	0.N	15.	0.N
BCM306	500.	0.L	0.N	0.N	0.L	15.	15.	0.L	0.N	0.N

CHERT - SIL. ASSEMBLAGE-continued

SAMPLE	NI	PB	SB	SC	SN	SR	V	W	Y	ZN	ZR
AGV256	10.	0.N	0.N	0.N	0.N	0.N	500.	0.N	10.	0.N	70.
AGV284	10.	10.	200.	0.N	0.N	0.N	100.	0.N	20.	0.N	150.
AGV285	10.	0.N	300.	0.N	0.N	200.	20.	0.N	0.L	0.N	70.
AGV286	10.	0.N	0.N	0.N	0.N	0.N	200.	0.N	10.	0.N	20.
AGV290	20.	0.N	200.	0.N	0.N	0.N	50.	0.N	0.N	0.N	15.
AGV293	15.	0.N	0.N	0.L	0.N	0.N	100.	50.	10.	0.N	200.
AGV314	15.	0.N	100.	0.N	0.N	0.N	500.	0.N	15.	0.N	300.
AGV315	15.	0.N	0.N	5.	0.N	0.N	1500.	0.N	30.	0.N	70.
AGV316	30.	0.N	0.L	7.	0.N	0.N	200.	0.N	10.	0.N	200.
AGV317	15.	10.	0.N	0.N	0.N	0.N	1500.	0.N	15.	0.N	30.
AGV319	15.	0.N	0.L	0.N	0.N	0.N	500.	0.N	10.	0.N	100.
AGV333	50.	0.L	0.N	7.	0.N	200.	100.	0.N	15.	0.N	200.
AGV337	10.	10.	200.	7.	0.N	100.	500.	0.N	10.	0.N	150.
AGV339	15.	0.N	0.N	7.	0.N	0.N	200.	0.N	20.	0.N	50.
AGV344	0.L	0.L	0.L	5.	0.N	0.N	100.	0.N	10.	0.N	200.
AGU346	5.	10.	0.N	5.	0.N	0.L	100.	0.N	0.L	0.N	100.
AGU351	5.	10.	0.N	5.	0.N	0.L	70.	0.N	0.L	0.N	100.
AGU355	100.	0.L	0.N	30.	0.L	500.	300.	0.N	30.	0.N	200.
AGU412	0.L	0.L	0.N	5.	0.N	150.	30.	0.N	0.L	0.L	50.
AGU461	10.	0.N	0.N	0.L	0.N	0.N	30.	0.N	0.L	0.N	30.
AGU462	70.	0.L	0.N	7.	0.N	100.	300.	0.N	200.	0.N	30.
AGU464	200.	15.	0.N	7.	0.N	0.L	100.	0.N	20.	500.	70.
AGU465	50.	10.	0.N	0.L	0.N	0.N	200.	0.N	70.	0.N	150.
AGU466	150.	30.	0.N	0.L	0.N	200.	500.	0.N	20.	200.	30.
AGU468	7.	10.	0.L	10.	0.N	0.N	200.	0.N	10.	0.N	150.
AGU470	15.	0.N	0.N	5.	0.N	0.N	30.	0.N	10.	0.N	70.
AGU472	70.	10.	0.N	20.	0.N	700.	100.	0.N	20.	0.N	100.
AGU473	10.	0.N	0.N	0.L	0.N	0.N	50.	0.N	0.N	0.N	50.
AGU474	10.	0.N	0.N	0.L	0.N	0.N	30.	0.N	0.N	0.N	30.
AGU504	30.	0.L	0.N	5.	0.N	0.N	50.	0.N	0.N	200.	30.
AGU511	5.	0.N	0.N	0.N	0.N	0.N	20.	0.N	0.L	0.N	20.
BCM272	0.L	150.	150.	0.L	0.N	0.N	300.	0.N	0.L	0.N	50.
BCM273	10.	150.	150.	5.	0.N	100.	200.	0.N	15.	0.N	100.
BCM274	15.	20.	0.N	5.	0.N	0.N	20.	0.N	0.L	0.N	30.
BCM276	5.	50.	0.N	0.L	0.N	0.N	150.	0.N	0.L	0.N	30.
BCM277	15.	30.	0.N	5.	0.N	150.	300.	0.N	15.	0.N	50.
BCM279	100.	100.	0.N	5.	0.L	0.L	300.	0.N	10.	700.	70.
BCM293	5.	10.	0.N	0.N	0.N	0.N	10.	0.N	0.N	0.N	0.L
BCM294	20.	15.	0.N	5.	0.N	200.	30.	0.N	0.L	200.	20.
BCM296	10.	15.	0.N	5.	0.N	0.N	30.	0.N	0.L	0.L	30.
BCM297	7.	10.	0.N	0.L	0.N	0.N	20.	0.N	0.L	0.N	20.
BCM298	150.	15.	0.N	20.	0.N	100.	70.	0.N	30.	0.N	70.
BCM299	50.	30.	0.N	5.	0.N	0.L	30.	0.N	0.L	0.N	50.
BCM300	70.	10.	0.N	0.L	0.N	0.N	30.	0.N	0.L	700.	15.
BCM301	0.L	15.	0.N	5.	0.N	0.L	30.	0.N	0.L	0.N	20.
BCM302	0.L	10.	0.N	0.L	0.N	0.N	30.	0.N	0.N	0.N	20.
BCM303	0.L	10.	0.N	0.L	0.N	0.N	10.	0.N	0.N	0.N	10.
BCM304	5.	0.L	0.N	0.L	0.N	0.L	150.	0.N	0.L	0.N	20.
BCM305	15.	15.	0.N	5.	0.N	0.L	70.	0.N	0.L	0.N	30.
BCM306	5.	0.L	0.N	5.	0.N	0.N	30.	0.N	0.L	0.N	30.

CHERT - SIL. ASSEMBLAGE-continued

SAMPLE	AU	HG	FE	MG	CA	TI	MN	AG	AS	B
BCM307	0.00N	0.13	20000.	2000.	500.	700.	30.	0.0N	0.N	50.
BCM308	0.00N	0.24	7000.	700.	70.	300.	30.	1.5	0.N	20.
BCM309	0.00N	1.00	10000.	1000.	500.	700.	70.	3.0	0.N	30.
BCM310	0.00N	0.20	7000.	3000.	700.	700.	30.	0.0N	0.N	30.
BCM311	0.00N	0.20	7000.	2000.	700.	700.	700.	1.0	0.N	20.
BCM312	0.00L	0.28	70000.	2000.	700.	700.	150.	0.0N	0.N	100.
BCM313	0.00N	0.50	5000.	700.	500.	200.	30.	0.0L	0.N	20.
BCM314	0.00N	0.12	7000.	2000.	500.	500.	150.	0.0N	0.N	20.
BCM315	0.00N	0.14	10000.	3000.	0.L	700.	20.	0.0N	0.N	50.
BCM316	0.00N	0.20	7000.	1000.	0.L	500.	20.	0.0N	0.N	15.
BCM317	0.00N	0.35	7000.	200.	0.L	300.	20.	1.0	0.N	15.
BCM318	0.00N	0.20	3000.	300.	0.L	300.	30.	0.0N	0.N	30.
BCM319	0.00N	0.26	50000.	10000.	0.L	1500.	100.	0.0N	0.N	100.
BCM331	0.00N	0.14	15000.	1000.	700.	700.	300.	0.0N	200.	30.
BCM332	0.00N	0.22	20000.	1000.	1000.	500.	50.	1.5	200.	30.
BCM333	0.00N	0.10	1000.	500.	500.	700.	30.	1.0	0.N	70.
BCM335	0.00N	0.22	30000.	2000.	0.L	1000.	200.	1.0	0.N	70.
BCM336	0.00N	0.24	15000.	1500.	500.	700.	30.	0.7	0.N	30.
BCM337	0.00N	0.13	10000.	3000.	700.	3000.	30.	0.0N	0.N	20.
BCM338	0.00N	0.15	30000.	1500.	1000.	1500.	50.	1.5	0.N	200.
BCM339	0.00N	0.12	5000.	200.	0.L	300.	0.L	0.5	0.N	30.
BCM340	0.00N	0.90	20000.	300.	15000.	300.	50.	1.0	0.N	70.
BCM341	0.00N	0.15	20000.	500.	500.	500.	300.	0.0N	0.N	50.
BCM342	0.00N	0.10	7000.	1000.	500.	700.	300.	0.0N	0.N	15.
BCM343	0.00N	0.07	20000.	1500.	700.	700.	30.	0.0N	0.N	50.
BCM344	0.00N	0.05	2000.	300.	0.L	300.	30.	0.0N	0.N	15.
BCM345	0.00N	0.45	20000.	300.	0.L	500.	20.	2.0	0.N	50.
BCM348	0.00N	0.40	10000.	1500.	700.	700.	20.	1.5	0.N	150.
BCM349	0.00N	0.08	7000.	5000.	500.	1000.	100.	0.0N	0.N	20.
BCM354	0.00N	0.55	70000.	500.	3000.	500.	100.	1.0	0.L	100.
BCM355	0.00L	0.50	20000.	1500.	500.	1000.	30.	0.5	0.L	100.
BBJ001	0.02	0.22	10000.	1000.	2000.	1000.	70.	0.7	0.N	50.
BBJ002	1.50	0.10	20000.	15000.	500.	2000.	70.	0.5	0.N	100.
BBJ004	0.00L	0.20	100000.	700.	700.	1000.	20.	0.5	1000.	50.
BBJ007	0.00N	0.04	150000.	3000.	1500.	1000.	150.	0.7	0.N	50.
BBJ008	0.04	0.50	70000.	1000.	1000.	1000.	1000.	0.5	2000.	30.
BBJ010	0.00L	0.06	7000.	500.	1500.	500.	50.	0.5	0.N	70.
BBJ011	0.00N	0.18	70000.	3000.	700.	1500.	3000.	0.5	0.N	50.
BBJ012	0.00N	0.40	70000.	1000.	1500.	300.	200.	0.0N	0.N	30.
BBJ014	0.00N	0.40	5000.	1500.	1000.	500.	700.	0.5	0.N	50.
BBJ024	1.00	0.20	70000.	1000.	1000.	1000.	30.	2.0	0.N	20.
BBJ025	0.02	0.16	50000.	30000.	500.	3000.	200.	0.0N	0.N	70.
BBJ026	0.00N	0.01	15000.	15000.	1500.	1500.	50.	0.0N	0.N	30.
BBJ033	0.30	0.12	50000.	1500.	1000.	2000.	70.	1.0	300.	10.
BBJ035	0.00N	0.26	100000.	1000.	0.L	1500.	300.	0.0L	1000.	30.
BBJ039	0.00N	0.80	30000.	2000.	50000.	2000.	300.	0.0N	0.N	50.
BBJ043	0.03	0.80	0.G	1500.	1000.	700.	1500.	0.0N	1500.	20.
BBJ044	0.02	0.60	30000.	500.	1000.	700.	20.	0.0N	0.N	30.
BBJ049	2.80	1.00	2000.	700.	700.	500.	20.	1.0	0.N	100.
BBJ050	0.00N	0.40	20000.	700.	500.	500.	100.	0.0N	0.N	50.

CHERT - SIL. ASSEMBLAGE-continued

SAMPLE	BA	BE	BI	CD	CO	CR	CU	LA	MO	NB
BCM307	1000.	0.L	0.N	0.N	5.	0.L	50.	0.N	5.	0.N
BCM308	200.	0.L	0.N	0.N	0.N	15.	70.	0.N	7.	0.N
BCM309	300.	0.L	0.N	0.N	0.L	50.	70.	0.L	70.	0.N
BCM310	1000.	0.L	0.N	0.N	5.	15.	30.	0.N	0.N	0.N
BCM311	700.	0.L	0.N	0.N	10.	15.	50.	0.N	0.N	0.N
BCM312	100.	0.L	0.N	0.N	5.	0.L	100.	0.N	20.	0.N
BCM313	150.	0.L	0.N	0.N	0.L	0.L	20.	0.N	0.N	0.N
BCM314	300.	0.L	0.N	0.N	0.L	0.L	30.	0.N	0.N	0.N
BCM315	200.	0.L	0.N	0.N	0.N	15.	70.	0.N	0.N	0.N
BCM316	200.	0.L	0.N	0.N	0.L	0.L	30.	0.N	50.	0.N
BCM317	300.	0.L	0.N	0.N	0.L	0.L	30.	0.N	0.L	0.N
BCM318	150.	0.L	0.N	0.N	0.L	0.L	15.	0.N	0.N	0.N
BCM319	300.	1.	0.N	0.N	15.	30.	150.	0.N	0.N	0.N
BCM331	200.	0.L	0.N	0.N	0.L	50.	100.	0.L	0.N	0.N
BCM332	500.	0.L	0.N	0.N	0.N	50.	150.	20.	15.	0.N
BCM333	150.	0.L	0.N	0.N	0.L	20.	10.	0.L	0.N	0.N
BCM335	200.	0.L	0.N	0.N	20.	70.	70.	0.N	0.N	0.N
BCM336	200.	0.L	0.N	0.N	0.N	30.	70.	20.	10.	0.N
BCM337	0.G	0.L	0.N	0.N	0.L	50.	100.	30.	0.N	0.N
BCM338	1000.	0.L	0.N	0.N	0.N	100.	150.	20.	100.	0.N
BCM339	200.	0.L	0.N	0.N	0.N	0.L	30.	0.L	0.N	0.N
BCM340	300.	5.	0.N	0.N	0.N	100.	100.	0.L	0.L	0.N
BCM341	150.	1.	0.N	0.N	15.	0.L	70.	0.L	7.	0.N
BCM342	300.	0.L	0.N	0.N	7.	0.L	20.	0.L	0.N	0.N
BCM343	500.	0.L	0.N	0.N	0.N	50.	50.	0.L	30.	0.N
BCM344	200.	0.L	0.N	0.N	0.N	0.L	10.	0.N	0.N	0.N
BCM345	200.	1.	0.N	0.N	0.N	70.	100.	0.N	150.	0.N
BCM348	200.	0.L	0.N	0.N	0.N	70.	70.	20.	20.	0.N
BCM349	1500.	0.L	0.N	0.N	7.	20.	20.	20.	0.N	0.N
BCM354	300.	2.	0.N	0.N	5.	50.	150.	0.N	30.	0.N
BCM355	300.	0.L	0.N	0.N	0.N	150.	200.	0.L	10.	0.N
BBJ001	500.	1.	0.N	0.N	0.N	100.	50.	20.	0.N	0.N
BBJ002	1000.	1.	0.N	0.N	0.N	0.L	30.	20.	0.N	0.N
BBJ004	500.	2.	0.N	0.N	0.N	30.	100.	0.N	5.	0.N
BBJ007	5000.	20.	0.N	0.N	15.	50.	70.	0.N	30.	0.N
BBJ008	300.	0.L	0.N	0.N	0.N	70.	150.	0.N	20.	0.N
BBJ010	200.	0.L	0.N	0.N	0.N	20.	15.	0.N	0.N	0.N
BBJ011	700.	1.	0.N	0.N	70.	20.	100.	0.N	70.	0.N
BBJ012	200.	0.L	0.N	0.N	5.	20.	20.	0.N	0.N	0.N
BBJ014	700.	0.L	0.N	100.	0.N	20.	10.	0.L	0.N	0.N
BBJ024	700.	0.L	0.N	0.N	0.N	30.	20.	50.	50.	0.N
BBJ025	1500.	1.	0.N	0.N	20.	100.	100.	20.	0.N	0.N
BBJ026	500.	0.L	0.N	0.N	5.	20.	15.	0.N	0.N	0.N
BBJ033	200.	0.L	0.N	0.N	0.N	0.N	50.	20.	20.	0.N
BBJ035	300.	0.L	0.N	0.N	10.	150.	300.	0.N	10.	0.N
BBJ039	200.	0.L	0.N	0.N	10.	20.	50.	0.N	7.	0.N
BBJ043	700.	5.	0.N	0.N	30.	20.	700.	0.N	20.	0.N
BBJ044	200.	2.	0.N	0.N	0.N	30.	50.	0.N	0.N	0.N
BBJ049	150.	0.L	0.N	0.N	0.N	20.	10.	0.N	0.N	0.N
BBJ050	200.	0.L	0.N	0.N	5.	0.N	50.	0.N	0.N	0.N

CHERT - SIL. ASSEMBLAGE-continued

SAMPLE	NI	PB	SB	SC	SN	SR	V	W	Y	ZN	ZR
BCM307	30.	0.L	0.N	0.L	0.N	0.L	20.	0.N	0.L	0.N	20.
BCM308	10.	0.L	0.N	0.L	0.N	0.N	300.	0.N	0.L	0.N	30.
BCM309	15.	10.	0.N	7.	0.N	150.	300.	0.N	0.L	0.N	70.
BCM310	7.	0.L	0.N	0.L	0.N	100.	30.	0.N	0.L	0.N	30.
BCM311	50.	0.L	0.N	0.L	0.N	0.L	30.	0.N	0.L	500.	30.
BCM312	15.	100.	0.N	7.	0.N	0.N	70.	0.N	15.	0.N	70.
BCM313	7.	0.L	0.N	0.L	0.N	0.N	20.	0.N	0.L	0.N	20.
BCM314	5.	0.L	0.N	0.L	0.N	0.N	20.	0.N	0.L	0.N	15.
BCM315	5.	0.L	0.N	0.L	0.N	0.N	30.	0.N	0.L	0.N	30.
BCM316	0.L	0.L	0.N	5.	0.N	0.N	300.	0.N	0.L	0.N	30.
BCM317	5.	0.L	0.N	0.L	0.N	0.N	70.	0.N	0.L	0.N	30.
BCM318	0.L	0.L	0.N	0.L	0.N	0.N	15.	0.N	0.L	0.N	15.
BCM319	150.	10.	0.N	7.	0.N	0.N	70.	0.N	15.	1000.	150.
BCM331	10.	0.L	0.N	5.	0.N	0.N	300.	0.N	15.	30.	30.
BCM332	30.	15.	0.N	5.	0.N	100.	1000.	0.N	10.	20.	20.
BCM333	0.L	10.	0.N	0.L	0.N	0.N	70.	0.N	10.	30.	30.
BCM335	150.	0.L	0.N	7.	0.N	0.N	70.	0.N	15.	70.	70.
BCM336	15.	0.L	0.N	7.	0.N	0.N	150.	0.N	0.L	20.	20.
BCM337	20.	15.	0.N	7.	0.N	100.	100.	0.N	15.	70.	70.
BCM338	5.	0.L	0.N	7.	0.N	300.	1000.	0.N	20.	0.N	70.
BCM339	15.	0.L	0.N	0.L	0.N	0.N	30.	0.N	0.L	0.L	30.
BCM340	150.	15.	0.L	0.L	0.N	150.	300.	0.N	70.	700.	20.
BCM341	70.	30.	0.N	0.L	0.N	0.N	70.	0.N	10.	1500.	30.
BCM342	15.	10.	0.N	5.	0.N	0.N	70.	0.N	10.	0.L	30.
BCM343	5.	10.	0.N	5.	0.N	150.	300.	0.N	0.L	0.L	30.
BCM344	0.L	0.L	0.N	0.L	0.N	0.N	10.	0.N	0.L	0.N	10.
BCM345	100.	70.	100.	10.	0.N	100.	500.	0.N	15.	300.	20.
BCM348	10.	0.L	0.N	10.	0.N	100.	500.	0.N	10.	0.N	150.
BCM349	15.	0.L	0.N	5.	0.N	0.N	50.	0.N	0.L	0.N	50.
BCM354	70.	10.	0.N	0.L	0.N	0.L	300.	0.N	30.	200.	20.
BCM355	15.	15.	0.L	5.	0.N	0.L	300.	0.N	15.	0.L	50.
BBJ001	15.	10.	0.N	0.L	0.N	100.	50.	0.N	10.	0.N	70.
BBJ002	15.	10.	0.N	7.	0.N	0.N	100.	0.N	10.	0.N	100.
BBJ004	70.	20.	200.	5.	0.N	100.	1000.	0.L	20.	500.	20.
BBJ007	300.	10.	0.N	5.	0.N	100.	200.	0.N	20.	700.	50.
BBJ008	50.	10.	0.N	5.	0.N	0.L	500.	0.N	15.	0.N	50.
BBJ010	10.	0.N	0.N	5.	0.N	0.L	50.	0.N	0.L	0.N	30.
BBJ011	100.	20.	0.N	5.	0.N	0.L	150.	0.N	10.	500.	50.
BBJ012	15.	100.	0.N	10.	0.N	100.	150.	0.N	0.L	500.	10.
BBJ014	10.	200.	100.	5.	0.N	0.L	70.	0.N	15.	0.N	15.
BBJ024	5.	30.	0.N	7.	0.N	500.	200.	0.N	10.	0.N	20.
BBJ025	70.	20.	0.N	10.	0.N	0.L	100.	0.N	15.	0.N	100.
BBJ026	15.	0.N	0.N	5.	0.N	0.L	70.	0.N	0.L	0.N	70.
BBJ033	10.	10.	0.N	7.	0.N	300.	150.	0.N	20.	0.N	100.
BBJ035	70.	0.N	0.N	7.	0.N	100.	300.	0.L	50.	200.	70.
BBJ039	50.	10.	0.N	7.	0.N	0.L	150.	0.N	15.	0.N	70.
BBJ043	500.	20.	100.	5.	0.N	100.	200.	0.N	20.	500.	0.N
BBJ044	150.	10.	0.L	7.	0.N	100.	150.	0.N	20.	500.	70.
BBJ049	10.	100.	100.	5.	0.N	0.L	50.	0.N	0.N	0.N	50.
BBJ050	15.	30.	0.N	5.	0.N	0.L	150.	0.N	0.N	0.L	20.

CHERT - SIL. ASSEMBLAGE-continued

SAMPLE	AU	HG	FE	MG	CA	TI	MN	AG	AS	B
BBJ056	0.10	7.00	200000.	1000.	1000.	1000.	200.	5.0	2000.	150.
BBJ057	0.00N	0.50	5000.	700.	500.	500.	50.	0.0N	0.N	50.
BBJ059	0.00N	1.30	10000.	500.	500.	500.	100.	0.0N	0.N	50.
BBJ066	0.02	1.00	3000.	300.	500.	2000.	30.	0.0N	0.N	30.
BBJ067	0.10	0.00G	20000.	200.	500.	1500.	150.	1.0	500.	10.
BBJ068	0.00N	1.40	15000.	3000.	500.	2000.	100.	0.0N	0.N	100.
BBJ069	0.00N	0.90	100000.	1000.	7000.	700.	500.	0.5	700.	20.
BBJ070	0.40	0.45	70000.	2000.	0.L	1000.	700.	2.0	300.	30.
BBJ071	0.00N	0.06	30000.	700.	500.	500.	5000.	0.0N	0.N	30.
BBJ072	0.00N	0.45	70000.	1500.	7000.	700.	500.	0.0N	0.N	50.
BBJ073	1.80	0.90	150000.	2000.	1000.	1500.	1500.	1.0	700.	20.
BBJ074	0.20	1.50	150000.	1500.	1000.	1000.	1000.	0.0N	700.	20.
BBJ076	0.60	0.90	200000.	3000.	700.	1000.	1500.	1.0	500.	30.
BBJ077	0.00N	0.70	10000.	1500.	700.	2000.	100.	2.0	300.	20.
BBJ078	0.00N	1.30	5000.	1000.	500.	700.	150.	0.0N	0.N	30.
BBJ079	0.10	0.16	70000.	700.	0.L	1000.	100.	0.0N	700.	100.
BBJ080	0.10	0.70	3000.	700.	0.L	300.	50.	1.5	0.N	15.
BBJ081	0.80	1.50	50000.	300.	700.	2000.	200.	0.0N	500.	50.
BBJ083	0.00N	0.90	3000.	500.	0.L	500.	50.	0.0N	0.N	50.
BBJ085	0.00N	3.00	10000.	1500.	1000.	500.	70.	0.7	0.L	30.
BBJ086	0.00N	1.80	50000.	700.	5000.	700.	200.	0.0N	500.	30.
BBJ087	0.02	0.20	50000.	500.	0.L	700.	150.	0.0N	300.	30.
BBJ089	0.40	0.35	0.G	2000.	70000.	700.	1000.	1.0	1000.	30.
BBJ092	0.00L	0.08	2000.	1000.	1000.	1000.	100.	2.0	0.N	30.
BBJ096	0.00N	0.06	70000.	5000.	500.	1500.	100.	0.0N	0.N	50.
BBJ099	0.00N	0.75	3000.	700.	700.	700.	10.	0.0N	0.N	50.
BBJ100	0.00N	3.00	50000.	15000.	2000.	2000.	200.	0.0N	0.N	50.
BBJ102	0.00L	0.14	70000.	5000.	500.	2000.	5000.	0.0N	500.	100.
BBJ107	0.00N	0.04	100000.	7000.	2000.	2000.	200.	0.0N	0.N	70.
BBJ156	1.10	0.26	50000.	1000.	700.	1500.	50.	0.0N	700.	50.
BBJ161	0.06	0.04	20000.	3000.	3000.	2000.	100.	1.5	0.N	70.
BBJ174	0.04	0.00N	30000.	1500.	0.L	1000.	70.	0.0N	0.N	30.
BBJ176	0.04	0.04	70000.	3000.	1000.	2000.	300.	0.0N	700.	200.
BBJ177	0.02	0.20	20000.	5000.	0.L	2000.	20.	0.0N	0.N	100.
BBJ179	0.40	0.06	100000.	1500.	7000.	1000.	300.	1.5	700.	70.
BBJ181	0.20	2.00	100000.	2000.	2000.	2000.	70.	0.0N	5000.	200.
BBJ182	0.10	0.08	15000.	1000.	0.L	500.	20.	0.0N	0.N	50.
BBJ186	0.02	0.16	50000.	2000.	500.	1500.	300.	0.0N	0.N	70.
BBJ187	0.40	0.00N	20000.	1500.	1500.	2000.	70.	0.0N	500.	100.
BBJ188	0.40	0.00N	30000.	1500.	0.L	1000.	150.	0.0N	700.	50.
BBJ189	0.04	0.70	15000.	1500.	1500.	1000.	70.	0.5	700.	150.
BBJ192	0.06	0.16	70000.	1500.	1000.	1500.	50.	0.0N	700.	150.
BBJ193	0.04	0.14	30000.	7000.	500.	2000.	20.	0.0N	0.N	150.
BBJ194	0.00L	0.18	3000.	700.	7000.	500.	100.	1.0	0.N	30.
BBJ196	0.04	0.20	50000.	7000.	1500.	2000.	70.	0.0N	0.N	100.
BBJ197	0.00L	0.20	100000.	300.	1500.	5000.	500.	0.0N	2000.	20.
BBJ198	0.06	0.10	100000.	2000.	1000.	1500.	700.	0.0N	700.	300.
BBJ199	2.40	0.06	70000.	2000.	500.	2000.	150.	0.0N	300.	30.
BBJ200	0.06	0.14	7000.	2000.	1500.	700.	300.	0.0N	0.N	30.
BBJ201	0.14	0.04	50000.	1000.	1500.	3000.	300.	3.0	500.	150.

CHERT - SIL. ASSEMBLAGE-continued

SAMPLE	BA	BE	BI	CD	CO	CR	CU	LA	MO	NB
BBJ056	1500.	1.	0.N	0.N	30.	20.	2000.	0.N	20.	0.N
BBJ057	700.	0.N	0.N	0.N	0.N	0.L	10.	20.	0.N	0.N
BBJ059	500.	0.L	0.N	0.N	0.N	0.N	15.	0.N	0.N	0.N
BBJ066	300.	0.N	0.N	0.N	5.	0.N	5.	20.	0.N	0.N
BBJ067	300.	0.L	100.	0.N	7.	0.N	70.	0.N	5.	0.N
BBJ068	300.	1.	0.N	0.N	0.N	20.	0.L	50.	0.N	0.N
BBJ069	300.	5.	0.N	0.N	10.	50.	500.	0.N	30.	0.N
BBJ070	300.	2.	20.	0.N	10.	20.	300.	20.	15.	0.N
BBJ071	500.	0.L	0.N	0.N	0.N	0.N	30.	0.N	0.N	0.N
BBJ072	200.	0.L	0.N	0.N	15.	20.	50.	20.	15.	0.N
BBJ073	300.	1.	15.	0.N	100.	70.	1500.	0.N	0.N	0.N
BBJ074	200.	1.	0.N	0.N	20.	70.	1000.	0.N	20.	0.N
BBJ076	1000.	1.	150.	0.N	20.	30.	1000.	0.N	0.N	0.N
BBJ077	300.	0.L	100.	0.N	0.N	0.N	30.	20.	0.N	0.N
BBJ078	500.	0.L	0.N	0.N	0.N	0.N	10.	0.N	0.N	0.N
BBJ079	700.	1.	0.N	0.N	0.N	20.	70.	20.	5.	0.N
BBJ080	300.	0.L	0.N	0.N	0.N	20.	30.	0.N	0.N	0.N
BBJ081	150.	0.L	0.N	0.N	0.N	20.	50.	50.	10.	0.N
BBJ083	700.	0.L	0.N	0.N	0.N	0.N	15.	0.N	0.N	0.N
BBJ085	500.	0.L	0.N	0.N	0.N	30.	30.	0.N	0.N	0.N
BBJ086	500.	2.	0.N	0.N	0.N	70.	70.	0.L	0.N	0.N
BBJ087	200.	1.	0.N	0.N	0.N	100.	50.	0.N	10.	0.N
BBJ089	300.	0.L	150.	100.	20.	100.	1000.	0.N	15.	0.N
BBJ092	200.	0.L	0.N	0.N	0.N	50.	7.	0.N	0.N	0.N
BBJ096	300.	2.	0.N	30.	20.	30.	200.	0.N	10.	0.N
BBJ099	200.	0.L	0.N	0.N	0.N	70.	70.	0.N	0.N	0.N
BBJ100	300.	0.L	0.N	0.N	20.	50.	150.	20.	0.N	0.N
BBJ102	200.	2.	0.N	0.N	50.	30.	150.	0.L	0.N	0.N
BBJ107	500.	2.	0.N	0.N	15.	50.	300.	0.N	7.	0.N
BBJ156	0.G	1.	0.N	0.N	10.	100.	70.	20.	7.	0.N
BBJ161	300.	1.	0.N	0.N	10.	70.	50.	20.	0.N	0.N
BBJ174	1500.	0.L	0.N	0.N	0.N	20.	50.	0.L	0.N	0.N
BBJ176	700.	2.	0.N	0.N	10.	200.	500.	20.	20.	0.N
BBJ177	3000.	1.	0.N	0.N	0.N	50.	100.	20.	5.	0.N
BBJ179	500.	1.	0.N	0.N	15.	30.	1000.	0.L	30.	0.N
BBJ181	700.	1.	0.N	0.N	20.	70.	300.	30.	15.	0.N
BBJ182	300.	0.N	0.N	0.N	0.N	0.N	100.	0.N	0.N	0.N
BBJ186	500.	1.	0.N	0.N	10.	20.	100.	0.L	0.N	0.N
BBJ187	500.	0.L	0.N	0.N	0.N	20.	30.	0.L	0.N	0.N
BBJ188	700.	2.	0.N	0.N	0.L	20.	50.	20.	0.N	0.N
BBJ189	200.	0.L	0.N	0.N	0.N	30.	50.	0.L	0.N	0.N
BBJ192	300.	2.	0.N	0.N	0.N	30.	200.	20.	0.N	0.N
BBJ193	1000.	0.L	0.N	0.N	0.N	100.	100.	20.	0.N	0.N
BBJ194	300.	0.L	0.N	0.N	0.N	50.	20.	0.N	0.N	0.N
BBJ196	700.	2.	0.N	0.N	10.	50.	200.	0.L	0.N	0.N
BBJ197	300.	0.L	0.N	0.N	10.	30.	300.	0.N	20.	20.
BBJ198	200.	2.	0.N	0.N	5.	30.	50.	0.L	0.N	0.N
BBJ199	500.	0.L	0.N	0.N	10.	150.	100.	0.N	10.	0.N
BBJ200	300.	1.	0.N	0.N	0.N	20.	30.	20.	0.N	0.N
BBJ201	1000.	1.	0.N	0.N	0.N	20.	30.	150.	10.	0.N

CHERT - SIL. ASSEMBLAGE-continued

SAMPLE	NI	PB	SB	SC	SN	SR	V	W	Y	ZN	ZR
BBJ056	200.	20.	0.N	5.	0.N	100.	500.	0.N	15.	200.	70.
BBJ057	7.	0.N	0.N	5.	0.N	100.	50.	0.N	0.N	0.N	30.
BBJ059	20.	0.N	0.N	5.	0.N	100.	70.	0.N	0.N	0.N	50.
BBJ066	5.	10.	0.N	0.L	0.N	100.	20.	0.N	0.L	0.N	100.
BBJ067	20.	10.	0.L	5.	0.N	0.L	70.	0.N	0.L	0.N	70.
BBJ068	5.	200.	0.N	7.	0.N	100.	150.	0.N	15.	0.N	70.
BBJ069	200.	10.	0.N	10.	0.N	100.	1000.	0.N	50.	700.	50.
BBJ070	15.	50.	0.N	10.	0.N	0.L	300.	0.N	15.	0.N	70.
BBJ071	50.	10.	0.N	5.	0.N	0.L	200.	0.N	20.	700.	10.
BBJ072	50.	70.	0.N	5.	0.N	0.L	150.	0.N	20.	700.	30.
BBJ073	150.	30.	0.N	10.	0.N	100.	500.	0.N	50.	0.N	70.
BBJ074	300.	100.	0.N	20.	0.N	100.	500.	0.N	70.	1000.	50.
BBJ076	150.	150.	0.N	10.	0.N	100.	300.	0.N	30.	0.N	50.
BBJ077	10.	10.	0.L	5.	0.N	200.	150.	0.N	0.L	0.N	70.
BBJ078	7.	10.	0.N	5.	0.N	0.L	50.	0.N	0.L	0.N	50.
BBJ079	15.	10.	0.N	5.	0.N	200.	70.	0.N	15.	0.N	70.
BBJ080	10.	0.N	0.N	5.	0.N	0.L	200.	0.N	0.L	0.N	20.
BBJ081	7.	0.N	0.N	5.	0.N	100.	300.	0.L	10.	0.N	100.
BBJ083	10.	0.N	0.N	5.	0.N	100.	70.	0.N	0.N	0.N	50.
BBJ085	20.	0.N	0.N	5.	0.N	100.	500.	0.N	15.	0.N	20.
BBJ086	50.	10.	0.N	5.	0.N	100.	500.	0.N	20.	0.L	30.
BBJ087	50.	10.	0.N	5.	0.N	0.L	1000.	0.N	15.	0.N	30.
BBJ089	200.	200.	200.	5.	0.N	100.	2000.	70.	30.	500.	20.
BBJ092	10.	0.N	0.N	5.	0.N	0.N	150.	0.N	10.	0.N	70.
BBJ096	70.	0.N	0.N	7.	0.N	0.N	100.	0.N	15.	200.	100.
BBJ099	10.	0.L	0.N	0.L	0.N	0.L	1000.	0.N	15.	0.N	20.
BBJ100	200.	10.	0.N	10.	0.N	0.L	200.	0.N	30.	200.	150.
BBJ102	150.	15.	0.N	15.	0.N	0.L	100.	0.N	20.	500.	150.
BBJ107	50.	10.	0.N	10.	0.N	100.	150.	0.N	15.	0.N	200.
BBJ156	70.	30.	300.	10.	0.N	700.	1500.	0.L	15.	300.	50.
BBJ161	50.	10.	0.N	10.	0.N	100.	150.	0.N	20.	0.L	150.
BBJ174	15.	15.	0.N	7.	0.N	100.	50.	0.N	0.N	0.N	50.
BBJ176	150.	20.	0.N	15.	0.N	200.	1000.	0.N	70.	300.	100.
BBJ177	20.	0.N	0.N	10.	0.N	100.	150.	0.N	15.	0.N	100.
BBJ179	150.	20.	0.N	7.	0.N	200.	300.	0.N	10.	0.N	70.
BBJ181	150.	20.	0.N	10.	0.N	200.	300.	50.	50.	0.N	150.
BBJ182	5.	0.N	0.N	0.N	0.N	0.N	70.	0.N	0.L	0.N	10.
BBJ186	70.	0.L	0.N	7.	0.N	0.N	100.	0.N	20.	500.	70.
BBJ187	5.	0.L	0.N	7.	0.N	100.	70.	0.N	15.	0.N	200.
BBJ188	15.	0.L	0.N	5.	0.N	0.L	100.	0.N	15.	0.N	50.
BBJ189	7.	0.N	0.N	5.	0.N	100.	200.	150.	10.	0.N	100.
BBJ192	70.	10.	0.N	10.	0.N	200.	200.	0.L	15.	200.	100.
BBJ193	10.	10.	0.N	10.	0.N	0.L	150.	0.N	15.	0.N	150.
BBJ194	20.	0.N	0.N	0.L	0.N	0.N	300.	0.N	10.	0.N	10.
BBJ196	70.	10.	0.N	15.	0.N	0.N	200.	0.N	30.	0.N	200.
BBJ197	50.	10.	0.L	10.	0.N	0.N	500.	70.	20.	0.N	300.
BBJ198	15.	10.	0.N	7.	0.N	100.	100.	0.N	10.	0.N	70.
BBJ199	15.	15.	0.N	7.	0.N	0.L	300.	0.N	20.	0.N	70.
BBJ200	15.	20.	0.N	15.	0.N	0.N	100.	0.N	20.	0.N	50.
BBJ201	10.	70.	0.N	10.	0.N	500.	200.	0.N	70.	0.N	150.

CHERT - SIL. ASSEMBLAGE-continued

SAMPLE	AU	HG	FE	MG	CA	TI	MN	AG	AS	B
BBJ202	0.10	0.06	30000.	1000.	5000.	1500.	150.	0.5	700.	30.
BBJ203	0.06	0.10	50000.	7000.	500.	300.	70.	0.0N	0.N	200.
BBJ204	0.04	0.00N	30000.	10000.	500.	5000.	70.	0.0N	0.N	100.
BBJ205	0.18	0.08	10000.	3000.	500.	300.	70.	0.0N	0.N	100.
BBJ207	0.04	0.06	70000.	7000.	700.	5000.	500.	0.0N	200.	50.
BBJ208	0.08	0.00N	15000.	20000.	1000.	7000.	200.	0.0N	0.N	100.
BBJ210	0.04	0.04	5000.	1500.	0.L	1500.	150.	0.0N	0.L	70.
BBJ211	0.10	0.04	30000.	2000.	3000.	1500.	150.	0.5	700.	50.
BBJ213	0.06	0.12	5000.	1500.	0.L	1500.	100.	1.0	0.N	50.
BBJ214	0.04	0.06	0.G	10000.	20000.	2000.	1000.	1.0	1000.	100.
BBJ220	0.04	0.16	50000.	3000.	0.L	3000.	50.	0.0N	500.	200.
BBJ229	0.02	0.16	15000.	5000.	700.	2000.	70.	0.0N	0.N	100.
BBJ230	0.02	1.00	150000.	5000.	1500.	3000.	100.	0.0N	700.	100.
BBJ244	0.06	1.40	50000.	1000.	1000.	1000.	100.	1.0	700.	50.
BBJ259	0.10	1.00	20000.	5000.	0.L	2000.	50.	0.0N	0.L	50.
BBJ265	0.04	0.90	15000.	20000.	100000.	1500.	100.	0.0N	0.N	50.
BBJ267	0.24	0.80	20000.	500.	1000.	1500.	50.	0.7	200.	20.
BBJ281	0.00N	0.80	20000.	3000.	1000.	1500.	150.	0.0N	0.N	50.
BBJ291	0.00N	1.30	50000.	7000.	1000.	2000.	300.	0.0N	0.N	100.
BBJ292	0.00N	0.75	30000.	2000.	700.	1500.	100.	0.0N	0.N	70.
BBJ293	0.00N	1.40	70000.	3000.	70000.	1000.	1000.	0.0N	0.N	20.
BBJ295	0.28	1.30	100000.	10000.	200000.	1000.	1000.	0.0N	0.N	20.
BBJ297	0.02	6.00	30000.	5000.	700.	2000.	30.	0.5	0.N	70.
BBJ302	0.14	2.20	10000.	1000.	2000.	1500.	70.	0.5	0.N	70.
BBJ306	0.02	1.20	20000.	7000.	2000.	2000.	70.	0.0N	500.	150.
BBJ318	0.16	2.70	100000.	1000.	10000.	1000.	70.	0.0N	700.	50.
BBJ320	0.00N	1.40	100000.	5000.	1000.	2000.	1500.	0.0N	700.	100.
BBJ330	0.00N	0.60	10000.	2000.	5000.	1500.	50.	0.0N	0.N	50.
BBJ331	0.00L	0.13	10000.	700.	0.L	500.	50.	0.0N	0.L	30.
BBJ332	0.00L	0.30	30000.	7000.	500.	3000.	70.	1.0	0.N	100.
BBJ333	0.02	0.04	10000.	1000.	0.L	700.	70.	0.5	0.N	30.
BBJ334	0.00L	0.11	10000.	700.	500.	500.	50.	0.5	0.N	30.
BBJ335	0.00L	0.12	700.	700.	500.	500.	50.	1.0	0.N	30.
BBJ336	0.00L	0.26	15000.	3000.	500.	1000.	50.	0.0N	0.N	30.
BBJ337	0.00L	0.10	5000.	1000.	0.L	700.	70.	0.0L	0.N	30.
BBJ338	0.00L	1.00	5000.	1000.	0.L	1500.	20.	0.0L	0.L	100.
BBJ339	0.00L	1.40	20000.	700.	500.	700.	30.	0.5	2000.	50.
BBJ340	0.00L	0.07	15000.	0.L	0.L	30.	150.	0.0L	0.N	0.L
BBJ341	0.00L	0.05	10000.	1500.	1500.	700.	2000.	0.0N	0.N	30.
BBJ343	0.00L	6.10	20000.	10000.	1000.	3000.	1500.	0.0N	0.N	70.
BBJ344	0.00L	0.30	30000.	1500.	2000.	1000.	500.	0.0N	0.N	30.
BBJ345	0.00L	0.60	100000.	7000.	0.L	2000.	100.	0.7	0.N	150.
BBJ346	0.00L	0.10	7000.	2000.	700.	1000.	30.	0.0N	0.N	30.
BBJ347	0.04	1.30	15000.	500.	1000.	700.	100.	1.0	1000.	20.
BBJ348	0.00L	0.05	100000.	5000.	0.L	1500.	100.	0.0N	0.N	70.
BBJ349	0.00L	0.14	7000.	1000.	1000.	700.	100.	0.0L	0.N	30.
BBJ350	0.00L	0.09	30000.	2000.	700.	1000.	100.	0.0N	0.N	30.
BBJ351	0.00L	0.13	50000.	500.	1000.	1000.	500.	0.0N	0.N	10.
BBJ352	0.00L	0.05	5000.	700.	700.	300.	500.	0.0N	0.N	30.
BBJ354	0.00L	0.05	15000.	500.	500.	300.	50.	0.0N	0.N	30.

CHERT - SIL. ASSEMBLAGE-continued

SAMPLE	BA	BE	BI	CD	CO	CR	CU	LA	MO	NB
BBJ202	700.	0.L	0.N	0.N	0.N	50.	700.	30.	100.	0.N
BBJ203	700.	0.L	0.N	0.N	0.N	200.	150.	20.	0.N	0.N
BBJ204	700.	2.	0.N	0.N	5.	150.	300.	30.	0.N	10.
BBJ205	700.	0.L	0.N	0.N	0.N	50.	20.	20.	0.N	0.N
BBJ207	300.	1.	0.N	0.N	15.	100.	150.	20.	0.N	10.
BBJ208	1000.	0.L	0.N	0.N	5.	50.	70.	0.L	0.N	10.
BBJ210	200.	0.L	0.N	0.N	0.N	50.	20.	20.	0.N	0.N
BBJ211	500.	1.	0.N	0.N	0.N	150.	1000.	0.L	50.	0.N
BBJ213	300.	0.L	0.N	0.N	0.N	30.	20.	0.L	0.N	0.N
BBJ214	500.	5.	0.N	0.N	150.	150.	200.	0.N	50.	0.N
BBJ220	700.	1.	0.N	0.N	15.	100.	700.	20.	0.N	0.N
BBJ229	300.	1.	0.N	0.N	0.N	20.	70.	20.	0.N	0.N
BBJ230	3000.	2.	0.N	0.N	15.	100.	1000.	0.N	50.	0.N
BBJ244	500.	1.	0.N	0.N	5.	100.	70.	0.L	20.	0.N
BBJ259	300.	1.	0.N	0.N	0.N	50.	50.	20.	0.N	0.N
BBJ265	150.	0.L	0.N	0.N	7.	50.	5.	20.	0.N	0.N
BBJ267	700.	1.	0.N	0.N	0.N	50.	30.	30.	5.	0.N
BBJ281	3000.	1.	0.N	0.N	7.	20.	20.	0.N	0.N	0.N
BBJ291	500.	1.	0.N	0.N	15.	50.	70.	20.	0.N	0.N
BBJ292	300.	0.L	0.N	0.N	5.	20.	70.	0.L	0.N	0.N
BBJ293	300.	1.	0.N	0.N	7.	20.	30.	0.N	5.	0.N
BBJ295	500.	0.L	0.N	0.N	10.	20.	20.	0.N	0.N	0.N
BBJ297	500.	1.	0.N	0.N	0.L	70.	20.	0.N	0.N	0.N
BBJ302	3000.	1.	0.N	0.N	0.N	30.	15.	20.	0.N	0.N
BBJ306	300.	1.	0.N	0.N	0.L	70.	50.	20.	0.N	0.N
BBJ318	1000.	1.	0.N	20.	0.N	100.	100.	0.N	50.	0.N
BBJ320	500.	1.	0.N	0.N	30.	150.	200.	0.N	20.	0.N
BBJ330	1500.	1.	0.N	0.N	0.N	20.	20.	20.	50.	0.N
BBJ331	700.	0.L	0.N	0.N	0.N	20.	50.	0.N	0.N	0.N
BBJ332	1000.	2.	0.N	0.N	0.L	70.	100.	20.	0.N	0.N
BBJ333	2000.	1.	0.N	0.N	0.N	30.	70.	0.N	0.L	0.N
BBJ334	500.	0.L	0.N	0.N	0.N	0.L	50.	0.N	0.N	0.N
BBJ335	500.	0.L	0.N	0.N	0.N	30.	50.	0.N	0.N	0.N
BBJ336	700.	1.	0.N	0.N	0.L	30.	100.	0.N	0.N	0.N
BBJ337	500.	0.L	0.N	0.N	0.N	30.	30.	0.N	0.N	0.N
BBJ338	700.	0.L	0.N	0.N	0.N	20.	30.	0.N	0.N	0.N
BBJ339	1000.	0.L	0.N	0.N	0.N	30.	30.	0.L	7.	0.N
BBJ340	300.	0.L	0.N	0.N	0.N	10.	15.	0.N	0.N	0.N
BBJ341	700.	2.	0.N	0.N	30.	10.	50.	0.N	0.N	0.N
BBJ343	700.	1.	0.N	0.N	30.	50.	50.	20.	0.N	0.N
BBJ344	700.	0.L	0.N	0.N	5.	30.	70.	0.L	7.	0.N
BBJ345	700.	2.	0.N	0.N	0.N	70.	150.	0.L	0.N	0.N
BBJ346	700.	0.L	0.N	0.N	0.N	20.	15.	0.N	0.N	0.N
BBJ347	500.	0.L	0.N	0.N	0.N	20.	50.	0.N	0.N	0.N
BBJ348	1000.	2.	0.N	0.N	0.N	70.	100.	0.N	0.N	0.N
BBJ349	500.	0.L	0.N	0.N	0.N	15.	10.	0.N	0.N	0.N
BBJ350	500.	1.	0.N	0.N	0.N	20.	50.	0.L	0.N	0.N
BBJ351	150.	1.	0.N	0.N	15.	30.	70.	0.N	7.	0.N
BBJ352	500.	0.L	0.N	0.N	0.N	20.	5.	0.N	0.N	0.N
BBJ354	700.	0.L	0.N	0.N	0.N	0.L	7.	0.N	0.N	0.N

CHERT - SIL. ASSEMBLAGE-continued

SAMPLE	NI	PB	SB	SC	SN	SR	V	W	Y	ZN	ZR
BBJ202	20.	10.	0.N	5.	0.N	200.	1000.	0.N	10.	0.N	70.
BBJ203	15.	10.	0.N	15.	0.N	0.N	300.	0.N	15.	0.N	150.
BBJ204	50.	10.	0.N	15.	0.N	100.	200.	0.N	30.	0.N	200.
BBJ205	10.	0.N	0.N	10.	0.N	100.	100.	0.N	10.	0.N	70.
BBJ207	70.	15.	0.N	15.	0.N	0.L	150.	0.N	30.	0.N	300.
BBJ208	70.	10.	0.N	7.	0.N	100.	150.	0.N	10.	0.N	300.
BBJ210	10.	0.N	0.N	5.	0.N	0.N	150.	0.N	15.	0.N	50.
BBJ211	70.	20.	0.N	5.	0.N	500.	2000.	0.N	50.	0.N	70.
BBJ213	10.	0.N	0.N	5.	0.N	0.L	150.	0.N	0.N	0.N	70.
BBJ214	1000.	20.	150.	15.	0.N	300.	500.	0.N	70.	5000.	150.
BBJ220	100.	10.	0.N	15.	0.N	300.	200.	0.N	30.	0.N	150.
BBJ229	15.	10.	0.N	10.	0.N	100.	70.	0.N	10.	0.N	100.
BBJ230	70.	0.L	150.	10.	0.N	300.	300.	0.N	30.	0.N	150.
BBJ244	30.	10.	0.N	7.	0.N	100.	700.	0.N	20.	300.	20.
BBJ259	20.	0.N	0.N	7.	0.N	100.	150.	0.N	10.	0.N	100.
BBJ265	20.	20.	0.N	10.	0.N	0.L	70.	0.N	15.	500.	100.
BBJ267	20.	200.	200.	10.	0.N	500.	70.	0.N	20.	0.N	100.
BBJ281	20.	10.	0.N	7.	0.N	0.L	100.	0.N	15.	0.N	70.
BBJ291	100.	10.	0.N	10.	0.N	0.L	100.	0.N	15.	0.N	200.
BBJ292	50.	10.	0.N	7.	0.N	0.L	100.	0.N	10.	0.N	500.
BBJ293	50.	20.	0.N	10.	0.N	100.	100.	0.N	50.	0.N	70.
BBJ295	30.	50.	0.N	7.	0.N	100.	70.	0.N	20.	300.	50.
BBJ297	30.	20.	0.N	10.	0.N	0.L	200.	0.N	10.	0.N	150.
BBJ302	50.	20.	150.	7.	0.N	0.L	1000.	0.N	15.	0.L	100.
BBJ306	15.	10.	0.N	10.	0.N	100.	150.	0.N	15.	0.N	200.
BBJ318	70.	20.	0.N	7.	0.N	300.	1000.	0.N	20.	500.	70.
BBJ320	100.	30.	0.N	20.	0.N	0.N	700.	0.L	20.	0.N	200.
BBJ330	50.	0.L	0.N	7.	0.N	150.	200.	0.N	15.	0.N	50.
BBJ331	7.	0.N	0.N	0.N	0.N	0.N	50.	0.N	0.N	0.N	30.
BBJ332	30.	10.	0.N	15.	0.N	0.N	150.	0.N	15.	500.	150.
BBJ333	30.	0.N	0.N	7.	0.N	100.	50.	0.N	15.	200.	100.
BBJ334	7.	0.N	0.N	5.	0.N	0.N	50.	0.N	0.L	0.N	50.
BBJ335	7.	0.N	0.N	0.L	0.N	0.N	30.	0.N	0.L	0.N	50.
BBJ336	15.	0.N	0.N	5.	0.N	0.N	30.	0.N	10.	0.N	70.
BBJ337	10.	0.N	0.N	7.	0.N	0.N	50.	0.N	0.L	0.N	100.
BBJ338	5.	0.N	0.N	0.L	0.N	100.	50.	0.N	0.L	0.N	150.
BBJ339	7.	0.N	0.N	0.L	0.N	200.	150.	0.N	0.L	0.N	30.
BBJ340	15.	0.N	0.N	0.N	0.N	0.N	15.	0.N	0.N	0.L	10.
BBJ341	20.	15.	0.N	5.	0.N	0.N	100.	0.N	15.	0.N	70.
BBJ343	100.	0.N	0.N	10.	0.N	0.N	70.	0.N	15.	1000.	200.
BBJ344	30.	0.N	0.N	10.	0.N	100.	100.	0.N	30.	0.L	70.
BBJ345	20.	30.	0.N	15.	0.N	0.N	150.	0.N	30.	1000.	150.
BBJ346	7.	0.N	0.N	0.L	0.N	0.N	30.	0.N	0.L	0.N	50.
BBJ347	15.	0.N	0.L	0.N	0.N	0.N	150.	0.N	10.	0.N	30.
BBJ348	20.	0.L	0.N	15.	0.N	0.N	100.	0.N	10.	500.	70.
BBJ349	10.	0.N	0.N	0.L	0.N	0.N	30.	0.N	0.L	0.N	50.
BBJ350	30.	0.N	0.N	7.	0.N	0.N	70.	0.N	10.	1000.	70.
BBJ351	50.	0.N	0.N	15.	0.N	0.N	100.	0.N	30.	500.	50.
BBJ352	10.	0.N	0.N	0.N	0.N	0.N	15.	0.N	0.N	0.N	20.
BBJ354	0.L	0.N	0.N	0.N	0.N	0.N	70.	0.N	0.N	0.N	15.

CHERT - SIL. ASSEMBLAGE-continued

SAMPLE	AU	HG	FE	MG	CA	TI	MN	AG	AS	B
BBJ355	0.00L	0.16	30000.	700.	700.	1500.	50.	0.0L	2000.	50.
BBJ356	0.00L	0.50	70000.	700.	1000.	1000.	500.	0.5	1500.	20.
BBJ357	0.00L	0.40	50000.	1500.	700.	1000.	100.	0.0N	0.L	70.
BBJ360	0.00L	0.04	10000.	3000.	500.	150.	70.	0.0L	0.N	70.
BBJ361	0.00L	0.12	70000.	3000.	700.	1000.	150.	0.0N	0.N	50.
BBJ362	0.00L	0.35	30000.	1500.	500.	1500.	30.	0.5	0.N	70.
BBJ363	0.00L	0.40	15000.	700.	700.	700.	20.	2.0	0.N	30.
BBJ364	0.00L	0.45	15000.	3000.	1000.	2000.	70.	1.0	0.N	70.
BBJ366	0.00L	0.55	15000.	1000.	500.	1000.	70.	3.0	1000.	70.
BBJ367	0.00L	0.07	100000.	1500.	500.	1500.	700.	0.0N	0.N	70.
BBJ369	0.00L	1.40	200000.	700.	500.	700.	150.	2.0	1500.	70.
BBJ370	0.00L	0.14	10000.	200.	1000.	300.	30.	0.5	0.N	10.
BBJ371	0.00L	0.07	70000.	2000.	1000.	700.	150.	0.0N	0.L	10.
BBJ373	0.00L	0.18	5000.	700.	700.	700.	70.	1.0	0.N	20.
BBJ376	0.06	0.26	15000.	3000.	2000.	3000.	20.	0.0L	0.N	100.
BBJ377	0.04	0.26	50000.	1000.	1500.	2000.	1500.	0.0N	0.N	30.
BBJ378	0.02	0.06	30000.	15000.	0.N	3000.	150.	0.0N	0.N	100.
BBJ379	0.04	0.05	30000.	15000.	1000.	3000.	150.	0.0N	0.N	100.
BBJ380	0.00L	0.08	20000.	10000.	0.L	2000.	70.	0.0N	0.N	150.
BBJ382	0.00L	0.07	70000.	1000.	1500.	700.	150.	0.0N	0.N	20.
BBJ383	0.00L	0.08	100000.	2000.	1500.	1000.	200.	0.0N	700.	30.
BBJ385	0.04	0.20	70000.	1000.	1000.	700.	100.	1.0	300.	30.
BBJ388	0.00L	0.20	20000.	5000.	3000.	1500.	50.	0.0N	0.N	50.
BBJ389	0.00L	0.20	50000.	5000.	1500.	500.	2000.	0.0L	0.N	15.
BBJ390	0.00L	0.28	20000.	2000.	700.	700.	2000.	0.0N	0.N	15.
BBJ391	0.02	0.12	30000.	300.	500.	2000.	500.	0.0N	0.N	15.
BBJ392	0.00L	0.16	50000.	1000.	0.L	700.	150.	0.0L	0.N	30.
BBJ393	0.00L	0.35	30000.	1000.	7000.	700.	200.	2.0	0.N	50.
BBJ394	0.00L	0.03	30000.	1000.	700.	300.	150.	0.0N	0.N	20.
BBJ395	0.00L	0.28	50000.	3000.	3000.	1000.	700.	0.0N	0.N	70.
BBJ398	0.00L	0.06	20000.	20000.	15000.	3000.	150.	0.0N	0.N	20.
BBJ399	0.00L	0.09	5000.	1500.	700.	700.	100.	0.0N	0.N	10.
BBJ417	0.00L	0.09	3000.	1500.	1000.	700.	70.	0.0L	0.L	10.
BBJ426	0.04	0.11	10000.	700.	1000.	500.	15.	0.0N	0.N	10.
BBJ427	0.06	0.14	70000.	3000.	700.	1500.	100.	1.5	0.N	100.
BBJ429	0.06	0.07	5000.	700.	500.	300.	150.	0.0N	0.N	15.
BBJ430	0.02	0.02	30000.	1000.	2000.	700.	150.	2.0	0.L	20.
BBJ431	0.00L	0.05	15000.	3000.	0.L	700.	150.	0.0N	0.N	20.
BBJ432	0.00L	0.45	7000.	700.	2000.	700.	500.	1.0	0.N	10.
BBJ434	0.00L	0.14	20000.	3000.	0.N	1500.	100.	0.0N	0.N	10.
BBJ435	0.00L	0.04	10000.	1500.	0.L	700.	50.	0.0N	0.N	30.
BBJ436	0.00L	0.05	100000.	500.	500.	100.	150.	0.0N	0.N	0.L
BBJ437	0.00L	0.12	20000.	700.	0.L	500.	20.	0.5	0.N	10.
BBJ438	0.00L	0.05	20000.	2000.	700.	1000.	30.	0.0N	0.N	15.
BBJ439	0.00L	0.07	7000.	2000.	1000.	700.	30.	0.0N	0.N	15.
BBJ441	0.00L	0.55	10000.	500.	700.	300.	100.	0.0N	300.	15.
BBJ443	0.00L	0.05	15000.	700.	700.	700.	50.	0.0N	0.N	50.
BBJ444	0.00L	0.05	10000.	2000.	700.	1000.	30.	0.0N	0.N	70.
BBJ450	0.00L	0.05	15000.	1000.	700.	1500.	70.	0.0N	0.N	50.
BBJ457	0.00L	0.50	7000.	700.	1500.	1000.	50.	2.0	0.N	50.

CHERT - SIL. ASSEMBLAGE-continued

SAMPLE	BA	BE	BI	CD	CO	CR	CU	LA	MO	NB
BBJ355	300.	0.L	0.N	0.L	0.L	70.	50.	50.	15.	0.N
BBJ356	700.	2.	0.N	100.	7.	70.	500.	20.	70.	0.N
BBJ357	700.	1.	0.N	0.N	0.N	30.	70.	0.L	0.N	0.N
BBJ360	1500.	1.	0.N	0.N	0.N	30.	30.	0.N	0.N	0.N
BBJ361	700.	2.	0.N	0.N	5.	50.	70.	0.N	0.N	0.N
BBJ362	500.	1.	0.N	0.N	0.N	50.	150.	0.N	70.	0.N
BBJ363	2000.	1.	0.N	0.N	0.N	100.	100.	0.N	10.	0.N
BBJ364	700.	1.	0.N	0.N	0.N	50.	70.	0.N	7.	0.N
BBJ366	3000.	1.	0.N	0.N	0.N	100.	70.	0.N	20.	0.N
BBJ367	700.	1.	0.N	0.N	70.	50.	100.	0.N	0.N	0.N
BBJ369	2000.	10.	20.	0.N	5.	50.	70.	0.N	15.	0.N
BBJ370	200.	5.	0.N	0.N	0.N	50.	150.	0.N	20.	0.N
BBJ371	70.	0.N	0.N	0.N	5.	30.	50.	0.N	0.N	0.N
BBJ373	700.	0.L	0.N	0.N	0.N	30.	50.	0.N	0.L	0.N
BBJ376	700.	2.	0.N	0.N	0.L	70.	700.	20.	0.N	0.L
BBJ377	1000.	1.	0.N	0.N	5.	15.	30.	70.	20.	0.N
BBJ378	1500.	1.	0.N	0.N	5.	100.	50.	50.	0.N	0.N
BBJ379	700.	2.	0.N	0.N	10.	100.	30.	30.	0.N	0.N
BBJ380	1000.	1.	0.N	0.N	0.N	70.	70.	30.	0.N	0.N
BBJ382	0.G	0.L	0.N	0.N	7.	20.	30.	0.N	10.	0.N
BBJ383	2000.	7.	0.N	0.N	5.	50.	70.	0.N	50.	0.N
BBJ385	1500.	1.	0.N	0.N	0.N	20.	150.	0.N	0.N	0.N
BBJ388	1000.	1.	0.N	0.N	0.N	30.	70.	0.N	0.N	0.N
BBJ389	500.	0.N	0.N	0.N	70.	15.	50.	0.N	0.N	0.N
BBJ390	500.	0.L	0.N	0.N	50.	0.N	30.	0.N	0.N	0.N
BBJ391	700.	0.N	0.N	0.N	0.L	20.	30.	70.	10.	10.
BBJ392	1000.	0.N	0.N	0.N	0.N	10.	50.	0.N	0.N	0.N
BBJ393	200.	2.	0.N	0.L	5.	100.	100.	0.N	10.	0.N
BBJ394	200.	2.	0.N	0.N	10.	20.	100.	0.N	0.N	0.N
BBJ395	500.	2.	0.N	0.N	10.	50.	70.	0.N	7.	0.N
BBJ398	100.	2.	0.N	0.N	5.	70.	30.	20.	30.	0.N
BBJ399	300.	0.N	0.N	0.N	0.N	20.	30.	0.N	20.	0.N
BBJ417	300.	0.N	0.N	0.N	0.N	0.L	15.	0.N	7.	0.N
BBJ426	100.	0.N	0.N	0.N	0.N	0.L	5.	0.N	5.	0.N
BBJ427	700.	2.	0.N	0.N	10.	70.	1500.	0.N	0.L	0.N
BBJ429	200.	0.N	0.N	0.N	0.N	0.N	30.	0.N	0.N	0.N
BBJ430	1500.	3.	0.N	0.N	5.	70.	30.	0.N	30.	0.N
BBJ431	3000.	0.N	0.N	0.N	0.N	0.L	20.	0.N	0.N	0.N
BBJ432	1000.	0.N	0.N	0.N	0.L	20.	20.	0.N	0.N	0.N
BBJ434	5000.	0.N	0.N	0.N	0.N	15.	50.	0.N	0.N	0.N
BBJ435	5000.	0.L	0.N	0.N	0.N	0.L	15.	0.N	0.N	0.N
BBJ436	100.	0.L	0.N	0.N	0.N	0.L	70.	0.N	0.N	0.N
BBJ437	700.	0.L	0.N	0.N	0.N	70.	50.	0.N	70.	0.N
BBJ438	3000.	0.L	0.N	0.N	0.N	20.	20.	0.N	0.N	0.N
BBJ439	5000.	0.L	0.N	0.N	0.N	10.	50.	0.N	0.N	0.N
BBJ441	200.	0.N	0.N	0.N	0.N	0.L	70.	0.N	0.N	0.N
BBJ443	700.	0.N	0.N	0.N	0.L	15.	30.	0.N	0.L	0.N
BBJ444	1000.	0.L	0.N	0.N	0.N	15.	20.	0.N	0.N	0.N
BBJ450	1500.	0.N	0.N	0.N	0.N	20.	20.	0.N	0.N	0.N
BBJ457	700.	0.N	0.N	0.N	0.N	15.	10.	0.N	0.L	0.N

CHERT - SIL. ASSEMBLAGE-continued

SAMPLE	NI	PB	SB	SC	SN	SR	V	W	Y	ZN	ZR
BBJ355	30.	20.	0.N	0.L	0.N	0.N	1500.	0.N	20.	500.	70.
BBJ356	100.	10.	100.	0.L	0.N	0.N	700.	0.N	70.	700.	70.
BBJ357	10.	0.N	0.N	0.L	0.N	0.N	100.	0.N	0.L	0.L	50.
BBJ360	7.	0.N	0.N	0.L	0.N	0.N	70.	0.N	10.	0.N	100.
BBJ361	20.	0.N	0.N	5.	0.N	0.N	50.	0.N	20.	200.	50.
BBJ362	7.	30.	0.N	0.L	0.N	0.N	300.	0.N	10.	0.N	50.
BBJ363	15.	0.N	0.N	7.	0.N	0.N	300.	0.N	30.	0.N	100.
BBJ364	7.	0.L	0.N	5.	0.N	0.N	70.	0.N	0.L	0.N	100.
BBJ366	10.	15.	0.L	7.	0.N	300.	700.	0.N	30.	0.N	70.
BBJ367	150.	0.L	0.N	7.	0.N	0.N	30.	0.N	15.	3000.	70.
BBJ369	150.	10.	100.	5.	0.N	0.N	70.	0.L	15.	700.	30.
BBJ370	7.	0.N	0.N	0.N	0.N	0.N	300.	0.N	20.	0.N	20.
BBJ371	15.	0.L	0.N	0.N	0.N	0.N	100.	0.N	15.	1000.	70.
BBJ373	7.	0.N	0.N	0.N	0.N	0.N	100.	0.N	0.L	0.N	150.
BBJ376	15.	10.	0.N	10.	0.N	200.	200.	0.N	30.	0.N	200.
BBJ377	70.	100.	0.N	5.	0.N	0.L	70.	0.N	30.	300.	150.
BBJ378	20.	0.N	0.N	15.	0.N	0.N	100.	0.N	15.	0.N	150.
BBJ379	20.	0.N	0.N	15.	0.N	0.N	70.	0.N	10.	0.N	150.
BBJ380	10.	0.N	0.N	15.	0.N	0.L	70.	0.N	10.	0.N	150.
BBJ382	30.	0.N	0.N	0.N	0.N	100.	50.	0.N	15.	300.	70.
BBJ383	50.	0.N	0.N	7.	0.N	0.N	100.	0.N	50.	300.	50.
BBJ385	7.	0.L	0.N	5.	0.N	200.	70.	0.N	0.L	200.	50.
BBJ388	20.	0.L	0.N	7.	0.N	200.	100.	0.N	30.	0.L	300.
BBJ389	150.	10.	0.N	5.	0.N	0.N	30.	0.N	15.	700.	150.
BBJ390	30.	0.N	0.N	5.	0.N	0.N	50.	0.N	15.	0.L	50.
BBJ391	15.	100.	0.N	7.	0.N	0.L	70.	0.N	30.	0.L	150.
BBJ392	7.	70.	0.N	0.L	0.N	0.N	150.	0.N	20.	0.N	50.
BBJ393	50.	20.	0.N	5.	0.N	0.L	500.	0.N	70.	500.	50.
BBJ394	50.	0.L	0.N	0.L	0.N	0.N	70.	0.N	30.	300.	20.
BBJ395	50.	70.	0.N	10.	0.N	0.N	200.	0.N	30.	300.	70.
BBJ398	70.	0.N	0.N	10.	0.N	150.	700.	0.N	20.	0.N	100.
BBJ399	10.	0.N	0.N	0.N	0.N	0.N	300.	0.N	10.	0.N	70.
BBJ417	7.	0.N	0.N	0.L	0.N	0.N	300.	0.N	0.N	0.N	50.
BBJ426	15.	0.N	0.N	0.N	0.N	0.N	300.	0.N	0.L	0.L	30.
BBJ427	100.	0.L	0.N	7.	0.N	0.N	200.	0.N	70.	700.	150.
BBJ429	7.	0.N	0.N	0.L	0.N	0.N	10.	0.N	0.N	0.N	30.
BBJ430	70.	0.L	0.N	0.L	0.N	0.N	1000.	0.N	30.	700.	50.
BBJ431	10.	0.N	0.N	0.N	0.N	0.N	15.	0.N	0.L	0.N	50.
BBJ432	7.	0.L	0.N	0.L	0.N	100.	150.	0.N	20.	0.N	70.
BBJ434	10.	0.N	0.N	0.L	0.N	0.N	50.	0.N	0.L	0.N	50.
BBJ435	10.	0.N	0.N	0.N	0.N	0.N	15.	0.N	0.L	0.N	30.
BBJ436	10.	0.N	0.N	0.N	0.N	0.N	70.	0.N	0.L	0.N	0.N
BBJ437	0.L	0.N	0.N	0.L	0.N	700.	500.	0.N	0.N	0.N	30.
BBJ438	7.	0.N	0.N	0.L	0.N	0.L	30.	0.N	0.L	0.N	50.
BBJ439	10.	0.N	0.N	0.L	0.N	0.L	100.	0.N	10.	0.N	70.
BBJ441	5.	0.N	0.N	0.N	0.N	0.N	15.	0.N	0.L	0.N	15.
BBJ443	20.	0.N	0.N	5.	0.N	0.L	50.	0.N	10.	0.N	30.
BBJ444	7.	0.N	0.N	7.	0.N	0.L	70.	0.N	10.	0.N	70.
BBJ450	5.	0.N	0.N	0.L	0.N	0.N	50.	0.N	10.	0.N	70.
BBJ457	5.	0.L	0.N	0.L	0.N	0.L	70.	0.N	0.L	0.N	100.

CHERT - SIL. ASSEMBLAGE-continued

SAMPLE	AU	HG	FE	MG	CA	TI	MN	AG	AS	B
BBJ459	0.00L	1.10	15000.	500.	1000.	1000.	1000.	1.0	0.N	30.
BBJ460	0.06	0.00G	30000.	1000.	700.	1500.	150.	1.0	0.N	20.
BBJ461	0.00L	0.30	10000.	2000.	700.	700.	70.	0.0N	0.N	50.
BBJ462	0.00L	0.50	20000.	1000.	500.	700.	50.	0.7	0.N	70.
BBJ463	0.00L	0.45	15000.	700.	0.L	500.	50.	0.5	0.N	70.

CHERT - SIL. ASSEMBLAGE-continued

SAMPLE	BA	BE	BI	CD	CO	CR	CU	LA	MO	NB
BBJ459	700.	0.N	0.N	0.N	0.N	10.	20.	0.N	5.	0.N
BBJ460	700.	0.N	0.N	0.N	0.N	30.	20.	0.N	7.	0.N
BBJ461	3000.	1.	0.N	0.N	0.N	15.	30.	0.N	0.N	0.N
BBJ462	700.	1.	0.N	0.N	0.N	50.	70.	0.N	0.N	0.N
BBJ463	500.	0.N	0.N	0.N	0.N	30.	15.	0.N	0.L	0.N

CHERT - SIL. ASSEMBLAGE-continued

SAMPLE	NI	PB	SB	SC	SN	SR	V	W	Y	ZN	ZR
BBJ459	5.	20.	0.N	0.L	0.N	0.N	100.	0.N	0.L	0.N	100.
BBJ460	20.	10.	0.N	7.	0.N	0.N	500.	0.N	0.N	200.	70.
BBJ461	7.	0.N	0.N	0.L	0.N	0.N	15.	0.N	0.N	0.N	30.
BBJ462	30.	0.L	0.N	10.	0.N	0.L	300.	0.N	15.	500.	70.
BBJ463	5.	0.L	0.N	5.	0.N	0.N	300.	0.N	0.L	0.N	50.

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QUARTZITE - SIL. ASSEMBLAGE

SAMPLE	AU	HG	FE	MG	CA	TI	MN	AG	AS	B
AGV299	0.10	0.08	20000.	3000.	2000.	3000.	200.	0.0N	700.	100.
AGV305	0.00L	0.13	500.	1000.	5000.	200.	20.	0.0N	0.N	0.N
AGV312	0.04	5.50	7000.	1000.	5000.	1000.	200.	0.0N	1000.	50.
AGV327	0.04	1.80	10000.	5000.	2000.	2000.	100.	0.0N	500.	50.
AGV332	0.00L	0.04	20000.	10000.	3000.	5000.	100.	0.0N	0.N	300.
AGU467	0.04	0.55	10000.	1500.	500.	1000.	100.	0.0L	300.	15.
AGU469	0.00L	0.30	5000.	1500.	700.	700.	150.	1.5	0.N	20.
AGU488	0.00L	0.18	30000.	50000.	50000.	2000.	1500.	0.0N	0.N	70.
AGU505	0.00L	0.45	10000.	5000.	700.	5000.	20.	0.0L	0.N	300.
AGU507	0.00L	0.14	10000.	50000.	70000.	1500.	1000.	0.0N	0.N	30.
AGU516	0.00L	0.13	1000.	0.L	0.L	15.	20.	0.0N	0.N	0.N
AGU536	0.00L	6.00	1500.	300.	1500.	200.	0.N	0.0N	0.N	0.L
AGU538	0.00L	0.08	700.	500.	700.	700.	0.N	0.0N	0.N	30.
BBJ018	0.00N	0.24	15000.	1500.	1000.	2000.	20.	0.7	0.N	50.
BBJ020	0.00N	0.04	3000.	1000.	500.	700.	200.	0.5	0.N	100.
BBJ021	0.00N	0.18	50000.	20000.	0.L	3000.	700.	0.0N	0.N	70.
BBJ027	0.00N	0.08	7000.	500.	1500.	300.	20.	0.5	300.	30.
BBJ140	0.00N	1.30	2000.	500.	500.	300.	20.	0.0N	500.	50.
BBJ167	0.10	0.18	3000.	500.	2000.	700.	150.	0.0N	0.L	0.L
BBJ258	0.10	3.00	15000.	700.	1500.	700.	100.	0.0N	0.L	30.
BBJ273	0.02	0.50	2000.	200.	1000.	700.	20.	0.0N	0.N	20.
BBJ301	0.00L	1.40	10000.	300.	2000.	150.	70.	0.0N	0.N	20.

QUARTZITE - SIL. ASSEMBLAGE-continued

SAMPLE	BA	BE	BI	CD	CO	CR	CU	LA	MO	NB
AGV299	700.	2.	0.N	0.N	5.	70.	70.	50.	0.N	10.
AGV305	70.	0.N	0.N	0.N	0.N	0.N	20.	0.N	0.N	0.N
AGV312	300.	0.N	0.N	0.N	0.N	30.	20.	0.N	50.	50.
AGV327	300.	1.	0.N	0.N	0.N	50.	100.	20.	15.	10.
AGV332	1000.	1.	0.N	0.N	0.N	70.	100.	30.	0.N	10.
AGU467	500.	0.L	0.N	0.L	0.N	70.	15.	0.N	30.	0.N
AGU469	700.	1.	0.N	0.L	0.L	30.	20.	0.N	7.	0.N
AGU488	300.	0.L	0.N	0.N	7.	70.	10.	30.	0.N	0.N
AGU505	3000.	1.	0.N	0.N	0.N	100.	30.	30.	0.N	15.
AGU507	500.	1.	0.N	0.N	0.L	15.	7.	0.L	0.N	0.L
AGU516	700.	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N
AGU536	200.	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N
AGU538	300.	0.N	0.N	0.N	0.N	20.	0.N	0.N	0.N	0.N
BBJ018	1500.	0.L	0.N	0.N	0.L	50.	15.	30.	20.	0.N
BBJ020	150.	1.	0.N	0.N	0.N	30.	50.	0.L	0.N	0.N
BBJ021	300.	2.	0.N	0.N	10.	70.	50.	20.	0.N	0.N
BBJ027	100.	0.L	0.N	0.N	0.N	0.N	7.	0.N	0.N	0.N
BBJ140	1000.	0.N	0.N	0.N	0.N	0.N	10.	0.N	0.N	0.N
BBJ167	300.	0.L	0.N	0.N	5.	0.N	5.	20.	0.N	0.N
BBJ258	200.	1.	0.N	0.N	10.	20.	30.	0.N	0.N	0.N
BBJ273	0.G	0.N	0.N	0.N	0.N	20.	5.	0.N	0.N	0.N
BBJ301	200.	0.L	0.N	0.N	0.N	0.N	7.	0.N	0.N	0.N

QUARTZITE - SIL. ASSEMBLAGE-continued

SAMPLE	NI	PB	SB	SC	SN	SR	V	W	Y	ZN	ZR
AGV299	30.	0.N	0.N	10.	0.N	0.N	200.	0.N	15.	0.N	200.
AGV305	10.	0.N	0.N	0.N	0.N	0.N	10.	0.N	0.N	0.N	50.
AGV312	50.	0.N	0.L	5.	0.N	100.	2000.	0.N	30.	0.N	200.
AGV327	30.	0.L	0.N	5.	0.N	0.N	2000.	0.N	20.	0.N	100.
AGV332	10.	0.L	0.N	10.	0.N	0.N	150.	0.N	10.	0.N	300.
AGU467	20.	10.	0.N	0.L	0.N	0.L	1500.	0.L	20.	0.N	50.
AGU469	50.	0.N	0.N	0.L	0.N	0.N	3000.	0.N	30.	200.	30.
AGU488	15.	0.N	0.N	7.	0.N	0.L	50.	0.N	15.	0.N	200.
AGU505	0.L	0.L	0.N	15.	0.N	300.	200.	0.N	20.	0.N	200.
AGU507	7.	0.L	0.N	5.	0.N	100.	50.	0.N	15.	0.N	150.
AGU516	7.	0.N	0.N	0.N	0.N	0.N	10.	0.N	0.N	0.N	70.
AGU536	0.L	0.N	0.N	0.N	0.N	0.N	20.	0.N	0.L	0.N	100.
AGU538	5.	0.N	0.N	0.L	0.N	0.N	300.	0.N	10.	0.N	70.
BBJ018	5.	100.	0.N	7.	0.N	300.	700.	0.N	15.	0.N	70.
BBJ020	50.	20.	0.N	5.	0.N	0.L	1500.	0.N	10.	300.	50.
BBJ021	50.	70.	0.N	15.	0.N	0.L	100.	0.N	15.	0.N	70.
BBJ027	10.	0.N	0.N	0.N	0.N	0.L	30.	0.N	0.N	0.N	10.
BBJ140	5.	0.N	0.N	0.L	0.N	0.L	200.	0.N	10.	0.N	20.
BBJ167	5.	0.L	0.L	5.	0.N	0.L	30.	0.N	0.L	0.N	150.
BBJ258	50.	20.	200.	0.L	0.N	0.L	200.	50.	10.	0.N	200.
BBJ273	5.	0.N	0.N	0.L	0.N	0.L	15.	0.N	0.N	0.N	70.
BBJ301	10.	15.	0.N	0.L	0.N	0.L	70.	0.N	0.N	0.N	10.

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SHALE - SIL. ASSEMBLAGE

SAMPLE	AU	HG	FE	MG	CA	TI	MN	AG	AS	B
AGV341	0.96	2.60	15000.	2000.	10000.	3000.	100.	0.5	1000.	100.
AGU366	0.00L	0.30	70000.	10000.	15000.	5000.	100.	0.0N	0.N	150.
AGU377	0.00L	0.18	50000.	70000.	100000.	5000.	2000.	0.0N	0.N	10.
AGU423	0.00L	0.08	30000.	50000.	150000.	3000.	1000.	0.5	0.N	10.
AGU460	0.00L	0.20	7000.	5000.	1500.	3000.	50.	0.0N	0.N	300.
AGU463	0.08	0.50	15000.	5000.	0.L	3000.	30.	0.0L	0.N	200.
BCM334	0.00N	0.35	30000.	2000.	2000.	2000.	50.	0.0N	300.	70.
BCM346	0.00N	0.06	10000.	15000.	1000.	3000.	70.	0.0N	0.N	70.
BCM347	0.00N	0.08	10000.	3000.	500.	1500.	30.	0.0N	0.N	30.
BCM353	0.00N	0.13	7000.	5000.	700.	3000.	30.	0.0N	0.N	10.
BBJ098	0.00N	0.12	30000.	5000.	700.	2000.	20.	0.0N	0.N	100.
BBJ101	0.06	0.70	70000.	5000.	3000.	2000.	1500.	0.5	7000.	150.
BBJ103	0.40	0.08	70000.	20000.	1500.	500.	500.	0.0N	0.N	50.
BBJ104	0.00L	0.00N	7000.	30000.	70000.	700.	1000.	0.0N	0.N	50.
BBJ170	0.04	0.08	50000.	15000.	1000.	5000.	70.	0.0N	0.N	200.
BBJ171	0.00L	0.12	30000.	5000.	1000.	5000.	70.	0.0N	0.L	200.
BBJ173	0.02	0.06	20000.	15000.	70000.	1500.	1000.	0.0N	300.	30.
BBJ175	0.04	0.08	20000.	5000.	20000.	3000.	200.	0.0N	0.N	300.
BBJ178	0.00L	0.12	30000.	10000.	500.	2000.	500.	0.0N	0.N	100.
BBJ183	0.04	0.10	7000.	7000.	500.	2000.	50.	0.5	0.N	50.
BBJ184	0.02	0.06	70000.	5000.	1000.	3000.	700.	0.0N	700.	700.
BBJ209	0.04	0.00N	30000.	7000.	500.	5000.	1000.	0.0N	0.L	100.
BBJ283	0.04	2.20	10000.	3000.	500.	3000.	20.	0.0N	0.N	100.
BBJ290	0.12	3.00	30000.	3000.	1000.	2000.	50.	0.0N	0.N	100.
BBJ298	0.00N	0.50	50000.	10000.	1000.	3000.	1500.	0.0N	0.N	70.
BBJ309	0.26	0.65	30000.	10000.	500.	2000.	150.	0.0N	0.N	100.
BBJ313	0.02	1.10	30000.	10000.	1500.	2000.	1000.	0.0N	0.N	70.
BBJ353	0.00L	0.06	150000.	20000.	20000.	1500.	1500.	0.0N	0.N	20.
BBJ359	0.00L	0.14	15000.	3000.	1500.	1000.	150.	0.0N	0.N	30.
BBJ365	0.00L	0.06	70000.	5000.	500.	2000.	30.	0.0L	0.L	100.
BBJ368	0.00L	0.75	70000.	3000.	1500.	2000.	50.	1.5	200.	100.
BBJ387	0.02	0.60	70000.	2000.	2000.	2000.	100.	1.0	0.N	150.
BBJ469	0.00L	1.00	30000.	1000.	3000.	1500.	500.	0.0L	300.	20.
BBJ470	0.00L	0.35	30000.	7000.	5000.	3000.	700.	0.0N	0.N	200.

SHALE - SIL. ASSEMBLAGE-continued

SAMPLE	BA	BE	BI	CD	CO	CR	CU	LA	MO	NB
AGV341	1000.	0.L	0.N	0.N	0.N	50.	100.	30.	0.N	15.
AGU366	1000.	0.L	0.N	0.N	10.	70.	300.	70.	0.L	20.
AGU377	1000.	0.L	0.N	0.N	15.	70.	20.	100.	0.N	15.
AGU423	2000.	0.L	0.N	0.N	0.L	20.	10.	70.	0.L	10.
AGU460	700.	1.	0.N	0.N	0.L	70.	10.	50.	0.N	0.L
AGU463	1000.	1.	0.N	0.N	0.L	70.	15.	0.L	0.N	15.
BCM334	150.	0.L	0.N	0.N	0.N	20.	200.	0.N	0.N	0.N
BCM346	500.	1.	0.N	0.N	7.	70.	30.	30.	0.L	0.N
BCM347	2000.	0.L	0.N	0.N	5.	30.	20.	20.	0.N	0.N
BCM353	700.	0.L	0.N	0.N	5.	20.	70.	20.	0.N	0.N
BBJ098	300.	1.	0.N	0.N	0.N	50.	100.	20.	0.N	0.N
BBJ101	700.	0.L	0.N	20.	20.	50.	150.	0.N	0.N	0.N
BBJ103	500.	2.	0.N	0.N	30.	30.	100.	30.	0.N	10.
BBJ104	100.	0.L	0.N	0.N	0.N	0.N	10.	0.N	0.N	0.N
BBJ170	700.	2.	0.N	0.N	10.	100.	50.	20.	10.	0.N
BBJ171	300.	2.	0.N	0.N	10.	70.	70.	30.	0.N	15.
BBJ173	300.	0.L	0.N	0.N	0.N	20.	30.	0.L	0.N	0.N
BBJ175	500.	2.	0.N	0.N	10.	50.	20.	50.	0.N	15.
BBJ178	500.	1.	0.N	0.N	15.	20.	70.	0.L	0.N	0.N
BBJ183	700.	0.N	0.N	0.N	0.N	150.	30.	0.N	0.N	0.N
BBJ184	200.	2.	0.N	0.N	10.	70.	70.	0.L	0.N	0.N
BBJ209	700.	1.	0.N	0.N	150.	150.	50.	30.	5.	10.
BBJ283	1000.	1.	0.N	0.N	0.N	70.	10.	70.	50.	0.N
BBJ290	700.	2.	0.N	0.N	0.N	50.	70.	30.	30.	0.N
BBJ298	300.	1.	0.N	0.N	15.	100.	20.	20.	0.N	0.N
BBJ309	300.	2.	0.N	0.N	10.	70.	20.	20.	0.N	0.N
BBJ313	500.	2.	0.N	0.N	15.	50.	20.	20.	0.N	0.N
BBJ353	700.	0.L	0.N	0.N	0.L	15.	30.	20.	0.N	0.N
BBJ359	700.	1.	0.N	0.N	0.N	20.	30.	0.N	0.N	0.N
BBJ365	500.	2.	0.N	0.N	0.N	50.	30.	30.	30.	0.N
BBJ368	500.	2.	0.N	0.N	0.N	100.	150.	20.	70.	0.N
BBJ387	700.	0.L	0.N	0.N	15.	70.	150.	0.N	20.	0.N
BBJ469	500.	1.	0.N	0.N	10.	50.	70.	30.	0.N	0.N
BBJ470	500.	2.	0.N	0.N	15.	70.	30.	50.	0.L	0.N

SHALE - SIL. ASSEMBLAGE-continued

SAMPLE	NI	PB	SB	SC	SN	SR	V	W	Y	ZN	ZR
AGV341	30.	0.N	10000.	10.	0.N	0.N	500.	50.	15.	0.N	200.
AGU366	100.	10.	0.N	20.	0.L	100.	200.	0.N	50.	500.	300.
AGU377	10.	20.	0.N	10.	0.L	300.	70.	0.N	30.	0.N	300.
AGU423	30.	20.	0.N	5.	0.N	200.	100.	0.N	50.	200.	300.
AGU460	15.	10.	0.N	10.	0.N	100.	150.	0.N	15.	0.N	200.
AGU463	15.	15.	0.N	10.	0.N	0.N	100.	0.N	15.	0.N	200.
BCM334	10.	10.	0.N	5.	0.N	0.N	100.	0.N	10.	100.	100.
BCM346	30.	10.	0.N	10.	0.N	100.	70.	0.N	20.	0.N	200.
BCM347	10.	0.L	0.N	7.	0.N	0.N	70.	0.N	15.	0.N	70.
BCM353	30.	15.	0.N	5.	0.N	0.L	30.	0.N	15.	0.L	300.
BBJ098	5.	10.	0.N	10.	0.N	100.	150.	0.N	10.	0.N	100.
BBJ101	20.	50.	0.N	7.	0.N	100.	150.	0.N	15.	1500.	150.
BBJ103	150.	0.N	0.N	20.	0.N	0.L	150.	0.N	20.	200.	150.
BBJ104	5.	15.	0.N	5.	0.N	100.	100.	0.N	10.	0.N	30.
BBJ170	70.	20.	0.N	15.	0.N	0.L	200.	0.N	30.	0.N	500.
BBJ171	20.	15.	0.N	15.	0.N	0.L	150.	0.N	20.	0.N	200.
BBJ173	15.	15.	0.N	7.	0.N	100.	100.	0.N	20.	0.N	150.
BBJ175	15.	15.	0.N	10.	0.N	100.	70.	0.N	20.	0.N	200.
BBJ178	70.	0.N	0.N	10.	0.N	0.L	50.	0.N	15.	300.	150.
BBJ183	50.	10.	0.N	7.	0.N	0.N	200.	0.N	0.L	0.N	200.
BBJ184	50.	10.	0.N	7.	0.N	100.	150.	70.	20.	0.N	200.
BBJ209	200.	10.	0.N	15.	0.N	0.L	100.	0.N	30.	700.	500.
BBJ283	5.	10.	0.N	10.	0.N	100.	700.	0.N	30.	0.N	150.
BBJ290	15.	20.	0.N	10.	0.N	100.	700.	0.N	50.	0.N	200.
BBJ298	70.	10.	0.N	10.	0.N	0.L	70.	0.N	20.	300.	200.
BBJ309	20.	20.	0.N	10.	0.N	0.L	100.	0.N	15.	200.	100.
BBJ313	50.	10.	0.N	15.	0.N	0.L	150.	0.N	20.	0.L	150.
BBJ353	15.	0.N	0.N	5.	0.N	0.L	20.	0.N	10.	0.N	200.
BBJ359	7.	0.N	0.N	0.N	0.N	0.L	50.	0.N	0.L	0.N	50.
BBJ365	7.	0.L	0.N	15.	0.N	0.N	300.	0.N	20.	0.N	150.
BBJ368	20.	10.	0.L	15.	0.N	0.N	1500.	0.N	50.	0.N	150.
BBJ387	50.	20.	0.N	10.	0.N	0.L	150.	0.N	20.	0.L	200.
BBJ469	30.	10.	0.N	7.	0.N	0.N	300.	0.N	20.	0.N	70.
BBJ470	50.	0.L	0.N	15.	0.N	0.L	100.	0.N	50.	200.	300.

LIMESTONE - SIL. ASSEMBLAGE

SAMPLE	AU	HG	FE	MG	CA	TI	MN	AG	AS	B
AGV263	0.00L	0.35	10000.	5000.	200000.	200.	500.	0.0N	0.N	0.L
AGV328	0.02	0.04	10000.	10000.	20000.	2000.	500.	0.0N	0.N	30.
AGU365	0.00L	0.07	5000.	70000.	200000.	5000.	3000.	0.0N	0.N	10.
AGU401	0.00L	0.08	50000.	70000.	200000.	1500.	2000.	0.0N	0.N	20.
AGU413	0.00L	0.08	10000.	50000.	0.G	1000.	0.G	0.0N	0.N	0.L
AGU415	0.00L	0.07	15000.	70000.	0.G	700.	2000.	0.0N	0.N	20.
AGU416	0.00L	0.20	30000.	30000.	0.G	2000.	3000.	0.0N	0.N	200.
AGU420	0.00L	0.06	20000.	20000.	200000.	2000.	1000.	0.0N	0.N	10.
AGU483	0.00L	0.18	30000.	50000.	200000.	1500.	700.	0.0N	0.N	70.
AGU486	0.00L	0.06	3000.	7000.	0.G	300.	150.	0.0N	0.N	0.N
AGU487	0.00L	0.12	7000.	5000.	0.G	200.	150.	0.0N	0.N	0.N
BBJ058	0.00N	0.00G	15000.	5000.	200000.	300.	300.	0.0N	0.N	0.L
BBJ060	0.00N	0.90	5000.	15000.	200000.	200.	200.	0.0N	0.N	0.N
BBJ063	0.00N	1.20	10000.	500.	2000.	700.	0.G	0.0N	0.N	30.
BBJ169	0.00L	0.00N	30000.	7000.	200000.	700.	700.	0.0N	0.N	20.
BBJ172	0.02	0.70	15000.	30000.	200000.	1500.	500.	0.0N	0.N	70.
BBJ180	0.00L	0.12	50000.	7000.	150000.	1500.	700.	0.0N	0.N	100.
BBJ195	0.02	0.06	10000.	10000.	0.G	500.	300.	0.0N	0.N	10.
BBJ249	0.04	0.20	70000.	20000.	100000.	1500.	1000.	0.0N	0.N	70.
BBJ288	0.02	3.00	10000.	7000.	0.G	1000.	500.	0.0N	0.N	0.L
BBJ358	0.00L	0.05	15000.	50000.	200000.	700.	700.	0.0N	0.N	0.N

LIMESTONE - SIL. ASSEMBLAGE-continued

SAMPLE	BA	BE	BI	CD	CO	CR	CU	LA	MO	NB
AGV263	100.	0.N	0.N	0.N	0.N	5.	15.	0.N	0.N	0.N
AGV328	700.	1.	0.N	0.N	0.N	20.	50.	20.	0.N	10.
AGU365	100.	0.N	0.N	0.N	10.	100.	10.	0.L	0.L	20.
AGU401	0.L	0.L	0.N	0.N	15.	50.	7.	0.N	10.	10.
AGU413	100.	0.L	0.N	0.N	10.	0.L	5.	50.	0.L	0.L
AGU415	100.	0.L	0.N	0.N	0.L	0.L	5.	50.	0.L	0.L
AGU416	100.	0.L	0.N	0.N	5.	70.	20.	70.	5.	10.
AGU420	70.	0.L	0.N	0.N	0.L	50.	10.	50.	5.	0.L
AGU483	300.	0.L	0.N	0.N	10.	70.	7.	30.	0.N	0.N
AGU486	300.	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N
AGU487	100.	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N
BBJ058	30.	0.N	0.N	0.N	0.N	0.N	5.	0.N	0.N	0.N
BBJ060	100.	0.N	0.N	0.N	0.N	0.N	0.L	0.N	0.N	0.N
BBJ063	1000.	0.L	0.N	0.N	150.	0.L	10.	0.N	10.	0.N
BBJ169	150.	0.N	0.N	0.N	5.	50.	5.	0.N	0.N	0.N
BBJ172	500.	0.L	0.N	0.N	0.N	50.	15.	0.L	0.N	0.N
BBJ180	700.	0.L	0.N	0.N	10.	50.	10.	0.L	0.N	0.N
BBJ195	100.	0.N	0.N	0.N	0.N	0.N	0.L	0.N	0.N	0.N
BBJ249	300.	0.L	0.N	0.N	20.	50.	15.	20.	0.N	0.N
BBJ288	200.	0.L	0.N	0.N	0.N	20.	5.	0.N	0.N	0.N
BBJ358	300.	0.N	0.N	0.N	0.N	30.	0.L	0.N	0.N	0.N

LIMESTONE - SIL. ASSEMBLAGE-continued

SAMPLE	NI	PB	SB	SC	SN	SR	V	W	Y	ZN	ZR
AGV263	10.	0.L	0.N	0.N	0.N	500.	20.	0.N	10.	0.N	15.
AGV328	50.	0.L	0.N	5.	0.N	300.	50.	0.N	10.	0.N	100.
AGU365	50.	70.	0.N	15.	10.	700.	200.	0.N	50.	500.	150.
AGU401	30.	10.	0.N	5.	50.	100.	100.	0.N	30.	0.L	150.
AGU413	50.	0.L	0.N	0.L	0.N	300.	70.	0.N	15.	0.L	50.
AGU415	7.	0.L	0.N	0.L	0.N	200.	50.	0.N	10.	0.L	50.
AGU416	20.	0.L	0.N	10.	0.N	200.	150.	0.N	20.	200.	100.
AGU420	20.	20.	0.N	15.	0.N	100.	50.	0.N	20.	0.L	100.
AGU483	30.	20.	0.N	7.	0.N	700.	50.	0.N	15.	0.N	30.
AGU486	0.N	0.N	0.N	0.N	0.N	700.	0.L	0.N	0.N	0.N	0.L
AGU487	0.N	0.N	0.N	0.N	0.N	300.	30.	0.N	0.L	0.N	0.L
BBJ058	0.L	0.N	0.N	0.L	0.N	300.	30.	0.N	10.	0.N	0.N
BBJ060	5.	0.N	0.N	0.L	0.N	500.	20.	0.N	10.	0.N	0.N
BBJ063	300.	0.N	0.N	0.L	0.N	0.L	700.	0.N	0.N	1000.	10.
BBJ169	5.	10.	0.N	7.	0.N	200.	70.	0.N	30.	0.N	70.
BBJ172	20.	20.	0.N	7.	0.N	700.	200.	0.N	20.	0.N	70.
BBJ180	15.	10.	0.N	15.	0.N	100.	70.	0.N	30.	0.N	150.
BBJ195	5.	0.N	0.N	5.	0.N	500.	20.	0.N	20.	0.N	15.
BBJ249	50.	50.	0.N	10.	0.N	100.	100.	0.N	20.	0.N	70.
BBJ288	0.L	0.N	0.N	5.	0.N	300.	70.	0.N	20.	0.N	20.
BBJ358	0.L	0.N	0.N	0.N	0.N	300.	15.	0.N	10.	0.N	50.

QUARTZ VEINS - SIL. ASSEMBL.

SAMPLE	AU	HG	FE	MG	CA	TI	MN	AG	AS	B
AGV310	0.10	0.08	10000.	500.	3000.	150.	100.	0.0N	700.	0.N
AGV324	0.04	0.50	20000.	5000.	2000.	5000.	100.	0.0N	500.	200.
AGV335	0.00L	7.50	10000.	500.	1000.	5000.	100.	0.0N	500.	0.N
AGU527	0.00L	0.35	10000.	2000.	7000.	700.	30.	0.5	0.N	10.
BCM295	0.00N	0.55	50000.	1000.	1000.	300.	1000.	0.0N	0.N	15.
BBJ003	0.02	0.10	50000.	700.	2000.	1500.	200.	0.5	500.	20.
BBJ029	0.00N	0.04	20000.	200.	0.L	20.	100.	0.0N	0.N	15.
BBJ055	0.80	3.00	200000.	1000.	10000.	500.	1500.	2.0	700.	20.
BBJ127	0.00N	0.16	500.	50000.	70000.	70.	200.	0.0N	0.N	0.L
BBJ190	0.02	0.14	0.G	3000.	1000.	1000.	2000.	0.0N	0.N	50.
BBJ224	0.02	0.12	1000.	2000.	7000.	100.	150.	1.5	0.L	15.
BBJ232	0.02	0.80	0.G	3000.	1000.	1500.	0.G	2.0	300.	100.
BBJ235	0.02	0.40	0.G	1000.	2000.	0.G	0.G	0.0N	500.	20.
BBJ240	6.30	2.20	150000.	2000.	1000.	1500.	70.	0.0N	1500.	100.
BBJ342	7.00	8.00	150000.	1000.	20000.	1000.	100.	2.0	3000.	0.L
BBJ386	0.10	1.20	20000.	300.	500.	200.	200.	0.0L	700.	15.
BBJ396	0.15	0.90	30000.	300.	700.	150.	150.	0.0L	700.	15.
BBJ428	0.04	0.09	150000.	1500.	700.	700.	150.	0.0N	0.N	20.
BBJ440	0.00L	0.07	10000.	1000.	500.	1000.	150.	0.0L	0.N	50.
BBJ448	0.00L	0.06	15000.	500.	1000.	300.	700.	0.0N	0.N	20.
BBJ467	0.04	2.00	0.G	2000.	1500.	700.	1500.	0.0N	2000.	70.
BBJ468	0.80	0.50	20000.	1500.	1000.	500.	150.	0.0N	1000.	50.

QUARTZ VEINS - SIL. ASSEMBL.-continued

SAMPLE	BA	BE	BI	CD	CO	CR	CU	LA	MO	NB
AGV310	70.	0.N	0.N	0.N	0.N	0.N	15.	0.N	0.N	0.N
AGV324	1000.	1.	0.N	0.N	0.N	100.	50.	50.	0.N	10.
AGV335	500.	0.L	0.N	0.N	0.N	50.	20.	70.	0.N	15.
AGU527	700.	0.N	0.N	0.N	0.N	0.N	0.N	30.	0.N	0.N
BCM295	300.	0.L	0.N	0.N	10.	50.	150.	20.	10.	0.N
BBJ003	300.	0.L	50.	0.N	0.N	30.	70.	0.L	15.	0.N
BBJ029	50.	0.L	0.N	0.N	0.N	20.	50.	0.L	0.N	0.N
BBJ055	100.	2.	0.L	0.N	30.	20.	1000.	0.N	10.	0.N
BBJ127	0.G	0.N	0.N	0.N	0.N	0.L	0.L	0.N	0.N	0.N
BBJ190	300.	1.	0.N	0.N	15.	70.	200.	0.N	0.N	0.N
BBJ224	300.	0.L	0.N	0.N	0.L	0.N	5.	0.N	0.N	0.N
BBJ232	500.	3.	0.N	20.	200.	50.	10000.	0.N	0.N	0.N
BBJ235	300.	1.	0.N	0.N	500.	700.	100.	0.N	20.	20.
BBJ240	700.	1.	0.N	50.	15.	300.	70.	0.N	30.	0.N
BBJ342	1500.	3.	20.	0.L	0.L	70.	500.	0.N	70.	0.N
BBJ386	200.	0.N	0.N	0.N	0.N	0.L	30.	0.N	0.N	0.N
BBJ396	200.	0.N	0.N	0.N	5.	15.	30.	0.N	0.N	0.N
BBJ428	700.	1.	0.N	0.N	10.	15.	50.	0.N	50.	0.N
BBJ440	200.	0.N	0.N	0.N	0.N	15.	50.	0.N	0.L	0.N
BBJ448	1000.	0.N	0.N	0.N	0.N	0.N	10.	0.N	0.N	0.N
BBJ467	700.	7.	0.N	0.N	150.	70.	1000.	0.L	10.	0.N
BBJ468	150.	1.	0.N	0.N	10.	30.	100.	0.N	7.	0.N

QUARTZ VEINS - SIL. ASSEMBL.-continued

SAMPLE	NI	PB	SB	SC	SN	SR	V	W	Y	ZN	ZR
AGV310	10.	0.N	0.N	0.N	0.N	0.N	50.	0.N	0.N	0.N	0.N
AGV324	10.	10.	0.N	10.	0.N	0.N	100.	0.N	10.	0.N	200.
AGV335	10.	0.L	0.N	7.	0.N	200.	100.	100.	10.	0.N	300.
AGU527	15.	0.N	0.L	0.N	0.N	0.N	30.	0.N	10.	0.N	300.
BCM295	70.	100.	0.N	7.	0.N	0.L	200.	0.N	15.	200.	20.
BBJ003	15.	100.	0.N	5.	0.N	200.	200.	0.L	20.	0.N	70.
BBJ029	10.	0.N	0.N	0.L	0.N	0.L	20.	0.N	0.N	0.N	0.N
BBJ055	200.	20.	0.N	5.	0.N	0.L	700.	0.N	15.	0.N	0.N
BBJ127	0.L	10.	0.N	0.L	0.N	100.	10.	0.N	0.N	0.N	0.N
BBJ190	150.	0.N	0.N	7.	0.N	0.L	200.	0.N	20.	3000.	50.
BBJ224	10.	0.L	0.N	5.	0.N	0.L	20.	0.N	0.N	0.N	0.N
BBJ232	1000.	20.	0.N	15.	0.N	100.	500.	0.N	200.	0.G	70.
BBJ235	1500.	0.L	0.N	50.	0.N	0.L	200.	0.N	70.	2000.	150.
BBJ240	50.	20.	500.	10.	0.N	150.	2000.	0.N	20.	700.	70.
BBJ342	50.	50.	0.N	0.L	0.N	500.	700.	100.	70.	300.	50.
BBJ386	15.	0.N	0.N	0.N	0.N	0.N	15.	0.N	0.N	300.	20.
BBJ396	15.	0.N	0.N	0.N	0.N	0.N	15.	0.N	0.N	500.	10.
BBJ428	50.	0.L	0.N	5.	0.N	0.N	70.	0.N	15.	300.	30.
BBJ440	7.	0.N	0.N	0.L	0.N	0.N	150.	0.N	0.N	0.N	70.
BBJ448	7.	0.N	0.N	0.L	0.N	0.N	15.	0.N	0.L	0.N	20.
BBJ467	500.	15.	0.L	15.	0.N	0.N	300.	50.	20.	2000.	70.
BBJ468	50.	0.N	0.L	0.L	0.N	0.N	700.	0.N	0.N	300.	30.

DATE 3/18/80

HAMBURG DOLOMITE

SAMPLE	AU	HG	FE	MG	CA	TI	MN	AG	AS	B
AGU347	0.00L	0.70	100000.	100000.	100000.	50.	0.G	0.0N	0.N	200.
AGU348	0.00L	0.24	7000.	100000.	150000.	500.	500.	0.0N	0.N	10.
AGU349	0.00L	0.15	5000.	100000.	200000.	500.	500.	0.0N	0.N	10.
AGU356	0.00L	0.11	0.G	5000.	10000.	300.	50.	0.0N	0.N	100.
AGU360	0.00L	0.18	1000.	10000.	20000.	300.	500.	0.0N	0.N	10.
AGU362	0.00L	0.03	50000.	100000.	0.G	100.	5000.	0.0N	0.N	0.G
AGU364	0.00L	0.12	7000.	0.G	200000.	50.	1000.	0.0N	0.N	70.
AGU379	0.00L	0.15	0.L	100000.	200000.	50.	200.	0.0N	0.N	0.N
AGU382	0.00L	0.10	1000.	100000.	200000.	50.	500.	0.0N	0.N	15.
AGU384	0.00L	0.22	3000.	20000.	0.G	100.	3000.	0.0N	0.N	10.
AGU388	0.00L	0.12	2000.	100000.	200000.	150.	500.	0.0N	0.N	0.L
AGU391	0.00L	0.09	500.	100000.	200000.	100.	200.	0.0N	0.N	0.L
AGU395	0.00L	0.08	10000.	100000.	0.G	100.	1000.	0.0N	0.N	0.L
AGU396	0.00L	0.14	0.G	5000.	15000.	20.	200.	15.0	0.N	200.
AGU398	0.00L	0.28	0.G	30000.	70000.	50.	0.G	0.0N	0.N	200.
AGU400	0.00L	0.00L	0.G	15000.	200000.	50.	0.G	0.0N	0.N	50.
AGU402	0.00L	0.11	100000.	100000.	200000.	100.	5000.	0.0N	0.N	0.G
AGU428	0.00L	0.10	0.L	100000.	100000.	50.	150.	0.0N	0.N	0.N
BCM381	0.04	3.00	5000.	7000.	200000.	70.	2000.	0.0N	0.N	0.N
BCM383	0.00L	0.40	20000.	2000.	30000.	70.	2000.	0.0N	0.N	15.
BCM385	0.00N	0.55	7000.	1000.	3000.	100.	2000.	0.0N	0.N	0.N
BCM386	0.00N	0.35	15000.	20000.	0.G	200.	3000.	0.0N	0.N	10.
BCM387	0.00N	0.30	3000.	70000.	100000.	50.	2000.	0.0N	0.N	150.
BCM388	0.00N	0.20	5000.	7000.	150000.	200.	1500.	0.5	0.L	0.N
BCM389	0.00N	0.40	3000.	7000.	70000.	50.	1000.	0.0N	0.N	0.N
BCM390	0.00N	0.50	10000.	7000.	200000.	300.	3000.	0.0N	0.N	0.L
BCM391	0.00N	0.16	500.	70000.	200000.	70.	300.	0.0N	0.N	0.L
BCM392	0.00N	0.09	5000.	70000.	100000.	70.	3000.	0.0N	0.N	30.
BCM393	0.00N	0.30	50000.	3000.	10000.	300.	0.G	0.0N	0.N	70.
BCM394	0.00N	0.60	7000.	50000.	70000.	50.	700.	0.0N	0.N	0.L
BCM395	0.00L	0.35	10000.	30000.	200000.	50.	1500.	0.5	0.N	10.
BCM400	0.00N	1.80	30000.	300.	700.	0.L	300.	2.0	300.	70.
BCM401	0.00N	0.16	10000.	70000.	150000.	100.	0.G	0.0N	0.N	10.
BCM402	0.00N	0.65	70000.	1500.	700.	200.	300.	1.0	0.N	100.
BCM403	0.00N	0.26	7000.	5000.	70000.	50.	5000.	0.0N	0.N	0.N

HAMBURG DOLOMITE-continued

SAMPLE	BA	BE	BI	CD	CO	CR	CU	LA	MO	NB
AGU347	0.L	2.	0.N	0.N	10.	0.L	0.L	0.L	1000.	10.
AGU348	0.L	0.L	0.N	0.N	0.L	0.L	0.L	0.L	0.L	0.L
AGU349	0.L	0.L	0.N	0.N	0.L	0.L	0.L	0.L	0.L	0.L
AGU356	100.	0.L	0.N	0.N	0.L	10.	150.	0.L	0.L	20.
AGU360	0.N	0.N	0.N	0.N	0.L	0.L	0.L	20.	0.N	0.L
AGU362	0.N	0.N	0.N	0.N	0.L	0.L	0.L	0.L	5.	0.L
AGU364	0.N	0.N	0.N	0.N	0.L	0.L	0.L	50.	0.L	0.L
AGU379	0.L	0.N	0.N	0.N	0.L	0.L	0.L	0.	0.N	0.L
AGU382	0.N	0.N	0.N	0.N	0.L	0.L	0.L	0.L	0.N	0.L
AGU384	50.	0.N	0.N	0.N	0.L	0.L	0.L	0.L	0.L	0.L
AGU388	0.L	0.N	0.N	0.N	0.L	0.L	0.L	0.L	0.N	0.L
AGU391	0.L	0.L	0.N	0.N	0.L	0.L	0.L	50.	0.L	0.L
AGU395	20.	0.L	0.N	0.N	0.L	0.L	20.	0.L	0.N	0.L
AGU396	300.	0.L	0.N	0.N	10.	10.	300.	0.L	10.	20.
AGU398	100.	0.L	0.N	0.N	10.	0.L	20.	0.N	0.L	20.
AGU400	0.L	5.	0.N	0.N	10.	0.L	20.	0.L	10.	20.
AGU402	0.L	0.L	0.N	0.N	0.L	0.L	5.	50.	0.L	0.L
AGU428	0.L	0.L	0.N	0.N	0.L	0.L	0.L	0.L	0.L	0.L
BCM381	200.	0.L	0.N	0.N	0.N	0.N	7.	0.N	0.N	0.N
BCM383	500.	2.	10.	0.N	7.	0.N	20.	0.N	7.	0.N
BCM385	150.	3.	0.N	0.N	0.N	0.N	20.	0.N	0.N	0.N
BCM386	70.	0.L	0.N	0.N	0.N	0.L	20.	0.L	0.N	0.N
BCM387	2000.	0.L	0.L	0.N	0.N	0.N	5.	0.L	0.N	0.N
BCM388	200.	0.L	0.N	0.N	0.N	0.N	20.	0.L	5.	0.N
BCM389	100.	2.	0.N	0.N	0.N	0.L	20.	0.N	0.N	0.N
BCM390	150.	2.	0.N	0.N	0.N	0.L	15.	0.N	0.N	0.N
BCM391	50.	0.N	0.N	0.N	0.N	0.N	7.	0.L	0.N	0.N
BCM392	50.	0.L	0.N	0.N	0.N	0.L	0.L	0.N	0.N	0.N
BCM393	150.	1.	100.	0.N	10.	0.N	70.	0.N	20.	0.N
BCM394	0.L	0.N	20.	0.N	10.	0.L	700.	0.N	0.N	0.N
BCM395	70.	2.	20.	30.	5.	20.	200.	0.N	0.N	0.N
BCM400	150.	0.L	10.	0.N	0.N	0.L	700.	0.N	50.	0.N
BCM401	0.L	2.	0.N	0.N	0.N	0.L	15.	0.N	0.N	0.N
BCM402	20.	1.	0.N	0.N	20.	0.L	15.	0.N	50.	0.N
BCM403	300.	5.	0.N	20.	0.N	0.L	70.	0.N	0.L	0.N

HAMBURG DOLOMITE-continued

SAMPLE	NI	PB	SB	SC	SN	SR	V	W	Y	ZN	ZR
AGU347	0.L	0.L	0.N	0.N	100.	0.L	10.	200.	0.L	0.N	0.L
AGU348	5.	30.	0.N	0.N	0.N	100.	0.L	0.N	10.	0.N	20.
AGU349	0.L	0.L	0.N	0.N	0.N	100.	0.L	0.N	0.L	0.N	0.L
AGU356	0.L	70.	0.N	0.N	0.L	0.L	50.	0.N	0.L	1000.	20.
AGU360	0.L	0.N	0.N	0.N	0.L	100.	10.	0.N	0.L	0.N	30.
AGU362	0.L	0.L	0.N	0.N	10.	100.	10.	50.	0.L	0.N	0.L
AGU364	0.L	0.N	0.N	0.N	0.L	100.	0.L	0.N	0.L	0.N	0.L
AGU379	0.L	30.	0.N	0.L	0.L	100.	0.L	0.N	0.L	0.N	0.L
AGU382	0.L	0.N	0.N	0.N	0.L	100.	0.L	0.N	0.L	0.N	0.L
AGU384	0.L	0.N	0.N	0.N	0.L	100.	10.	100.	0.L	0.N	0.L
AGU388	0.L	10.	0.N	0.L	0.L	100.	10.	0.N	0.L	0.N	0.L
AGU391	0.L	0.L	0.N	0.L	0.N	100.	0.L	0.N	0.L	0.L	0.L
AGU395	7.	0.L	0.N	0.L	0.N	100.	15.	0.N	0.L	0.L	0.L
AGU396	0.L	500.	0.N	0.L	50.	0.L	30.	0.N	10.	5000.	0.L
AGU398	0.L	10.	0.N	0.L	20.	0.L	10.	0.N	0.L	1000.	0.L
AGU400	0.L	10.	0.N	0.L	100.	0.L	15.	0.N	0.L	1000.	0.L
AGU402	0.L	20.	0.N	0.L	20.	100.	0.L	0.N	0.L	500.	0.L
AGU428	5.	0.N	0.N	0.L	0.N	0.L	0.L	0.N	0.L	0.L	0.L
BCM381	7.	70.	0.N	0.N	15.	100.	10.	0.N	10.	0.L	0.N
BCM383	7.	15.	0.L	0.L	0.L	0.N	50.	150.	0.L	0.L	0.N
BCM385	5.	15.	0.N	0.N	0.L	0.N	30.	50.	0.N	500.	0.L
BCM386	0.L	10.	0.N	5.	20.	100.	20.	70.	10.	0.N	0.L
BCM387	0.L	20.	0.N	0.N	0.L	200.	0.L	0.N	0.L	0.L	0.N
BCM388	0.L	30.	0.N	0.N	0.L	0.L	20.	0.N	10.	300.	0.L
BCM389	0.L	50.	0.N	0.N	0.N	0.N	0.L	0.N	0.L	1000.	0.N
BCM390	5.	30.	0.N	0.L	10.	0.L	50.	50.	10.	300.	15.
BCM391	0.L	30.	0.N	0.N	0.N	100.	0.L	0.N	0.L	300.	0.N
BCM392	0.L	30.	0.N	0.N	0.N	0.L	0.L	0.N	0.L	0.N	0.N
BCM393	15.	30.	0.N	5.	0.N	0.N	70.	150.	15.	200.	15.
BCM394	7.	50.	0.N	0.N	0.N	0.L	50.	0.N	0.L	700.	0.L
BCM395	15.	150.	200.	0.N	200.	0.L	150.	70.	10.	1000.	0.L
BCM400	5.	15.	0.L	0.N	20.	0.N	100.	0.N	0.L	5000.	0.N
BCM401	0.L	15.	0.N	0.N	20.	0.N	20.	0.N	0.L	0.L	10.
BCM402	15.	10.	0.N	5.	0.N	0.N	100.	0.N	0.L	200.	0.N
BCM403	10.	50.	0.N	0.N	20.	0.N	20.	50.	0.L	3000.	0.N

POGONIP GROUP

SAMPLE	AU	HG	FE	MG	CA	TI	MN	AG	AS	B
AGU352	0.00L	0.14	70000.	50000.	0.G	3000.	0.G	0.ON	0.N	20.
AGU357	0.00L	0.06	100000.	30000.	200000.	5000.	0.G	0.ON	0.N	10.
AGU361	0.00L	0.06	10000.	100000.	150000.	1000.	1500.	0.ON	0.N	10.
AGU368	0.00L	0.08	150000.	50000.	200000.	700.	0.G	0.ON	0.N	20.
AGU371	0.00L	0.16	0.G	500.	500.	0.L	200.	10.0	0.N	150.
AGU373	0.00L	0.18	0.G	30000.	100000.	50.	2000.	0.0L	0.N	50.
AGU381	0.00L	0.20	1000.	100000.	200000.	150.	300.	0.ON	0.N	0.L
AGU386	0.00L	0.15	5000.	100000.	0.G	1000.	1000.	0.ON	0.N	0.L
AGU397	0.00L	0.06	100000.	100000.	150000.	50.	0.G	0.ON	0.N	200.
AGU442	0.00L	0.09	15000.	70000.	20000.	5000.	2000.	0.ON	0.N	10.
AGU447	0.00L	0.06	20000.	15000.	100000.	1500.	150.	0.ON	0.N	15.
AGU518	0.00L	0.11	20000.	30000.	150000.	1500.	500.	0.ON	0.N	100.
AGU519	0.00L	0.05	5000.	70000.	100000.	300.	300.	0.ON	0.N	0.N
AGU520	0.00L	0.06	3000.	100000.	150000.	30.	150.	0.ON	0.N	0.N
AGU521	0.00L	0.18	1500.	2000.	50000.	200.	70.	0.ON	0.N	0.N
BCM356	0.00N	0.26	2000.	5000.	200000.	500.	300.	0.ON	0.N	15.
BCM360	0.00N	0.20	2000.	7000.	200000.	300.	1500.	0.ON	0.N	15.
BCM362	0.02	0.55	30000.	2000.	7000.	100.	5000.	1.0	0.L	50.
BCM365	0.00N	1.60	70000.	1000.	7000.	70.	100.	1.0	0.L	100.
BCM396	0.00N	0.30	70000.	300.	700.	0.L	20.	10.0	0.N	100.
BCM397	0.00N	1.80	30000.	200.	1000.	20.	20.	2.0	300.	50.
BCM398	0.00L	0.65	7000.	7000.	150000.	150.	3000.	1.5	0.L	0.L
BCM399	0.00N	3.50	20000.	500.	700.	70.	30.	10.0	300.	50.

POGONIP GROUP-continued

SAMPLE	BA	BE	BI	CD	CO	CR	CU	LA	MO	NB
AGU352	0.L	0.L	0.N	0.N	15.	100.	0.L	100.	0.L	10.
AGU357	0.L	0.L	0.N	0.N	5.	100.	5.	100.	0.L	10.
AGU361	700.	0.N	0.N	0.N	0.L	10.	0.L	20.	0.N	0.L
AGU368	200.	1.	0.N	0.N	10.	10.	50.	0.N	200.	100.
AGU371	0.L	0.L	0.N	0.N	30.	0.L	150.	0.N	0.L	10.
AGU373	0.L	0.L	0.N	0.N	0.L	10.	150.	0.N	0.L	10.
AGU381	0.L	0.N	0.N	0.N	0.L	0.L	5.	20.	0.N	0.L
AGU386	100.	0.N	0.N	0.N	0.L	0.L	0.L	0.L	0.N	0.L
AGU397	70.	2.	0.N	0.N	15.	0.L	5.	0.L	2000.	30.
AGU442	150.	1.	0.N	0.N	10.	50.	0.L	30.	200.	10.
AGU447	200.	1.	0.N	0.N	15.	70.	10.	0.N	0.N	0.N
AGU518	300.	0.L	0.N	0.N	5.	50.	0.L	0.L	0.N	0.N
AGU519	500.	0.N	0.N	0.N	0.N	0.N	0.L	0.N	0.N	0.N
AGU520	0.L	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N
AGU521	300.	0.N	0.N	0.N	0.N	0.N	30.	0.N	0.N	0.N
BCM356	100.	0.L	0.N	0.N	0.N	0.L	0.L	0.L	0.N	0.N
BCM360	30.	0.L	0.N	0.N	0.N	0.L	0.L	0.N	0.N	0.N
BCM362	150.	0.L	10.	0.N	50.	20.	100.	0.N	0.N	0.N
BCM365	0.L	10.	0.L	0.N	100.	0.L	100.	0.N	20.	0.N
BCM396	300.	1.	0.N	0.N	70.	0.N	3000.	0.N	30.	0.N
BCM397	50.	2.	10.	0.N	0.L	15.	300.	0.N	50.	0.N
BCM398	150.	1.	300.	0.N	0.N	0.L	300.	0.N	15.	0.N
BCM399	150.	0.L	30.	0.N	0.L	0.L	150.	0.N	70.	0.N

POGONIP GROUP-continued

SAMPLE	NI	PB	SB	SC	SN	SR	V	W	Y	ZN	ZR
AGU352	20.	0.L	0.N	20.	0.L	200.	70.	0.N	30.	0.N	200.
AGU357	10.	10.	0.N	15.	50.	0.L	100.	0.N	30.	0.N	300.
AGU361	0.L	0.L	0.N	5.	0.L	100.	20.	0.N	10.	0.N	50.
AGU368	5.	10.	0.N	0.L	200.	100.	70.	10000.	20.	0.N	50.
AGU371	0.L	300.	0.N	0.N	0.L	0.L	50.	0.N	0.L	5000.	0.L
AGU373	5.	50.	0.N	0.N	0.L	0.L	30.	0.N	0.L	5000.	0.L
AGU381	0.L	10.	0.N	0.N	0.L	100.	0.L	0.N	0.L	0.N	0.L
AGU386	0.L	20.	0.N	0.N	0.L	200.	10.	0.N	15.	0.N	100.
AGU397	5.	0.L	0.N	0.L	50.	0.L	20.	2000.	0.L	300.	0.L
AGU442	20.	0.L	0.N	15.	0.N	200.	50.	0.N	20.	0.N	300.
AGU447	30.	30.	0.N	7.	0.N	300.	50.	0.N	10.	0.N	70.
AGU518	30.	0.L	0.N	7.	0.N	300.	30.	0.N	10.	0.N	100.
AGU519	0.L	0.N	0.N	0.N	0.N	0.N	0.L	0.N	0.L	0.N	150.
AGU520	0.N	0.N	0.N	0.N	0.N	100.	0.N	0.N	0.N	0.N	0.N
AGU521	0.L	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N	100.
BCM356	0.L	10.	0.N	0.N	0.N	300.	10.	0.N	0.L	0.N	20.
BCM360	0.L	0.L	0.N	0.N	0.N	300.	10.	0.N	10.	0.N	15.
BCM362	20.	30.	0.N	0.L	0.N	0.N	70.	0.N	0.L	1000.	15.
BCM365	150.	100.	150.	0.L	0.N	0.N	30.	0.N	20.	2000.	0.L
BCM396	20.	1000.	0.L	0.N	0.N	0.N	10.	0.N	0.L	3000.	15.
BCM397	5.	70.	100.	0.N	70.	0.N	70.	0.N	0.L	3000.	0.N
BCM398	10.	150.	0.L	0.N	30.	0.N	30.	0.N	0.L	300.	0.N
BCM399	5.	70.	150.	0.N	50.	0.N	70.	0.N	0.L	5000.	0.N

EUREKA QUARTZITE

SAMPLE	AU	HG	FE	MG	CA	TI	MN	AG	AS	B
AGU426	0.00L	0.45	5000.	1000.	2000.	500.	20.	0.0N	0.N	0.L
AGU427	0.00L	0.14	0.L	100000.	150000.	50.	100.	0.0N	0.N	0.N
AGU445	0.04	0.09	3000.	15000.	30000.	150.	200.	0.0N	0.N	0.N
AGU446	0.00L	0.07	7000.	7000.	7000.	1500.	150.	0.0N	0.N	0.N
AGU484	0.00L	0.14	500.	70000.	150000.	30.	50.	0.0N	0.N	0.N
BCM270	0.00N	0.50	3000.	500.	700.	300.	700.	0.0L	0.N	0.N
BCM374	0.00L	0.70	1500.	3000.	7000.	30.	300.	0.0N	0.N	0.N
BCM382	0.00N	0.20	7000.	200.	1000.	20.	150.	0.0N	0.N	0.N
BCM384	0.00N	0.35	500.	200.	700.	50.	500.	0.0N	0.N	0.N
BBJ061	0.00N	0.65	10000.	700.	5000.	500.	700.	0.5	300.	20.
BBJ109	0.10	0.20	0.L	2000.	5000.	70.	0.N	0.0N	0.N	10.
BBJ110	0.00N	0.06	700.	500.	1000.	1000.	100.	0.0N	0.N	30.
BBJ111	0.00N	0.08	1000.	10000.	0.L	200.	150.	0.0N	0.N	20.
BBJ113	0.00N	0.12	1000.	1000.	500.	300.	100.	0.0N	0.N	20.
BBJ114	0.00N	0.00N	3000.	500.	500.	700.	200.	0.0N	0.N	30.
BBJ121	0.00N	0.14	10000.	2000.	2000.	1000.	500.	0.0N	0.N	20.
BBJ122	0.00N	0.55	15000.	1000.	0.L	2000.	200.	0.0N	0.N	70.
BBJ124	0.00N	0.40	0.L	200.	1500.	150.	50.	0.0N	0.N	10.

EUREKA QUARTZITE-continued

SAMPLE	BA	BE	BI	CD	CO	CR	CU	LA	MO	NB
AGU426	50.	0.L	0.N	0.N	0.L	0.L	0.L	30.	0.L	0.L
AGU427	0.L	0.L	0.N	0.N	0.L	0.L	0.L	0.L	0.L	0.L
AGU445	150.	0.N	0.N	0.N	0.L	0.N	0.L	0.N	0.N	0.N
AGU446	3000.	1.	0.N	0.N	5.	15.	15.	0.L	0.N	0.L
AGU484	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N
BCM270	50.	0.L	0.N	0.N	0.L	0.L	20.	0.L	0.N	0.N
BCM374	30.	0.L	0.N	0.N	0.N	0.N	15.	0.N	0.N	0.N
BCM382	20.	1.	0.N	0.N	0.N	0.N	15.	0.N	0.L	0.N
BCM384	50.	0.L	0.N	0.N	0.N	0.N	7.	0.N	0.N	0.N
BBJ061	300.	1.	0.N	0.N	0.N	0.N	30.	0.N	7.	0.N
BBJ109	0.N	0.N	0.N	0.N	0.N	0.N	0.L	20.	0.N	0.N
BBJ110	100.	0.N	0.N	0.N	0.N	0.N	0.L	30.	0.N	0.N
BBJ111	50.	0.N	0.N	0.N	0.N	0.N	0.L	0.N	0.N	0.N
BBJ113	200.	0.N	0.N	0.N	0.N	0.N	10.	20.	0.N	0.N
BBJ114	300.	0.N	0.N	0.N	0.N	20.	5.	20.	0.N	0.N
BBJ121	500.	0.L	0.N	0.N	0.N	0.N	10.	0.N	0.N	0.N
BBJ122	300.	0.L	0.N	0.N	0.N	0.N	5.	20.	0.N	0.N
BBJ124	100.	0.N	0.N	0.N	0.N	20.	0.L	20.	0.N	0.N

EUREKA QUARTZITE-continued

SAMPLE	NI	PB	SB	SC	SN	SR	V	W	Y	ZN	ZR
AGU426	0.L	0.L	300.	0.L	0.N	0.L	10.	0.N	0.L	0.L	30.
AGU427	5.	0.N	0.N	0.L	0.N	0.L	0.L	0.N	0.L	0.L	0.L
AGU445	5.	0.N	0.N	0.N	0.N	0.N	0.L	0.N	0.N	0.N	15.
AGU446	0.L	0.L	0.N	7.	0.N	0.N	50.	0.N	15.	0.N	500.
AGU484	0.N	0.N	0.N	0.N	0.N	0.L	0.N	0.N	0.N	0.N	0.N
BCM270	5.	30.	0.N	0.L	0.N	0.N	10.	0.N	0.L	0.N	30.
BCM374	10.	20.	100.	0.N	0.N	0.N	15.	0.N	0.N	0.N	0.N
BCM382	5.	10.	0.N	0.N	0.N	0.N	10.	0.L	0.N	0.N	10.
BCM384	0.L	10.	0.N	0.N	0.N	0.N	0.L	0.N	0.N	0.N	0.L
BBJ061	15.	100.	300.	0.L	0.N	0.L	50.	0.N	0.L	0.L	20.
BBJ109	5.	10.	0.N	0.N	0.N	0.L	15.	0.N	0.N	0.N	10.
BBJ110	5.	10.	0.N	0.N	0.N	0.L	20.	0.N	0.L	0.N	100.
BBJ111	5.	10.	0.N	0.N	0.N	0.N	10.	0.N	0.N	0.N	50.
BBJ113	5.	10.	0.N	0.L	0.N	0.L	15.	0.N	0.N	0.N	70.
BBJ114	10.	10.	0.N	0.L	0.N	100.	30.	0.N	0.N	0.N	70.
BBJ121	10.	20.	0.N	7.	0.N	0.L	50.	0.N	20.	0.N	100.
BBJ122	0.L	10.	0.N	5.	0.N	100.	20.	0.N	0.L	0.N	500.
BBJ124	0.L	0.N	0.N	5.	0.N	100.	10.	0.N	0.N	0.N	50.

DATE 3/18/80

HANSON CREEK FORMATION

SAMPLE	AU	HG	FE	MG	CA	TI	MN	AG	AS	B
AGU363	0.00L	0.13	70000.	0.G	200000.	200.	0.G	0.0N	0.N	0.G
AGU367	0.00L	0.11	10000.	100000.	200000.	200.	2000.	0.0N	0.N	300.
AGU374	0.00L	0.08	50000.	100000.	150000.	150.	0.G	0.0N	0.N	50.
AGU383	0.00L	0.08	20000.	100000.	200000.	100.	5000.	0.0N	0.N	100.
AGU385	0.00L	0.00G	1000.	50000.	100000.	100.	300.	2.0	0.N	0.L
AGU394	0.00L	0.07	150000.	100000.	100000.	150.	0.G	0.0N	0.N	200.
AGU399	0.00L	0.09	7000.	100000.	200000.	50.	1000.	0.0N	0.N	0.L
AGU429	0.00L	0.03	10000.	100000.	200000.	1000.	500.	0.0N	0.N	10.
AGU449	0.00L	0.07	3000.	700.	1000.	700.	30.	0.0N	0.N	0.L
AGU454	0.00L	0.55	7000.	20000.	50000.	1000.	150.	0.0N	0.N	0.N
AGU455	0.00L	2.80	5000.	1000.	2000.	1500.	0.L	0.0N	0.N	10.
AGU457	0.00L	0.10	15000.	100000.	150000.	150.	3000.	0.0N	0.N	70.
AGU541	0.00L	0.35	10000.	70000.	150000.	700.	150.	0.0N	0.N	30.
BCM282	0.02	6.50	7000.	30000.	70000.	2100.	300.	7.0	0.L	0.N
BCM288	0.00N	0.60	3000.	5000.	70000.	70.	300.	0.7	0.N	0.N
BCM290	0.02	0.40	300.	30000.	70000.	300.	70.	0.5	0.L	10.
BCM291	0.02	0.35	3000.	50000.	70000.	200.	150.	0.0N	0.L	0.L
BCM329	0.00N	0.24	1000.	70000.	200000.	200.	300.	0.0N	0.N	0.L
BCM358	0.00L	0.20	3000.	70000.	100000.	300.	150.	0.0N	0.N	50.
BCM359	0.00N	0.18	3000.	30000.	70000.	0.L	70.	0.0N	0.N	0.N
BCM361	0.00N	0.80	3000.	50000.	150000.	70.	200.	0.0N	0.N	0.N
BCM364	0.02	2.00	2000.	100000.	100000.	70.	700.	0.5	0.N	10.
BCM367	0.00N	0.70	7000.	30000.	150000.	1000.	700.	1.0	0.N	70.
BCM369	0.00N	0.45	500.	70000.	100000.	0.L	150.	0.0N	0.N	0.N
BCM370	0.00L	0.55	2000.	20000.	70000.	200.	150.	0.0N	0.N	0.N
BCM373	0.50	0.00G	70000.	3000.	5000.	0.L	200.	7.0	700.	70.
BCM375	0.00N	0.70	1500.	70000.	100000.	20.	300.	0.0N	0.N	0.N
BCM379	0.06	0.80	5000.	50000.	100000.	70.	1000.	2.0	0.N	10.
BBJ009	0.30	0.04	15000.	70000.	150000.	1500.	300.	0.5	0.L	10.
BBJ064	0.00N	1.60	5000.	100000.	200000.	500.	100.	0.0N	0.N	0.N
BBJ084	0.00N	1.40	1000.	100000.	200000.	100.	500.	0.0N	0.N	0.N
BBJ116	0.00N	0.08	3000.	100000.	0.G	150.	150.	0.0N	0.N	0.N
BBJ120	0.00N	0.20	500.	50000.	70000.	100.	70.	0.0N	0.N	10.
BBJ137	0.00N	0.02	20000.	100000.	100000.	1500.	700.	0.0N	0.N	50.
BBJ141	0.00N	0.20	3000.	100000.	150000.	300.	200.	1.0	0.N	20.
BBJ142	0.00N	0.60	500.	100000.	200000.	100.	500.	1.5	0.N	0.L
BBJ145	0.00N	0.12	1000.	0.G	200000.	200.	150.	0.0N	0.N	0.N
BBJ148	0.00N	0.12	0.L	100000.	100000.	50.	200.	0.0N	0.N	0.N
BBJ151	0.00N	0.16	1000.	0.G	200000.	200.	200.	0.0N	0.N	0.L
BBJ226	0.04	0.02	2000.	2000.	2000.	200.	200.	0.0N	0.N	20.

HANSON CREEK FORMATION-continued

SAMPLE	BA	BE	BI	CD	CO	CR	CU	LA	MO	NB
AGU363	0.L	1.	0.N	0.N	0.L	0.L	0.L	0.L	200.	15.
AGU367	0.L	0.L	0.N	0.N	0.L	0.L	20.	0.L	10.	0.L
AGU374	0.L	10.	0.N	0.N	10.	0.L	0.L	0.N	0.L	10.
AGU383	0.N	0.L	0.N	0.N	0.L	0.L	5.	0.L	5.	0.L
AGU385	500.	0.N	0.N	0.N	10.	0.L	10.	0.L	0.N	0.L
AGU394	0.L	5.	0.N	0.N	20.	0.L	5.	100.	10.	20.
AGU399	20.	0.L	0.N	0.N	0.L	0.L	0.L	0.N	0.N	0.L
AGU429	300.	0.N	0.N	0.N	0.L	20.	5.	20.	5.	0.L
AGU449	70.	2.	0.L	0.N	0.N	0.N	15.	0.N	0.N	20.
AGU454	150.	2.	0.N	0.N	5.	70.	15.	20.	0.L	0.L
AGU455	700.	1.	0.N	0.N	0.N	20.	0.N	20.	0.L	10.
AGU457	0.N	2.	0.N	0.N	5.	0.N	0.N	0.N	0.L	0.N
AGU541	200.	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N
BCM282	100.	0.N	0.N	0.N	0.N	0.L	150.	0.L	0.N	0.N
BCM288	50.	0.L	0.N	0.N	5.	0.N	10.	0.L	0.N	0.N
BCM290	50.	0.L	0.N	0.N	0.N	0.N	10.	0.N	0.N	0.N
BCM291	20.	0.L	0.N	0.N	0.N	0.N	10.	0.N	0.N	0.N
BCM329	30.	0.L	0.N	0.N	0.N	0.L	0.L	0.N	0.N	0.N
BCM358	20.	0.L	0.N	0.N	0.N	0.L	0.L	0.N	0.N	0.N
BCM359	20.	0.L	0.N	0.N	0.N	0.L	7.	0.N	0.N	0.N
BCM361	20.	0.L	0.N	0.N	0.N	0.L	5.	0.N	15.	0.N
BCM364	20.	0.L	0.N	0.N	0.N	0.L	7.	0.N	0.N	0.N
BCM367	2000.	0.L	0.N	0.N	10.	20.	20.	0.L	0.N	0.N
BCM369	0.L	0.N	0.N	0.N	0.N	0.L	5.	0.L	0.N	0.N
BCM370	30.	0.L	0.N	0.N	0.N	0.L	10.	0.L	0.N	0.N
BCM373	20.	0.N	150.	0.N	0.N	0.N	500.	200.	7.	0.N
BCM375	30.	0.L	0.N	0.N	0.N	0.N	7.	0.N	0.N	0.N
BCM379	0.G	0.L	0.N	0.N	0.N	0.N	20.	0.N	7.	0.N
BBJ009	300.	0.L	0.N	0.N	0.N	150.	10.	0.N	0.N	0.N
BBJ064	20.	0.N	0.N	0.N	0.N	0.L	0.L	0.N	0.N	0.N
BBJ084	200.	0.L	0.N	0.N	0.N	0.L	5.	0.N	0.N	0.N
BBJ116	50.	0.N	0.N	0.N	0.N	0.N	0.L	0.N	0.N	0.N
BBJ120	150.	0.N	0.N	0.N	0.N	0.N	5.	0.N	0.N	0.N
BBJ137	200.	0.L	0.N	0.N	7.	50.	7.	0.L	0.N	0.N
BBJ141	200.	0.N	0.N	0.N	0.N	0.N	5.	0.N	0.N	0.N
BBJ142	150.	0.N	0.N	0.N	0.N	0.N	0.L	0.N	0.N	0.N
BBJ145	50.	0.N	0.N	0.N	0.N	0.L	0.L	0.L	0.N	0.N
BBJ148	20.	0.N	0.N	0.N	0.N	0.N	0.L	50.	0.N	0.N
BBJ151	20.	0.L	0.N	0.N	0.N	0.N	0.L	30.	0.N	0.N
BBJ226	1500.	0.L	0.N	0.N	0.L	0.N	7.	0.N	0.N	0.N

HANSON CREEK FORMATION-continued

SAMPLE	NI	PB	SB	SC	SN	SR	V	W	Y	ZN	ZR
AGU363	0.L	0.L	0.N	0.N	100.	100.	15.	200.	0.L	0.N	20.
AGU367	0.L	0.L	0.N	0.N	0.L	100.	0.L	0.N	0.L	0.N	20.
AGU374	0.L	0.L	0.N	0.N	20.	0.L	20.	0.N	0.L	300.	0.L
AGU383	0.L	0.N	0.N	0.N	0.L	100.	10.	0.N	0.L	0.N	0.L
AGU385	0.L	300.	500.	0.N	0.L	200.	10.	0.N	0.L	3000.	0.L
AGU394	5.	10.	0.N	0.L	100.	100.	20.	0.N	0.L	700.	0.L
AGU399	0.L	0.N	0.N	0.L	0.L	0.L	10.	0.N	0.L	0.L	0.L
AGU429	0.L	0.N	0.N	5.	0.N	500.	15.	0.N	0.L	0.L	20.
AGU449	5.	10.	0.N	0.L	0.N	0.N	20.	0.N	0.L	0.N	50.
AGU454	30.	0.N	0.N	5.	0.N	0.N	150.	0.N	15.	0.N	70.
AGU455	15.	0.N	0.N	0.N	0.N	0.N	150.	0.N	0.L	0.N	150.
AGU457	5.	0.N	0.N	0.N	0.L	0.N	10.	0.L	0.L	0.N	0.L
AGU541	7.	20.	0.N	0.L	0.N	100.	20.	0.N	0.L	0.L	10.
BCM282	5.	7000.	1500.	0.L	20.	0.N	70.	0.N	0.L	1000.	0.N
BCM288	30.	200.	100.	0.N	0.N	0.N	20.	0.N	15.	300.	0.L
BCM290	5.	30.	150.	0.N	0.N	0.N	30.	0.N	0.L	0.L	15.
BCM291	10.	30.	0.N	0.N	0.N	0.N	10.	0.N	0.L	0.L	15.
BCM329	0.L	10.	0.N	0.N	0.N	100.	30.	0.N	0.L	0.N	15.
BCM358	0.L	0.L	0.N	0.L	0.N	100.	15.	0.N	0.L	0.N	10.
BCM359	0.L	0.L	0.N	0.N	0.N	0.N	0.L	0.N	0.L	0.L	0.N
BCM361	0.L	20.	700.	0.N	0.N	0.L	10.	0.N	15.	0.N	10.
BCM364	0.L	70.	0.L	0.N	30.	0.L	10.	0.N	0.N	0.N	0.N
BCM367	50.	50.	100.	5.	0.N	0.L	50.	0.N	10.	300.	20.
BCM369	0.N	15.	0.N	0.N	0.N	0.L	0.L	0.N	0.N	0.N	0.N
BCM370	0.L	10.	0.N	0.N	0.N	0.N	0.L	0.N	0.L	0.N	0.L
BCM373	15.	3000.	1500.	0.L	70.	0.N	50.	0.N	0.L	10000.	0.N
BCM375	0.L	30.	0.N	0.N	0.N	0.L	10.	0.N	0.L	0.N	0.N
BCM379	5.	150.	200.	0.N	10.	150.	20.	0.N	0.L	500.	0.N
BBJ009	20.	30.	0.N	0.L	0.N	300.	50.	0.N	0.L	0.L	50.
BBJ064	0.L	2.	0.N	0.L	0.N	0.L	10.	0.N	0.N	0.N	0.N
BBJ084	0.N	20.	0.N	0.L	0.N	100.	20.	0.N	0.N	0.N	10.
BBJ116	0.L	20.	0.N	0.L	0.N	100.	15.	0.N	0.N	0.L	10.
BBJ120	0.L	10.	0.N	5.	0.N	0.L	20.	0.N	0.N	0.N	0.N
BBJ137	15.	20.	0.N	7.	0.N	150.	50.	0.N	10.	0.N	30.
BBJ141	7.	20.	0.N	0.L	0.N	100.	70.	0.N	15.	0.N	10.
BBJ142	0.L	15.	0.N	0.L	0.N	100.	10.	0.N	0.N	0.N	0.L
BBJ145	0.L	20.	0.N	0.L	0.N	100.	10.	0.N	10.	0.N	0.L
BBJ148	0.N	20.	0.N	0.L	0.N	0.L	15.	0.N	0.L	0.N	0.N
BBJ151	0.L	10.	0.N	0.L	0.N	150.	20.	0.N	10.	0.N	10.
BBJ226	10.	50.	200.	0.L	0.N	0.L	50.	0.N	10.	0.N	10.

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VEINS IN HANSON CREEK FM

SAMPLE	AU	HG	FE	MG	CA	TI	MN	AG	AS	B
AGU370	0.00L	0.65	7000.	500.	20000.	200.	500.	0.0N	0.N	0.L
AGU375	0.00L	0.00G	30000.	2000.	10000.	500.	500.	0.0N	1000.	0.L
AGU418	0.00L	0.45	30000.	100000.	0.G	500.	500.	0.0N	0.N	0.L
AGU522	0.00L	0.65	7000.	1500.	1500.	700.	15.	0.0N	0.N	30.
AGU524	0.10	1.00	15000.	10000.	30000.	200.	100.	0.0N	0.N	50.
BCM271	0.85	0.00G	2000.	0.L	5000.	20.	200.	1500.0	1500.	0.N
BCM275	0.00N	0.90	3000.	2000.	7000.	150.	700.	7.0	0.L	0.N
BCM280	1.00	0.00G	1000.	200.	7000.	0.L	300.	700.0	2000.	0.N
BCM281	0.95	0.00G	15000.	30000.	70000.	50.	30.	70.0	700.	10.
BCM284	1.20	0.00G	7000.	30000.	70000.	0.L	30.	150.0	0.N	0.L
BCM285	0.00L	3.50	15000.	500.	5000.	300.	300.	0.5	300.	10.
BCM286	0.25	0.00G	10000.	7000.	20000.	20.	1000.	200.0	1500.	20.
BCM287	0.02	1.30	5000.	30000.	70000.	50.	300.	0.7	0.N	0.L
BCM357	3.20	3.50	7000.	20000.	50000.	1500.	300.	2.0	700.	70.
BCM363	0.15	0.00G	15000.	700.	2000.	20.	500.	150.0	700.	10.
BCM366	0.80	5.00	150000.	300.	500.	20.	0.L	1.5	0.L	200.
BCM368	0.10	1.50	7000.	500.	3000.	150.	1000.	0.5	200.	0.L
BCM372	0.08	0.00G	30000.	200.	700.	0.L	50.	70.0	500.	20.
BCM376	7.00	0.00G	700.	500.	10000.	0.L	50.	150.0	3000.	0.N
BCM377	0.80	0.00G	30000.	1500.	3000.	300.	150.	70.0	1000.	70.
BCM378	0.30	0.00G	70000.	300.	3000.	100.	500.	15.0	300.	100.
BCM380	4.30	0.00G	30000.	500.	700.	150.	30.	7.0	1500.	30.
BBJ013	3.40	8.00	100000.	200.	3000.	100.	20.	200.0	2000.	10.
BBJ016	18.00	0.00G	30000.	1000.	20000.	70.	200.	700.0	0.G	15.
BBJ022	0.00N	0.60	7000.	50000.	100000.	300.	700.	1.0	200.	15.
BBJ040	2.00	1.20	20000.	300.	2000.	50.	100.	300.0	2000.	15.
BBJ047	0.00N	0.90	15000.	500.	2000.	30.	200.	500.0	5000.	0.L
BBJ112	0.00N	0.00G	3000.	50000.	70000.	200.	700.	700.0	1000.	30.

VEINS IN HANSON CREEK FM-continued

SAMPLE	BA	BE	BI	CD	CO	CR	CU	LA	MO	NB
AGU370	1000.	1.	0.N	0.N	10.	0.L	10.	0.L	10.	0.L
AGU375	200.	2.	0.N	0.N	10.	10.	100.	0.L	200.	10.
AGU418	100.	0.L	0.N	0.N	0.L	0.L	20.	20.	5.	0.L
AGU522	150.	2.	0.N	0.N	0.N	15.	0.L	0.N	0.L	0.N
AGU524	100.	0.L	0.N	0.N	0.N	0.L	5.	0.N	5.	0.N
BCM271	70.	0.N	10.	100.	0.N	0.L	500.	30.	7.	0.N
BCM275	30.	0.L	0.N	0.N	0.N	0.L	50.	0.L	0.N	0.N
BCM280	70.	0.L	10.	50.	0.L	0.L	1000.	30.	7.	0.N
BCM281	200.	0.L	0.N	300.	0.N	0.L	1000.	0.L	7.	0.N
BCM284	150.	0.N	0.N	500.	0.N	0.L	3000.	0.L	0.N	0.N
BCM285	50.	5.	0.N	0.N	0.L	0.L	50.	0.L	0.L	0.N
BCM286	300.	0.L	0.N	200.	0.L	0.L	1500.	0.L	7.	0.N
BCM287	300.	0.L	0.N	0.N	15.	0.N	15.	0.N	0.N	0.N
BCM357	500.	0.L	0.N	0.N	20.	150.	50.	20.	7.	0.N
BCM363	70.	0.L	0.L	0.G	0.N	20.	5000.	0.N	7.	0.N
BCM366	0.L	0.L	0.N	0.N	0.N	0.L	1000.	0.N	0.N	0.N
BCM368	150.	0.L	0.N	0.N	0.L	0.L	20.	0.L	7.	0.N
BCM372	0.L	0.N	50.	500.	0.N	0.N	300.	30.	0.N	0.N
BCM376	100.	0.L	200.	100.	0.N	0.N	1000.	70.	20.	0.N
BCM377	300.	0.L	0.N	150.	0.N	15.	1500.	300.	10.	0.N
BCM378	20.	0.L	30.	300.	10.	0.L	700.	20.	0.L	0.N
BCM380	50.	0.N	50.	150.	0.N	0.N	1500.	50.	0.N	0.N
BBJ013	70.	1.	0.N	0.N	0.N	30.	5000.	0.N	20.	0.N
BBJ016	100.	1.	0.N	0.N	0.N	20.	700.	100.	20.	0.N
BBJ022	300.	0.L	0.N	0.N	0.N	20.	5.	0.L	0.N	0.N
BBJ040	50.	0.L	0.N	100.	0.N	0.N	3000.	0.N	20.	0.N
BBJ047	0.G	0.L	0.N	500.	5.	0.N	3000.	0.N	10.	0.N
BBJ112	150.	0.N	0.N	50.	0.N	0.N	7000.	50.	0.N	0.N

VEINS IN HANSON CREEK FM-continued

SAMPLE	NI	PB	SB	SC	SN	SR	V	W	Y	ZN	ZR
AGU370	7.	0.L	0.N	0.L	0.N	100.	20.	0.N	0.L	300.	0.L
AGU375	10.	0.N	100.	0.L	0.N	0.L	70.	0.N	10.	200.	0.L
AGU418	10.	0.L	150.	0.L	0.N	100.	70.	0.N	15.	500.	0.L
AGU522	5.	0.L	300.	0.N	0.N	0.N	50.	0.N	0.N	500.	15.
AGU524	15.	0.N	0.N	0.N	0.N	0.L	20.	0.N	0.L	0.N	0.N
BCM271	0.L	0.G	0.G	0.N	10.	0.N	300.	0.N	0.N	1000.	0.N
BCM275	10.	1500.	200.	0.N	0.N	0.N	300.	0.N	0.L	1500.	20.
BCM280	5.	0.G	0.G	0.N	10.	0.N	150.	0.N	0.N	500.	0.N
BCM281	10.	0.G	7000.	0.N	0.G	0.L	70.	0.N	0.N	0.G	0.N
BCM284	0.L	0.G	7000.	0.N	700.	0.N	0.L	0.N	0.N	0.G	0.N
BCM285	70.	300.	300.	5.	0.N	0.N	300.	70.	15.	700.	20.
BCM286	15.	0.G	0.G	0.L	200.	100.	100.	0.N	0.L	0.G	0.N
BCM287	30.	300.	100.	0.L	0.N	100.	20.	0.N	0.L	0.L	0.N
BCM357	70.	15.	150.	7.	0.N	100.	70.	0.N	10.	0.L	70.
BCM363	5.	0.G	0.G	5.	0.G	200.	30.	0.N	70.	5000.	0.N
BCM366	5.	5000.	5000.	0.L	0.N	0.N	70.	0.N	0.L	1500.	10.
BCM368	20.	150.	200.	0.L	0.N	0.N	70.	0.N	0.N	200.	0.N
BCM372	0.L	20000.	0.G	0.N	50.	0.N	150.	0.N	0.L	3000.	0.N
BCM376	0.L	0.G	0.G	0.N	300.	100.	100.	0.N	0.L	3000.	0.N
BCM377	7.	0.G	0.G	0.L	0.G	150.	10.	0.N	10.	0.G	0.N
BCM378	70.	2000.	300.	0.L	70.	0.N	30.	50.	0.L	0.G	0.N
BCM380	10.	3000.	500.	0.L	500.	0.L	20.	0.N	0.L	7000.	0.N
BBJ013	10.	0.G	0.G	0.L	0.G	0.L	3000.	0.N	0.L	5000.	0.N
BBJ016	15.	0.G	0.G	5.	1000.	0.L	1000.	0.N	0.N	0.G	0.N
BBJ022	10.	70.	100.	5.	0.N	0.L	30.	0.N	10.	0.N	20.
BBJ040	5.	0.G	0.G	0.L	50.	0.L	1500.	0.N	0.N	10000.	0.N
BBJ047	20.	0.G	0.G	0.L	1000.	100.	20.	0.N	0.N	5000.	0.N
BBJ112	5.	3000.	10000.	0.N	0.N	100.	150.	0.N	0.N	500.	0.N

ROBERTS MOUNTAINS FORMATION

SAMPLE	AU	HG	FE	MG	CA	TI	MN	AG	AS	B
AGV270	0.00L	0.80	10000.	50000.	200000.	1500.	200.	0.0N	0.N	20.
AGV281	0.00L	0.24	10000.	20000.	150000.	1000.	200.	0.0L	0.N	50.
AGV282	0.02	0.60	10000.	50000.	100000.	1000.	200.	0.5	0.N	50.
AGU353	0.00L	0.13	20000.	70000.	100000.	3000.	1000.	0.0N	0.N	0.L
AGU378	0.00L	0.70	10000.	100000.	200000.	1500.	200.	0.5	0.N	20.
AGU390	0.00L	0.13	50000.	70000.	200000.	1500.	5000.	0.0N	0.N	10.
AGU452	0.00L	0.09	10000.	30000.	70000.	1500.	300.	0.7	0.N	0.N
AGU453	0.00L	0.07	2000.	20000.	200000.	500.	150.	0.5	0.N	0.N
AGU458	0.00L	0.06	20000.	50000.	100000.	1000.	3000.	0.0N	0.N	20.
AGU459	0.00L	0.03	15000.	30000.	100000.	1000.	5000.	0.0N	0.N	0.L
AGU477	0.00L	0.05	15000.	0.L	1000.	1000.	300.	0.0N	0.N	0.L
AGU485	0.00L	0.12	7000.	10000.	0.G	150.	70.	0.0N	0.N	0.N
BCM278	0.02	0.40	2000.	3000.	200000.	500.	300.	0.0N	0.N	0.L
BCM283	0.00L	0.90	5000.	70000.	100000.	1000.	300.	2.0	0.N	100.
BCM292	0.00N	1.10	1500.	15000.	70000.	300.	100.	0.0N	0.N	10.
BCM323	0.00N	0.22	3000.	50000.	150000.	500.	300.	0.0L	0.N	10.
BCM328	0.00N	0.50	500.	10000.	50000.	700.	100.	1.0	0.N	10.
BCM371	0.00N	0.35	5000.	2000.	3000.	1000.	70.	1.0	0.N	50.
BBJ006	0.00N	0.06	30000.	7000.	200000.	2000.	1000.	0.7	200.	70.
BBJ015	0.00N	0.06	10000.	30000.	0.G	1000.	200.	0.0N	0.N	20.
BBJ017	0.00N	2.00	7000.	2000.	150000.	700.	500.	2.0	0.N	15.
BBJ023	0.02	0.26	20000.	50000.	100000.	2000.	200.	0.0N	300.	50.
BBJ030	0.00N	1.00	20000.	3000.	1500.	3000.	500.	1.0	0.N	100.
BBJ034	0.02	0.30	150000.	10000.	2000.	3000.	3000.	0.0N	700.	100.
BBJ036	0.00N	0.30	20000.	10000.	15000.	2000.	30.	1.5	0.N	100.
BBJ037	1.50	8.00	20000.	70000.	150000.	2000.	200.	0.0N	0.N	70.
BBJ038	0.00N	1.60	20000.	20000.	70000.	3000.	300.	0.0N	0.N	150.
BBJ041	0.00N	0.50	7000.	20000.	150000.	700.	200.	1.5	0.N	30.
BBJ042	0.32	2.80	15000.	5000.	700.	2000.	20.	0.0N	500.	70.
BBJ045	0.00N	7.50	30000.	10000.	2000.	3000.	50.	0.7	1500.	100.
BBJ048	0.00N	0.70	20000.	10000.	200000.	3000.	1000.	1.5	0.N	200.
BBJ052	0.00N	1.20	10000.	50000.	100000.	1500.	100.	0.0N	0.N	50.
BBJ088	0.00N	0.22	5000.	7000.	0.G	700.	70.	0.0N	0.N	10.
BBJ094	0.00N	0.00N	1500.	5000.	200000.	5000.	70.	0.0N	0.N	0.N
BBJ115	0.00N	0.00N	10000.	70000.	0.G	1500.	200.	0.7	0.N	50.
BBJ134	0.00N	0.50	2000.	20000.	50000.	200.	100.	0.0N	0.N	20.
BBJ136	0.00N	0.18	20000.	70000.	100000.	1500.	200.	0.0N	0.N	100.
BBJ157	0.10	0.12	30000.	50000.	150000.	2000.	150.	0.0N	0.N	100.
BBJ158	0.04	0.06	20000.	50000.	100000.	2000.	200.	0.0N	0.N	50.
BBJ162	0.02	0.02	15000.	10000.	70000.	3000.	200.	0.0N	0.N	70.
BBJ164	0.02	0.24	20000.	70000.	150000.	3000.	300.	0.0N	0.N	200.
BBJ166	0.00L	0.24	15000.	20000.	150000.	3000.	200.	0.0N	0.N	50.
BBJ215	0.02	0.16	7000.	20000.	0.G	1000.	200.	0.0N	0.N	0.L
BBJ223	0.00L	0.06	10000.	70000.	100000.	1000.	150.	2.0	0.N	50.
BBJ231	0.40	1.10	50000.	10000.	1500.	3000.	50.	0.5	0.N	300.
BBJ234	0.06	1.20	20000.	1500.	2000.	1000.	1000.	0.5	0.N	30.
BBJ236	0.60	3.00	50000.	7000.	2000.	3000.	50.	0.7	1000.	150.
BBJ237	0.02	0.30	30000.	30000.	0.G	2000.	500.	0.0N	0.N	70.
BBJ241	0.02	0.50	2000.	7000.	50000.	150.	20.	0.0N	0.N	0.N
BBJ242	0.10	0.80	20000.	50000.	100000.	2000.	300.	0.7	0.N	100.

ROBERTS MOUNTAINS FORMATION-continued

SAMPLE	BA	BE	BI	CD	CO	CR	CU	LA	MO	NB
AGV270	300.	0.L	0.N	0.N	7.	50.	20.	0.N	0.N	0.N
AGV281	150.	1.	0.N	0.N	0.N	30.	7.	20.	0.N	0.N
AGV282	200.	1.	0.N	0.N	0.N	50.	1.	20.	10.	0.N
AGU353	0.G	0.L	0.N	0.N	10.	70.	0.L	20.	0.L	10.
AGU378	100.	0.N	0.N	0.N	0.L	70.	10.	30.	0.N	10.
AGU390	200.	0.L	0.N	0.N	10.	50.	5.	0.L	10.	10.
AGU452	300.	0.N	0.N	0.N	5.	50.	10.	0.N	0.L	0.N
AGU453	100.	0.N	0.N	0.N	0.N	15.	0.N	0.N	0.N	0.N
AGU458	300.	0.L	0.N	0.N	15.	50.	0.N	0.N	30.	0.N
AGU459	150.	0.L	0.N	0.N	7.	30.	0.N	0.N	0.N	0.N
AGU477	300.	3.	0.N	0.N	0.N	0.N	5.	100.	5.	15.
AGU485	150.	0.N	0.N	0.N	0.N	0.N	0.N	0.N	7.	0.N
BCM278	150.	0.N	0.N	0.N	0.N	20.	5.	0.L	0.N	0.N
BCM283	70.	0.L	0.N	0.N	0.L	70.	10.	30.	5.	0.N
BCM292	50.	0.L	0.N	0.N	0.N	0.N	10.	0.L	0.N	0.N
BCM323	150.	0.L	0.N	0.N	0.L	30.	10.	0.L	0.N	0.N
BCM328	70.	0.L	0.N	0.N	0.L	20.	5.	0.L	0.N	0.N
BCM371	100.	0.L	0.N	0.N	0.N	30.	15.	20.	10.	0.N
BBJ006	150.	1.	0.N	0.N	10.	150.	20.	20.	0.N	0.N
BBJ015	300.	0.L	0.N	0.N	0.N	50.	0.L	20.	0.N	0.N
BBJ017	1000.	0.N	0.N	0.G	0.N	20.	5.	0.N	0.N	0.N
BBJ023	150.	1.	0.N	0.N	5.	50.	10.	50.	0.N	0.N
BBJ030	2000.	1.	0.N	0.N	5.	50.	15.	30.	0.N	0.N
BBJ034	300.	2.	0.N	0.N	50.	150.	70.	20.	50.	10.
BBJ036	500.	2.	0.N	0.N	5.	200.	150.	30.	0.N	0.L
BBJ037	100.	0.L	0.N	0.N	5.	100.	20.	30.	30.	0.N
BBJ038	150.	1.	0.N	0.N	10.	70.	20.	50.	0.N	0.N
BBJ041	70.	0.L	0.N	0.N	0.N	0.N	10.	20.	15.	0.N
BBJ042	200.	1.	0.N	0.N	5.	30.	10.	30.	0.N	0.N
BBJ045	300.	2.	0.N	0.N	30.	100.	70.	100.	0.N	0.N
BBJ048	300.	1.	0.N	0.N	30.	100.	30.	30.	0.N	0.N
BBJ052	200.	0.L	0.N	0.N	5.	20.	10.	0.L	0.N	0.N
BBJ088	70.	0.N	0.N	0.N	0.N	30.	5.	0.N	0.N	0.N
BBJ094	20.	0.N	0.N	0.N	0.N	0.N	0.L	0.N	0.N	0.N
BBJ115	50.	0.N	0.N	0.N	0.N	0.N	10.	20.	15.	0.N
BBJ134	1000.	0.N	0.N	0.N	0.N	0.N	0.L	0.N	0.N	0.N
BBJ136	200.	0.L	0.N	0.N	10.	100.	10.	30.	0.N	0.N
BBJ157	700.	0.L	0.N	0.N	5.	200.	10.	30.	0.N	0.N
BBJ158	300.	0.L	0.N	0.N	10.	70.	10.	30.	0.N	0.N
BBJ162	300.	1.	0.N	0.N	5.	100.	10.	50.	0.N	0.N
BBJ164	100.	0.L	0.N	0.N	10.	150.	20.	50.	0.N	0.N
BBJ166	1000.	0.L	0.N	0.N	5.	70.	7.	50.	0.N	0.N
BBJ215	150.	0.N	0.N	0.N	0.N	30.	7.	0.N	0.N	0.N
BBJ223	100.	0.L	0.N	0.N	5.	150.	30.	30.	0.N	0.N
BBJ231	150.	1.	0.N	0.N	5.	150.	20.	20.	10.	0.N
BBJ234	200.	1.	0.N	0.N	5.	30.	30.	0.N	0.N	0.N
BBJ236	300.	1.	0.N	0.N	5.	70.	70.	0.L	15.	0.N
BBJ237	200.	0.L	0.N	0.N	5.	100.	20.	20.	0.N	0.N
BBJ241	0.N	0.L	0.N	0.N	0.N	20.	5.	20.	0.N	0.N
BBJ242	150.	1.	0.N	0.N	10.	100.	30.	20.	0.N	0.N

ROBERTS MOUNTAINS FORMATION-continued

SAMPLE	NI	PB	SB	SC	SN	SR	V	W	Y	ZN	ZR
AGV270	30.	0.N	0.N	5.	0.N	300.	100.	0.N	10.	0.N	70.
AGV281	20.	10.	0.N	5.	0.N	200.	100.	0.N	10.	0.N	100.
AGV282	50.	15.	0.N	5.	0.N	150.	200.	0.N	15.	200.	70.
AGU353	20.	0.L	0.N	10.	0.L	300.	150.	0.N	30.	0.N	200.
AGU378	10.	0.N	0.N	5.	0.L	200.	700.	0.N	20.	0.N	100.
AGU390	70.	0.L	0.N	0.L	0.L	100.	700.	0.N	20.	200.	300.
AGU452	50.	10.	0.N	5.	0.N	200.	300.	0.N	20.	0.L	150.
AGU453	7.	0.N	0.N	0.N	0.N	500.	100.	0.N	10.	0.N	30.
AGU458	70.	10.	0.N	5.	0.L	100.	20.	0.L	15.	0.L	150.
AGU459	30.	0.N	0.N	5.	10.	200.	700.	0.N	15.	0.N	100.
AGU477	5.	20.	0.N	0.N	0.N	0.N	10.	0.N	50.	0.L	300.
AGU485	0.L	10.	0.N	0.N	0.N	700.	70.	0.N	15.	0.N	20.
BCM278	7.	50.	0.N	0.N	0.N	100.	20.	0.N	0.L	0.N	50.
BCM283	30.	150.	100.	5.	0.L	100.	100.	0.N	20.	0.N	150.
BCM292	5.	20.	70.	0.L	0.N	0.L	150.	0.N	0.L	0.N	30.
BCM323	20.	10.	0.N	0.L	0.N	15.	70.	0.N	15.	0.N	70.
BCM328	10.	15.	70.	0.L	0.N	0.N	300.	0.N	0.L	0.N	100.
BCM371	7.	15.	0.N	5.	0.N	0.N	1000.	0.N	15.	0.N	70.
BBJ006	200.	70.	500.	7.	0.N	0.L	300.	50.	20.	500.	70.
BBJ015	5.	200.	0.N	5.	0.N	500.	30.	0.N	20.	0.N	20.
BBJ017	15.	1500.	100.	10.	0.N	0.L	50.	0.N	30.	0.N	70.
BBJ023	30.	70.	0.L	7.	0.N	100.	150.	0.N	20.	0.N	200.
BBJ030	50.	15.	0.N	7.	0.N	0.L	100.	0.N	20.	0.L	70.
BBJ034	1500.	100.	700.	20.	0.N	0.N	300.	50.	30.	2000.	100.
BBJ036	150.	15.	0.N	10.	0.N	0.L	100.	0.N	30.	500.	150.
BBJ037	30.	20.	0.N	10.	0.N	200.	70.	0.N	20.	0.N	150.
BBJ038	50.	20.	100.	15.	0.N	100.	150.	0.N	30.	0.N	200.
BBJ041	15.	200.	100.	5.	0.N	100.	150.	0.N	15.	0.N	50.
BBJ042	20.	20.	150.	5.	0.N	0.L	150.	0.N	15.	0.N	200.
BBJ045	150.	30.	100.	10.	0.N	100.	300.	0.N	20.	1000.	500.
BBJ048	150.	3000.	1000.	10.	0.N	100.	500.	0.L	30.	200.	200.
BBJ052	20.	50.	0.N	5.	0.N	100.	100.	0.N	10.	0.N	150.
BBJ088	5.	10.	0.N	5.	0.N	300.	500.	0.N	15.	0.N	50.
BBJ094	0.N	0.N	0.N	0.N	0.N	200.	10.	0.N	0.N	0.N	0.N
BBJ115	30.	30.	0.N	5.	0.N	150.	300.	0.N	20.	0.N	70.
BBJ134	5.	0.N	0.N	0.L	0.N	100.	15.	0.N	0.N	0.N	10.
BBJ136	20.	20.	0.N	7.	0.N	200.	70.	0.N	20.	0.N	70.
BBJ157	30.	30.	0.N	10.	0.N	100.	100.	0.N	20.	0.N	70.
BBJ158	30.	20.	0.N	7.	0.N	150.	200.	0.N	20.	200.	200.
BBJ162	20.	10.	0.N	10.	0.N	0.L	100.	0.N	30.	0.N	300.
BBJ164	50.	20.	0.N	15.	0.N	100.	100.	0.N	30.	0.N	150.
BBJ166	30.	10.	0.N	10.	0.N	200.	150.	0.N	20.	0.N	200.
BBJ215	15.	15.	0.N	5.	0.N	500.	200.	0.N	15.	0.N	70.
BBJ223	70.	10.	0.N	5.	0.N	300.	300.	0.N	20.	300.	70.
BBJ231	70.	1.	0.N	15.	0.N	0.L	500.	0.N	50.	0.N	150.
BBJ234	30.	0.L	150.	5.	0.N	0.L	300.	0.N	10.	0.N	30.
BBJ236	50.	20.	200.	10.	0.N	0.L	150.	0.N	20.	0.N	300.
BBJ237	20.	30.	0.N	7.	0.N	150.	70.	0.N	20.	0.N	70.
BBJ241	0.N	20.	0.N	0.L	0.N	100.	50.	0.N	0.L	0.N	10.
BBJ242	50.	30.	0.N	10.	0.N	100.	100.	0.N	20.	0.N	300.

ROBERTS MOUNTAINS FORMATION-continued

SAMPLE	AU	HG	FE	MG	CA	TI	MN	AG	AS	B
BBJ247	0.06	3.00	20000.	5000.	700.	1500.	20.	0.0N	0.L	70.
BBJ248	0.02	0.50	20000.	70000.	0.G	2000.	200.	3.0	0.N	70.
BBJ250	0.36	3.00	20000.	7000.	500.	2000.	30.	0.0N	200.	100.
BBJ254	0.20	3.00	20000.	20000.	70000.	2000.	200.	0.0N	300.	100.
BBJ255	0.10	2.50	2000.	500.	2000.	150.	100.	0.0N	0.N	15.
BBJ257	1.00	4.00	10000.	700.	1500.	700.	50.	0.0N	0.L	20.
BBJ260	0.04	1.60	15000.	7000.	50000.	2000.	150.	0.5	0.N	30.
BBJ261	0.10	0.40	50000.	7000.	5000.	5000.	1500.	0.0N	200.	500.
BBJ280	0.04	3.00	10000.	20000.	150000.	2000.	150.	0.0N	0.N	70.
BBJ286	0.04	3.00	20000.	5000.	700.	3000.	300.	0.0N	0.N	100.
BBJ294	118.00	9.00	50000.	20000.	100000.	2000.	200.	0.0N	1000.	50.
BBJ305	0.78	2.80	20000.	10000.	200000.	2000.	300.	0.0N	0.N	30.
BBJ307	0.08	1.00	20000.	10000.	200000.	2000.	200.	0.0N	0.N	100.
BBJ311	0.18	2.50	20000.	50000.	150000.	1500.	200.	1.0	0.N	50.
BBJ324	0.04	1.50	15000.	30000.	100000.	1500.	200.	0.7	0.N	70.
BBJ328	0.04	0.90	10000.	70000.	200000.	1500.	200.	0.0N	0.N	30.
BBJ374	0.00L	0.05	15000.	50000.	100000.	3000.	500.	0.0N	0.N	0.N
BBJ397	0.15	0.45	20000.	3000.	50000.	500.	200.	1.0	700.	10.
BBJ400	0.00L	0.04	15000.	50000.	100000.	1500.	300.	0.0N	0.N	0.N
BBJ402	0.02	2.40	15000.	3000.	2000.	1500.	700.	0.5	500.	15.
BBJ403	0.02	0.04	15000.	50000.	100000.	2000.	200.	0.0N	0.N	0.N
BBJ405	0.02	0.05	15000.	100000.	200000.	1000.	200.	0.0N	0.N	0.N
BBJ407	0.02	0.00G	100000.	2000.	5000.	500.	200.	0.0N	3000.	10.
BBJ408	0.02	0.34	20000.	2000.	70000.	3000.	500.	0.0N	500.	0.N
BBJ410	0.02	0.05	15000.	70000.	200000.	1500.	200.	0.5	0.N	0.N
BBJ413	0.00L	0.04	15000.	70000.	150000.	2000.	200.	0.0N	0.N	0.N
BBJ419	0.02	0.07	20000.	70000.	100000.	3000.	200.	0.0N	0.N	0.L
BBJ423	0.06	0.04	20000.	50000.	100000.	1500.	150.	2.0	0.N	0.N

ROBERTS MOUNTAINS FORMATION-continued

SAMPLE	BA	BE	BI	CD	CO	CR	CU	LA	MO	NB
BBJ247	150.	0.L	0.N	0.N	7.	30.	70.	20.	0.N	0.N
BBJ248	0.G	0.L	0.N	0.N	0.N	300.	100.	100.	5.	0.N
BBJ250	200.	1.	0.N	0.N	5.	70.	15.	20.	0.N	0.N
BBJ254	100.	0.L	0.N	0.N	7.	50.	10.	30.	0.N	0.N
BBJ255	700.	0.L	0.N	0.N	0.N	0.L	5.	0.N	0.N	0.N
BBJ257	700.	1.	0.N	0.N	0.N	20.	5.	0.N	0.N	0.N
BBJ260	200.	1.	0.N	0.N	5.	50.	10.	70.	0.N	0.N
BBJ261	300.	2.	0.N	0.N	15.	100.	30.	20.	10.	15.
BBJ280	700.	1.	0.N	0.N	0.N	100.	10.	50.	0.N	0.N
BBJ286	200.	1.	0.N	0.N	5.	50.	20.	50.	0.N	10.
BBJ294	300.	1.	0.N	0.N	0.L	30.	30.	50.	10.	0.N
BBJ305	700.	0.L	0.N	0.N	10.	50.	10.	20.	0.N	0.N
BBJ307	300.	0.L	0.N	0.N	0.N	200.	7.	30.	0.N	0.N
BBJ311	1000.	0.L	0.N	0.N	5.	50.	10.	20.	0.N	0.N
BBJ324	150.	0.L	0.N	0.N	0.N	50.	15.	20.	7.	0.N
BBJ328	100.	0.L	0.N	0.N	0.L	50.	5.	20.	15.	0.N
BBJ374	1000.	1.	0.N	0.N	5.	70.	5.	30.	0.N	0.N
BBJ397	300.	2.	0.N	0.N	0.N	15.	50.	0.N	0.N	0.N
BBJ400	500.	0.L	0.N	0.N	5.	70.	15.	30.	0.N	0.N
BBJ402	500.	2.	0.N	0.N	0.L	50.	50.	0.L	0.N	0.N
BBJ403	500.	1.	0.N	0.N	5.	150.	10.	100.	0.N	0.N
BBJ405	100.	1.	0.N	0.N	0.L	50.	20.	20.	20.	0.N
BBJ407	500.	2.	0.N	30.	5.	50.	70.	0.N	0.N	0.N
BBJ408	1500.	0.N	0.N	0.N	7.	100.	7.	30.	0.N	0.N
BBJ410	300.	0.N	0.N	0.N	0.L	70.	50.	20.	0.N	0.N
BBJ413	300.	0.L	0.N	0.N	0.L	70.	30.	20.	0.N	0.N
BBJ419	1500.	1.	0.N	0.N	20.	100.	70.	30.	0.N	0.N
BBJ423	300.	1.	0.N	0.N	7.	70.	20.	0.L	0.N	0.N

ROBERTS MOUNTAINS FORMATION-continued

SAMPLE	NI	PB	SB	SC	SN	SR	V	W	Y	ZN	ZR
BBJ247	20.	20.	200.	7.	0.N	0.L	700.	0.L	20.	200.	150.
BBJ248	100.	20.	0.N	15.	0.N	700.	700.	0.N	100.	0.N	150.
BBJ250	20.	20.	200.	7.	0.N	0.L	200.	0.L	30.	0.N	200.
BBJ254	50.	15.	150.	5.	0.N	0.L	200.	0.N	15.	300.	200.
BBJ255	7.	0.N	150.	0.L	0.N	100.	15.	0.N	0.N	0.N	0.N
BBJ257	15.	0.N	150.	0.L	0.N	0.L	100.	0.N	10.	0.N	150.
BBJ260	20.	0.N	300.	5.	0.N	100.	150.	0.N	30.	0.N	200.
BBJ261	200.	100.	300.	15.	0.N	100.	150.	0.N	30.	1000.	150.
BBJ280	10.	15.	0.N	7.	0.N	0.L	200.	0.N	30.	0.N	200.
BBJ286	20.	10.	0.N	10.	0.N	0.L	150.	0.N	20.	0.N	500.
BBJ294	50.	20.	200.	7.	0.N	100.	150.	0.N	20.	0.N	200.
BBJ305	20.	10.	0.N	10.	0.N	200.	70.	0.N	20.	0.N	150.
BBJ307	15.	10.	0.N	10.	0.N	100.	70.	0.N	15.	0.N	100.
BBJ311	20.	20.	0.N	7.	0.N	200.	500.	0.N	20.	0.N	100.
BBJ324	20.	10.	100.	7.	0.N	0.L	300.	0.N	20.	300.	150.
BBJ328	20.	15.	0.N	5.	0.N	300.	200.	0.N	20.	0.N	100.
BBJ374	30.	0.N	0.N	7.	0.N	100.	50.	0.N	20.	0.N	200.
BBJ397	50.	100.	300.	0.L	0.N	0.L	500.	0.N	10.	1000.	70.
BBJ400	20.	0.N	0.N	7.	0.N	300.	70.	0.N	20.	0.N	200.
BBJ402	70.	50.	300.	7.	0.N	0.N	300.	50.	15.	700.	150.
BBJ403	70.	0.N	0.N	10.	0.N	300.	1500.	0.N	50.	0.N	150.
BBJ405	50.	15.	0.N	5.	0.N	300.	150.	0.N	20.	0.N	100.
BBJ407	100.	0.N	500.	5.	0.N	0.N	2000.	70.	50.	1500.	70.
BBJ408	50.	0.N	0.N	10.	0.N	0.L	100.	0.L	20.	0.L	300.
BBJ410	30.	20.	0.N	7.	0.N	300.	500.	0.N	20.	200.	150.
BBJ413	20.	0.N	0.N	7.	0.N	300.	150.	0.N	20.	0.N	300.
BBJ419	30.	0.N	0.N	10.	0.N	300.	100.	0.N	20.	0.N	150.
BBJ423	30.	0.L	0.N	7.	0.N	200.	100.	0.N	20.	0.N	150.

DATE 3/17/80

JASPEROID

SAMPLE	AU	HG	FE	MG	CA	TI	MN	AG	AS	B
AGV251	0.00L	2.80	5000.	2000.	200000.	700.	700.	0.0N	0.N	0.N
AGV253	0.06	1.20	50000.	2000.	2000.	2000.	50.	0.0N	2000.	150.
AGV257	0.02	0.26	5000.	1000.	20000.	300.	200.	0.0N	0.N	0.N
AGV259	0.00L	1.80	5000.	20000.	200000.	1000.	200.	0.0N	0.N	0.L
AGV261	0.00L	1.20	5000.	1000.	2000.	700.	70.	0.0N	0.N	10.
AGV262	0.00L	1.30	10000.	5000.	2000.	2000.	10.	0.5	0.N	70.
AGV264	0.04	2.20	3000.	500.	2000.	200.	500.	0.0N	200.	0.N
AGV265	0.00L	0.20	10000.	3000.	1000.	1500.	10.	0.5	0.N	20.
AGV266	0.80	1.50	10000.	2000.	1000.	2000.	0.L	0.5	700.	50.
AGV267	0.04	1.30	10000.	1000.	1000.	5000.	0.L	0.5	200.	10.
AGV268	0.02	0.09	5000.	2000.	100000.	500.	50.	0.0L	0.N	0.N
AGV269	0.00L	0.80	10000.	5000.	2000.	2000.	10.	0.0L	0.N	30.
AGV271	0.06	0.24	2000.	200.	3000.	200.	100.	0.0N	0.N	0.N
AGV272	0.02	0.75	5000.	500.	10000.	500.	200.	0.0L	0.N	10.
AGV274	0.00L	1.00	10000.	5000.	5000.	2000.	50.	0.0L	200.	50.
AGV275	0.00L	0.12	5000.	2000.	500.	1000.	100.	0.0N	0.N	20.
AGV277	1.30	5.50	5000.	500.	7000.	2000.	50.	10.0	0.G	0.N
AGV279	0.04	0.20	1000.	1000.	20000.	200.	30.	0.0N	0.N	0.N
AGV280	0.04	0.75	5000.	50000.	100000.	1000.	100.	0.0L	0.N	50.
AGV283	0.04	0.70	20000.	5000.	2000.	5000.	200.	0.0N	700.	100.
AGV287	0.00L	0.65	3000.	2000.	1000.	1000.	100.	0.0N	0.N	20.
AGV288	0.00L	0.22	5000.	20000.	30000.	1000.	100.	0.0L	0.N	15.
AGV289	0.00L	1.00	7000.	1000.	700.	1000.	50.	0.0L	0.N	20.
AGV292	0.00L	0.50	3000.	5000.	50000.	500.	200.	0.0L	0.N	0.N
AGV294	0.02	1.50	15000.	20000.	30000.	2000.	200.	0.0N	0.N	100.
AGV295	0.12	1.40	15000.	2000.	2000.	3000.	200.	0.0N	0.N	100.
AGV298	1.90	0.90	30000.	2000.	100000.	3000.	1000.	0.0N	2000.	200.
AGU345	0.20	0.75	10000.	2000.	2000.	1500.	100.	0.1	0.N	20.
AGU358	1.00	0.35	50000.	3000.	10000.	3000.	100.	0.5	500.	20.
AGU359	0.00L	0.35	20000.	7000.	5000.	7000.	50.	0.0N	200.	50.
AGU369	0.00L	6.00	2000.	500.	10000.	150.	200.	0.0N	0.N	0.L
AGU376	0.00L	0.20	5000.	1000.	15000.	300.	300.	0.0N	0.N	0.L
AGU380	1.80	2.20	70000.	2000.	15000.	150.	200.	10.0	1500.	10.
AGU389	0.10	0.00G	10000.	7000.	10000.	1500.	50.	0.0N	500.	30.
AGU403	0.00L	0.35	10000.	5000.	10000.	1000.	100.	1.0	0.N	150.
AGU450	0.00L	0.60	5000.	30000.	150000.	700.	700.	0.0L	0.N	0.N
AGU451	0.40	2.60	700.	700.	3000.	100.	20.	500.0	0.N	10.
AGU517	0.00L	2.00	7000.	5000.	1000.	2000.	0.N	0.0N	0.N	150.
AGU523	0.00L	0.40	7000.	50000.	70000.	700.	70.	0.0L	0.N	70.
AGU525	0.00L	0.24	5000.	10000.	100000.	700.	50.	5.0	0.N	20.
BCM320	0.00N	0.45	1000.	1000.	500.	700.	70.	0.0N	0.N	20.
BCM321	0.00N	0.00G	15000.	2000.	700.	1000.	150.	0.0L	300.	15.
BCM322	0.00N	1.00	3000.	20000.	70000.	1000.	300.	0.5	0.N	10.
BCM324	0.00N	0.35	5000.	2000.	1500.	3000.	20.	0.0N	1500.	20.
BCM326	0.00N	1.00	5000.	20000.	30000.	700.	50.	0.0N	0.N	20.
BCM327	0.00N	1.30	7000.	2000.	1000.	700.	300.	0.0N	200.	20.
BCM350	0.00N	5.00	7000.	3000.	500.	1500.	30.	0.0N	0.N	70.
BCM351	0.04	1.30	0.L	1500.	700.	1000.	50.	0.0N	0.N	70.
BCM352	0.02	1.40	1500.	200.	700.	2000.	30.	0.0N	0.N	0.L
BBJ046	0.00N	0.28	150000.	300.	1000.	700.	0.G	0.0N	200.	20.

JASPEROID-continued

SAMPLE	BA	BE	BI	CD	CO	CR	CU	LA	MO	NB
AGV251	100.	0.N	0.L	0.N	0.N	50.	70.	0.N	0.N	0.N
AGV253	700.	1.	0.N	0.N	5.	150.	50.	50.	50.	10.
AGV257	1000.	0.N	0.N	0.N	0.N	10.	50.	0.N	0.N	0.N
AGV259	150.	0.N	0.L	0.N	0.N	70.	50.	20.	0.N	0.N
AGV261	150.	0.N	0.N	0.N	0.N	10.	100.	0.N	7.	0.L
AGV262	300.	2.	0.N	0.N	0.N	70.	50.	0.N	0.N	10.
AGV264	1500.	0.N	0.N	0.N	0.N	5.	50.	0.N	0.N	0.L
AGV265	200.	2.	0.L	0.N	7.	70.	50.	20.	0.N	10.
AGV266	1500.	1.	0.L	0.N	0.N	50.	50.	20.	0.N	10.
AGV267	200.	0.L	0.L	0.N	5.	300.	100.	100.	0.N	15.
AGV268	100.	0.N	0.L	0.N	0.N	5.	50.	0.N	0.N	0.N
AGV269	200.	1.	0.N	0.N	0.N	50.	10.	0.N	0.N	0.L
AGV271	500.	0.N	0.L	0.N	0.N	5.	70.	0.N	0.N	0.N
AGV272	700.	0.N	0.L	0.N	0.N	10.	50.	0.N	0.N	0.N
AGV274	0.G	1.	0.N	0.N	0.N	30.	5.	0.N	10.	10.
AGV275	1000.	0.L	0.N	0.N	0.N	20.	5.	0.N	0.N	0.L
AGV277	300.	0.N	0.N	0.N	0.N	10.	0.G	0.N	0.N	10.
AGV279	200.	0.N	0.N	0.N	0.N	20.	10.	0.N	0.N	0.N
AGV280	200.	1.	0.N	0.N	0.N	20.	10.	20.	20.	0.N
AGV283	500.	1.	0.N	0.N	0.N	100.	10.	50.	0.N	10.
AGV287	300.	0.L	0.N	0.N	0.N	30.	5.	20.	0.N	0.L
AGV288	200.	1.	0.N	0.N	0.N	20.	7.	0.N	0.N	0.L
AGV289	500.	0.N	0.N	0.N	0.N	20.	0.L	0.N	15.	0.L
AGV292	300.	1.	0.N	0.N	0.N	10.	0.L	20.	7.	0.L
AGV294	700.	1.	0.N	0.N	0.N	50.	10.	20.	7.	10.
AGV295	100.	1.	0.N	0.N	0.N	50.	5.	20.	0.N	10.
AGV298	200.	1.	0.N	0.N	20.	100.	15.	50.	0.N	0.L
AGU345	1500.	1.	0.N	0.N	0.L	20.	10.	100.	0.N	15.
AGU358	300.	0.L	0.N	0.N	0.L	50.	20.	70.	20.	10.
AGU359	200.	0.L	0.N	0.N	5.	50.	15.	50.	0.N	20.
AGU369	0.G	0.L	0.N	0.N	0.L	0.L	10.	0.L	0.L	0.L
AGU376	700.	0.L	0.N	0.N	5.	10.	5.	0.L	0.N	10.
AGU380	300.	5.	0.N	0.N	0.L	10.	700.	0.L	10.	10.
AGU389	300.	0.L	0.N	0.N	0.L	20.	20.	70.	0.N	10.
AGU403	500.	2.	0.N	0.N	0.L	10.	7.	0.N	0.L	0.L
AGU450	150.	0.N	0.N	0.N	0.N	0.N	5.	0.N	0.N	0.N
AGU451	150.	0.N	0.N	30.	0.N	0.N	500.	0.L	0.N	0.N
AGU517	1000.	0.L	0.N	0.N	0.N	70.	0.L	30.	5.	10.
AGU523	300.	0.L	0.N	0.N	0.N	15.	0.L	0.N	0.N	0.N
AGU525	150.	0.L	0.N	70.	0.N	70.	30.	20.	30.	0.N
BCM320	0.G	0.L	0.N	0.N	0.L	0.L	10.	20.	0.N	0.N
BCM321	150.	0.L	0.N	0.N	10.	20.	20.	0.L	5.	0.N
BCM322	150.	0.L	0.N	0.N	10.	30.	10.	20.	0.N	0.N
BCM324	100.	1.	0.N	0.N	0.L	50.	15.	30.	0.N	10.
BCM326	500.	1.	0.N	0.N	0.N	20.	10.	20.	0.N	0.N
BCM327	1500.	1.	0.N	0.N	15.	20.	15.	0.L	0.N	0.N
BCM350	150.	0.L	0.N	0.N	5.	30.	5.	30.	7.	0.N
BCM351	1000.	0.L	0.N	0.N	0.N	20.	20.	30.	10.	0.N
BCM352	1500.	0.L	0.N	0.N	0.N	0.L	10.	20.	0.N	0.N
BBJ046	300.	20.	0.N	30.	300.	0.N	5.	0.N	0.N	0.N

JASPEROID-continued

SAMPLE	NI	PB	SB	SC	SN	SR	V	W	Y	ZN	ZR
AGV251	5.	10.	0.N	0.N	0.N	300.	20.	0.N	10.	0.N	30.
AGV253	20.	10.	200.	10.	0.N	0.N	200.	0.N	15.	2000.	200.
AGV257	15.	0.N	300.	0.N	0.N	0.N	20.	0.N	10.	0.N	50.
AGV259	10.	20.	0.N	0.N	0.N	300.	20.	0.N	15.	200.	50.
AGV261	30.	50.	200.	0.N	0.N	0.N	200.	0.N	10.	200.	50.
AGV262	20.	10.	500.	7.	0.N	0.N	1000.	0.N	10.	0.N	200.
AGV264	20.	0.N	0.N	0.N	0.N	0.N	50.	0.N	0.N	0.N	20.
AGV265	50.	0.N	200.	5.	0.N	0.N	1000.	0.N	10.	0.N	100.
AGV266	20.	0.N	200.	0.N	0.N	0.N	70.	0.N	15.	0.N	200.
AGV267	30.	0.N	0.N	10.	0.N	0.N	200.	50.	50.	0.N	200.
AGV268	20.	10.	0.N	0.N	0.N	200.	50.	0.N	10.	0.N	20.
AGV269	20.	0.N	300.	5.	0.N	0.N	500.	0.N	10.	0.N	100.
AGV271	20.	0.N	0.N	0.N	0.N	0.N	50.	0.N	0.N	0.N	100.
AGV272	20.	0.N	0.N	0.N	0.N	0.N	50.	70.	10.	0.N	50.
AGV274	30.	10.	200.	5.	0.N	150.	500.	0.N	15.	200.	150.
AGV275	15.	10.	0.N	5.	0.N	0.N	300.	50.	15.	0.N	100.
AGV277	50.	0.N	500.	0.L	0.N	0.N	50.	0.N	15.	0.N	200.
AGV279	20.	0.L	0.N	0.N	0.N	0.N	200.	0.N	10.	0.N	15.
AGV280	50.	0.L	0.N	5.	0.N	150.	200.	0.N	15.	0.N	70.
AGV283	70.	15.	100.	10.	0.N	0.N	150.	0.N	20.	0.N	500.
AGV287	0.L	15.	100.	0.N	0.N	0.N	300.	0.N	15.	0.N	300.
AGV288	30.	10.	500.	0.L	0.N	0.N	300.	0.N	0.N	0.L	50.
AGV289	15.	0.N	100.	0.N	0.N	0.N	200.	0.N	0.L	0.N	100.
AGV292	20.	0.N	0.N	5.	0.N	0.N	100.	0.N	10.	0.N	50.
AGV294	50.	10.	0.N	7.	0.N	0.N	200.	0.N	15.	0.N	150.
AGV295	30.	0.N	0.N	7.	0.N	0.N	200.	0.N	20.	0.N	300.
AGV298	30.	0.L	0.N	15.	0.N	0.N	100.	0.N	15.	0.N	100.
AGU345	5.	10.	100.	5.	0.N	300.	100.	0.N	10.	0.N	200.
AGU358	7.	10.	100.	10.	0.N	200.	2000.	0.N	30.	0.N	200.
AGU359	50.	0.L	0.N	10.	0.N	100.	70.	0.N	30.	0.N	500.
AGU369	5.	10.	0.N	0.L	0.N	1000.	20.	0.N	10.	0.N	50.
AGU376	5.	0.N	0.N	0.L	0.N	100.	50.	0.N	10.	0.N	50.
AGU380	20.	300.	500.	0.N	100.	0.L	70.	0.N	0.L	1000.	0.L
AGU389	20.	0.L	200.	0.L	0.L	100.	700.	0.N	50.	0.N	100.
AGU403	20.	15.	0.N	5.	0.N	100.	200.	0.N	10.	200.	150.
AGU450	15.	20.	0.N	0.L	0.N	0.L	30.	0.N	10.	0.N	15.
AGU451	7.	300.	3000.	0.N	0.N	0.N	100.	0.N	0.N	200.	15.
AGU517	7.	0.N	150.	5.	0.N	0.N	70.	0.N	10.	0.N	150.
AGU523	15.	0.L	0.N	0.N	0.N	0.L	300.	0.N	0.L	200.	70.
AGU525	70.	20.	0.N	0.L	0.N	100.	1000.	0.N	30.	3000.	70.
BCM320	5.	0.L	0.N	0.L	0.N	100.	200.	0.N	10.	0.N	50.
BCM321	70.	0.L	100.	0.L	0.N	0.N	200.	0.N	15.	300.	200.
BCM322	15.	50.	0.N	7.	0.N	0.L	300.	0.N	15.	0.N	100.
BCM324	5.	20.	100.	10.	0.N	100.	150.	0.N	15.	0.N	150.
BCM326	15.	10.	100.	0.L	0.N	0.N	150.	0.N	0.L	0.N	70.
BCM327	30.	15.	300.	0.L	0.N	0.N	200.	0.N	0.L	0.L	70.
BCM350	0.L	10.	0.N	0.L	0.N	0.N	70.	0.N	0.L	0.N	70.
BCM351	0.L	20.	200.	0.L	0.N	150.	150.	0.N	15.	0.N	70.
BCM352	0.L	10.	0.N	0.L	0.N	100.	30.	0.N	0.L	0.N	300.
BBJ046	1500.	0.N	0.N	7.	0.N	100.	50.	0.N	20.	0.G	150.

JASPEROID-continued

SAMPLE	AU	HG	FE	MG	CA	TI	MN	AG	AS	B
BBJ053	0.00N	2.00	7000.	200.	500.	300.	20.	0.0N	0.N	20.
BBJ062	0.00N	1.40	7000.	1000.	700.	1000.	150.	0.5	0.N	50.
BBJ082	0.00N	0.80	10000.	2000.	500.	2000.	200.	0.0N	500.	100.
BBJ095	0.00N	0.12	10000.	2000.	5000.	1000.	70.	0.0N	0.N	50.
BBJ097	0.10	0.26	7000.	700.	1500.	1000.	100.	0.0N	0.N	30.
BBJ108	0.00N	0.10	15000.	50000.	200000.	1500.	150.	0.0N	0.N	100.
BBJ118	0.00N	0.18	3000.	700.	5000.	300.	20.	0.0N	0.N	20.
BBJ119	0.00N	0.28	7000.	10000.	10000.	1000.	70.	0.0L	0.N	50.
BBJ123	0.00N	2.60	15000.	2000.	0.L	1500.	20.	0.5	0.N	100.
BBJ125	0.00N	0.00G	50000.	1500.	700.	1000.	50.	0.0N	700.	30.
BBJ126	0.00N	0.22	150000.	7000.	700.	3000.	10.	0.0N	1000.	70.
BBJ128	0.00N	9.00	10000.	1000.	5000.	1000.	100.	0.5	0.N	50.
BBJ129	0.00N	0.35	3000.	1500.	1000.	2000.	20.	0.0N	0.N	100.
BBJ130	0.00N	1.00	500.	500.	700.	1500.	10.	0.0N	0.N	50.
BBJ132	0.00N	0.10	5000.	50000.	70000.	700.	200.	0.0N	0.N	30.
BBJ133	0.00N	0.90	0.L	2000.	500.	2000.	20.	0.0N	0.N	100.
BBJ139	0.00N	1.60	500.	200.	500.	150.	0.N	0.0N	0.N	0.L
BBJ143	0.00N	1.60	20000.	5000.	1000.	1500.	30.	0.0N	300.	50.
BBJ144	0.00N	0.20	500.	5000.	0.G	200.	70.	0.0N	0.N	0.N
BBJ146	0.00N	2.60	15000.	3000.	1000.	1000.	20.	0.0N	200.	70.
BBJ147	0.02	2.00	5000.	700.	700.	700.	100.	0.0N	0.N	30.
BBJ149	0.30	0.40	7000.	3000.	500.	1500.	30.	0.0N	0.N	100.
BBJ165	0.00L	1.00	10000.	5000.	2000.	3000.	50.	0.7	0.L	70.
BBJ216	0.02	0.20	15000.	30000.	100000.	1500.	300.	0.0N	0.N	70.
BBJ217	0.06	0.85	15000.	1500.	2000.	700.	300.	0.0N	500.	20.
BBJ218	0.18	0.75	3000.	2000.	1000.	2000.	70.	0.0N	0.N	70.
BBJ219	0.08	0.45	5000.	2000.	5000.	500.	100.	1.5	0.N	20.
BBJ238	0.10	3.00	20000.	5000.	1000.	3000.	50.	0.0N	0.L	100.
BBJ239	0.02	2.20	10000.	10000.	0.G	500.	300.	0.0N	0.N	0.L
BBJ243	0.40	1.80	20000.	50000.	70000.	2000.	300.	0.5	0.N	100.
BBJ245	1.40	3.00	10000.	2000.	1000.	1500.	50.	0.0N	0.N	70.
BBJ246	0.26	1.10	50000.	2000.	1000.	2000.	20.	0.0N	200.	70.
BBJ251	0.02	0.24	20000.	50000.	100000.	2000.	200.	0.0N	0.N	70.
BBJ252	0.50	10.00	20000.	3000.	2000.	1500.	100.	0.5	200.	70.
BBJ253	1.20	2.00	3000.	2000.	500.	1500.	30.	0.0N	0.N	50.
BBJ256	0.06	1.60	5000.	3000.	0.L	1500.	20.	0.5	0.N	50.
BBJ262	0.08	1.00	7000.	7000.	500.	3000.	20.	0.0N	0.N	70.
BBJ264	0.16	4.00	20000.	5000.	500.	1500.	70.	0.0N	500.	70.
BBJ266	0.04	10.00	20000.	2000.	7000.	1000.	70.	0.0N	500.	50.
BBJ268	0.30	2.60	3000.	5000.	700.	1500.	50.	0.0N	0.N	50.
BBJ269	0.46	0.40	15000.	2000.	0.L	2000.	20.	0.0L	0.N	50.
BBJ270	0.70	3.00	200000.	2000.	3000.	2000.	1000.	0.0N	2000.	30.
BBJ274	0.02	0.60	5000.	5000.	1000.	3000.	15.	0.0N	0.N	50.
BBJ275	0.90	0.65	100000.	5000.	1000.	2000.	20.	0.0N	1000.	50.
BBJ277	0.14	0.70	300.	500.	2000.	300.	200.	0.0N	0.N	20.
BBJ278	0.24	0.70	100000.	5000.	2000.	10000.	70.	0.0N	2000.	50.
BBJ282	0.00N	8.00	10000.	5000.	1000.	3000.	20.	0.5	0.L	100.
BBJ284	0.04	10.00	70000.	2000.	2000.	1500.	30.	0.0N	700.	30.
BBJ287	0.46	0.00G	20000.	20000.	50000.	2000.	200.	0.0N	5000.	100.
BBJ296	0.10	7.50	30000.	3000.	1000.	1500.	300.	0.0N	0.N	50.

JASPEROID-continued

SAMPLE	BA	BE	BI	CD	CO	CR	CU	LA	MO	NB
BBJ053	150.	0.L	0.N	0.N	5.	0.L	7.	0.L	0.N	0.N
BBJ062	200.	0.L	0.N	0.N	0.N	20.	5.	20.	15.	0.N
BBJ082	300.	1.	0.N	0.N	0.N	20.	10.	30.	0.N	0.N
BBJ095	300.	0.L	0.N	0.N	5.	0.N	20.	20.	0.N	0.N
BBJ097	100.	0.L	0.N	0.N	0.N	0.N	15.	20.	7.	0.N
BBJ108	200.	0.L	0.N	0.N	5.	50.	30.	20.	20.	0.N
BBJ118	3000.	1.	0.N	0.N	0.N	0.N	5.	0.L	0.N	0.N
BBJ119	300.	1.	0.N	0.N	0.N	0.N	5.	0.N	0.N	0.N
BBJ123	100.	0.L	0.N	0.N	0.N	0.N	20.	20.	50.	0.N
BBJ125	300.	0.L	0.N	0.N	0.N	30.	15.	20.	70.	0.N
BBJ126	300.	1.	0.N	0.N	10.	0.N	100.	0.N	15.	0.N
BBJ128	5000.	0.L	0.N	0.N	0.N	20.	70.	30.	5.	0.N
BBJ129	500.	0.L	0.N	0.N	0.N	0.N	7.	50.	0.N	0.N
BBJ130	200.	0.L	0.N	0.N	0.N	0.N	10.	30.	0.N	0.N
BBJ132	300.	0.N	0.N	0.N	0.N	0.N	0.L	20.	0.N	0.N
BBJ133	100.	0.L	0.N	0.N	0.N	0.N	0.L	30.	0.N	0.N
BBJ139	0.G	0.N	0.N	0.N	0.N	0.N	5.	0.N	0.N	0.N
BBJ143	200.	1.	0.N	0.N	0.N	20.	7.	0.L	0.N	0.N
BBJ144	70.	0.N	0.N	0.N	0.N	0.L	0.L	0.L	0.N	0.N
BBJ146	1000.	1.	0.N	0.N	5.	50.	20.	20.	7.	0.N
BBJ147	300.	0.L	0.N	0.N	0.N	0.N	7.	20.	15.	0.N
BBJ149	100.	0.L	0.N	0.N	0.N	20.	5.	20.	0.N	0.N
BBJ165	300.	2.	0.N	0.N	5.	50.	20.	50.	0.N	0.N
BBJ216	300.	1.	0.N	0.N	5.	50.	15.	0.N	0.N	0.N
BBJ217	5000.	0.L	0.N	0.N	0.N	20.	5.	0.L	0.N	0.N
BBJ218	500.	0.L	0.N	0.N	0.N	20.	0.L	20.	0.N	0.N
BBJ219	500.	0.L	0.N	0.N	5.	20.	5.	20.	10.	0.N
BBJ238	200.	2.	0.N	0.N	15.	100.	20.	30.	0.N	0.N
BBJ239	100.	0.N	0.N	0.N	0.N	20.	7.	0.N	0.N	0.N
BBJ243	200.	0.L	0.N	0.N	7.	100.	30.	20.	0.N	0.N
BBJ245	500.	0.L	0.N	0.N	0.L	20.	15.	20.	50.	0.N
BBJ246	300.	2.	0.N	0.N	5.	50.	15.	70.	5.	0.N
BBJ251	2000.	0.L	0.N	0.N	7.	50.	20.	20.	30.	0.N
BBJ252	2000.	0.L	0.N	0.N	0.N	50.	20.	30.	0.N	0.N
BBJ253	700.	0.L	0.N	0.N	0.N	20.	5.	20.	7.	0.N
BBJ256	100.	1.	0.N	0.N	0.N	30.	7.	30.	0.N	0.N
BBJ262	150.	0.L	0.N	0.N	0.N	70.	0.L	30.	0.N	0.N
BBJ264	700.	1.	0.N	0.N	5.	20.	10.	20.	10.	0.N
BBJ266	1500.	1.	0.N	0.N	20.	20.	10.	0.L	0.L	0.N
BBJ268	200.	0.L	0.N	0.N	0.N	30.	7.	50.	0.N	0.N
BBJ269	150.	0.L	0.N	0.N	0.N	50.	5.	70.	0.N	0.N
BBJ270	0.G	1.	0.N	0.N	150.	700.	300.	150.	20.	0.N
BBJ274	200.	1.	0.N	0.N	0.N	100.	5.	50.	0.N	0.N
BBJ275	300.	1.	0.N	0.N	5.	70.	50.	30.	30.	0.N
BBJ277	0.G	1.	0.N	0.N	0.N	0.N	0.L	0.N	0.N	0.N
BBJ278	3000.	1.	0.N	0.N	10.	1000.	100.	150.	15.	0.N
BBJ282	200.	1.	0.N	0.N	0.N	50.	5.	70.	0.N	0.N
BBJ284	1500.	1.	0.N	0.N	0.N	50.	100.	0.N	7.	0.N
BBJ287	2000.	0.L	0.N	0.N	5.	20.	10.	50.	0.N	0.N
BBJ296	700.	2.	0.N	0.N	5.	20.	10.	0.N	0.N	0.N

JASPEROID-continued

SAMPLE	NI	PB	SB	SC	SN	SR	V	W	Y	ZN	ZR
BBJ053	5.	50.	100.	0.L	0.N	0.L	100.	0.N	0.N	0.N	100.
BBJ062	15.	30.	0.L	0.L	0.N	0.L	1500.	0.N	0.N	0.L	70.
BBJ082	20.	10.	200.	7.	0.N	0.L	150.	0.N	15.	200.	150.
BBJ095	70.	0.N	0.N	5.	0.N	100.	300.	0.N	15.	0.N	100.
BBJ097	20.	10.	0.N	0.N	0.N	0.L	500.	0.N	10.	0.N	50.
BBJ108	100.	20.	0.N	5.	0.N	200.	300.	0.N	20.	0.N	100.
BBJ118	7.	0.N	150.	0.L	0.N	100.	20.	0.N	10.	0.N	30.
BBJ119	15.	20.	100.	5.	0.N	0.L	500.	0.N	0.N	0.N	70.
BBJ123	10.	10.	300.	5.	0.N	100.	1000.	0.N	15.	0.N	150.
BBJ125	7.	10.	200.	7.	0.N	150.	500.	0.N	15.	0.N	70.
BBJ126	20.	10.	150.	10.	0.N	150.	500.	0.N	20.	0.L	200.
BBJ128	20.	10.	100.	0.L	0.N	200.	150.	0.N	15.	0.N	200.
BBJ129	0.L	0.L	200.	0.L	0.N	0.L	50.	0.N	10.	0.N	150.
BBJ130	0.L	10.	0.N	5.	0.N	100.	200.	0.N	10.	0.N	100.
BBJ132	5.	10.	0.N	0.L	0.N	100.	70.	0.N	15.	0.N	100.
BBJ133	0.L	0.N	200.	5.	0.N	100.	500.	0.N	20.	0.N	100.
BBJ139	0.L	30.	0.N	0.L	0.N	3000.	30.	0.N	0.N	0.N	10.
BBJ143	20.	10.	100.	5.	0.N	0.L	500.	0.N	0.N	0.N	150.
BBJ144	0.L	0.N	0.N	0.L	0.N	700.	20.	0.N	0.L	0.N	0.L
BBJ146	50.	10.	150.	5.	0.N	0.L	500.	0.N	10.	0.L	100.
BBJ147	10.	10.	0.L	0.L	0.N	0.L	150.	0.N	10.	0.N	50.
BBJ149	5.	10.	0.L	5.	0.N	0.L	200.	0.N	10.	0.N	200.
BBJ165	20.	10.	500.	10.	0.N	0.N	700.	0.N	15.	0.N	150.
BBJ216	50.	15.	150.	7.	0.N	0.L	150.	0.N	10.	0.N	200.
BBJ217	30.	0.N	200.	5.	0.N	100.	70.	0.N	10.	0.N	70.
BBJ218	7.	0.N	0.L	5.	0.N	0.L	300.	0.N	15.	0.N	150.
BBJ219	15.	10.	100.	0.L	0.N	0.L	300.	0.N	0.N	300.	100.
BBJ238	50.	50.	100.	10.	0.N	0.L	150.	0.N	15.	0.N	500.
BBJ239	5.	0.N	0.N	10.	0.N	150.	30.	0.N	20.	0.N	50.
BBJ243	50.	20.	0.N	10.	0.N	100.	150.	0.N	20.	0.N	300.
BBJ245	15.	0.N	200.	5.	0.N	100.	700.	0.N	15.	0.N	100.
BBJ246	150.	20.	200.	10.	0.N	150.	200.	50.	50.	200.	500.
BBJ251	70.	30.	0.N	7.	0.N	200.	500.	0.N	20.	0.L	150.
BBJ252	15.	20.	100.	5.	0.N	0.L	150.	0.N	15.	0.N	150.
BBJ253	5.	0.N	100.	5.	0.N	0.L	300.	0.N	15.	0.N	70.
BBJ256	15.	0.N	200.	5.	0.N	0.L	1000.	0.N	10.	0.N	100.
BBJ262	5.	0.N	0.N	10.	0.N	0.L	100.	0.N	10.	0.N	200.
BBJ264	50.	0.N	100.	7.	0.N	0.L	150.	0.N	20.	200.	100.
BBJ266	50.	15.	200.	0.L	0.N	100.	150.	0.N	15.	0.N	50.
BBJ268	5.	0.L	0.N	7.	0.N	0.L	150.	0.N	10.	0.N	100.
BBJ269	10.	0.L	500.	7.	0.N	0.L	100.	0.L	15.	0.N	200.
BBJ270	200.	2000.	200.	7.	0.N	300.	200.	0.N	50.	0.N	100.
BBJ274	15.	10.	0.N	10.	0.N	0.L	200.	0.N	15.	0.N	500.
BBJ275	30.	15.	100.	15.	0.N	200.	300.	0.N	20.	0.L	200.
BBJ277	7.	10.	100.	5.	0.N	200.	50.	0.N	0.L	0.N	20.
BBJ278	150.	20.	200.	20.	0.N	200.	200.	100.	50.	500.	200.
BBJ282	5.	10.	0.N	10.	0.N	0.L	100.	0.N	20.	0.N	300.
BBJ284	20.	50.	150.	7.	0.N	150.	1000.	0.N	15.	200.	150.
BBJ287	15.	30.	0.L	7.	0.N	100.	100.	0.N	15.	0.N	200.
BBJ296	20.	10.	200.	7.	0.N	0.L	200.	0.N	20.	0.L	100.

JASPEROID-continued

SAMPLE	AU	HG	FE	MG	CA	TI	MN	AG	AS	B
BBJ299	0.00N	1.80	2000.	500.	7000.	200.	200.	0.0N	0.N	30.
BBJ300	0.00N	7.00	30000.	20000.	100000.	2000.	300.	1.5	200.	200.
BBJ304	0.04	6.00	20000.	5000.	700.	1500.	100.	0.0N	700.	70.
BBJ310	32.00	0.00G	10000.	1000.	500.	1500.	20.	0.7	0.N	50.
BBJ411	0.02	5.50	20000.	1500.	700.	2000.	100.	0.0N	700.	10.
BBJ412	0.00L	0.60	15000.	700.	700.	500.	50.	0.0N	700.	20.
BBJ416	0.00L	0.09	20000.	1000.	20000.	700.	150.	0.0N	300.	100.
BBJ424	0.04	0.04	15000.	50000.	150000.	1500.	200.	0.0L	0.N	10.

JASPEROID-continued

SAMPLE	BA	BE	BI	CD	CO	CR	CU	LA	MO	NB
BBJ299	1000.	0.L	0.N	0.N	0.N	0.N	5.	0.N	0.N	0.N
BBJ300	1000.	1.	0.N	0.N	0.N	300.	50.	30.	0.N	0.N
BBJ304	300.	1.	0.N	0.N	15.	20.	15.	30.	15.	0.N
BBJ310	500.	1.	0.N	0.N	7.	20.	50.	20.	0.N	0.N
BBJ411	500.	2.	0.N	0.N	0.L	50.	30.	0.N	10.	0.N
BBJ412	100.	0.N	0.N	0.N	0.N	15.	15.	0.N	0.L	0.N
BBJ416	200.	3.	0.N	30.	10.	10.	30.	0.N	5.	0.N
BBJ424	100.	1.	0.N	0.N	0.N	100.	30.	0.L	0.N	0.N

JASPEROID-continued

SAMPLE	NI	PB	SB	SC	SN	SR	V	W	Y	ZN	ZR
BBJ299	10.	10.	0.N	0.N	0.N	0.L	30.	0.N	0.L	0.N	70.
BBJ300	100.	150.	0.N	15.	0.N	100.	200.	0.N	50.	700.	100.
BBJ304	50.	10.	100.	10.	0.N	0.N	200.	0.N	20.	0.N	100.
BBJ310	15.	20.	100.	5.	0.N	0.L	100.	0.N	20.	0.N	150.
BBJ411	20.	20.	300.	0.L	0.N	0.N	200.	50.	15.	500.	200.
BBJ412	10.	0.N	100.	0.N	0.N	0.N	150.	0.N	0.N	0.N	100.
BBJ416	100.	0.N	0.N	0.L	0.N	0.N	700.	0.N	70.	1000.	70.
BBJ424	30.	0.L	0.N	7.	0.N	300.	300.	0.N	20.	200.	200.

DATE 3/17/80

SILURIAN & DEVONIAN LIMESTONE

SAMPLE	AU	HG	FE	MG	CA	TI	MN	AG	AS	B
AGV300	0.10	0.04	50000.	10000.	150000.	3000.	1000.	0.0N	0.N	0.L
AGV301	0.04	0.03	15000.	10000.	50000.	1000.	500.	0.0N	0.N	0.N
AGV304	0.00L	0.26	20000.	50000.	200000.	2000.	500.	0.0N	0.N	100.
AGV307	0.04	0.03	50000.	50000.	100000.	3000.	500.	0.0N	0.N	0.N
AGV309	0.02	0.03	20000.	20000.	150000.	1000.	500.	0.0N	0.N	10.
AGV313	0.02	0.14	30000.	10000.	150000.	2000.	1000.	0.0N	0.N	10.
AGV318	0.02	0.00L	50000.	10000.	100000.	2000.	1000.	0.0N	0.N	10.
AGV321	0.00L	0.04	10000.	50000.	200000.	200.	200.	0.0N	0.N	0.L
AGV322	0.00L	0.03	10000.	50000.	200000.	1000.	200.	0.0N	0.N	100.
AGV323	0.00L	0.07	20000.	20000.	30000.	5000.	200.	0.5	0.N	10.
AGV326	0.00L	0.05	15000.	10000.	50000.	2000.	200.	0.0N	0.N	0.N
AGV329	0.00L	0.05	20000.	20000.	100000.	5000.	500.	0.0N	0.N	0.N
AGV330	0.00L	0.08	30000.	30000.	100000.	1000.	500.	0.0N	0.N	0.N
AGV331	0.00L	0.03	20000.	50000.	100000.	2000.	500.	0.0N	0.N	0.N
AGV336	0.00L	0.35	15000.	20000.	50000.	5000.	200.	0.0N	0.N	0.N
AGV338	0.02	0.90	20000.	15000.	20000.	5000.	100.	0.0N	0.N	50.
AGV340	0.00L	0.04	1000.	20000.	200000.	200.	100.	0.0N	0.N	0.N
AGV342	0.02	0.03	50000.	15000.	50000.	5000.	100.	0.0N	0.N	10.
AGV343	0.02	0.03	30000.	50000.	150000.	2000.	200.	0.0N	0.N	0.L
AGU539	0.00L	0.05	1500.	30000.	0.G	100.	100.	0.0N	0.N	0.N
BCM325	0.00N	0.28	1500.	5000.	200000.	300.	300.	0.0N	0.N	0.L
BCM330	0.00N	0.80	3000.	30000.	150000.	700.	300.	0.0N	0.N	20.
BBJ117	0.00N	0.04	2000.	5000.	0.G	500.	300.	0.0N	0.N	0.N
BBJ131	0.00N	0.24	500.	7000.	0.G	200.	200.	0.0N	0.N	0.N
BBJ135	0.00N	0.24	5000.	70000.	200000.	500.	1000.	0.0N	0.N	10.
BBJ138	0.00N	0.35	10000.	5000.	70000.	1500.	3000.	0.0N	0.N	50.
BBJ150	0.00N	0.10	10000.	15000.	0.G	700.	300.	0.0N	0.N	0.L
BBJ152	0.10	0.16	50000.	10000.	100000.	3000.	300.	0.0N	0.N	100.

SILURIAN & DEVONIAN LIMESTONE-continued

SAMPLE	BA	BE	BI	CD	CO	CR	CU	LA	MO	NB
AGV300	200.	0.L	0.N	0.N	10.	30.	20.	50.	0.N	0.L
AGV301	1500.	1.	0.N	0.N	5.	5.	20.	0.N	0.N	0.N
AGV304	30.	2.	0.N	0.N	10.	200.	20.	0.L	0.N	0.N
AGV307	200.	0.N	0.N	0.N	15.	100.	20.	0.N	0.N	0.N
AGV309	100.	2.	0.N	0.N	5.	0.N	20.	0.N	0.N	0.N
AGV313	200.	1.	0.N	0.N	10.	0.N	20.	50.	0.N	10.
AGV318	300.	1.	0.N	0.N	20.	70.	15.	50.	0.N	30.
AGV321	500.	2.	0.N	0.N	5.	0.N	10.	20.	0.N	0.N
AGV322	200.	0.N	0.N	0.N	0.N	70.	5.	20.	0.N	0.L
AGV323	3000.	1.	0.N	0.N	5.	150.	200.	70.	0.N	0.L
AGV326	2000.	0.L	0.N	0.N	0.N	50.	20.	30.	0.N	0.L
AGV329	500.	0.N	0.N	0.N	10.	50.	50.	30.	0.N	10.
AGV330	1000.	1.	0.N	0.N	20.	50.	15.	0.N	0.N	0.L
AGV331	200.	1.	0.N	0.N	10.	100.	50.	0.N	0.N	0.L
AGV336	2000.	0.L	0.N	0.N	0.N	100.	100.	50.	0.N	0.L
AGV338	1000.	1.	0.N	0.N	0.N	100.	100.	50.	0.N	10.
AGV340	150.	0.N	0.N	0.N	0.N	0.N	5.	0.N	0.N	0.N
AGV342	1000.	1.	0.N	0.N	5.	10.	15.	50.	0.N	15.
AGV343	500.	1.	0.N	0.N	15.	50.	5.	30.	0.N	0.L
AGU539	70.	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N
BCM325	20.	0.L	0.N	0.N	0.N	0.L	0.L	0.N	0.N	0.N
BCM330	50.	0.L	0.N	0.N	0.L	20.	10.	20.	0.N	0.N
BBJ117	70.	0.N	0.N	0.N	0.N	0.N	0.L	0.L	0.N	0.N
BBJ131	20.	0.N	0.N	0.N	0.N	0.N	0.L	0.N	0.N	0.N
BBJ135	100.	0.L	0.N	0.N	0.N	0.N	5.	20.	0.N	0.N
BBJ138	70.	0.L	0.N	0.N	0.N	0.N	5.	0.L	0.N	0.N
BBJ150	100.	0.L	0.N	0.N	0.N	0.N	0.L	20.	0.N	0.N
BBJ152	1000.	2.	0.N	0.N	15.	100.	20.	50.	10.	0.N

SILURIAN & DEVONIAN LIMESTONE-continued

SAMPLE	NI	PB	SB	SC	SN	SR	V	W	Y	ZN	ZR
AGV300	30.	0.N	0.N	10.	0.N	100.	500.	0.N	20.	0.N	150.
AGV301	20.	0.N	0.N	0.N	0.N	150.	100.	0.N	10.	0.N	100.
AGV304	50.	0.N	0.N	10.	0.N	150.	20.	0.N	0.N	200.	150.
AGV307	50.	0.N	0.N	20.	0.N	100.	150.	0.N	20.	0.N	100.
AGV309	15.	0.L	0.N	0.N	0.N	100.	50.	0.N	15.	0.N	70.
AGV313	10.	50.	0.N	5.	0.N	100.	100.	0.N	15.	200.	70.
AGV318	30.	0.N	0.N	10.	0.N	200.	200.	0.N	20.	0.N	70.
AGV321	15.	10.	0.N	0.N	0.N	500.	20.	0.N	0.N	500.	0.N
AGV322	20.	0.L	0.N	5.	0.N	300.	20.	0.N	15.	0.N	50.
AGV323	50.	10.	0.N	15.	0.N	300.	100.	0.N	20.	0.N	100.
AGV326	70.	0.L	0.N	7.	0.N	200.	300.	0.N	10.	0.N	100.
AGV329	30.	10.	0.N	10.	0.N	300.	150.	0.N	30.	0.N	100.
AGV330	50.	0.L	0.N	5.	0.N	200.	500.	0.N	10.	0.L	50.
AGV331	30.	0.N	0.N	5.	0.N	0.N	100.	0.N	10.	200.	100.
AGV336	50.	0.L	0.N	10.	0.N	300.	200.	0.N	10.	0.N	100.
AGV338	50.	0.L	0.N	10.	0.N	200.	100.	0.N	15.	0.N	200.
AGV340	5.	10.	0.N	0.N	0.N	200.	10.	0.N	0.N	0.N	0.N
AGV342	15.	0.N	0.N	7.	0.N	700.	100.	0.N	20.	0.N	150.
AGV343	50.	0.N	0.N	7.	0.N	200.	100.	0.N	15.	0.N	100.
AGU539	0.N	15.	0.N	0.N	0.N	300.	0.L	0.N	0.L	0.N	15.
BCM325	5.	15.	100.	0.L	0.N	100.	20.	0.N	10.	0.N	50.
BCM330	20.	15.	0.N	0.L	0.N	100.	150.	0.N	15.	50.	50.
BBJ117	0.L	10.	100.	5.	0.N	500.	30.	0.N	20.	0.N	20.
BBJ131	0.L	0.N	0.N	0.L	0.N	500.	20.	0.N	10.	0.N	0.N
BBJ135	5.	50.	0.L	0.L	0.N	150.	50.	0.N	15.	0.N	10.
BBJ138	10.	20.	100.	0.L	0.N	0.L	300.	0.N	10.	0.N	200.
BBJ150	10.	50.	0.L	0.L	0.N	300.	100.	0.N	15.	0.N	50.
BBJ152	50.	15.	0.N	15.	0.N	200.	150.	0.N	20.	0.N	100.

POPOVICH FORMATION

SAMPLE	AU	HG	FE	MG	CA	TI	MN	AG	AS	B
AGV252	0.06	0.00G	7000.	20000.	50000.	1000.	200.	1.0	0.N	10.
AGV254	0.04	0.50	10000.	5000.	2000.	3000.	500.	0.0N	200.	100.
AGV255	0.00L	0.30	5000.	15000.	50000.	700.	200.	0.0N	0.N	20.
AGV258	0.00L	0.00G	10000.	50000.	100000.	1500.	200.	3.0	0.N	10.
AGV296	0.06	0.03	5000.	20000.	200000.	500.	200.	0.0N	0.N	10.
AGU532	0.00L	0.05	500.	5000.	200000.	70.	20.	0.0N	0.N	0.N
AGU533	0.00L	0.07	700.	5000.	50000.	30.	20.	0.0N	0.N	0.L
BBJ091	1.40	0.14	2000.	7000.	200000.	300.	100.	0.0N	0.N	0.N
BBJ093	0.00L	0.14	1500.	3000.	200000.	1500.	150.	0.0N	0.N	0.N
BBJ106	0.00N	0.30	20000.	20000.	50000.	3000.	150.	0.0N	0.N	100.
BBJ153	1.20	0.16	70000.	30000.	70000.	5000.	1000.	1.0	1000.	500.
BBJ154	0.08	0.02	20000.	70000.	150000.	3000.	500.	0.0N	0.N	200.
BBJ160	0.00L	0.06	2000.	3000.	0.G	500.	150.	0.0N	0.N	0.L
BBJ163	0.00L	0.55	10000.	7000.	200000.	1000.	300.	0.0N	0.N	30.
BBJ168	0.06	0.08	20000.	7000.	200000.	2000.	2000.	0.0N	0.N	50.
BBJ221	0.02	0.06	2000.	15000.	0.G	300.	150.	0.0N	0.N	0.L
BBJ227	0.02	0.08	2000.	10000.	0.G	500.	150.	0.0N	0.N	0.N
BBJ276	0.02	0.40	30000.	10000.	0.G	2000.	300.	0.0N	0.N	50.
BBJ279	0.02	0.45	10000.	50000.	0.G	1000.	100.	0.0N	0.N	20.
BBJ289	0.04	0.00G	100000.	5000.	700.	5000.	500.	0.0N	2000.	100.
BBJ303	0.04	1.40	2000.	200.	500.	2000.	30.	1.0	0.L	20.
BBJ308	0.20	0.65	20000.	30000.	70000.	2000.	300.	0.0N	0.N	70.
BBJ312	0.06	1.00	2000.	7000.	0.G	200.	150.	0.0N	0.N	0.N
BBJ315	0.06	1.80	70000.	7000.	100000.	5000.	700.	0.0N	500.	30.
BBJ316	0.00N	1.00	20000.	50000.	200000.	1000.	200.	0.5	0.N	20.
BBJ317	0.02	0.30	1500.	1500.	70000.	150.	20.	0.0N	0.N	0.N
BBJ319	0.04	1.10	15000.	50000.	100000.	1500.	100.	0.0N	0.N	100.
BBJ321	1.10	0.60	1500.	700.	5000.	500.	20.	0.0N	0.N	30.
BBJ322	0.02	0.60	500.	3000.	0.G	200.	50.	0.0N	0.N	10.
BBJ323	0.00N	1.00	2000.	20000.	0.G	300.	100.	0.0N	0.N	0.N
BBJ325	0.02	1.00	15000.	10000.	200000.	1500.	200.	0.0N	0.N	30.
BBJ326	0.02	1.10	20000.	70000.	150000.	1500.	300.	0.0N	0.N	50.
BBJ327	0.04	1.20	0.L	500.	70000.	50.	0.N	0.0N	0.N	0.N
BBJ329	0.00N	0.80	10000.	20000.	0.G	1500.	200.	0.0N	0.N	20.
BBJ381	0.00L	0.06	10000.	7000.	0.G	500.	300.	0.0N	0.N	0.L
BBJ401	0.02	0.07	15000.	70000.	150000.	1500.	300.	0.0N	0.N	0.N
BBJ404	0.02	0.04	10000.	50000.	150000.	1500.	200.	0.0N	0.N	0.N
BBJ414	0.00L	0.05	200.	7000.	0.G	200.	150.	0.0N	0.N	0.N
BBJ415	0.00L	0.03	200.	7000.	0.G	200.	200.	0.0N	0.N	0.N
BBJ418	0.00L	0.05	150.	7000.	150000.	200.	100.	0.7	0.L	0.N
BBJ420	0.00L	0.05	15000.	30000.	100000.	2000.	500.	0.0N	0.N	0.N
BBJ421	0.00L	0.03	15000.	50000.	100000.	3000.	200.	0.0N	0.N	70.
BBJ422	0.04	0.03	200.	7000.	0.G	300.	100.	0.0N	0.N	0.N
BBJ425	0.02	0.04	0.L	5000.	200000.	100.	50.	0.0N	0.N	0.N
BBJ442	0.00L	0.05	10000.	50000.	70000.	3000.	150.	0.0N	0.N	0.L
BBJ471	0.00L	0.09	5000.	5000.	0.G	700.	150.	0.0N	0.N	0.N

POPOVICH FORMATION-continued

SAMPLE	BA	BE	BI	CD	CO	CR	CU	LA	MO	NB
AGV252	1500.	0.N	0.L	300.	5.	20.	150.	0.N	0.N	10.
AGV254	300.	2.	0.N	0.N	10.	70.	50.	50.	0.L	10.
AGV255	150.	0.N	0.N	0.N	0.N	5.	50.	0.N	0.N	0.N
AGV258	2000.	0.N	0.L	300.	5.	70.	100.	0.N	0.L	0.L
AGV296	200.	0.N	0.N	0.N	0.N	30.	5.	0.N	0.N	0.L
AGU532	0.L	0.N	0.N	0.N	0.N	0.N	10.	0.N	0.N	0.N
AGU533	50.	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N
BBJ091	70.	0.N	0.N	0.N	0.N	20.	0.L	0.N	0.N	0.N
BBJ093	50.	0.N	0.N	0.N	0.N	0.N	0.L	0.N	0.N	0.N
BBJ106	300.	2.	0.N	0.N	5.	70.	5.	0.L	0.N	0.N
BBJ153	1500.	2.	0.N	0.N	30.	1500.	70.	150.	15.	0.N
BBJ154	200.	0.L	0.N	0.N	10.	150.	7.	50.	0.N	0.N
BBJ160	150.	0.L	0.N	0.N	0.N	0.N	0.L	20.	0.N	0.N
BBJ163	150.	0.N	0.N	0.N	0.N	0.N	5.	0.L	0.N	0.N
BBJ168	700.	0.L	0.N	0.N	7.	70.	7.	20.	0.N	0.N
BBJ221	100.	0.N	0.N	0.N	0.N	20.	0.L	20.	0.N	0.N
BBJ227	100.	0.N	0.N	0.N	0.N	0.N	5.	0.N	0.N	0.N
BBJ276	300.	0.L	0.N	0.N	5.	50.	10.	0.N	0.N	0.N
BBJ279	700.	0.N	0.N	0.N	0.N	100.	0.L	20.	0.N	0.N
BBJ289	200.	1.	0.N	0.N	50.	1000.	70.	100.	5.	0.N
BBJ303	500.	1.	0.N	0.N	0.N	30.	10.	30.	7.	0.N
BBJ308	500.	1.	0.N	0.N	10.	70.	10.	20.	0.N	0.N
BBJ312	150.	0.N	0.N	0.N	0.N	0.L	0.L	0.N	0.N	0.N
BBJ315	500.	2.	0.N	0.N	20.	1000.	70.	100.	5.	0.N
BBJ316	70.	0.L	0.N	20.	5.	70.	50.	0.L	50.	0.N
BBJ317	300.	0.L	0.N	0.N	0.N	20.	0.L	20.	0.N	0.N
BBJ319	700.	0.L	0.N	20.	0.N	50.	50.	0.N	70.	0.N
BBJ321	200.	0.L	0.N	0.N	0.N	0.N	5.	0.N	0.N	0.N
BBJ322	100.	0.L	0.N	0.N	0.N	0.N	0.L	0.N	0.N	0.N
BBJ323	50.	0.N	0.N	0.N	0.N	0.N	0.L	0.N	0.N	0.N
BBJ325	150.	0.L	0.N	0.N	0.N	50.	0.L	20.	0.N	0.N
BBJ326	300.	0.L	0.N	0.N	5.	30.	7.	20.	0.N	0.N
BBJ327	20.	0.L	0.N	0.N	0.N	0.L	0.L	20.	0.N	0.N
BBJ329	2000.	0.L	0.N	0.N	0.N	70.	0.L	20.	0.N	0.N
BBJ381	500.	0.N	0.N	0.N	0.N	15.	0.N	0.N	0.N	0.N
BBJ401	50.	0.L	0.N	0.N	0.L	70.	15.	30.	0.N	0.N
BBJ404	700.	0.N	0.N	0.N	0.L	50.	20.	0.N	0.N	0.N
BBJ414	300.	0.N	0.N	0.N	0.N	10.	0.L	0.N	0.N	0.N
BBJ415	70.	0.N	0.N	0.N	0.N	0.L	0.N	0.N	0.N	0.N
BBJ418	70.	0.N	0.N	0.N	0.N	0.L	20.	0.N	0.N	0.N
BBJ420	1000.	0.L	0.N	0.N	0.L	50.	15.	30.	0.N	0.N
BBJ421	1000.	1.	0.N	0.N	0.L	70.	30.	30.	0.N	0.N
BBJ422	150.	0.N	0.N	0.N	0.N	10.	0.N	0.N	0.N	0.N
BBJ425	70.	0.N	0.N	0.N	0.N	0.N	5.	0.N	0.N	0.N
BBJ442	100.	0.N	0.N	0.N	10.	70.	30.	0.N	0.N	0.N
BBJ471	0.G	0.N	0.N	0.N	0.N	0.L	15.	0.N	0.N	0.N

POPOVICH FORMATION-continued

SAMPLE	NI	PB	SB	SC	SN	SR	V	W	Y	ZN	ZR
AGV252	20.	2000.	0.N	0.N	0.N	200.	70.	0.N	10.	0.G	100.
AGV254	50.	10.	100.	10.	0.N	0.N	150.	0.N	20.	200.	100.
AGV255	20.	0.N	100.	0.N	0.N	0.N	20.	0.N	10.	0.N	100.
AGV258	50.	7000.	0.N	5.	0.N	500.	100.	0.N	15.	0.G	150.
AGV296	7.	0.N	0.N	0.N	0.N	300.	50.	0.N	10.	0.N	30.
AGU532	0.N	0.N	0.N	0.N	0.N	300.	0.L	0.N	0.N	0.N	0.N
AGU533	5.	0.N	0.N	0.N	0.N	150.	10.	0.N	0.N	0.N	0.N
BBJ091	0.N	0.N	0.N	0.N	0.N	500.	20.	0.N	0.N	0.N	0.N
BBJ093	0.N	0.N	0.N	0.N	0.N	300.	15.	0.N	0.N	0.N	50.
BBJ106	20.	10.	700.	10.	0.N	100.	100.	0.N	20.	0.N	300.
BBJ153	200.	50.	0.N	20.	0.N	500.	1000.	0.L	30.	1500.	200.
BBJ154	15.	30.	0.N	10.	0.N	150.	100.	0.N	20.	0.N	150.
BBJ160	5.	0.N	0.N	5.	0.N	100.	30.	0.N	10.	0.N	150.
BBJ163	10.	15.	0.N	5.	0.N	300.	50.	0.N	10.	0.N	10.
BBJ168	20.	10.	0.N	10.	0.N	150.	100.	0.N	20.	0.N	70.
BBJ221	0.L	0.N	0.N	5.	0.N	700.	20.	0.N	15.	0.N	20.
BBJ227	0.L	0.N	0.N	0.L	0.N	500.	20.	0.N	10.	0.N	150.
BBJ276	20.	30.	0.L	10.	0.N	300.	100.	0.N	20.	0.N	70.
BBJ279	5.	10.	0.N	5.	0.N	700.	30.	0.N	20.	0.N	30.
BBJ289	200.	10.	0.N	30.	0.N	100.	200.	50.	30.	0.N	200.
BBJ303	0.L	50.	0.L	7.	0.N	100.	700.	0.N	15.	0.N	200.
BBJ308	20.	30.	2000.	10.	0.N	100.	100.	0.N	15.	0.L	150.
BBJ312	0.N	0.N	0.N	0.N	0.N	500.	50.	0.N	10.	0.N	10.
BBJ315	100.	20.	0.N	20.	0.N	200.	200.	0.N	30.	0.N	150.
BBJ316	100.	20.	0.N	5.	0.N	300.	300.	0.N	30.	300.	50.
BBJ317	0.N	0.N	0.N	5.	0.N	100.	30.	0.N	10.	0.N	10.
BBJ319	50.	10.	0.N	7.	0.N	100.	700.	0.N	20.	300.	100.
BBJ321	10.	20.	0.N	0.L	0.N	0.L	100.	0.N	0.L	0.N	150.
BBJ322	0.L	0.N	0.N	0.N	0.N	200.	20.	0.N	0.N	0.N	15.
BBJ323	0.L	0.N	0.N	0.L	0.N	500.	20.	0.N	0.N	0.N	15.
BBJ325	7.	0.N	0.N	5.	0.N	300.	20.	0.N	10.	0.N	50.
BBJ326	10.	10.	0.N	7.	0.N	500.	50.	0.N	20.	0.N	150.
BBJ327	0.L	0.N	0.N	5.	0.N	0.L	10.	0.N	0.L	0.N	10.
BBJ329	0.L	0.N	0.N	5.	0.N	500.	20.	0.N	15.	0.N	50.
BBJ381	5.	0.N	0.N	0.N	0.N	300.	15.	0.N	0.L	0.N	30.
BBJ401	15.	0.N	0.N	7.	0.N	300.	20.	0.N	10.	0.N	150.
BBJ404	10.	0.L	0.N	5.	0.N	300.	200.	0.N	15.	200.	200.
BBJ414	10.	0.N	0.N	0.N	0.N	500.	70.	0.N	0.L	0.N	10.
BBJ415	5.	0.N	0.N	0.N	0.N	500.	50.	0.N	15.	0.N	10.
BBJ418	20.	0.N	0.N	0.N	0.N	300.	300.	0.N	20.	300.	20.
BBJ420	15.	0.N	0.N	5.	0.N	150.	50.	0.N	15.	0.N	200.
BBJ421	20.	15.	0.N	10.	0.N	200.	150.	0.N	30.	0.N	300.
BBJ422	0.N	0.N	0.N	0.N	0.N	300.	0.L	0.N	0.N	0.N	10.
BBJ425	7.	0.N	0.N	0.N	0.N	500.	100.	0.N	0.L	0.N	10.
BBJ442	20.	0.N	0.N	7.	0.N	150.	300.	0.N	20.	0.N	200.
BBJ471	7.	0.N	0.N	0.N	0.N	300.	0.N	0.N	0.L	0.N	20.

LIMESTONE - TRANS. ASSEMBLAGE

SAMPLE	AU	HG	FE	MG	CA	TI	MN	AG	AS	B
AGU417	0.00L	0.09	50000.	15000.	100000.	5000.	300.	0.0N	0.N	200.
BBJ446	0.00L	0.05	3000.	3000.	200000.	500.	200.	0.0N	0.N	0.L
BBJ449	0.00L	0.05	20000.	5000.	70000.	2000.	150.	0.0N	0.N	70.
BBJ451	0.00L	0.26	2000.	1500.	200000.	200.	150.	0.0N	0.N	0.N
BBJ452	0.00L	0.09	7000.	5000.	0.G	500.	150.	0.0N	0.N	0.N
BBJ453	0.00L	0.12	3000.	1500.	150000.	300.	200.	0.0N	0.N	0.N
BBJ454	0.00L	0.07	3000.	10000.	0.G	500.	200.	0.0N	0.N	0.N
BBJ456	0.00L	0.09	5000.	500.	1500.	300.	30.	0.0N	0.N	50.
BBJ458	0.00L	0.12	10000.	500.	1000.	300.	150.	0.0N	0.N	20.
BBJ464	0.00L	0.13	10000.	7000.	0.G	300.	200.	0.0N	0.N	0.N
BBJ465	0.00L	0.13	700.	5000.	0.G	300.	150.	0.0N	0.N	0.N
BBJ466	0.00L	0.12	10000.	7000.	200000.	300.	200.	0.0N	0.N	0.N

LIMESTONE - TRANS. ASSEMBLAGE-continued

SAMPLE	BA	BE	BI	CD	CO	CR	CU	LA	MO	NB
AGU417	150.	1.	0.N	0.N	10.	70.	20.	50.	0.L	20.
BBJ446	100.	0.N	0.N	0.N	0.N	0.N	15.	0.N	0.N	0.N
BBJ449	1500.	0.L	0.N	0.N	7.	50.	20.	20.	7.	0.N
BBJ451	200.	0.N	0.N	0.N	0.N	0.N	7.	0.N	0.N	0.N
BBJ452	500.	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N
BBJ453	70.	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N
BBJ454	700.	0.N	0.N	0.N	0.N	0.N	0.L	0.N	0.N	0.N
BBJ456	500.	0.N	0.N	0.N	0.N	0.N	10.	0.N	0.N	0.N
BBJ458	150.	0.L	0.N	0.N	0.N	15.	20.	0.N	10.	0.N
BBJ464	700.	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N
BBJ465	700.	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N
BBJ466	1000.	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N

LIMESTONE - TRANS. ASSEMBLAGE-continued

SAMPLE	NI	PB	SB	SC	SN	SR	V	W	Y	ZN	ZR
AGU417	20.	0.L	0.N	10.	0.N	100.	70.	0.N	20.	0.L	150.
BBJ446	5.	0.N	0.N	0.N	0.N	200.	10.	0.N	10.	0.N	30.
BBJ449	50.	0.L	0.N	5.	0.N	0.L	70.	0.N	10.	0.L	100.
BBJ451	5.	0.N	0.N	0.N	0.N	100.	0.L	0.N	0.L	0.N	50.
BBJ452	5.	0.N	0.N	0.N	0.N	500.	10.	0.N	0.N	0.N	15.
BBJ453	5.	0.N	0.N	0.N	0.N	100.	0.L	0.N	0.N	0.N	100.
BBJ454	0.N	0.N	0.N	0.N	0.N	500.	0.L	0.N	0.N	0.N	20.
BBJ456	7.	0.N	0.N	0.N	0.N	0.N	10.	0.N	0.N	0.N	20.
BBJ458	15.	0.N	0.N	0.N	0.N	0.N	300.	0.N	0.N	200.	30.
BBJ464	0.N	0.N	0.N	0.N	0.N	500.	0.N	0.N	0.N	0.N	30.
BBJ465	0.L	0.N	0.N	0.N	0.N	500.	10.	0.N	0.L	0.N	10.
BBJ466	7.	0.N	0.N	0.N	0.N	300.	10.	0.N	0.L	0.N	100.

GRANODIORITE - CRETACEOUS

SAMPLE	AU	HG	FE	MG	CA	TI	MN	AG	AS	B
AGV291	0.60	0.16	10000.	2000.	5000.	2000.	200.	0.0N	0.N	15.
AGV297	0.18	0.13	30000.	2000.	100000.	2000.	1000.	0.0N	2000.	200.
AGV302	0.00L	0.07	100000.	50000.	100000.	5000.	2000.	0.0N	0.N	0.N
AGV303	0.00L	0.03	50000.	20000.	100000.	2000.	1000.	0.0N	0.N	0.L
AGV306	0.04	0.04	50000.	20000.	30000.	5000.	700.	0.0N	0.N	10.
AGV308	0.06	0.04	50000.	20000.	50000.	5000.	1000.	0.0N	0.N	15.
AGV311	0.00L	0.05	50000.	15000.	50000.	2000.	1000.	0.0N	0.N	0.N
AGV320	0.00L	0.08	30000.	10000.	20000.	5000.	500.	0.0N	0.N	0.L
AGV325	0.18	0.22	20000.	5000.	70000.	5000.	500.	0.0N	700.	200.
AGV334	0.00L	0.05	15000.	10000.	20000.	5000.	200.	0.0N	0.N	0.N
AGU404	0.00L	0.06	70000.	20000.	70000.	10000.	1000.	0.0N	0.N	0.L
AGU471	0.00L	0.11	50000.	30000.	30000.	5000.	700.	0.0N	0.N	10.
AGU506	0.00L	0.08	50000.	50000.	30000.	5000.	700.	0.0N	0.N	10.
AGU510	0.00L	0.06	50000.	10000.	20000.	3000.	700.	0.0N	0.N	0.N
AGU512	0.00L	0.14	50000.	30000.	20000.	3000.	700.	0.0N	0.N	15.
AGU528	0.00L	0.07	20000.	5000.	3000.	1500.	300.	0.0N	0.N	10.
AGU529	0.00L	0.75	1500.	5000.	10000.	300.	100.	0.0N	0.N	0.N
AGU534	0.00L	0.09	70000.	70000.	50000.	5000.	1000.	0.0N	0.N	10.
BBJ225	0.02	0.16	30000.	3000.	15000.	3000.	200.	0.0N	0.N	30.
BBJ228	0.02	0.20	70000.	500.	500.	10000.	70.	0.0N	0.N	20.
BBJ314	0.02	10.00	30000.	7000.	5000.	2000.	300.	0.0N	0.N	50.

GRANODIORITE - CRETACEOUS-continued

SAMPLE	BA	BE	BI	CD	CO	CR	CU	LA	MO	NB
AGV291	1500.	1.	0.N	0.N	0.N	10.	5.	30.	0.N	10.
AGV297	500.	1.	0.N	0.N	15.	70.	15.	50.	0.N	0.L
AGV302	200.	0.L	0.N	0.N	30.	300.	10.	0.L	0.N	0.N
AGV303	700.	1.	0.N	0.N	20.	150.	30.	0.L	0.N	0.N
AGV306	500.	1.	0.N	0.N	20.	200.	20.	70.	0.N	10.
AGV308	500.	1.	0.N	0.N	20.	100.	20.	50.	0.N	0.L
AGV311	300.	1.	0.N	0.N	10.	70.	15.	50.	0.N	50.
AGV320	700.	1.	0.N	0.N	20.	50.	15.	70.	0.N	10.
AGV325	150.	1.	0.N	0.N	10.	100.	10.	50.	0.N	10.
AGV334	1000.	1.	0.N	0.N	0.N	50.	20.	50.	0.N	10.
AGU404	1000.	1.	0.N	0.N	20.	50.	7.	50.	0.L	10.
AGU471	1000.	1.	0.N	0.N	30.	150.	15.	70.	0.N	0.N
AGU506	700.	0.L	0.N	0.N	30.	200.	15.	50.	0.N	10.
AGU510	1500.	0.L	0.N	0.N	70.	10.	7.	30.	0.N	10.
AGU512	700.	0.L	0.N	0.N	50.	100.	5.	30.	0.N	10.
AGU528	1000.	2.	0.N	0.N	5.	15.	0.N	20.	0.N	0.N
AGU529	1500.	0.L	0.N	0.N	0.N	0.N	0.N	0.N	0.L	0.N
AGU534	1500.	1.	0.N	0.N	50.	500.	70.	70.	0.N	0.N
BBJ225	700.	2.	0.N	0.N	0.L	20.	7.	30.	0.N	0.N
BBJ228	200.	1.	0.N	0.N	5.	300.	100.	150.	10.	20.
BBJ314	700.	2.	0.N	0.N	10.	50.	15.	30.	5.	0.N

GRANODIORITE - CRETACEOUS-continued

SAMPLE	NI	PB	SB	SC	SN	SR	V	W	Y	ZN	ZR
AGV291	15.	10.	0.N	5.	0.N	200.	20.	0.N	10.	0.N	150.
AGV297	50.	0.N	0.N	15.	0.N	0.N	200.	0.N	20.	0.N	150.
AGV302	150.	0.N	0.N	70.	0.N	100.	500.	0.N	20.	0.N	30.
AGV303	20.	0.N	0.N	20.	0.N	500.	200.	0.N	15.	0.N	30.
AGV306	50.	10.	0.N	20.	0.N	500.	200.	0.N	15.	0.N	100.
AGV308	50.	10.	0.N	15.	0.N	500.	100.	0.N	15.	0.N	100.
AGV311	50.	0.N	0.N	15.	0.N	300.	200.	0.N	15.	0.N	150.
AGV320	20.	10.	0.N	15.	0.N	500.	100.	0.N	20.	0.N	200.
AGV325	30.	0.L	0.N	15.	0.N	0.N	200.	0.N	20.	0.N	150.
AGV334	30.	10.	0.N	7.	0.N	500.	100.	0.N	15.	0.N	300.
AGU404	10.	20.	0.N	20.	0.N	500.	150.	0.N	30.	0.L	200.
AGU471	100.	10.	0.N	30.	0.N	1000.	150.	0.N	20.	0.N	70.
AGU506	100.	10.	0.N	20.	0.N	700.	150.	0.N	20.	0.N	150.
AGU510	15.	10.	0.N	15.	0.N	700.	100.	0.N	20.	0.N	150.
AGU512	50.	10.	0.N	15.	0.N	700.	150.	0.N	20.	0.N	200.
AGU528	20.	10.	0.N	0.L	0.N	300.	30.	0.N	0.L	0.N	100.
AGU529	10.	0.N	500.	0.N	0.N	0.L	50.	0.N	0.L	0.N	70.
AGU534	300.	0.N	0.N	20.	0.N	1000.	200.	0.N	15.	0.N	150.
BBJ225	20.	20.	0.N	7.	0.N	150.	50.	0.N	15.	0.N	200.
BBJ228	7.	20.	0.N	20.	0.N	150.	300.	70.	50.	0.N	1000.
BBJ314	20.	20.	0.N	10.	0.N	200.	50.	0.N	10.	0.N	150.

QUARTZ MONZONITE - CRETACEOUS

SAMPLE	AU	HG	FE	MG	CA	TI	MN	AG	AS	B
AGU393	0.00L	0.12	20000.	5000.	10000.	2000.	700.	0.0N	0.N	0.L
AGU406	0.00L	0.04	15000.	2000.	10000.	1000.	300.	0.0N	0.N	0.L
AGU443	0.00L	0.20	70000.	15000.	20000.	10000.	1000.	0.0N	0.N	10.
AGU444	0.10	0.07	15000.	5000.	5000.	1500.	1000.	0.0N	0.N	10.
AGU456	0.00L	0.06	7000.	1500.	3000.	500.	200.	0.0N	0.N	0.N
BBJ406	0.02	0.00G	10000.	3000.	700.	1000.	30.	0.0L	500.	20.
BBJ409	0.02	1.40	10000.	300.	700.	2000.	50.	0.0N	500.	30.

QUARTZ MONZONITE - CRETACEOUS-continued

SAMPLE	BA	BE	BI	CD	CO	CR	CU	LA	MO	NB
AGU393	700.	2.	0.N	0.N	0.L	0.L	5.	70.	0.L	50.
AGU406	200.	3.	0.N	0.N	0.L	0.L	0.L	70.	0.L	20.
AGU443	1500.	1.	0.N	0.N	20.	10.	10.	70.	0.L	10.
AGU444	700.	7.	0.N	0.N	0.L	0.L	0.L	50.	0.L	50.
AGU456	150.	2.	0.N	0.N	0.N	0.N	0.L	0.L	0.N	20.
BBJ406	3000.	1.	0.N	0.N	0.N	10.	30.	0.N	0.N	0.N
BBJ409	2000.	1.	0.N	0.N	0.N	10.	15.	50.	0.N	15.

QUARTZ MONZONITE - CRETACEOUS-continued

SAMPLE	NI	PB	SB	SC	SN	SR	V	W	Y	ZN	ZR
AGU393	5.	20.	0.N	5.	0.N	200.	50.	0.N	20.	0.L	150.
AGU406	5.	20.	0.N	0.L	0.N	200.	20.	0.N	15.	0.L	50.
AGU443	5.	30.	0.N	15.	0.N	300.	100.	0.N	20.	0.N	200.
AGU444	0.L	30.	0.N	5.	0.N	100.	30.	0.N	20.	0.N	100.
AGU456	7.	10.	0.N	0.N	0.N	100.	0.L	0.N	10.	0.N	20.
BBJ406	0.L	20.	0.L	0.L	0.N	0.N	70.	0.N	10.	0.N	100.
BBJ409	7.	0.N	0.N	5.	0.N	0.N	70.	0.N	10.	0.N	150.

RHYODACTIE

SAMPLE	AU	HG	FE	MG	CA	TI	MN	AG	AS	B
AGU494	0.00L	0.04	30000.	7000.	15000.	3000.	700.	0.0N	0.N	0.L
AGU495	0.00L	0.11	30000.	10000.	15000.	3000.	700.	0.0N	0.N	10.
AGU500	0.00L	0.05	30000.	7000.	20000.	3000.	700.	0.0N	0.N	0.L
AGU540	0.00L	0.05	50000.	7000.	30000.	5000.	700.	0.0N	0.N	0.N
BBJ005	0.00N	0.08	70000.	10000.	30000.	5000.	1000.	1.0	0.N	20.
BBJ019	0.00N	0.35	50000.	20000.	15000.	3000.	700.	0.0N	0.N	20.
BBJ090	0.00N	0.65	50000.	15000.	30000.	3000.	1000.	0.0N	0.N	20.

RHYODACTIE-continued

SAMPLE	BA	BE	BI	CD	CO	CR	CU	LA	MO	NB
AGU494	700.	2.	0.N	0.N	15.	0.N	0.L	50.	0.N	10.
AGU495	700.	1.	0.N	0.N	15.	0.N	0.N	30.	0.N	0.N
AGU500	700.	1.	0.N	0.N	10.	20.	0.L	50.	0.N	10.
AGU540	1000.	1.	0.N	0.N	15.	0.N	0.L	50.	0.N	10.
BBJ005	700.	1.	0.N	0.N	15.	20.	10.	50.	0.N	0.N
BBJ019	700.	1.	0.N	0.N	10.	30.	10.	20.	0.N	0.N
BBJ090	700.	1.	0.N	0.N	15.	50.	10.	30.	0.N	0.N

RHYODACTIE-continued

SAMPLE	NI	PB	SB	SC	SN	SR	V	W	Y	ZN	ZR
AGU494	5.	15.	0.N	7.	0.N	700.	100.	0.N	15.	0.N	150.
AGU495	0.L	15.	0.N	10.	0.N	500.	150.	0.N	15.	0.N	150.
AGU500	10.	15.	0.N	10.	0.N	700.	150.	0.N	15.	0.N	150.
AGU540	15.	15.	0.N	10.	0.N	1000.	150.	0.N	15.	0.N	150.
BBJ005	10.	20.	0.N	10.	0.N	500.	150.	0.N	20.	0.N	150.
BBJ019	10.	100.	0.N	10.	0.N	500.	100.	0.N	15.	0.N	100.
BBJ090	10.	50.	0.N	15.	0.N	700.	150.	0.N	20.	0.N	150.

ANDESITE

SAMPLE	AU	HG	FE	MG	CA	TI	MN	AG	AS	B
AGV276	0.00L	0.06	50000.	20000.	20000.	2000.	500.	0.0N	0.N	10.
AGU387	0.00L	0.20	100000.	10000.	50000.	0.G	1000.	0.0N	0.N	50.
AGU408	0.00L	0.06	70000.	15000.	15000.	0.G	100.	0.0N	0.N	20.
AGU431	0.00L	0.07	70000.	30000.	50000.	5000.	500.	0.0N	0.N	70.
AGU432	0.00L	0.06	70000.	20000.	50000.	5000.	1500.	0.0N	0.N	20.
AGU438	0.00L	0.07	70000.	50000.	50000.	10000.	1000.	0.0N	0.N	10.
AGU475	0.00L	0.03	30000.	10000.	20000.	3000.	700.	0.0N	0.N	0.N
AGU493	0.00L	0.06	30000.	10000.	15000.	2000.	500.	0.0N	0.N	0.L
AGU502	0.00L	0.15	70000.	30000.	30000.	10000.	1500.	0.0N	0.N	0.L
AGU503	0.00L	0.24	100000.	50000.	50000.	0.G	700.	0.0N	0.N	0.N
BBJ372	0.00L	0.07	10000.	10000.	5000.	0.G	500.	0.0N	0.N	15.
BBJ445	0.00L	0.11	1500.	10000.	0.G	200.	500.	0.0N	0.N	0.N
BBJ455	0.00L	0.09	50000.	20000.	50000.	10000.	700.	0.0N	0.N	0.N

ANDESITE-continued

SAMPLE	BA	BE	BI	CD	CO	CR	CU	LA	MO	NB
AGV276	3000.	1.	0.N	0.N	30.	200.	70.	100.	0.N	10.
AGU387	1500.	2.	0.N	0.N	30.	300.	300.	100.	0.L	50.
AGU408	5000.	0.L	0.N	0.N	15.	70.	20.	70.	0.L	50.
AGU431	300.	1.	0.N	0.N	20.	70.	10.	70.	0.L	20.
AGU432	300.	1.	0.N	0.N	15.	0.L	5.	100.	0.L	20.
AGU438	700.	0.L	0.N	0.N	30.	700.	10.	100.	0.L	20.
AGU475	700.	1.	0.N	0.N	20.	10.	7.	50.	0.N	0.N
AGU493	1000.	0.L	0.N	0.N	15.	15.	5.	20.	0.N	0.N
AGU502	700.	0.N	0.N	0.N	100.	50.	7000.	0.L	0.N	15.
AGU503	2000.	0.N	0.N	0.N	70.	100.	150.	30.	0.N	15.
BBJ372	1500.	0.N	0.N	0.N	70.	0.L	50.	50.	0.N	30.
BBJ445	300.	0.N	0.N	0.N	0.N	0.N	5.	0.N	0.N	0.N
BBJ455	300.	0.N	0.N	0.N	20.	0.N	7.	20.	0.N	20.

ANDESITE-continued

SAMPLE	NI	PB	SB	SC	SN	SR	V	W	Y	ZN	ZR
AGV276	70.	10.	0.N	15.	0.N	500.	100.	0.N	20.	0.N	100.
AGU387	100.	10.	100.	20.	0.L	500.	200.	0.N	30.	0.N	500.
AGU408	50.	10.	0.N	20.	0.L	0.L	100.	0.N	30.	0.L	300.
AGU431	30.	10.	0.N	10.	0.N	200.	70.	0.N	20.	0.L	150.
AGU432	0.L	50.	0.N	10.	0.N	700.	70.	0.N	20.	0.L	200.
AGU438	150.	20.	0.N	30.	0.N	500.	150.	0.N	20.	0.N	200.
AGU475	20.	10.	0.N	10.	0.N	700.	100.	0.N	15.	0.N	150.
AGU493	15.	30.	0.N	10.	0.N	500.	150.	0.N	10.	0.N	70.
AGU502	150.	0.L	0.N	30.	0.N	500.	200.	0.N	20.	0.L	150.
AGU503	150.	0.N	0.N	30.	0.N	150.	200.	0.N	30.	0.N	150.
BBJ372	30.	0.N	0.N	30.	0.N	0.L	200.	0.N	50.	0.N	200.
BBJ445	0.L	0.N	0.N	0.N	0.N	300.	50.	0.N	0.N	0.N	10.
BBJ455	0.N	0.N	0.N	15.	0.N	100.	150.	0.N	15.	0.N	150.

GRANODIORITE - TERTIARY

SAMPLE	AU	HG	FE	MG	CA	TI	MN	AG	AS	B
AGU350	0.00L	0.10	150000.	50000.	70000.	0.G	1500.	0.0N	0.N	10.
AGU372	0.00L	0.05	70000.	15000.	50000.	7000.	700.	0.0N	0.N	0.L
AGU407	0.00L	0.13	70000.	15000.	50000.	10000.	1000.	0.0N	0.N	0.L
AGU409	0.00L	0.03	5000.	2000.	50000.	3000.	200.	0.0N	0.N	10.
AGU410	0.00L	0.07	70000.	15000.	50000.	10000.	1500.	0.5	0.N	0.L
AGU414	0.00L	0.06	20000.	10000.	50000.	3000.	100.	0.0L	0.N	0.L
AGU421	0.00L	0.08	70000.	15000.	30000.	7000.	1000.	0.0N	0.N	0.L
AGU422	0.00L	0.09	150000.	30000.	100000.	0.G	1500.	0.0N	0.N	10.
BBJ031	0.00N	0.35	30000.	20000.	30000.	7000.	1500.	0.0N	0.N	0.L

GRANODIORITE - TERTIARY-continued

SAMPLE	BA	BE	BI	CD	CO	CR	CU	LA	MO	NB
AGU350	1500.	0.L	0.N	0.N	20.	10.	10.	150.	0.L	20.
AGU372	1000.	0.L	0.N	0.N	20.	0.L	20.	50.	0.L	10.
AGU407	1500.	1.	0.N	0.N	15.	0.L	10.	50.	0.L	20.
AGU409	300.	2.	0.N	0.N	0.L	0.L	0.L	100.	0.L	20.
AGU410	1500.	1.	0.N	0.N	15.	0.L	5.	20.	0.L	20.
AGU414	1500.	1.	0.N	0.N	0.L	0.L	30.	100.	5.	10.
AGU421	1500.	0.L	0.N	0.N	10.	0.L	5.	50.	5.	0.L
AGU422	5000.	0.L	0.N	0.N	30.	10.	30.	50.	0.L	50.
BBJ031	500.	0.L	0.N	0.N	10.	0.N	0.L	30.	0.N	0.N

GRANODIORITE - TERTIARY-continued

SAMPLE	NI	PB	SB	SC	SN	SR	V	W	Y	ZN	ZR
AGU350	0.L	20.	0.N	30.	0.N	1500.	200.	0.N	50.	0.N	300.
AGU372	0.L	20.	0.N	20.	0.N	700.	100.	0.N	20.	0.N	200.
AGU407	0.L	20.	0.N	10.	0.L	500.	100.	0.N	20.	0.L	200.
AGU409	0.L	10.	0.N	5.	0.N	500.	15.	0.N	10.	0.L	150.
AGU410	0.L	30.	0.N	10.	0.N	500.	100.	0.N	20.	200.	200.
AGU414	0.L	20.	0.N	7.	0.N	300.	50.	0.N	15.	0.L	100.
AGU421	0.L	0.L	0.N	10.	0.N	500.	100.	0.N	20.	0.L	150.
AGU422	30.	0.L	0.N	20.	0.N	200.	300.	0.N	30.	0.L	300.
BBJ031	0.L	20.	0.N	10.	0.N	500.	100.	0.N	10.	0.L	150.

DATE 3/18/80

QUARTZ LATITE DIKES

SAMPLE	AU	HG	FE	MG	CA	TI	MN	AG	AS	B
AGV260	0.04	2.60	10000.	700.	2000.	3000.	0.L	0.0N	500.	10.
AGV273	0.12	1.30	5000.	1000.	500.	2000.	10.	0.0N	500.	200.
AGV278	0.06	1.60	10000.	2000.	1000.	2000.	200.	0.0N	700.	100.
AGU354	0.00L	0.18	10000.	7000.	20000.	1000.	500.	0.0N	0.N	10.
AGU392	0.00L	0.04	30000.	15000.	50000.	3000.	500.	0.0N	0.N	0.L
AGU405	0.00L	0.06	30000.	15000.	15000.	3000.	1000.	0.0N	0.N	0.L
AGU433	0.00L	0.08	7000.	1000.	15000.	500.	1000.	0.0N	0.N	50.
AGU434	0.00L	0.03	15000.	5000.	10000.	1000.	300.	0.0N	0.N	0.L
AGU440	0.00L	0.08	10000.	7000.	10000.	1500.	200.	0.0N	0.N	10.
AGU448	0.00L	0.16	7000.	1500.	1500.	1000.	50.	0.0N	0.N	10.
AGU478	0.00L	0.20	5000.	100000.	200000.	150.	300.	0.0N	0.N	0.N
AGU479	0.00L	0.09	5000.	2000.	1500.	700.	30.	0.0N	0.N	30.
AGU492	0.00L	0.15	20000.	1500.	1500.	1500.	100.	0.0N	0.N	70.
AGU497	0.00L	0.10	10000.	2000.	2000.	1000.	50.	0.0N	0.N	30.
AGU498	0.00L	0.06	20000.	1500.	2000.	1500.	200.	0.0N	0.N	100.
AGU499	0.00L	0.16	7000.	1000.	700.	1500.	20.	0.0N	0.N	100.
AGU535	0.00L	0.08	10000.	3000.	1500.	1500.	150.	0.0N	0.N	0.L
AGU537	0.00L	0.24	7000.	1500.	500.	1500.	20.	0.0N	500.	150.
BBJ028	0.12	0.14	200000.	2000.	1500.	1500.	3000.	1.0	300.	10.
BBJ054	0.00N	2.00	150000.	3000.	1000.	3000.	1000.	0.0N	1000.	100.
BBJ065	0.02	2.00	15000.	3000.	2000.	5000.	100.	0.0N	200.	700.
BBJ075	3.20	0.70	20000.	10000.	0.L	3000.	2000.	0.0N	0.N	200.
BBJ105	0.00L	3.00	100000.	7000.	1500.	7000.	50.	1.5	2000.	500.
BBJ185	0.10	0.00N	70000.	1500.	1000.	3000.	300.	0.0N	1000.	15.
BBJ191	0.10	0.07	70000.	2000.	3000.	1500.	500.	5.0	1500.	50.
BBJ212	0.06	0.20	70000.	10000.	500.	5000.	300.	0.0N	300.	200.
BBJ233	3.00	0.00G	50000.	2000.	1000.	10000.	70.	0.0N	700.	50.
BBJ263	0.06	10.00	100000.	3000.	1500.	5000.	200.	0.0N	1000.	15.
BBJ272	0.06	1.30	20000.	3000.	1500.	10000.	20.	0.0N	0.N	20.
BBJ285	3.60	9.00	70000.	2000.	1000.	10000.	10.	0.0N	1500.	150.
BBJ375	8.00	1.80	50000.	3000.	5000.	10000.	50.	5.0	0.G	200.
BBJ433	0.00L	0.07	7000.	2000.	2000.	1000.	150.	0.0N	0.N	15.
BBJ447	0.00L	0.05	15000.	3000.	700.	2000.	150.	0.0N	0.N	20.

QUARTZ LATITE DIKES-continued

SAMPLE	BA	BE	BI	CD	CO	CR	CU	LA	MO	NB
AGV260	150.	0.N	0.N	0.N	5.	30.	10000.	20.	7.	10.
AGV273	700.	2.	0.L	0.N	0.N	10.	50.	20.	0.N	10.
AGV278	500.	2.	0.N	0.N	0.N	20.	200.	50.	0.N	10.
AGU354	200.	3.	0.N	0.N	0.L	10.	5.	50.	0.L	100.
AGU392	3000.	1.	0.N	0.N	10.	20.	5.	70.	0.L	0.L
AGU405	1500.	1.	0.N	0.N	0.L	0.L	0.L	100.	0.L	15.
AGU433	50.	7.	0.N	0.N	0.L	0.L	0.L	50.	0.L	20.
AGU434	700.	5.	0.N	0.N	0.L	0.L	0.L	30.	0.L	20.
AGU440	500.	5.	0.N	0.N	0.L	15.	0.L	50.	0.L	20.
AGU448	200.	2.	0.N	0.N	0.N	0.L	0.N	0.N	0.N	10.
AGU478	30.	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N	0.N
AGU479	1000.	1.	0.N	0.N	0.N	0.N	0.N	30.	0.N	10.
AGU492	1000.	2.	0.N	0.N	0.L	15.	0.N	30.	0.N	0.L
AGU497	1000.	1.	0.N	0.N	0.N	10.	0.N	30.	0.N	0.L
AGU498	1000.	2.	0.N	0.N	0.N	10.	0.N	30.	0.N	10.
AGU499	700.	1.	0.N	0.N	0.N	15.	0.N	30.	0.N	10.
AGU535	1000.	2.	0.N	0.N	0.N	0.L	0.N	30.	0.N	15.
AGU537	700.	1.	0.N	0.N	0.N	20.	0.N	30.	0.N	10.
BBJ028	200.	2.	0.N	0.N	30.	30.	1500.	0.N	5.	0.N
BBJ054	300.	1.	0.N	0.N	20.	500.	500.	20.	7.	10.
BBJ065	300.	1.	0.N	0.N	5.	300.	10.	70.	0.N	15.
BBJ075	1000.	1.	0.N	0.N	20.	20.	200.	50.	0.N	15.
BBJ105	500.	1.	0.N	0.N	30.	1500.	100.	20.	0.N	0.N
BBJ185	100.	0.L	0.N	0.N	0.N	30.	100.	0.L	0.N	0.N
BBJ191	700.	0.L	50.	0.N	0.N	150.	2000.	70.	10.	0.N
BBJ212	700.	2.	0.N	0.N	20.	20.	500.	100.	0.N	20.
BBJ233	3000.	0.L	0.N	0.N	5.	1500.	70.	100.	0.N	10.
BBJ263	1000.	1.	0.N	0.N	20.	1500.	500.	150.	7.	10.
BBJ272	1500.	1.	0.N	0.N	7.	1500.	20.	150.	0.N	10.
BBJ285	300.	1.	0.N	0.N	0.N	0.L	50.	50.	10.	15.
BBJ375	1500.	2.	0.N	0.N	0.L	500.	70.	20.	0.L	30.
BBJ433	1500.	1.	0.N	0.N	0.N	0.N	0.N	0.L	0.N	0.N
BBJ447	1000.	2.	0.N	0.N	5.	0.N	15.	20.	0.N	0.L

QUARTZ LATITE DIKES-continued

SAMPLE	NI	PB	SB	SC	SN	SR	V	W	Y	ZN	ZR
AGV260	50.	10.	100.	10.	0.N	0.N	500.	100.	20.	300.	200.
AGV273	10.	15.	0.N	0.N	0.N	0.N	50.	0.N	10.	0.N	200.
AGV278	30.	10.	100.	5.	0.N	0.N	50.	0.N	10.	0.N	150.
AGU354	5.	100.	0.N	10.	0.N	200.	50.	0.N	30.	0.N	150.
AGU392	5.	50.	0.N	7.	0.N	1000.	70.	0.N	20.	0.L	100.
AGU405	5.	30.	0.N	5.	0.N	200.	50.	0.N	15.	0.L	150.
AGU433	5.	30.	0.N	5.	0.N	100.	0.L	0.N	30.	0.L	50.
AGU434	5.	50.	0.N	5.	0.N	100.	0.L	0.N	15.	0.L	100.
AGU440	10.	30.	0.N	5.	0.N	100.	20.	0.N	20.	0.N	100.
AGU448	7.	15.	0.N	0.L	0.N	0.N	20.	0.N	10.	0.N	70.
AGU478	0.L	0.N	0.N	0.N	0.N	100.	15.	0.N	0.N	0.N	0.N
AGU479	15.	0.N	0.N	0.L	0.N	100.	15.	0.N	0.L	0.N	70.
AGU492	15.	20.	0.N	0.L	0.N	100.	30.	0.N	0.L	0.N	100.
AGU497	20.	10.	0.N	0.L	0.N	0.L	30.	0.N	0.L	0.N	70.
AGU498	15.	20.	0.N	0.L	0.N	150.	30.	0.L	0.L	0.N	100.
AGU499	0.L	0.N	0.N	0.L	0.N	0.N	30.	0.N	0.N	0.N	100.
AGU535	20.	30.	0.N	0.L	0.N	0.N	70.	0.N	15.	200.	150.
AGU537	5.	10.	100.	0.L	0.N	0.L	30.	0.N	0.L	0.N	150.
BBJ028	100.	15.	0.N	7.	0.N	0.L	500.	0.N	50.	0.N	100.
BBJ054	70.	30.	0.N	10.	0.N	150.	1000.	0.N	10.	0.L	150.
BBJ065	10.	2.	0.N	10.	0.N	300.	200.	0.N	15.	0.N	150.
BBJ075	100.	10.	0.N	10.	0.N	300.	100.	0.N	15.	0.N	100.
BBJ105	150.	50.	0.N	30.	0.N	100.	500.	50.	15.	200.	100.
BBJ185	5.	10.	0.N	10.	0.N	0.N	150.	0.N	30.	0.N	300.
BBJ191	10.	15.	0.N	15.	0.N	1000.	500.	0.L	30.	0.N	150.
BBJ212	50.	10.	0.N	15.	0.N	0.L	200.	0.N	20.	0.N	200.
BBJ233	50.	20.	0.N	20.	0.N	100.	300.	200.	30.	0.N	200.
BBJ263	100.	20.	100.	10.	0.N	200.	300.	70.	30.	0.N	150.
BBJ272	50.	30.	0.N	20.	0.N	100.	300.	100.	30.	0.N	300.
BBJ285	0.L	15.	150.	15.	0.N	100.	200.	0.L	15.	0.N	200.
BBJ375	15.	0.L	150.	30.	0.N	200.	200.	50.	10.	0.N	150.
BBJ433	10.	0.L	0.N	0.N	0.N	100.	0.L	0.N	0.L	0.N	100.
BBJ447	30.	10.	0.N	0.L	0.N	150.	15.	0.N	0.L	500.	100.

RHYOLITIC WELDED TUFF

SAMPLE	AU	HG	FE	MG	CA	TI	MN	AG	AS	B
AGU436	0.00L	0.12	30000.	1000.	10000.	2000.	5000.	0.0N	0.N	0.L
AGU437	0.00L	0.05	30000.	1000.	10000.	2000.	700.	0.0N	0.N	10.
AGU513	0.00L	0.07	30000.	200.	700.	1000.	300.	0.0N	0.N	0.N
AGU526	0.00L	0.08	30000.	1000.	3000.	1500.	500.	0.0N	0.N	0.L
AGU531	0.00L	0.04	30000.	200.	3000.	1500.	500.	0.0N	0.N	10.

RHYOLITIC WELDED TUFF-continued

SAMPLE	BA	BE	BI	CD	CO	CR	CU	LA	MO	NB
AGU436	700.	3.	0.N	0.N	30.	0.L	5.	200.	5.	50.
AGU437	300.	5.	0.N	0.N	0.L	10.	5.	200.	10.	50.
AGU513	200.	2.	0.N	0.N	0.N	0.L	0.N	150.	7.	20.
AGU526	200.	3.	0.N	0.N	0.L	0.N	0.N	70.	0.N	20.
AGU531	150.	3.	0.N	0.N	0.N	0.N	0.N	100.	7.	20.

RHYOLITIC WELDED TUFF-continued

SAMPLE	NI	PB	SB	SC	SN	SR	V	W	Y	ZN	ZR
AGU436	0.L	50.	0.N	0.L	0.N	100.	10.	0.N	100.	0.L	300.
AGU437	0.L	70.	0.N	5.	0.N	100.	30.	0.N	100.	0.N	500.
AGU513	0.N	20.	0.N	0.N	0.N	0.N	15.	0.N	70.	0.L	300.
AGU526	15.	30.	0.N	0.N	0.N	100.	10.	0.N	70.	0.N	500.
AGU531	5.	30.	0.N	0.N	0.N	0.N	0.L	0.N	70.	0.N	700.

DATE 3/18/80

INTRUSIVE BRECCIA

SAMPLE	AU	HG	FE	MG	CA	TI	MN	AG	AS	B
AGU419	0.00L	0.15	100000.	50000.	150000.	0.G	1000.	0.0N	0.N	10.
AGU424	0.00L	0.10	70000.	30000.	20000.	0.G	700.	0.0N	0.N	30.
AGU425	0.00L	0.07	150000.	30000.	50000.	0.G	1000.	0.0N	0.N	10.
AGU430	0.00L	0.09	70000.	30000.	20000.	0.G	300.	0.0N	0.N	50.
AGU439	0.00L	0.16	100000.	20000.	5000.	0.G	100.	0.0N	0.N	100.
AGU441	0.00L	0.07	70000.	30000.	200000.	0.G	1500.	0.0N	0.N	10.
AGU480	0.00L	0.06	20000.	15000.	200000.	1500.	200.	0.0N	0.N	0.L
AGU481	0.00L	0.12	50000.	50000.	100000.	7000.	1500.	0.0N	0.N	0.N
AGU491	0.00L	0.40	7000.	1500.	1500.	1500.	30.	0.5	0.N	50.
BBJ384	0.00L	0.09	30000.	1500.	7000.	7000.	50.	0.0N	0.N	10.

INTRUSIVE BRECCIA-continued

SAMPLE	BA	BE	BI	CD	CO	CR	CU	LA	MO	NB
AGU419	1500.	0.L	0.N	0.N	30.	700.	30.	0.L	5.	20.
AGU424	500.	0.L	0.N	0.N	30.	100.	30.	70.	0.L	50.
AGU425	1500.	0.L	0.N	0.N	30.	30.	10.	20.	0.L	50.
AGU430	1500.	0.N	0.N	0.N	15.	300.	30.	150.	5.	30.
AGU439	1000.	0.L	0.N	0.N	10.	1000.	50.	100.	0.L	100.
AGU441	500.	0.L	0.N	0.N	30.	500.	50.	100.	0.L	50.
AGU480	200.	0.N	0.N	0.N	7.	70.	0.L	0.L	0.N	0.N
AGU481	1000.	0.N	0.N	0.N	30.	300.	30.	30.	0.N	30.
AGU491	5000.	0.L	0.N	0.N	0.N	30.	30.	0.L	0.N	0.N
BBJ384	0.G	0.N	0.N	0.N	0.N	100.	30.	70.	0.N	20.

INTRUSIVE BRECCIA-continued

SAMPLE	NI	PB	SB	SC	SN	SR	V	W	Y	ZN	ZR
AGU419	200.	10.	0.N	30.	0.N	100.	100.	0.N	15.	0.L	100.
AGU424	50.	20.	0.N	20.	0.N	100.	200.	0.N	50.	0.L	300.
AGU425	20.	15.	0.N	20.	0.N	200.	200.	0.N	30.	0.L	200.
AGU430	30.	20.	0.N	30.	0.N	200.	200.	0.N	50.	0.L	100.
AGU439	70.	20.	0.N	70.	0.N	200.	300.	0.N	30.	0.N	300.
AGU441	150.	0.L	0.N	30.	0.N	200.	200.	0.N	20.	0.N	100.
AGU480	20.	15.	0.N	7.	0.N	300.	30.	0.N	0.L	0.N	50.
AGU481	100.	0.L	0.N	30.	0.N	300.	200.	0.N	15.	0.N	150.
AGU491	10.	0.N	0.N	5.	0.N	150.	200.	0.N	0.L	0.N	70.
BBJ384	10.	0.L	0.N	15.	0.N	300.	150.	0.N	30.	0.N	150.

Table 3.--Histograms and statistical data computed from the analyses of 877 rocks from the Rodeo Creek NE and Welches Canyon quadrangles

(Tabular material follows)

TITLE
CHERT - SIL. ASSEMBLAGE

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
AU	75	88	0	0	0	0	92
HG	5	1	0	0	0	7	242
MN	1	3	0	0	0	0	251
AG	151	16	0	0	0	0	88
B	5	4	0	0	0	0	246
BA	0	0	0	0	0	5	250
CO	135	29	0	0	0	0	91
CU	0	2	0	0	0	1	252
MO	146	11	0	0	0	0	98
PB	81	45	0	0	0	0	129
SB	223	12	0	0	0	0	20
V	0	0	0	0	0	0	255

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE

ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS
AU	0.006963	12.26	163 NOT DETECTED, LESS THAN, OR TRACE VALUES. 92 REPORTED VALUES.
HG	********	******	2 VALUES LESS THAN SPECIFIED LIMIT OF DETECTION. NO COMPUTATIONS.
MN	102.061167	3.66	4 NOT DETECTED, LESS THAN, OR TRACE VALUES. 251 REPORTED VALUES.
AG	0.228826	3.90	167 NOT DETECTED, LESS THAN, OR TRACE VALUES. 88 REPORTED VALUES.
B	38.411944	2.31	9 NOT DETECTED, LESS THAN, OR TRACE VALUES. 246 REPORTED VALUES.
BA	********	******	5 GREATER THAN VALUES. NO COMPUTATIONS.
CO	2.170678	5.02	164 NOT DETECTED, LESS THAN, OR TRACE VALUES. 91 REPORTED VALUES.
CU	********	******	1 GREATER THAN VALUES. NO COMPUTATIONS.
MO	2.383548	6.43	157 NOT DETECTED, LESS THAN, OR TRACE VALUES. 98 REPORTED VALUES.
PB	7.689225	3.39	126 NOT DETECTED, LESS THAN, OR TRACE VALUES. 129 REPORTED VALUES.
SB	13.929795	3.54	235 NOT DETECTED, LESS THAN, OR TRACE VALUES. 20 REPORTED VALUES.
V	123.103508	3.11	255 SAMPLES AND 255 ANALYTICAL VALUES.

TITLE
CHERT - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 1 (AU)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	20	20	7.84	36.08
2.6E-02 -	3.8E-02	1	21	0.39	28.24
3.8E-02 -	5.6E-02	19	40	7.45	27.84
5.6E-02 -	8.3E-02	15	55	5.88	20.39
8.3E-02 -	1.2E-01	10	65	3.92	14.51
1.2E-01 -	1.8E-01	4	69	1.57	10.59
1.8E-01 -	2.6E-01	4	73	1.57	9.02
2.6E-01 -	3.8E-01	2	75	0.78	7.45
3.8E-01 -	5.6E-01	5	80	1.96	6.67
5.6E-01 -	8.3E-01	3	83	1.18	4.71
8.3E-01 -	1.2E+00	2	85	0.78	3.53
1.2E+00 -	1.8E+00	1	86	0.39	2.75
1.8E+00 -	2.6E+00	3	89	1.18	2.35
2.6E+00 -	3.8E+00	2	91	0.78	1.18
3.8E+00 -	5.6E+00	0	91	0.00	0.39
5.6E+00 -	8.3E+00	0	91	0.00	0.39
8.3E+00 -	1.2E+01	0	91	0.00	0.39
1.2E+01 -	1.8E+01	0	91	0.00	0.39
1.8E+01 -	2.6E+01	1	92	0.39	0.39

HISTOGRAM FOR COLUMN 1 (AU)

```
2.0E-02 XXXXXXXX
3.0E-02
5.0E-02 XXXXXXX
7.0E-02 XXXXXX
1.0E-01 XXXX
1.5E-01 XX
2.0E-01 XX
3.0E-01 X
5.0E-01 XX
7.0E-01 X
1.0E+00 X
1.5E+00
2.0E+00 X
3.0E+00 X
5.0E+00
7.0E+00
1.0E+01
1.5E+01
2.0E+01
```

N	L	H	B	T	G	ANALYTICAL VALUES
75	88	0	0	0	0	92
29.41	34.51			0.00	0.00	

MAXIMUM = 2.00000E+01
MINIMUM = 2.00000E-02
GEOMETRIC MEAN = 8.98240E-02
GEOMETRIC DEVIATION = 4.31667E+00

TITLE
CHERT - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 2 (HG)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	1	1	0.39	97.65
2.6E-02 -	3.8E-02	4	5	1.57	97.25
3.8E-02 -	5.6E-02	21	26	8.24	95.69
5.6E-02 -	8.3E-02	24	50	9.41	87.45
8.3E-02 -	1.2E-01	27	77	10.59	78.04
1.2E-01 -	1.8E-01	24	101	9.41	67.45
1.8E-01 -	2.6E-01	38	139	14.90	58.04
2.6E-01 -	3.8E-01	15	154	5.88	43.14
3.8E-01 -	5.6E-01	27	181	10.59	37.25
5.6E-01 -	8.3E-01	14	195	5.49	26.67
8.3E-01 -	1.2E+00	15	210	5.88	21.18
1.2E+00 -	1.8E+00	14	224	5.49	15.29
1.8E+00 -	2.6E+00	5	229	1.96	9.80
2.6E+00 -	3.8E+00	5	234	1.96	7.84
3.8E+00 -	5.6E+00	1	235	0.39	5.88
5.6E+00 -	8.3E+00	5	240	1.96	5.49
8.3E+00 -	1.2E+01	1	241	0.39	3.53

HISTOGRAM FOR COLUMN 2 (HG)

```
2.0E-02
3.0E-02 XX
5.0E-02 XXXXXXXX
7.0E-02 XXXXXXXXX
1.0E-01 XXXXXXXXXXX
1.5E-01 XXXXXXXXX
2.0E-01 XXXXXXXXXXXXXXX
3.0E-01 XXXXXX
5.0E-01 XXXXXXXXXXX
7.0E-01 XXXXX
1.0E+00 XXXXXX
1.5E+00 XXXXX
2.0E+00 XX
3.0E+00 XX
5.0E+00
7.0E+00 XX
1.0E+01
```

N	L	H	B	T	G	ANALYTICAL VALUES
5	1	0	0	0	7	242
1.96	0.39			0.00	2.75	

MAXIMUM = 9.00000E+00
MINIMUM = 1.00000E-02
GEOMETRIC MEAN = 2.53010E-01
GEOMETRIC DEVIATION = 3.57781E+00

TITLE
CHERT - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 7 (MN)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	1	1	0.39	98.43
1.2E+01 -	1.8E+01	1	2	0.39	98.04
1.8E+01 -	2.6E+01	26	28	10.20	97.65
2.6E+01 -	3.8E+01	27	55	10.59	87.45
3.8E+01 -	5.6E+01	32	87	12.55	76.86
5.6E+01 -	8.3E+01	31	118	12.16	64.31
8.3E+01 -	1.2E+02	37	155	14.51	52.16
1.2E+02 -	1.8E+02	28	183	10.98	37.65
1.8E+02 -	2.6E+02	15	198	5.88	26.67
2.6E+02 -	3.8E+02	11	209	4.31	20.78
3.8E+02 -	5.6E+02	12	221	4.71	16.47
5.6E+02 -	8.3E+02	9	230	3.53	11.76
8.3E+02 -	1.2E+03	8	238	3.14	8.24
1.2E+03 -	1.8E+03	6	244	2.35	5.10
1.8E+03 -	2.6E+03	3	247	1.18	2.75
2.6E+03 -	3.8E+03	2	249	0.78	1.57
3.8E+03 -	5.6E+03	2	251	0.78	0.78

HISTOGRAM FOR COLUMN 7 (MN)

```
1.0E+01
1.5E+01
2.0E+01 XXXXXXXXX
3.0E+01 XXXXXXXXXX
5.0E+01 XXXXXXXXXXXX
7.0E+01 XXXXXXXXXXX
1.0E+02 XXXXXXXXXXXXXX
1.5E+02 XXXXXXXXXX
2.0E+02 XXXXXX
3.0E+02 XXXX
5.0E+02 XXXXX
7.0E+02 XXXX
1.0E+03 XXX
1.5E+03 XX
2.0E+03 X
3.0E+03 X
5.0E+03 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	3	0	0	0	0	251
0.39	1.18			0.00	0.00	

MAXIMUM = 5.00000E+03
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 1.07073E+02
GEOMETRIC DEVIATION = 3.49169E+00

TITLE
CHERT - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 8 (AG)

LIMITS LOWER - UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E-01 - 5.6E-01	26	26	10.20	34.51
5.6E-01 - 8.3E-01	8	34	3.14	24.31
8.3E-01 - 1.2E+00	27	61	10.59	21.18
1.2E+00 - 1.8E+00	10	71	3.92	10.59
1.8E+00 - 2.6E+00	10	81	3.92	6.67
2.6E+00 - 3.8E+00	4	85	1.57	2.75
3.8E+00 - 5.6E+00	1	86	0.39	1.18
5.6E+00 - 8.3E+00	1	87	0.39	0.78
8.3E+00 - 1.2E+01	1	88	0.39	0.39

HISTOGRAM FOR COLUMN 8 (AG)

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

N	L	H	B	T	G	ANALYTICAL VALUES
151	16	0	0	0	0	88
59.22	6.27			0.00	0.00	

MAXIMUM = 1.07000E+01
MINIMUM = 5.00000E-01
GEOMETRIC MEAN = 1.00491E+00
GEOMETRIC DEVIATION = 1.91590E+00

TITLE
CHERT - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 10 (B)

LIMITS LOWER - UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 - 1.2E+01	18	18	7.06	96.47
1.2E+01 - 1.8E+01	15	33	5.88	89.41
1.8E+01 - 2.6E+01	30	63	11.76	83.53
2.6E+01 - 3.8E+01	53	116	20.78	71.76
3.8E+01 - 5.6E+01	52	168	20.39	50.98
5.6E+01 - 8.3E+01	31	199	12.16	30.59
8.3E+01 - 1.2E+02	28	227	10.98	18.43
1.2E+02 - 1.8E+02	12	239	4.71	7.45
1.8E+02 - 2.6E+02	5	244	1.96	2.75
2.6E+02 - 3.8E+02	2	246	0.78	0.78

HISTOGRAM FOR COLUMN 10 (B)

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

N	L	H	B	T	G	ANALYTICAL VALUES
5	4	0	0	0	0	246
1.96	1.57			0.00	0.00	

MAXIMUM = 3.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 4.11275E+01
GEOMETRIC DEVIATION = 2.16100E+00

TITLE
CHERT - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 11 (BA)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	0	0	0.00	100.00
2.6E+01 -	3.8E+01	0	0	0.00	100.00
3.8E+01 -	5.6E+01	0	0	0.00	100.00
5.6E+01 -	8.3E+01	1	1	0.39	100.00
8.3E+01 -	1.2E+02	5	6	1.96	99.61
1.2E+02 -	1.8E+02	9	15	3.53	97.65
1.8E+02 -	2.6E+02	39	54	15.29	94.12
2.6E+02 -	3.8E+02	45	99	17.65	78.82
3.8E+02 -	5.6E+02	51	150	20.00	61.18
5.6E+02 -	8.3E+02	48	198	18.82	41.18
8.3E+02 -	1.2E+03	22	220	8.63	22.35
1.2E+03 -	1.8E+03	11	231	4.31	13.73
1.8E+03 -	2.6E+03	6	237	2.35	9.41
2.6E+03 -	3.8E+03	9	246	3.53	7.06
3.8E+03 -	5.6E+03	4	250	1.57	3.53

HISTOGRAM FOR COLUMN 11 (BA)

```
       7.0E+01
       1.0E+02 XX
       1.5E+02 XXXX
       2.0E+02 XXXXXXXXXXXXXX
       3.0E+02 XXXXXXXXXXXXXXXXX
       5.0E+02 XXXXXXXXXXXXXXXXXXX
       7.0E+02 XXXXXXXXXXXXXXXXX
       1.0E+03 XXXXXXXXX
       1.5E+03 XXXX
       2.0E+03 XX
       3.0E+03 XXXX
       5.0E+03 XX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	5	250
0.00	0.00			0.00	1.96	

MAXIMUM = 5.00000E+03
MINIMUM = 7.00000E+01
GEOMETRIC MEAN = 4.95158E+02
GEOMETRIC DEVIATION = 2.25833E+00

TITLE
CHERT - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 15 (CO)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	24	24	9.41	35.69
5.6E+00 -	8.3E+00	9	33	3.53	26.27
8.3E+00 -	1.2E+01	19	52	7.45	22.75
1.2E+01 -	1.8E+01	15	67	5.88	15.29
1.8E+01 -	2.6E+01	8	75	3.14	9.41
2.6E+01 -	3.8E+01	8	83	3.14	6.27
3.8E+01 -	5.6E+01	2	85	0.78	3.14
5.6E+01 -	8.3E+01	4	89	1.57	2.35
8.3E+01 -	1.2E+02	1	90	0.39	0.78
1.2E+02 -	1.8E+02	1	91	0.39	0.39

HISTOGRAM FOR COLUMN 15 (CO)

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

N	L	H	B	T	G	ANALYTICAL VALUES
135	29	0	0	0	0	91
52.94	11.37			0.00	0.00	

MAXIMUM = 1.50000E+02
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 1.19990E+01
GEOMETRIC DEVIATION = 2.24069E+00

TITLE
CHERT - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 17 (CU)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	7	7	2.75	99.22
5.6E+00 -	8.3E+00	5	12	1.96	96.47
8.3E+00 -	1.2E+01	13	25	5.10	94.51
1.2E+01 -	1.8E+01	24	49	9.41	89.41
1.8E+01 -	2.6E+01	26	75	10.20	80.00
2.6E+01 -	3.8E+01	33	108	12.94	69.80
3.8E+01 -	5.6E+01	40	148	15.69	56.86
5.6E+01 -	8.3E+01	39	187	15.29	41.18
8.3E+01 -	1.2E+02	22	209	8.63	25.88
1.2E+02 -	1.8E+02	14	223	5.49	17.25
1.8E+02 -	2.6E+02	6	229	2.35	11.76
2.6E+02 -	3.8E+02	6	235	2.35	9.41
3.8E+02 -	5.6E+02	4	239	1.57	7.06
5.6E+02 -	8.3E+02	4	243	1.57	5.49
8.3E+02 -	1.2E+03	6	249	2.35	3.92
1.2E+03 -	1.8E+03	2	251	0.78	1.57
1.8E+03 -	2.6E+03	1	252	0.39	0.78

HISTOGRAM FOR COLUMN 17 (CU)

```
5.0E+00 XXX
7.0E+00 XX
1.0E+01 XXXXX
1.5E+01 XXXXXXXXX
2.0E+01 XXXXXXXXXX
3.0E+01 XXXXXXXXXXXXX
5.0E+01 XXXXXXXXXXXXXXXX
7.0E+01 XXXXXXXXXXXXXXX
1.0E+02 XXXXXXXXX
1.5E+02 XXXXX
2.0E+02 XX
3.0E+02 XX
5.0E+02 XX
7.0E+02 XX
1.0E+03 XX
1.5E+03 X
2.0E+03
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	2	0	0	0	1	252
0.00	0.78			0.00	0.39	

MAXIMUM = 2.00000E+03
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 4.89410E+01
GEOMETRIC DEVIATION = 3.29876E+00

TITLE
CHERT - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 19 (MO)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	10	10	3.92	38.43
5.6E+00 -	8.3E+00	16	26	6.27	34.51
8.3E+00 -	1.2E+01	15	41	5.88	28.24
1.2E+01 -	1.8E+01	13	54	5.10	22.35
1.8E+01 -	2.6E+01	17	71	6.67	17.25
2.6E+01 -	3.8E+01	10	81	3.92	10.59
3.8E+01 -	5.6E+01	8	89	3.14	6.67
5.6E+01 -	8.3E+01	6	95	2.35	3.53
8.3E+01 -	1.2E+02	2	97	0.78	1.18
1.2E+02 -	1.8E+02	1	98	0.39	0.39

HISTOGRAM FOR COLUMN 19 (MO)

```
5.0E+00 XXXX
7.0E+00 XXXXXX
1.0E+01 XXXXXX
1.5E+01 XXXXX
2.0E+01 XXXXXXX
3.0E+01 XXXX
5.0E+01 XXX
7.0E+01 XX
1.0E+02 X
1.5E+02
```

N	L	H	B	T	G	ANALYTICAL VALUES
146	11	0	0	0	0	98
57.25	4.31			0.00	0.00	

MAXIMUM = 1.50000E+02
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 1.61982E+01
GEOMETRIC DEVIATION = 2.30717E+00

TITLE
CHERT - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 22 (PB)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	60	60	23.53	50.59
1.2E+01 -	1.8E+01	16	76	6.27	27.06
1.8E+01 -	2.6E+01	20	96	7.84	20.78
2.6E+01 -	3.8E+01	11	107	4.31	12.94
3.8E+01 -	5.6E+01	3	110	1.18	8.63
5.6E+01 -	8.3E+01	5	115	1.96	7.45
8.3E+01 -	1.2E+02	7	122	2.75	5.49
1.2E+02 -	1.8E+02	3	125	1.18	2.75
1.8E+02 -	2.6E+02	4	129	1.57	1.57

HISTOGRAM FOR COLUMN 22 (PB)

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

N	L	H	B	T	G	ANALYTICAL VALUES
81	45	0	0	0	0	129
31.76	17.65			0.00	0.00	

MAXIMUM = 2.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 1.90618E+01
GEOMETRIC DEVIATION = 2.35111E+00

TITLE
CHERT - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 23 (SB)

LIMITS LOWER - UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+01 - 1.2E+02	7	7	2.75	7.84
1.2E+02 - 1.8E+02	5	12	1.96	5.10
1.8E+02 - 2.6E+02	6	18	2.35	3.14
2.6E+02 - 3.8E+02	2	20	0.78	0.78

HISTOGRAM FOR COLUMN 23 (SB)

```
1.0E+02 XXX
1.5E+02 XX
2.0E+02 XX
3.0E+02 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
223	12	0	0	0	0	20
87.45	4.71			0.00	0.00	

MAXIMUM = 3.00000E+02
MINIMUM = 1.00000E+02
GEOMETRIC MEAN = 1.52070E+02
GEOMETRIC DEVIATION = 1.44809E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
CHERT - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 27 (V)

LIMITS LOWER - UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 - 1.2E+01	4	4	1.57	100.00
1.2E+01 - 1.8E+01	7	11	2.75	98.43
1.8E+01 - 2.6E+01	8	19	3.14	95.69
2.6E+01 - 3.8E+01	22	41	8.63	92.55
3.8E+01 - 5.6E+01	21	62	8.24	83.92
5.6E+01 - 8.3E+01	37	99	14.51	75.69
8.3E+01 - 1.2E+02	33	132	12.94	61.18
1.2E+02 - 1.8E+02	29	161	11.37	48.24
1.8E+02 - 2.6E+02	23	184	9.02	36.86
2.6E+02 - 3.8E+02	31	215	12.16	27.84
3.8E+02 - 5.6E+02	18	233	7.06	15.69
5.6E+02 - 8.3E+02	5	238	1.96	8.63
8.3E+02 - 1.2E+03	11	249	4.31	6.67
1.2E+03 - 1.8E+03	4	253	1.57	2.35
1.8E+03 - 2.6E+03	2	255	0.78	0.78

HISTOGRAM FOR COLUMN 27 (V)

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

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	255
0.00	0.00			0.00	0.00	

MAXIMUM = 2.00000E+03
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 1.23103E+02
GEOMETRIC DEVIATION = 3.11107E+00

TITLE
QUARTZITE - SIL. ASSEMBLAGE

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
AU	5	10	0	0	0	0	7
HG	0	0	0	0	0	0	22
MN	2	0	0	0	0	0	20
AG	16	2	0	0	0	0	4
B	2	2	0	0	0	0	18
BA	0	0	0	0	0	1	21
CO	14	3	0	0	0	0	5
CU	3	0	0	0	0	0	19
MO	17	0	0	0	0	0	5
PB	11	5	0	0	0	0	6
V	0	0	0	0	0	0	22

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE

ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS
AU	0.009062	4.66	15 NOT DETECTED, LESS THAN, OR TRACE VALUES. 7 REPORTED VALUES.
HG	0.333708	4.48	22 SAMPLES AND 22 ANALYTICAL VALUES.
MN	68.649672	5.02	2 NOT DETECTED, LESS THAN, OR TRACE VALUES. 20 REPORTED VALUES.
AG	0.135718	3.14	18 NOT DETECTED, LESS THAN, OR TRACE VALUES. 4 REPORTED VALUES.
B	31.642694	3.43	4 NOT DETECTED, LESS THAN, OR TRACE VALUES. 18 REPORTED VALUES.
BA	********	******	1 GREATER THAN VALUES. NO COMPUTATIONS.
CO	1.914026	2.61	17 NOT DETECTED, LESS THAN, OR TRACE VALUES. 5 REPORTED VALUES.
CU	14.192341	3.31	3 NOT DETECTED, LESS THAN, OR TRACE VALUES. 19 REPORTED VALUES.
MO	0.645180	12.08	17 NOT DETECTED, LESS THAN, OR TRACE VALUES. 5 REPORTED VALUES.
PB	2.642799	6.72	16 NOT DETECTED, LESS THAN, OR TRACE VALUES. 6 REPORTED VALUES.
V	148.970373	6.09	22 SAMPLES AND 22 ANALYTICAL VALUES.

TITLE
QUARTZITE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 1 (AU)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	1	1	4.55	31.82
2.6E-02 -	3.8E-02	0	1	0.00	27.27
3.8E-02 -	5.6E-02	3	4	13.64	27.27
5.6E-02 -	8.3E-02	0	4	0.00	13.64
8.3E-02 -	1.2E-01	3	7	13.64	13.64

HISTOGRAM FOR COLUMN 1 (AU)

```
2.0E-02 XXXXX
3.0E-02
5.0E-02 XXXXXXXXXXXXX
7.0E-02
1.0E-01 XXXXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
5	10	0	0	0	0	7
22.73	45.45			0.00	0.00	

MAXIMUM = 1.00000E-01
MINIMUM = 2.10000E-02
GEOMETRIC MEAN = 5.40292E-02
GEOMETRIC DEVIATION = 1.85764E+00

TITLE
QUARTZITE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 2 (HG)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	0	0	0.00	100.00
2.6E-02 -	3.8E-02	0	0	0.00	100.00
3.8E-02 -	5.6E-02	2	2	9.09	100.00
5.6E-02 -	8.3E-02	3	5	13.64	90.91
8.3E-02 -	1.2E-01	0	5	0.00	77.27
1.2E-01 -	1.8E-01	3	8	13.64	77.27
1.8E-01 -	2.6E-01	4	12	18.18	63.64
2.6E-01 -	3.8E-01	1	13	4.55	45.45
3.8E-01 -	5.6E-01	3	16	13.64	40.91
5.6E-01 -	8.3E-01	0	16	0.00	27.27
8.3E-01 -	1.2E+00	0	16	0.00	27.27
1.2E+00 -	1.8E+00	2	18	9.09	27.27
1.8E+00 -	2.6E+00	1	19	4.55	18.18
2.6E+00 -	3.8E+00	1	20	4.55	13.64
3.8E+00 -	5.6E+00	1	21	4.55	9.09
5.6E+00 -	8.3E+00	1	22	4.55	4.55

HISTOGRAM FOR COLUMN 2 (HG)

```
5.0E-02 XXXXXXXXX
7.0E-02 XXXXXXXXXXXXX
1.0E-01
1.5E-01 XXXXXXXXXXXXX
2.0E-01 XXXXXXXXXXXXXXXXX
3.0E-01 XXXXX
5.0E-01 XXXXXXXXXXXXX
7.0E-01
1.0E+00
1.5E+00 XXXXXXXXX
2.0E+00 XXXXX
3.0E+00 XXXXX
5.0E+00 XXXXX
7.0E+00 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	22
0.00	0.00			0.00	0.00	

MAXIMUM = 6.00000E+00
MINIMUM = 4.00000E-02
GEOMETRIC MEAN = 3.33708E-01
GEOMETRIC DEVIATION = 4.47718E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
QUARTZITE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 7 (MN)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	0	0	0.00	90.91
1.2E+01 -	1.8E+01	0	0	0.00	90.91
1.8E+01 -	2.6E+01	7	7	31.82	90.91
2.6E+01 -	3.8E+01	0	7	0.00	59.09
3.8E+01 -	5.6E+01	0	7	0.00	59.09
5.6E+01 -	8.3E+01	1	8	4.55	59.09
8.3E+01 -	1.2E+02	4	12	18.18	54.55
1.2E+02 -	1.8E+02	2	14	9.09	36.36
1.8E+02 -	2.6E+02	3	17	13.64	27.27
2.6E+02 -	3.8E+02	0	17	0.00	13.64
3.8E+02 -	5.6E+02	0	17	0.00	13.64
5.6E+02 -	8.3E+02	1	18	4.55	13.64
8.3E+02 -	1.2E+03	1	19	4.55	9.09
1.2E+03 -	1.8E+03	1	20	4.55	4.55

HISTOGRAM FOR COLUMN 7 (MN)

```
      2.0E+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
      3.0E+01
      5.0E+01
      7.0E+01 XXXXX
      1.0E+02 XXXXXXXXXXXXXXXXX
      1.5E+02 XXXXXXXXX
      2.0E+02 XXXXXXXXXXXXXX
      3.0E+02
      5.0E+02
      7.0E+02 XXXXX
      1.0E+03 XXXXX
      1.5E+03 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
2	0	0	0	0	0	20
9.09	0.00			0.00	0.00	

MAXIMUM = 1.50000E+03
MINIMUM = 2.00000E+01
GEOMETRIC MEAN = 9.15037E+01
GEOMETRIC DEVIATION = 3.98325E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
QUARTZITE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 8 (AG)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER -	UPPER				
3.8E-01 -	5.6E-01	2	2	9.09	18.18
5.6E-01 -	8.3E-01	1	3	4.55	9.09
8.3E-01 -	1.2E+00	0	3	0.00	4.55
1.2E+00 -	1.8E+00	1	4	4.55	4.55

HISTOGRAM FOR COLUMN 8 (AG)

```
5.0E-01 XXXXXXXXX
7.0E-01 XXXXX
1.0E+00
1.5E+00 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
16	2	0	0	0	0	4
72.73	9.09			0.00	0.00	

MAXIMUM = 1.50000E+00
MINIMUM = 5.00000E-01
GEOMETRIC MEAN = 7.15785E-01
GEOMETRIC DEVIATION = 1.67884E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
QUARTZITE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 10 (B)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER -	UPPER				
8.3E+00 -	1.2E+01	0	0	0.00	81.82
1.2E+01 -	1.8E+01	1	1	4.55	81.82
1.8E+01 -	2.6E+01	3	4	13.64	77.27
2.6E+01 -	3.8E+01	4	8	18.18	63.64
3.8E+01 -	5.6E+01	4	12	18.18	45.45
5.6E+01 -	8.3E+01	2	14	9.09	27.27
8.3E+01 -	1.2E+02	2	16	9.09	18.18
1.2E+02 -	1.8E+02	0	16	0.00	9.09
1.8E+02 -	2.6E+02	0	16	0.00	9.09
2.6E+02 -	3.8E+02	2	18	9.09	9.09

HISTOGRAM FOR COLUMN 10 (B)

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

N	L	H	B	T	G	ANALYTICAL VALUES
2	2	0	0	0	0	18
9.09	9.09			0.00	0.00	

MAXIMUM = 3.00000E+02
MINIMUM = 1.50000E+01
GEOMETRIC MEAN = 4.90279E+01
GEOMETRIC DEVIATION = 2.36640E+00

TITLE
QUARTZITE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 11 (BA)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	0	0	0.00	100.00
2.6E+01 -	3.8E+01	0	0	0.00	100.00
3.8E+01 -	5.6E+01	0	0	0.00	100.00
5.6E+01 -	8.3E+01	1	1	4.55	100.00
8.3E+01 -	1.2E+02	1	2	4.55	95.45
1.2E+02 -	1.8E+02	1	3	4.55	90.91
1.8E+02 -	2.6E+02	3	6	13.64	86.36
2.6E+02 -	3.8E+02	6	12	27.27	72.73
3.8E+02 -	5.6E+02	2	14	9.09	45.45
5.6E+02 -	8.3E+02	3	17	13.64	36.36
8.3E+02 -	1.2E+03	2	19	9.09	22.73
1.2E+03 -	1.8E+03	1	20	4.55	13.64
1.8E+03 -	2.6E+03	0	20	0.00	9.09
2.6E+03 -	3.8E+03	1	21	4.55	9.09

HISTOGRAM FOR COLUMN 11 (BA)

```
       7.0E+01 XXXXX
       1.0E+02 XXXXX
       1.5E+02 XXXXX
       2.0E+02 XXXXXXXXXXXXXX
       3.0E+02 XXXXXXXXXXXXXXXXXXXXXXXXXX
       5.0E+02 XXXXXXXXX
       7.0E+02 XXXXXXXXXXXXX
       1.0E+03 XXXXXXXXX
       1.5E+03 XXXXX
       2.0E+03
       3.0E+03 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	1	21
0.00	0.00			0.00	4.55	

MAXIMUM = 3.00000E+03
MINIMUM = 7.00000E+01
GEOMETRIC MEAN = 3.88340E+02
GEOMETRIC DEVIATION = 2.47097E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
QUARTZITE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 15 (CO)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	2	2	9.09	22.73
5.6E+00 -	8.3E+00	1	3	4.55	13.64
8.3E+00 -	1.2E+01	2	5	9.09	9.09

HISTOGRAM FOR COLUMN 15 (CO)

```
5.0E+00 XXXXXXXXX
7.0E+00 XXXXX
1.0E+01 XXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
14	3	0	0	0	0	5
63.64	13.64			0.00	0.00	

MAXIMUM = 1.00000E+01
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 7.05680E+00
GEOMETRIC DEVIATION = 1.41426E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
QUARTZITE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 17 (CU)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	2	2	9.09	86.36
5.6E+00 -	8.3E+00	3	5	13.64	77.27
8.3E+00 -	1.2E+01	2	7	9.09	63.64
1.2E+01 -	1.8E+01	2	9	9.09	54.55
1.8E+01 -	2.6E+01	3	12	13.64	45.45
2.6E+01 -	3.8E+01	2	14	9.09	31.82
3.8E+01 -	5.6E+01	2	16	9.09	22.73
5.6E+01 -	8.3E+01	1	17	4.55	13.64
8.3E+01 -	1.2E+02	2	19	9.09	9.09

HISTOGRAM FOR COLUMN 17 (CU)

```
5.0E+00 XXXXXXXX
7.0E+00 XXXXXXXXXXXXX
1.0E+01 XXXXXXXX
1.5E+01 XXXXXXXXX
2.0E+01 XXXXXXXXXXXXX
3.0E+01 XXXXXXXXX
5.0E+01 XXXXXXXXX
7.0E+01 XXXXX
1.0E+02 XXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
3	0	0	0	0	0	19
13.64	0.00			0.00	0.00	

MAXIMUM = 1.00000E+02
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 1.92071E+01
GEOMETRIC DEVIATION = 2.64301E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
QUARTZITE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 19 (MO)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	0	0	0.00	22.73
5.6E+00 -	8.3E+00	1	1	4.55	22.73
8.3E+00 -	1.2E+01	0	1	0.00	18.18
1.2E+01 -	1.8E+01	1	2	4.55	18.18
1.8E+01 -	2.6E+01	1	3	4.55	13.64
2.6E+01 -	3.8E+01	1	4	4.55	9.09
3.8E+01 -	5.6E+01	1	5	4.55	4.55

HISTOGRAM FOR COLUMN 19 (MO)

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

N	L	H	B	T	G	ANALYTICAL VALUES
17	0	0	0	0	0	5
77.27	0.00			0.00	0.00	

MAXIMUM = 5.00000E+01
MINIMUM = 7.00000E+00
GEOMETRIC MEAN = 1.99371E+01
GEOMETRIC DEVIATION = 2.09538E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
QUARTZITE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 22 (PB)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	1	1	4.55	27.27
1.2E+01 -	1.8E+01	1	2	4.55	22.73
1.8E+01 -	2.6E+01	2	4	9.09	18.18
2.6E+01 -	3.8E+01	0	4	0.00	9.09
3.8E+01 -	5.6E+01	0	4	0.00	9.09
5.6E+01 -	8.3E+01	1	5	4.55	9.09
8.3E+01 -	1.2E+02	1	6	4.55	4.55

HISTOGRAM FOR COLUMN 22 (PB)

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

N	L	H	B	T	G	ANALYTICAL VALUES
11	5	0	0	0	0	6
50.00	22.73			0.00	0.00	

MAXIMUM = 1.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 2.73658E+01
GEOMETRIC DEVIATION = 2.48227E+00

TITLE
QUARTZITE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 27 (V)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	2	2	9.09	100.00
1.2E+01 -	1.8E+01	1	3	4.55	90.91
1.8E+01 -	2.6E+01	1	4	4.55	86.36
2.6E+01 -	3.8E+01	2	6	9.09	81.82
3.8E+01 -	5.6E+01	2	8	9.09	72.73
5.6E+01 -	8.3E+01	1	9	4.55	63.64
8.3E+01 -	1.2E+02	1	10	4.55	59.09
1.2E+02 -	1.8E+02	1	11	4.55	54.55
1.8E+02 -	2.6E+02	4	15	18.18	50.00
2.6E+02 -	3.8E+02	1	16	4.55	31.82
3.8E+02 -	5.6E+02	0	16	0.00	27.27
5.6E+02 -	8.3E+02	1	17	4.55	27.27
8.3E+02 -	1.2E+03	0	17	0.00	22.73
1.2E+03 -	1.8E+03	2	19	9.09	22.73
1.8E+03 -	2.6E+03	2	21	9.09	13.64
2.6E+03 -	3.8E+03	1	22	4.55	4.55

HISTOGRAM FOR COLUMN 27 (V)

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

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	22
0.00	0.00			0.00	0.00	

MAXIMUM = 3.00000E+03
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 1.48970E+02
GEOMETRIC DEVIATION = 6.09045E+00

TITLE
SHALE - SIL. ASSEMBLAGE

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
AU	6	13	0	0	0	0	15
HG	2	0	0	0	0	0	32
MN	0	0	0	0	0	0	34
AG	25	3	0	0	0	0	6
B	0	0	0	0	0	0	34
BA	0	0	0	0	0	0	34
CO	11	4	0	0	0	0	19
CU	0	0	0	0	0	0	34
MO	23	4	0	0	0	0	7
PB	5	3	0	0	0	0	26
V	0	0	0	0	0	0	34

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE

ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS
AU	0.012635	6.37	19 NOT DETECTED, LESS THAN, OR TRACE VALUES. 15 REPORTED VALUES.
HG	0.197051	4.05	2 NOT DETECTED, LESS THAN, OR TRACE VALUES. 32 REPORTED VALUES.
MN	181.604610	4.53	34 SAMPLES AND 34 ANALYTICAL VALUES.
AG	0.144555	2.85	28 NOT DETECTED, LESS THAN, OR TRACE VALUES. 6 REPORTED VALUES.
B	76.489496	2.74	34 SAMPLES AND 34 ANALYTICAL VALUES.
BA	551.274162	1.88	34 SAMPLES AND 34 ANALYTICAL VALUES.
CO	4.999108	3.72	15 NOT DETECTED, LESS THAN, OR TRACE VALUES. 19 REPORTED VALUES.
CU	41.735170	2.53	34 SAMPLES AND 34 ANALYTICAL VALUES.
MO	0.401896	17.00	27 NOT DETECTED, LESS THAN, OR TRACE VALUES. 7 REPORTED VALUES.
PB	11.323932	1.65	8 NOT DETECTED, LESS THAN, OR TRACE VALUES. 26 REPORTED VALUES.
V	133.197819	2.41	34 SAMPLES AND 34 ANALYTICAL VALUES.

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
SHALE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 1 (AU)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	4	4	11.76	44.12
2.6E-02 -	3.8E-02	0	4	0.00	32.35
3.8E-02 -	5.6E-02	5	9	14.71	32.35
5.6E-02 -	8.3E-02	2	11	5.88	17.65
8.3E-02 -	1.2E-01	1	12	2.94	11.76
1.2E-01 -	1.8E-01	0	12	0.00	8.82
1.8E-01 -	2.6E-01	1	13	2.94	8.82
2.6E-01 -	3.8E-01	0	13	0.00	5.88
3.8E-01 -	5.6E-01	1	14	2.94	5.88
5.6E-01 -	8.3E-01	0	14	0.00	2.94
8.3E-01 -	1.2E+00	1	15	2.94	2.94

HISTOGRAM FOR COLUMN 1 (AU)

```
       2.0E-02 XXXXXXXXXXX
       3.0E-02
       5.0E-02 XXXXXXXXXXXXXX
       7.0E-02 XXXXXX
       1.0E-01 XXX
       1.5E-01
       2.0E-01 XXX
       3.0E-01
       5.0E-01 XXX
       7.0E-01
       1.0E+00 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
6	13	0	0	0	0	15
17.65	38.24			0.00	0.00	

MAXIMUM = 9.60000E-01
MINIMUM = 2.00000E-02
GEOMETRIC MEAN = 6.28458E-02
GEOMETRIC DEVIATION = 3.26656E+00

TITLE
SHALE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 2 (HG)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER -	UPPER				
1.8E-02 -	2.6E-02	0	0	0.00	94.12
2.6E-02 -	3.8E-02	0	0	0.00	94.12
3.8E-02 -	5.6E-02	0	0	0.00	94.12
5.6E-02 -	8.3E-02	10	10	29.41	94.12
8.3E-02 -	1.2E-01	4	14	11.76	64.71
1.2E-01 -	1.8E-01	2	16	5.88	52.94
1.8E-01 -	2.6E-01	2	18	5.88	47.06
2.6E-01 -	3.8E-01	3	21	8.82	41.18
3.8E-01 -	5.6E-01	2	23	5.88	32.35
5.6E-01 -	8.3E-01	4	27	11.76	26.47
8.3E-01 -	1.2E+00	2	29	5.88	14.71
1.2E+00 -	1.8E+00	0	29	0.00	8.82
1.8E+00 -	2.6E+00	2	31	5.88	8.82
2.6E+00 -	3.8E+00	1	32	2.94	2.94

HISTOGRAM FOR COLUMN 2 (HG)

```
7.0E-02 XXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.0E-01 XXXXXXXXXXX
1.5E-01 XXXXXX
2.0E-01 XXXXXX
3.0E-01 XXXXXXXXX
5.0E-01 XXXXXX
7.0E-01 XXXXXXXXXXX
1.0E+00 XXXXXX
1.5E+00
2.0E+00 XXXXXX
3.0E+00 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
2	0	0	0	0	0	32
5.88	0.00			0.00	0.00	

MAXIMUM = 3.00000E+00
MINIMUM = 6.00000E-02
GEOMETRIC MEAN = 2.37316E-01
GEOMETRIC DEVIATION = 3.36469E+00

TITLE
SHALE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 7 (MN)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	0	0	0.00	100.00
1.2E+01 -	1.8E+01	0	0	0.00	100.00
1.8E+01 -	2.6E+01	2	2	5.88	100.00
2.6E+01 -	3.8E+01	4	6	11.76	94.12
3.8E+01 -	5.6E+01	5	11	14.71	82.35
5.6E+01 -	8.3E+01	3	14	8.82	67.65
8.3E+01 -	1.2E+02	3	17	8.82	58.82
1.2E+02 -	1.8E+02	2	19	5.88	50.00
1.8E+02 -	2.6E+02	1	20	2.94	44.12
2.6E+02 -	3.8E+02	0	20	0.00	41.18
3.8E+02 -	5.6E+02	3	23	8.82	41.18
5.6E+02 -	8.3E+02	2	25	5.88	32.35
8.3E+02 -	1.2E+03	5	30	14.71	26.47
1.2E+03 -	1.8E+03	3	33	8.82	11.76
1.8E+03 -	2.6E+03	1	34	2.94	2.94

HISTOGRAM FOR COLUMN 7 (MN)

```
2.0E+01 XXXXXX
3.0E+01 XXXXXXXXXXX
5.0E+01 XXXXXXXXXXXXXX
7.0E+01 XXXXXXXX
1.0E+02 XXXXXXXX
1.5E+02 XXXXX
2.0E+02 XXX
3.0E+02
5.0E+02 XXXXXXXX
7.0E+02 XXXXX
1.0E+03 XXXXXXXXXXXXX
1.5E+03 XXXXXXXX
2.0E+03 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	34
0.00	0.00			0.00	0.00	

MAXIMUM = 2.00000E+03
MINIMUM = 2.00000E+01
GEOMETRIC MEAN = 1.81605E+02
GEOMETRIC DEVIATION = 4.52914E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
SHALE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 8 (AG)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E-01 -	5.6E-01	4	4	11.76	17.65
5.6E-01 -	8.3E-01	0	4	0.00	5.88
8.3E-01 -	1.2E+00	1	5	2.94	5.88
1.2E+00 -	1.8E+00	1	6	2.94	2.94

HISTOGRAM FOR COLUMN 8 (AG)

```
5.0E-01 XXXXXXXXXXX
7.0E-01
1.0E+00 XXX
1.5E+00 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
25	3	0	0	0	0	6
73.53	8.82			0.00	0.00	

MAXIMUM = 1.50000E+00
MINIMUM = 5.00000E-01
GEOMETRIC MEAN = 6.74003E-01
GEOMETRIC DEVIATION = 1.61619E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
SHALE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 10 (B)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	3	3	8.82	100.00
1.2E+01 -	1.8E+01	0	3	0.00	91.18
1.8E+01 -	2.6E+01	2	5	5.88	91.18
2.6E+01 -	3.8E+01	3	8	8.82	85.29
3.8E+01 -	5.6E+01	3	11	8.82	76.47
5.6E+01 -	8.3E+01	4	15	11.76	67.65
8.3E+01 -	1.2E+02	9	24	26.47	55.88
1.2E+02 -	1.8E+02	3	27	8.82	29.41
1.8E+02 -	2.6E+02	4	31	11.76	20.59
2.6E+02 -	3.8E+02	2	33	5.88	8.82
3.8E+02 -	5.6E+02	0	33	0.00	2.94
5.6E+02 -	8.3E+02	1	34	2.94	2.94

HISTOGRAM FOR COLUMN 10 (B)

```
1.0E+01 XXXXXXXXX
1.5E+01
2.0E+01 XXXXXX
3.0E+01 XXXXXXXXX
5.0E+01 XXXXXXXXX
7.0E+01 XXXXXXXXXXXX
1.0E+02 XXXXXXXXXXXXXXXXXXXXXXXXX
1.5E+02 XXXXXXXXX
2.0E+02 XXXXXXXXXXX
3.0E+02 XXXXXX
5.0E+02
7.0E+02 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	34
0.00	0.00			0.00	0.00	

MAXIMUM = 7.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 7.64895E+01
GEOMETRIC DEVIATION = 2.74128E+00

TITLE
SHALE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 11 (BA)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	0	0	0.00	100.00
2.6E+01 -	3.8E+01	0	0	0.00	100.00
3.8E+01 -	5.6E+01	0	0	0.00	100.00
5.6E+01 -	8.3E+01	0	0	0.00	100.00
8.3E+01 -	1.2E+02	1	1	2.94	100.00
1.2E+02 -	1.8E+02	1	2	2.94	97.06
1.8E+02 -	2.6E+02	1	3	2.94	94.12
2.6E+02 -	3.8E+02	5	8	14.71	91.18
3.8E+02 -	5.6E+02	9	17	26.47	76.47
5.6E+02 -	8.3E+02	10	27	29.41	50.00
8.3E+02 -	1.2E+03	5	32	14.71	20.59
1.2E+03 -	1.8E+03	0	32	0.00	5.88
1.8E+03 -	2.6E+03	2	34	5.88	5.88

HISTOGRAM FOR COLUMN 11 (BA)

```
1.0E+02 XXX
1.5E+02 XXX
2.0E+02 XXX
3.0E+02 XXXXXXXXXXXXXXX
5.0E+02 XXXXXXXXXXXXXXXXXXXXXXXXXX
7.0E+02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.0E+03 XXXXXXXXXXXXXXX
1.5E+03
2.0E+03 XXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	34
0.00	0.00			0.00	0.00	

MAXIMUM = 2.00000E+03
MINIMUM = 1.00000E+02
GEOMETRIC MEAN = 5.51274E+02
GEOMETRIC DEVIATION = 1.88395E+00

TITLE
SHALE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 15 (CO)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	2	2	5.88	55.88
5.6E+00 -	8.3E+00	1	3	2.94	50.00
8.3E+00 -	1.2E+01	7	10	20.59	47.06
1.2E+01 -	1.8E+01	6	16	17.65	26.47
1.8E+01 -	2.6E+01	1	17	2.94	8.82
2.6E+01 -	3.8E+01	1	18	2.94	5.88
3.8E+01 -	5.6E+01	0	18	0.00	2.94
5.6E+01 -	8.3E+01	0	18	0.00	2.94
8.3E+01 -	1.2E+02	0	18	0.00	2.94
1.2E+02 -	1.8E+02	1	19	2.94	2.94

HISTOGRAM FOR COLUMN 15 (CO)

```
5.0E+00 XXXXXX
7.0E+00 XXX
1.0E+01 XXXXXXXXXXXXXXXXXXXX
1.5E+01 XXXXXXXXXXXXXXXXX
2.0E+01 XXX
3.0E+01 XXX
5.0E+01
7.0E+01
1.0E+02
1.5E+02 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
11	4	0	0	0	0	19
32.35	11.76			0.00	0.00	

MAXIMUM = 1.50000E+02
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 1.31408E+01
GEOMETRIC DEVIATION = 2.08185E+00

TITLE
SHALE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 17 (CU)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	0	0	0.00	100.00
5.6E+00 -	8.3E+00	0	0	0.00	100.00
8.3E+00 -	1.2E+01	4	4	11.76	100.00
1.2E+01 -	1.8E+01	1	5	2.94	88.24
1.8E+01 -	2.6E+01	6	11	17.65	85.29
2.6E+01 -	3.8E+01	7	18	20.59	67.65
3.8E+01 -	5.6E+01	2	20	5.88	47.06
5.6E+01 -	8.3E+01	6	26	17.65	41.18
8.3E+01 -	1.2E+02	3	29	8.82	23.53
1.2E+02 -	1.8E+02	3	32	8.82	14.71
1.8E+02 -	2.6E+02	1	33	2.94	5.88
2.6E+02 -	3.8E+02	1	34	2.94	2.94

HISTOGRAM FOR COLUMN 17 (CU)

```
1.0E+01 XXXXXXXXXXX
1.5E+01 XXX
2.0E+01 XXXXXXXXXXXXXXXXX
3.0E+01 XXXXXXXXXXXXXXXXXXXX
5.0E+01 XXXXXX
7.0E+01 XXXXXXXXXXXXXXXXX
1.0E+02 XXXXXXXX
1.5E+02 XXXXXXXX
2.0E+02 XXX
3.0E+02 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	34
0.00	0.00			0.00	0.00	

MAXIMUM = 3.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 4.17352E+01
GEOMETRIC DEVIATION = 2.53025E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
SHALE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 19 (MO)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	1	1	2.94	20.59
5.6E+00 -	8.3E+00	0	1	0.00	17.65
8.3E+00 -	1.2E+01	1	2	2.94	17.65
1.2E+01 -	1.8E+01	0	2	0.00	14.71
1.8E+01 -	2.6E+01	1	3	2.94	14.71
2.6E+01 -	3.8E+01	2	5	5.88	11.76
3.8E+01 -	5.6E+01	1	6	2.94	5.88
5.6E+01 -	8.3E+01	1	7	2.94	2.94

HISTOGRAM FOR COLUMN 19 (MO)

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

N	L	H	B	T	G	ANALYTICAL VALUES
23	4	0	0	0	0	7
67.65	11.76			0.00	0.00	

MAXIMUM = 7.00000E+01
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 2.27458E+01
GEOMETRIC DEVIATION = 2.49697E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
SHALE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 22 (PB)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	13	13	38.24	76.47
1.2E+01 -	1.8E+01	6	19	17.65	38.24
1.8E+01 -	2.6E+01	6	25	17.65	20.59
2.6E+01 -	3.8E+01	0	25	0.00	2.94
3.8E+01 -	5.6E+01	1	26	2.94	2.94

HISTOGRAM FOR COLUMN 22 (PB)

```
1.0E+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.5E+01 XXXXXXXXXXXXXXXXXX
2.0E+01 XXXXXXXXXXXXXXXXXX
3.0E+01
5.0E+01 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
5	3	0	0	0	0	26
14.71	8.82			0.00	0.00	

MAXIMUM = 5.00000E+01
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 1.37085E+01
GEOMETRIC DEVIATION = 1.48227E+00

TITLE
SHALE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 27 (V)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	0	0	0.00	100.00
1.2E+01 -	1.8E+01	0	0	0.00	100.00
1.8E+01 -	2.6E+01	1	1	2.94	100.00
2.6E+01 -	3.8E+01	1	2	2.94	97.06
3.8E+01 -	5.6E+01	2	4	5.88	94.12
5.6E+01 -	8.3E+01	5	9	14.71	88.24
8.3E+01 -	1.2E+02	8	17	23.53	73.53
1.2E+02 -	1.8E+02	8	25	23.53	50.00
1.8E+02 -	2.6E+02	3	28	8.82	26.47
2.6E+02 -	3.8E+02	2	30	5.88	17.65
3.8E+02 -	5.6E+02	1	31	2.94	11.76
5.6E+02 -	8.3E+02	2	33	5.88	8.82
8.3E+02 -	1.2E+03	0	33	0.00	2.94
1.2E+03 -	1.8E+03	1	34	2.94	2.94

HISTOGRAM FOR COLUMN 27 (V)

```
2.0E+01 XXX
3.0E+01 XXX
5.0E+01 XXXXXX
7.0E+01 XXXXXXXXXXXXXX
1.0E+02 XXXXXXXXXXXXXXXXXXXXXXX
1.5E+02 XXXXXXXXXXXXXXXXXXXXXXX
2.0E+02 XXXXXXXXX
3.0E+02 XXXXXX
5.0E+02 XXX
7.0E+02 XXXXXX
1.0E+03
1.5E+03 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	34
0.00	0.00			0.00	0.00	

MAXIMUM = 1.50000E+03
MINIMUM = 2.00000E+01
GEOMETRIC MEAN = 1.33198E+02
GEOMETRIC DEVIATION = 2.40903E+00

TITLE
LIMESTONE - SIL. ASSEMBLAGE

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
AU	3	13	0	0	0	0	5
HG	1	0	0	0	0	1	19
MN	0	0	0	0	0	2	19
B	4	4	0	0	0	0	13
BA	0	1	0	0	0	0	20
CO	10	2	0	0	0	0	9
CU	2	3	0	0	0	0	16
MO	14	3	0	0	0	0	4
PB	8	5	0	0	0	0	8
V	0	1	0	0	0	0	20

TITLE

ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS
AU	0.012158	1.66	16 NOT DETECTED, LESS THAN, OR TRACE VALUES. 5 REPORTED VALUES.
HG	********	******	1 GREATER THAN VALUES. NO COMPUTATIONS.
MN	********	******	2 GREATER THAN VALUES. NO COMPUTATIONS.
B	13.076774	4.40	8 NOT DETECTED, LESS THAN, OR TRACE VALUES. 13 REPORTED VALUES.
BA	158.130978	2.88	1 NOT DETECTED, LESS THAN, OR TRACE VALUES. 20 REPORTED VALUES.
CO	2.757586	5.57	12 NOT DETECTED, LESS THAN, OR TRACE VALUES. 9 REPORTED VALUES.
CU	6.835371	2.34	5 NOT DETECTED, LESS THAN, OR TRACE VALUES. 16 REPORTED VALUES.
MO	1.558839	2.84	17 NOT DETECTED, LESS THAN, OR TRACE VALUES. 4 REPORTED VALUES.
PB	5.499040	3.71	13 NOT DETECTED, LESS THAN, OR TRACE VALUES. 8 REPORTED VALUES.
V	55.108418	2.89	1 NOT DETECTED, LESS THAN, OR TRACE VALUES. 20 REPORTED VALUES.

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
LIMESTONE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 1 (AU)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	4	4	19.05	23.81
2.6E-02 -	3.8E-02	0	4	0.00	4.76
3.8E-02 -	5.6E-02	1	5	4.76	4.76

HISTOGRAM FOR COLUMN 1 (AU)

```
2.0E-02 XXXXXXXXXXXXXXXXXX
3.0E-02
5.0E-02 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
3	13	0	0	0	0	5
14.29	61.90			0.00	0.00	

MAXIMUM = 4.00000E-02
MINIMUM = 2.00000E-02
GEOMETRIC MEAN = 2.29740E-02
GEOMETRIC DEVIATION = 1.36340E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
LIMESTONE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 2 (HG)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	0	0	0.00	95.24
2.6E-02 -	3.8E-02	0	0	0.00	95.24
3.8E-02 -	5.6E-02	2	2	9.52	95.24
5.6E-02 -	8.3E-02	7	9	33.33	85.71
8.3E-02 -	1.2E-01	2	11	9.52	52.38
1.2E-01 -	1.8E-01	0	11	0.00	42.86
1.8E-01 -	2.6E-01	3	14	14.29	42.86
2.6E-01 -	3.8E-01	1	15	4.76	28.57
3.8E-01 -	5.6E-01	0	15	0.00	23.81
5.6E-01 -	8.3E-01	1	16	4.76	23.81
8.3E-01 -	1.2E+00	2	18	9.52	19.05
1.2E+00 -	1.8E+00	0	18	0.00	9.52
1.8E+00 -	2.6E+00	0	18	0.00	9.52
2.6E+00 -	3.8E+00	1	19	4.76	9.52

HISTOGRAM FOR COLUMN 2 (HG)

```
5.0E-02 XXXXXXXXXX
7.0E-02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.0E-01 XXXXXXXXXX
1.5E-01
2.0E-01 XXXXXXXXXXXXXX
3.0E-01 XXXXX
5.0E-01
7.0E-01 XXXXX
1.0E+00 XXXXXXXXXX
1.5E+00
2.0E+00
3.0E+00 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	0	0	0	0	1	19
4.76	0.00			0.00	4.76	

MAXIMUM = 3.00000E+00
MINIMUM = 4.00000E-02
GEOMETRIC MEAN = 1.63310E-01
GEOMETRIC DEVIATION = 3.41763E+00

TITLE
LIMESTONE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 7 (MN)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	0	0	0.00	100.00
1.2E+01 -	1.8E+01	0	0	0.00	100.00
1.8E+01 -	2.6E+01	0	0	0.00	100.00
2.6E+01 -	3.8E+01	0	0	0.00	100.00
3.8E+01 -	5.6E+01	0	0	0.00	100.00
5.6E+01 -	8.3E+01	0	0	0.00	100.00
8.3E+01 -	1.2E+02	0	0	0.00	100.00
1.2E+02 -	1.8E+02	2	2	9.52	100.00
1.8E+02 -	2.6E+02	1	3	4.76	90.48
2.6E+02 -	3.8E+02	2	5	9.52	85.71
3.8E+02 -	5.6E+02	4	9	19.05	76.19
5.6E+02 -	8.3E+02	4	13	19.05	57.14
8.3E+02 -	1.2E+03	2	15	9.52	38.10
1.2E+03 -	1.8E+03	0	15	0.00	28.57
1.8E+03 -	2.6E+03	2	17	9.52	28.57
2.6E+03 -	3.8E+03	2	19	9.52	19.05

HISTOGRAM FOR COLUMN 7 (MN)

```
1.5E+02 XXXXXXXXX
2.0E+02 XXXXX
3.0E+02 XXXXXXXXX
5.0E+02 XXXXXXXXXXXXXXXXXX
7.0E+02 XXXXXXXXXXXXXXXXXX
1.0E+03 XXXXXXXXX
1.5E+03
2.0E+03 XXXXXXXXX
3.0E+03 XXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	2	19
0.00	0.00			0.00	9.52	

MAXIMUM = 3.00000E+03
MINIMUM = 1.50000E+02
GEOMETRIC MEAN = 6.41756E+02
GEOMETRIC DEVIATION = 2.47289E+00

TITLE
LIMESTONE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 10 (B)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	3	3	14.29	61.90
1.2E+01 -	1.8E+01	0	3	0.00	47.62
1.8E+01 -	2.6E+01	3	6	14.29	47.62
2.6E+01 -	3.8E+01	2	8	9.52	33.33
3.8E+01 -	5.6E+01	0	8	0.00	23.81
5.6E+01 -	8.3E+01	3	11	14.29	23.81
8.3E+01 -	1.2E+02	1	12	4.76	9.52
1.2E+02 -	1.8E+02	0	12	0.00	4.76
1.8E+02 -	2.6E+02	1	13	4.76	4.76

HISTOGRAM FOR COLUMN 10 (B)

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

N	L	H	B	T	G	ANALYTICAL VALUES
4	4	0	0	0	0	13
19.05	19.05			0.00	0.00	

MAXIMUM = 2.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 3.27263E+01
GEOMETRIC DEVIATION = 2.62970E+00

TITLE
LIMESTONE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 11 (BA)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	0	0	0.00	95.24
2.6E+01 -	3.8E+01	1	1	4.76	95.24
3.8E+01 -	5.6E+01	0	1	0.00	90.48
5.6E+01 -	8.3E+01	1	2	4.76	90.48
8.3E+01 -	1.2E+02	8	10	38.10	85.71
1.2E+02 -	1.8E+02	1	11	4.76	47.62
1.8E+02 -	2.6E+02	1	12	4.76	42.86
2.6E+02 -	3.8E+02	4	16	19.05	38.10
3.8E+02 -	5.6E+02	1	17	4.76	19.05
5.6E+02 -	8.3E+02	2	19	9.52	14.29
8.3E+02 -	1.2E+03	1	20	4.76	4.76

HISTOGRAM FOR COLUMN 11 (BA)

```
3.0E+01 XXXXX
5.0E+01
7.0E+01 XXXXX
1.0E+02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.5E+02 XXXXX
2.0E+02 XXXXX
3.0E+02 XXXXXXXXXXXXXXXXXX
5.0E+02 XXXXX
7.0E+02 XXXXXXXXXX
1.0E+03 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	1	0	0	0	0	20
0.00	4.76			0.00	0.00	

MAXIMUM = 1.00000E+03
MINIMUM = 3.00000E+01
GEOMETRIC MEAN = 1.79825E+02
GEOMETRIC DEVIATION = 2.47669E+00

TITLE
LIMESTONE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 15 (CO)

LIMITS LOWER -	UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	2	2	9.52	42.86
5.6E+00 -	8.3E+00	0	2	0.00	33.33
8.3E+00 -	1.2E+01	4	6	19.05	33.33
1.2E+01 -	1.8E+01	1	7	4.76	14.29
1.8E+01 -	2.6E+01	1	8	4.76	9.52
2.6E+01 -	3.8E+01	0	8	0.00	4.76
3.8E+01 -	5.6E+01	0	8	0.00	4.76
5.6E+01 -	8.3E+01	0	8	0.00	4.76
8.3E+01 -	1.2E+02	0	8	0.00	4.76
1.2E+02 -	1.8E+02	1	9	4.76	4.76

HISTOGRAM FOR COLUMN 15 (CO)

```
5.0E+00 XXXXXXXXX
7.0E+00
1.0E+01 XXXXXXXXXXXXXXXXX
1.5E+01 XXXXX
2.0E+01 XXXXX
3.0E+01
5.0E+01
7.0E+01
1.0E+02
1.5E+02 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
10	2	0	0	0	0	9
47.62	9.52			0.00	0.00	

MAXIMUM = 1.50000E+02
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 1.30856E+01
GEOMETRIC DEVIATION = 2.76728E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
LIMESTONE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 17 (CU)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	5	5	23.81	76.19
5.6E+00 -	8.3E+00	2	7	9.52	52.38
8.3E+00 -	1.2E+01	4	11	19.05	42.86
1.2E+01 -	1.8E+01	3	14	14.29	23.81
1.8E+01 -	2.6E+01	1	15	4.76	9.52
2.6E+01 -	3.8E+01	0	15	0.00	4.76
3.8E+01 -	5.6E+01	1	16	4.76	4.76

HISTOGRAM FOR COLUMN 17 (CU)

```
5.0E+00 XXXXXXXXXXXXXXXXXXXXXX
7.0E+00 XXXXXXXXXX
1.0E+01 XXXXXXXXXXXXXXXXXX
1.5E+01 XXXXXXXXXXXXX
2.0E+01 XXXXX
3.0E+01
5.0E+01 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
2	3	0	0	0	0	16
9.52	14.29			0.00	0.00	

MAXIMUM = 5.00000E+01
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 9.59583E+00
GEOMETRIC DEVIATION = 1.90136E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
LIMESTONE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 19 (MO)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	2	2	9.52	19.05
5.6E+00 -	8.3E+00	0	2	0.00	9.52
8.3E+00 -	1.2E+01	2	4	9.52	9.52

HISTOGRAM FOR COLUMN 19 (MO)

```
5.0E+00 XXXXXXXXX
7.0E+00
1.0E+01 XXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
14	3	0	0	0	0	4
66.67	14.29			0.00	0.00	

MAXIMUM = 1.00000E+01
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 7.07107E+00
GEOMETRIC DEVIATION = 1.49211E+00

TITLE
LIMESTONE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 22 (PB)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	3	3	14.29	38.10
1.2E+01 -	1.8E+01	0	3	0.00	23.81
1.8E+01 -	2.6E+01	3	6	14.29	23.81
2.6E+01 -	3.8E+01	0	6	0.00	9.52
3.8E+01 -	5.6E+01	1	7	4.76	9.52
5.6E+01 -	8.3E+01	1	8	4.76	4.76

HISTOGRAM FOR COLUMN 22 (PB)

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

N	L	H	B	T	G	ANALYTICAL VALUES
8	5	0	0	0	0	8
38.10	23.81			0.00	0.00	

MAXIMUM = 7.00000E+01
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 2.02253E+01
GEOMETRIC DEVIATION = 2.09920E+00

TITLE
LIMESTONE - SIL. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 27 (V)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	0	0	0.00	95.24
1.2E+01 -	1.8E+01	1	1	4.76	95.24
1.8E+01 -	2.6E+01	3	4	14.29	90.48
2.6E+01 -	3.8E+01	2	6	9.52	76.19
3.8E+01 -	5.6E+01	4	10	19.05	66.67
5.6E+01 -	8.3E+01	4	14	19.05	47.62
8.3E+01 -	1.2E+02	2	16	9.52	28.57
1.2E+02 -	1.8E+02	1	17	4.76	19.05
1.8E+02 -	2.6E+02	2	19	9.52	14.29
2.6E+02 -	3.8E+02	0	19	0.00	4.76
3.8E+02 -	5.6E+02	0	19	0.00	4.76
5.6E+02 -	8.3E+02	1	20	4.76	4.76

HISTOGRAM FOR COLUMN 27 (V)

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

N	L	H	B	T	G	ANALYTICAL VALUES
0	1	0	0	0	0	20
0.00	4.76			0.00	0.00	

MAXIMUM = 7.00000E+02
MINIMUM = 1.50000E+01
GEOMETRIC MEAN = 6.18938E+01
GEOMETRIC DEVIATION = 2.57575E+00

TITLE
QUARTZ VEINS - SIL. ASSEMBL.

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
AU	3	4	0	0	0	0	15
HG	0	0	0	0	0	0	22
MN	0	0	0	0	0	2	20
AG	13	3	0	0	0	0	6
B	2	2	0	0	0	0	18
BA	0	0	0	0	0	1	21
CO	10	2	0	0	0	0	10
CU	1	1	0	0	0	0	20
MO	12	1	0	0	0	0	9
PB	9	4	0	0	0	0	9
V	0	0	0	0	0	0	22

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE

ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS
AU	0.036122	12.56	7 NOT DETECTED, LESS THAN, OR TRACE VALUES. 15 REPORTED VALUES.
HG	0.416509	4.80	22 SAMPLES AND 22 ANALYTICAL VALUES.
MN	********	******	2 GREATER THAN VALUES. NO COMPUTATIONS.
AG	0.142391	5.50	16 NOT DETECTED, LESS THAN, OR TRACE VALUES. 6 REPORTED VALUES.
B	21.374410	2.96	4 NOT DETECTED, LESS THAN, OR TRACE VALUES. 18 REPORTED VALUES.
BA	********	******	1 GREATER THAN VALUES. NO COMPUTATIONS.
CO	2.828026	14.70	12 NOT DETECTED, LESS THAN, OR TRACE VALUES. 10 REPORTED VALUES.
CU	59.974078	8.01	2 NOT DETECTED, LESS THAN, OR TRACE VALUES. 20 REPORTED VALUES.
MO	2.756283	6.64	13 NOT DETECTED, LESS THAN, OR TRACE VALUES. 9 REPORTED VALUES.
PB	5.730555	4.96	13 NOT DETECTED, LESS THAN, OR TRACE VALUES. 9 REPORTED VALUES.
V	105.860534	4.64	22 SAMPLES AND 22 ANALYTICAL VALUES.

TITLE
QUARTZ VEINS - SIL. ASSEMBL.

FREQUENCY TABLE FOR COLUMN 1 (AU)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	5	5	22.73	68.18
2.6E-02 -	3.8E-02	0	5	0.00	45.45
3.8E-02 -	5.6E-02	3	8	13.64	45.45
5.6E-02 -	8.3E-02	0	8	0.00	31.82
8.3E-02 -	1.2E-01	2	10	9.09	31.82
1.2E-01 -	1.8E-01	1	11	4.55	22.73
1.8E-01 -	2.6E-01	0	11	0.00	18.18
2.6E-01 -	3.8E-01	0	11	0.00	18.18
3.8E-01 -	5.6E-01	0	11	0.00	18.18
5.6E-01 -	8.3E-01	2	13	9.09	18.18
8.3E-01 -	1.2E+00	0	13	0.00	9.09
1.2E+00 -	1.8E+00	0	13	0.00	9.09
1.8E+00 -	2.6E+00	0	13	0.00	9.09
2.6E+00 -	3.8E+00	0	13	0.00	9.09
3.8E+00 -	5.6E+00	0	13	0.00	9.09
5.6E+00 -	8.3E+00	2	15	9.09	9.09

HISTOGRAM FOR COLUMN I (AU)

```
2.0E-02 XXXXXXXXXXXXXXXXXXXXX
3.0E-02
5.0E-02 XXXXXXXXXXXXX
7.0E-02
1.0E-01 XXXXXXXXX
1.5E-01 XXXXX
2.0E-01
3.0E-01
5.0E-01
7.0E-01 XXXXXXXXX
1.0E+00
1.5E+00
2.0E+00
3.0E+00
5.0E+00
7.0E+00 XXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
3	4	0	0	0	0	15
13.64	18.18			0.00	0.00	

MAXIMUM = 7.00000E+00
MINIMUM = 2.00000E-02
GEOMETRIC MEAN = 1.15488E-01
GEOMETRIC DEVIATION = 7.81562E+00

TITLE
QUARTZ VEINS - SIL. ASSEMBL.

FREQUENCY TABLE FOR COLUMN 2 (HG)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	0	0	0.00	100.00
2.6E-02 -	3.8E-02	0	0	0.00	100.00
3.8E-02 -	5.6E-02	1	1	4.55	100.00
5.6E-02 -	8.3E-02	3	4	13.64	95.45
8.3E-02 -	1.2E-01	3	7	13.64	81.82
1.2E-01 -	1.8E-01	2	9	9.09	68.18
1.8E-01 -	2.6E-01	0	9	0.00	59.09
2.6E-01 -	3.8E-01	1	10	4.55	59.09
3.8E-01 -	5.6E-01	4	14	18.18	54.55
5.6E-01 -	8.3E-01	1	15	4.55	36.36
8.3E-01 -	1.2E+00	2	17	9.09	31.82
1.2E+00 -	1.8E+00	0	17	0.00	22.73
1.8E+00 -	2.6E+00	2	19	9.09	22.73
2.6E+00 -	3.8E+00	1	20	4.55	13.64
3.8E+00 -	5.6E+00	0	20	0.00	9.09
5.6E+00 -	8.3E+00	2	22	9.09	9.09

HISTOGRAM FOR COLUMN 2 (HG)

```
5.0E-02 XXXXX
7.0E-02 XXXXXXXXXXXXX
1.0E-01 XXXXXXXXXXXXX
1.5E-01 XXXXXXXXX
2.0E-01
3.0E-01 XXXXX
5.0E-01 XXXXXXXXXXXXXXXXX
7.0E-01 XXXXX
1.0E+00 XXXXXXXXX
1.5E+00
2.0E+00 XXXXXXXXX
3.0E+00 XXXXX
5.0E+00
7.0E+00 XXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	22
0.00	0.00			0.00	0.00	

MAXIMUM = 8.00000E+00
MINIMUM = 4.00000E-02
GEOMETRIC MEAN = 4.16509E-01
GEOMETRIC DEVIATION = 4.80336E+00

TITLE
QUARTZ VEINS - SIL. ASSEMBL.

FREQUENCY TABLE FOR COLUMN 7 (MN)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	0	0	0.00	100.00
1.2E+01 -	1.8E+01	0	0	0.00	100.00
1.8E+01 -	2.6E+01	0	0	0.00	100.00
2.6E+01 -	3.8E+01	1	1	4.55	100.00
3.8E+01 -	5.6E+01	0	1	0.00	95.45
5.6E+01 -	8.3E+01	1	2	4.55	95.45
8.3E+01 -	1.2E+02	5	7	22.73	90.91
1.2E+02 -	1.8E+02	5	12	22.73	68.18
1.8E+02 -	2.6E+02	3	15	13.64	45.45
2.6E+02 -	3.8E+02	0	15	0.00	31.82
3.8E+02 -	5.6E+02	0	15	0.00	31.82
5.6E+02 -	8.3E+02	1	16	4.55	31.82
8.3E+02 -	1.2E+03	1	17	4.55	27.27
1.2E+03 -	1.8E+03	2	19	9.09	22.73
1.8E+03 -	2.6E+03	1	20	4.55	13.64

HISTOGRAM FOR COLUMN 7 (MN)

```
3.0E+01 XXXXX
5.0E+01
7.0E+01 XXXXX
1.0E+02 XXXXXXXXXXXXXXXXXXXXX
1.5E+02 XXXXXXXXXXXXXXXXXXXXX
2.0E+02 XXXXXXXXXXXXX
3.0E+02
5.0E+02
7.0E+02 XXXXX
1.0E+03 XXXXX
1.5E+03 XXXXXXXXX
2.0E+03 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	2	20
0.00	0.00			0.00	9.09	

MAXIMUM = 2.00000E+03
MINIMUM = 3.00000E+01
GEOMETRIC MEAN = 2.13897E+02
GEOMETRIC DEVIATION = 3.14958E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
QUARTZ VEINS - SIL. ASSEMBL.

FREQUENCY TABLE FOR COLUMN 8 (AG)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E-01 -	5.6E-01	2	2	9.09	27.27
5.6E-01 -	8.3E-01	0	2	0.00	18.18
8.3E-01 -	1.2E+00	0	2	0.00	18.18
1.2E+00 -	1.8E+00	1	3	4.55	18.18
1.8E+00 -	2.6E+00	3	6	13.64	13.64

HISTOGRAM FOR COLUMN 8 (AG)

```
  5.0E-01 XXXXXXXXX
  7.0E-01
  1.0E+00
  1.5E+00 XXXXX
  2.0E+00 XXXXXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
13	3	0	0	0	0	6
59.09	13.64			0.00	0.00	

MAXIMUM = 2.00000E+00
MINIMUM = 5.00000E-01
GEOMETRIC MEAN = 1.20094E+00
GEOMETRIC DEVIATION = 1.98938E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
QUARTZ VEINS - SIL. ASSEMBL.

FREQUENCY TABLE FOR COLUMN 10 (B)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	1	1	4.55	81.82
1.2E+01 -	1.8E+01	5	6	22.73	77.27
1.8E+01 -	2.6E+01	5	11	22.73	54.55
2.6E+01 -	3.8E+01	0	11	0.00	31.82
3.8E+01 -	5.6E+01	3	14	13.64	31.82
5.6E+01 -	8.3E+01	1	15	4.55	18.18
8.3E+01 -	1.2E+02	2	17	9.09	13.64
1.2E+02 -	1.8E+02	0	17	0.00	4.55
1.8E+02 -	2.6E+02	1	18	4.55	4.55

HISTOGRAM FOR COLUMN 10 (B)

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

N	L	H	B	T	G	ANALYTICAL VALUES
2	2	0	0	0	0	18
9.09	9.09			0.00	0.00	

MAXIMUM = 2.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 3.01557E+01
GEOMETRIC DEVIATION = 2.35155E+00

TITLE
QUARTZ VEINS - SIL. ASSEMBL.

FREQUENCY TABLE FOR COLUMN 11 (BA)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	0	0	0.00	100.00
2.6E+01 -	3.8E+01	0	0	0.00	100.00
3.8E+01 -	5.6E+01	1	1	4.55	100.00
5.6E+01 -	8.3E+01	1	2	4.55	95.45
8.3E+01 -	1.2E+02	1	3	4.55	90.91
1.2E+02 -	1.8E+02	1	4	4.55	86.36
1.8E+02 -	2.6E+02	3	7	13.64	81.82
2.6E+02 -	3.8E+02	5	12	22.73	68.18
3.8E+02 -	5.6E+02	2	14	9.09	45.45
5.6E+02 -	8.3E+02	4	18	18.18	36.36
8.3E+02 -	1.2E+03	2	20	9.09	18.18
1.2E+03 -	1.8E+03	1	21	4.55	9.09

HISTOGRAM FOR COLUMN 11 (BA)

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

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	1	21
0.00	0.00			0.00	4.55	

MAXIMUM = 1.50000E+03
MINIMUM = 5.00000E+01
GEOMETRIC MEAN = 3.32706E+02
GEOMETRIC DEVIATION = 2.45734E+00

TITLE
QUARTZ VEINS - SIL. ASSEMBL.

FREQUENCY TABLE FOR COLUMN 15 (CO)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	1	1	4.55	45.45
5.6E+00 -	8.3E+00	0	1	0.00	40.91
8.3E+00 -	1.2E+01	3	4	13.64	40.91
1.2E+01 -	1.8E+01	2	6	9.09	27.27
1.8E+01 -	2.6E+01	0	6	0.00	18.18
2.6E+01 -	3.8E+01	1	7	4.55	18.18
3.8E+01 -	5.6E+01	0	7	0.00	13.64
5.6E+01 -	8.3E+01	0	7	0.00	13.64
8.3E+01 -	1.2E+02	0	7	0.00	13.64
1.2E+02 -	1.8E+02	1	8	4.55	13.64
1.8E+02 -	2.6E+02	1	9	4.55	9.09
2.6E+02 -	3.8E+02	0	9	0.00	4.55
3.8E+02 -	5.6E+02	1	10	4.55	4.55

HISTOGRAM FOR COLUMN 15 (CO)

```
5.0E+00 XXXXX
7.0E+00
1.0E+01 XXXXXXXXXXXXX
1.5E+01 XXXXXXXXX
2.0E+01
3.0E+01 XXXXX
5.0E+01
7.0E+01
1.0E+02
1.5E+02 XXXXX
2.0E+02 XXXXX
3.0E+02
5.0E+02 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
10	2	0	0	0	0	10
45.45	9.09			0.00	0.00	

MAXIMUM = 5.00000E+02
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 2.95418E+01
GEOMETRIC DEVIATION = 4.75747E+00

TITLE
QUARTZ VEINS - SIL. ASSEMBL.

FREQUENCY TABLE FOR COLUMN 17 (CU)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	1	1	4.55	90.91
5.6E+00 -	8.3E+00	0	1	0.00	86.36
8.3E+00 -	1.2E+01	1	2	4.55	86.36
1.2E+01 -	1.8E+01	1	3	4.55	81.82
1.8E+01 -	2.6E+01	1	4	4.55	77.27
2.6E+01 -	3.8E+01	2	6	9.09	72.73
3.8E+01 -	5.6E+01	4	10	18.18	63.64
5.6E+01 -	8.3E+01	2	12	9.09	45.45
8.3E+01 -	1.2E+02	2	14	9.09	36.36
1.2E+02 -	1.8E+02	1	15	4.55	27.27
1.8E+02 -	2.6E+02	1	16	4.55	22.73
2.6E+02 -	3.8E+02	0	16	0.00	18.18
3.8E+02 -	5.6E+02	1	17	4.55	18.18
5.6E+02 -	8.3E+02	0	17	0.00	13.64
8.3E+02 -	1.2E+03	2	19	9.09	13.64
1.2E+03 -	1.8E+03	0	19	0.00	4.55
1.8E+03 -	2.6E+03	0	19	0.00	4.55
2.6E+03 -	3.8E+03	0	19	0.00	4.55
3.8E+03 -	5.6E+03	0	19	0.00	4.55
5.6E+03 -	8.3E+03	0	19	0.00	4.55
8.3E+03 -	1.2E+04	1	20	4.55	4.55

HISTOGRAM FOR COLUMN 17 (CU)

```
5.0E+00 XXXXX
7.0E+00
1.0E+01 XXXXX
1.5E+01 XXXXX
2.0E+01 XXXXX
3.0E+01 XXXXXXXXX
5.0E+01 XXXXXXXXXXXXXXXXX
7.0E+01 XXXXXXXXX
1.0E+02 XXXXXXXXX
1.5E+02 XXXXX
2.0E+02 XXXXX
3.0E+02
5.0E+02 XXXXX
7.0E+02
1.0E+03 XXXXXXXXX
1.5E+03
2.0E+03
3.0E+03
5.0E+03
7.0E+03
1.0E+04 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	1	0	0	0	0	20
4.55	4.55			0.00	0.00	

MAXIMUM = 1.00000E+04
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 8.70212E+01
GEOMETRIC DEVIATION = 5.92998E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
QUARTZ VEINS - SIL. ASSEMBL.

FREQUENCY TABLE FOR COLUMN 19 (MO)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	0	0	0.00	40.91
5.6E+00 -	8.3E+00	1	1	4.55	40.91
8.3E+00 -	1.2E+01	3	4	13.64	36.36
1.2E+01 -	1.8E+01	1	5	4.55	22.73
1.8E+01 -	2.6E+01	1	6	4.55	18.18
2.6E+01 -	3.8E+01	1	7	4.55	13.64
3.8E+01 -	5.6E+01	1	8	4.55	9.09
5.6E+01 -	8.3E+01	1	9	4.55	4.55

HISTOGRAM FOR COLUMN 19 (MO)

```
7.0E+00 XXXXX
1.0E+01 XXXXXXXXXXXXX
1.5E+01 XXXXX
2.0E+01 XXXXX
3.0E+01 XXXXX
5.0E+01 XXXXX
7.0E+01 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
12	1	0	0	0	0	9
54.55	4.55			0.00	0.00	

MAXIMUM = 7.00000E+01
MINIMUM = 7.00000E+00
GEOMETRIC MEAN = 1.82129E+01
GEOMETRIC DEVIATION = 2.22568E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
QUARTZ VEINS - SIL. ASSEMBL.

FREQUENCY TABLE FOR COLUMN 22 (PB)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	2	2	9.09	40.91
1.2E+01 -	1.8E+01	1	3	4.55	31.82
1.8E+01 -	2.6E+01	3	6	13.64	27.27
2.6E+01 -	3.8E+01	0	6	0.00	13.64
3.8E+01 -	5.6E+01	1	7	4.55	13.64
5.6E+01 -	8.3E+01	0	7	0.00	9.09
8.3E+01 -	1.2E+02	2	9	9.09	9.09

HISTOGRAM FOR COLUMN 22 (PB)

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

N	L	H	B	T	G	ANALYTICAL VALUES
9	4	0	0	0	0	9
40.91	18.18			0.00	0.00	

MAXIMUM = 1.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 2.62902E+01
GEOMETRIC DEVIATION = 2.44436E+00

TITLE
QUARTZ VEINS - SIL. ASSEMBL.

FREQUENCY TABLE FOR COLUMN 27 (V)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	1	1	4.55	100.00
1.2E+01 -	1.8E+01	3	4	13.64	95.45
1.8E+01 -	2.6E+01	2	6	9.09	81.82
2.6E+01 -	3.8E+01	1	7	4.55	72.73
3.8E+01 -	5.6E+01	1	8	4.55	68.18
5.6E+01 -	8.3E+01	1	9	4.55	63.64
8.3E+01 -	1.2E+02	2	11	9.09	59.09
1.2E+02 -	1.8E+02	1	12	4.55	50.00
1.8E+02 -	2.6E+02	4	16	18.18	45.45
2.6E+02 -	3.8E+02	1	17	4.55	27.27
3.8E+02 -	5.6E+02	1	18	4.55	22.73
5.6E+02 -	8.3E+02	3	21	13.64	18.18
8.3E+02 -	1.2E+03	0	21	0.00	4.55
1.2E+03 -	1.8E+03	0	21	0.00	4.55
1.8E+03 -	2.6E+03	1	22	4.55	4.55

HISTOGRAM FOR COLUMN 27 (V)

```
       1.0E+01 XXXXX
       1.5E+01 XXXXXXXXXXXXX
       2.0E+01 XXXXXXXXX
       3.0E+01 XXXXX
       5.0E+01 XXXXX
       7.0E+01 XXXXX
       1.0E+02 XXXXXXXXX
       1.5E+02 XXXXX
       2.0E+02 XXXXXXXXXXXXXXXXXX
       3.0E+02 XXXXX
       5.0E+02 XXXXX
       7.0E+02 XXXXXXXXXXXXX
       1.0E+03
       1.5E+03
       2.0E+03 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	22
0.00	0.00			0.00	0.00	

MAXIMUM = 2.00000E+03
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 1.05861E+02
GEOMETRIC DEVIATION = 4.64150E+00

TITLE
HAMBURG DOLOMITE

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
HG	0	1	0	0	0	0	34
MN	0	0	0	0	0	5	30
AG	30	0	0	0	0	0	5
B	7	6	0	0	0	2	20
BA	4	11	0	0	0	0	20
CO	12	14	0	0	0	0	9
CU	0	13	0	0	0	0	22
MO	16	10	0	0	0	0	9
PB	5	5	0	0	0	0	25
V	0	12	0	0	0	0	23

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE

ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS	
HG	0.213598	2.80	1 NOT DETECTED, LESS THAN, OR TRACE VALUES.	34 REPORTED VALUES.
MN	********	******	5 GREATER THAN VALUES. NO COMPUTATIONS.	
AG	1.496687	4.10	30 NOT DETECTED, LESS THAN, OR TRACE VALUES.	5 REPORTED VALUES.
B	********	******	2 GREATER THAN VALUES. NO COMPUTATIONS.	
BA	29.137334	7.16	15 NOT DETECTED, LESS THAN, OR TRACE VALUES.	20 REPORTED VALUES.
CO	1.723330	3.70	26 NOT DETECTED, LESS THAN, OR TRACE VALUES.	9 REPORTED VALUES.
CU	8.293200	9.67	13 NOT DETECTED, LESS THAN, OR TRACE VALUES.	22 REPORTED VALUES.
MO	0.499041	21.03	26 NOT DETECTED, LESS THAN, OR TRACE VALUES.	9 REPORTED VALUES.
PB	15.838516	3.53	10 NOT DETECTED, LESS THAN, OR TRACE VALUES.	25 REPORTED VALUES.
V	12.992653	3.42	12 NOT DETECTED, LESS THAN, OR TRACE VALUES.	23 REPORTED VALUES.

TITLE
HAMBURG DOLOMITE

FREQUENCY TABLE FOR COLUMN 2 (HG)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	0	0	0.00	97.14
2.6E-02 -	3.8E-02	1	1	2.86	97.14
3.8E-02 -	5.6E-02	0	1	0.00	94.29
5.6E-02 -	8.3E-02	1	2	2.86	94.29
8.3E-02 -	1.2E-01	8	10	22.86	91.43
1.2E-01 -	1.8E-01	5	15	14.29	68.57
1.8E-01 -	2.6E-01	5	20	14.29	54.29
2.6E-01 -	3.8E-01	5	25	14.29	40.00
3.8E-01 -	5.6E-01	4	29	11.43	25.71
5.6E-01 -	8.3E-01	3	32	8.57	14.29
8.3E-01 -	1.2E+00	0	32	0.00	5.71
1.2E+00 -	1.8E+00	0	32	0.00	5.71
1.8E+00 -	2.6E+00	1	33	2.86	5.71
2.6E+00 -	3.8E+00	1	34	2.86	2.86

HISTOGRAM FOR COLUMN 2 (HG)

```
3.0E-02 XXX
5.0E-02
7.0E-02 XXX
1.0E-01 XXXXXXXXXXXXXXXXXXXXX
1.5E-01 XXXXXXXXXXXXX
2.0E-01 XXXXXXXXXXXXX
3.0E-01 XXXXXXXXXXXXX
5.0E-01 XXXXXXXXXX
7.0E-01 XXXXXXXX
1.0E+00
1.5E+00
2.0E+00 XXX
3.0E+00 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	1	0	0	0	0	34
0.00	2.86			0.00	0.00	

MAXIMUM = 3.00000E+00
MINIMUM = 3.00000E-02
GEOMETRIC MEAN = 2.32083E-01
GEOMETRIC DEVIATION = 2.50770E+00

TITLE
HAMBURG DOLOMITE

FREQUENCY TABLE FOR COLUMN 7 (MN)

LIMITS LOWER -	UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	0	0	0.00	100.00
1.2E+01 -	1.8E+01	0	0	0.00	100.00
1.8E+01 -	2.6E+01	0	0	0.00	100.00
2.6E+01 -	3.8E+01	0	0	0.00	100.00
3.8E+01 -	5.6E+01	1	1	2.86	100.00
5.6E+01 -	8.3E+01	0	1	0.00	97.14
8.3E+01 -	1.2E+02	0	1	0.00	97.14
1.2E+02 -	1.8E+02	1	2	2.86	97.14
1.8E+02 -	2.6E+02	3	5	8.57	94.29
2.6E+02 -	3.8E+02	3	8	8.57	85.71
3.8E+02 -	5.6E+02	5	13	14.29	77.14
5.6E+02 -	8.3E+02	1	14	2.86	62.86
8.3E+02 -	1.2E+03	3	17	8.57	60.00
1.2E+03 -	1.8E+03	2	19	5.71	51.43
1.8E+03 -	2.6E+03	4	23	11.43	45.71
2.6E+03 -	3.8E+03	4	27	11.43	34.29
3.8E+03 -	5.6E+03	3	30	8.57	22.86

HISTOGRAM FOR COLUMN 7 (MN)

```
5.0E+01 XXX
7.0E+01
1.0E+02
1.5E+02 XXX
2.0E+02 XXXXXXXXX
3.0E+02 XXXXXXXXX
5.0E+02 XXXXXXXXXXXXXX
7.0E+02 XXX
1.0E+03 XXXXXXXXX
1.5E+03 XXXXXX
2.0E+03 XXXXXXXXXXX
3.0E+03 XXXXXXXXXXX
5.0E+03 XXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	5	30
0.00	0.00			0.00	14.29	

MAXIMUM = 5.00000E+03
MINIMUM = 5.00000E+01
GEOMETRIC MEAN = 8.65045E+02
GEOMETRIC DEVIATION = 3.30491E+00

TITLE
HAMBURG DOLOMITE

FREQUENCY TABLE FOR COLUMN 8 (AG)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E-01 -	5.6E-01	2	2	5.71	14.29
5.6E-01 -	8.3E-01	0	2	0.00	8.57
8.3E-01 -	1.2E+00	1	3	2.86	8.57
1.2E+00 -	1.8E+00	0	3	0.00	5.71
1.8E+00 -	2.6E+00	1	4	2.86	5.71
2.6E+00 -	3.8E+00	0	4	0.00	2.86
3.8E+00 -	5.6E+00	0	4	0.00	2.86
5.6E+00 -	8.3E+00	0	4	0.00	2.86
8.3E+00 -	1.2E+01	0	4	0.00	2.86
1.2E+01 -	1.8E+01	1	5	2.86	2.86

HISTOGRAM FOR COLUMN 8 (AG)

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

N	L	H	B	T	G	ANALYTICAL VALUES
30	0	0	0	0	0	5
85.71	0.00			0.00	0.00	

MAXIMUM = 1.50000E+01
MINIMUM = 5.00000E-01
GEOMETRIC MEAN = 1.49628E+00
GEOMETRIC DEVIATION = 4.09978E+00 .

TITLE
HAMBURG DOLOMITE

FREQUENCY TABLE FOR COLUMN 10 (B)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	7	7	20.00	62.86
1.2E+01 -	1.8E+01	2	9	5.71	42.86
1.8E+01 -	2.6E+01	0	9	0.00	37.14
2.6E+01 -	3.8E+01	1	10	2.86	37.14
3.8E+01 -	5.6E+01	1	11	2.86	34.29
5.6E+01 -	8.3E+01	3	14	8.57	31.43
8.3E+01 -	1.2E+02	2	16	5.71	22.86
1.2E+02 -	1.8E+02	1	17	2.86	17.14
1.8E+02 -	2.6E+02	3	20	8.57	14.29

HISTOGRAM FOR COLUMN 10 (B)

```
1.0E+01 XXXXXXXXXXXXXXXXXXX
1.5E+01 XXXXXX
2.0E+01
3.0E+01 XXX
5.0E+01 XXX
7.0E+01 XXXXXXXXX
1.0E+02 XXXXXX
1.5E+02 XXX
2.0E+02 XXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
7	6	0	0	0	2	20
20.00	17.14			0.00	5.71	

MAXIMUM = 2.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 3.60693E+01
GEOMETRIC DEVIATION = 3.32535E+00

TITLE
HAMBURG DOLOMITE

FREQUENCY TABLE FOR COLUMN 11 (BA)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	2	2	5.71	57.14
2.6E+01 -	3.8E+01	0	2	0.00	51.43
3.8E+01 -	5.6E+01	3	5	8.57	51.43
5.6E+01 -	8.3E+01	2	7	5.71	42.86
8.3E+01 -	1.2E+02	3	10	8.57	37.14
1.2E+02 -	1.8E+02	4	14	11.43	28.57
1.8E+02 -	2.6E+02	2	16	5.71	17.14
2.6E+02 -	3.8E+02	2	18	5.71	11.43
3.8E+02 -	5.6E+02	1	19	2.86	5.71
5.6E+02 -	8.3E+02	0	19	0.00	2.86
8.3E+02 -	1.2E+03	0	19	0.00	2.86
1.2E+03 -	1.8E+03	0	19	0.00	2.86
1.8E+03 -	2.6E+03	1	20	2.86	2.86

HISTOGRAM FOR COLUMN 11 (BA)

```
2.0E+01 XXXXXX
3.0E+01
5.0E+01 XXXXXXXXX
7.0E+01 XXXXXX
1.0E+02 XXXXXXXXX
1.5E+02 XXXXXXXXXX
2.0E+02 XXXXXX
3.0E+02 XXXXXX
5.0E+02 XXX
7.0E+02
1.0E+03
1.5E+03
2.0E+03 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
4	11	0	0	0	0	20
11.43	31.43			0.00	0.00	

MAXIMUM = 2.00000E+03
MINIMUM = 2.00000E+01
GEOMETRIC MEAN = 1.20918E+02
GEOMETRIC DEVIATION = 2.91529E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
HAMBURG DOLOMITE

FREQUENCY TABLE FOR COLUMN 15 (CO)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	1	1	2.86	25.71
5.6E+00 -	8.3E+00	1	2	2.86	22.86
8.3E+00 -	1.2E+01	6	8	17.14	20.00
1.2E+01 -	1.8E+01	0	8	0.00	2.86
1.8E+01 -	2.6E+01	1	9	2.86	2.86

HISTOGRAM FOR COLUMN 15 (CO)

```
5.0E+00 XXX
7.0E+00 XXX
1.0E+01 XXXXXXXXXXXXXXXX
1.5E+01
2.0E+01 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
12	14	0	0	0	0	9
34.29	40.00			0.00	0.00	

MAXIMUM = 2.00000E+01
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 9.61144E+00
GEOMETRIC DEVIATION = 1.44253E+00

TITLE
HAMBURG DOLOMITE

FREQUENCY TABLE FOR COLUMN 17 (CU)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	2	2	5.71	62.86
5.6E+00 -	8.3E+00	2	4	5.71	57.14
8.3E+00 -	1.2E+01	0	4	0.00	51.43
1.2E+01 -	1.8E+01	3	7	8.57	51.43
1.8E+01 -	2.6E+01	8	15	22.86	42.86
2.6E+01 -	3.8E+01	0	15	0.00	20.00
3.8E+01 -	5.6E+01	0	15	0.00	20.00
5.6E+01 -	8.3E+01	2	17	5.71	20.00
8.3E+01 -	1.2E+02	0	17	0.00	14.29
1.2E+02 -	1.8E+02	1	18	2.86	14.29
1.8E+02 -	2.6E+02	1	19	2.86	11.43
2.6E+02 -	3.8E+02	1	20	2.86	8.57
3.8E+02 -	5.6E+02	0	20	0.00	5.71
5.6E+02 -	8.3E+02	2	22	5.71	5.71

HISTOGRAM FOR COLUMN 17 (CU)

```
5.0E+00 XXXXXX
7.0E+00 XXXXXX
1.0E+01
1.5E+01 XXXXXXXXX
2.0E+01 XXXXXXXXXXXXXXXXXXXXXX
3.0E+01
5.0E+01
7.0E+01 XXXXXX
1.0E+02
1.5E+02 XXX
2.0E+02 XXX
3.0E+02 XXX
5.0E+02
7.0E+02 XXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	13	0	0	0	0	22
0.00	37.14			0.00	0.00	

MAXIMUM = 7.00000E+02
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 3.28346E+01
GEOMETRIC DEVIATION = 4.39337E+00

TITLE
HAMBURG DOLOMITE

FREQUENCY TABLE FOR COLUMN 19 (MO)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	2	2	5.71	25.71
5.6E+00 -	8.3E+00	1	3	2.86	20.00
8.3E+00 -	1.2E+01	2	5	5.71	17.14
1.2E+01 -	1.8E+01	0	5	0.00	11.43
1.8E+01 -	2.6E+01	1	6	2.86	11.43
2.6E+01 -	3.8E+01	0	6	0.00	8.57
3.8E+01 -	5.6E+01	2	8	5.71	8.57
5.6E+01 -	8.3E+01	0	8	0.00	2.86
8.3E+01 -	1.2E+02	0	8	0.00	2.86
1.2E+02 -	1.8E+02	0	8	0.00	2.86
1.8E+02 -	2.6E+02	0	8	0.00	2.86
2.6E+02 -	3.8E+02	0	8	0.00	2.86
3.8E+02 -	5.6E+02	0	8	0.00	2.86
5.6E+02 -	8.3E+02	0	8	0.00	2.86
8.3E+02 -	1.2E+03	1	9	2.86	2.86

HISTOGRAM FOR COLUMN 19 (MO)

```
5.0E+00 XXXXXX
7.0E+00 XXX
1.0E+01 XXXXXX
1.5E+01
2.0E+01 XXX
3.0E+01
5.0E+01 XXXXXX
7.0E+01
1.0E+02
1.5E+02
2.0E+02
3.0E+02
5.0E+02
7.0E+02
1.0E+03 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
16	10	0	0	0	0	9
45.71	28.57			0.00	0.00	

MAXIMUM = 1.00000E+03
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 2.12271E+01
GEOMETRIC DEVIATION = 5.42129E+00

TITLE
HAMBURG DOLOMITE

FREQUENCY TABLE FOR COLUMN 22 (PB)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	5	5	14.29	71.43
1.2E+01 -	1.8E+01	4	9	11.43	57.14
1.8E+01 -	2.6E+01	2	11	5.71	45.71
2.6E+01 -	3.8E+01	7	18	20.00	40.00
3.8E+01 -	5.6E+01	3	21	8.57	20.00
5.6E+01 -	8.3E+01	2	23	5.71	11.43
8.3E+01 -	1.2E+02	0	23	0.00	5.71
1.2E+02 -	1.8E+02	1	24	2.86	5.71
1.8E+02 -	2.6E+02	0	24	0.00	2.86
2.6E+02 -	3.8E+02	0	24	0.00	2.86
3.8E+02 -	5.6E+02	1	25	2.86	2.86

HISTOGRAM FOR COLUMN 22 (PB)

```
1.0E+01 XXXXXXXXXXXXX
1.5E+01 XXXXXXXXXX
2.0E+01 XXXXXX
3.0E+01 XXXXXXXXXXXXXXXXXXX
5.0E+01 XXXXXXXXX
7.0E+01 XXXXXX
1.0E+02
1.5E+02 XXX
2.0E+02
3.0E+02
5.0E+02 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
5	5	0	0	0	0	25
14.29	14.29			0.00	0.00	

MAXIMUM = 5.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 2.83359E+01
GEOMETRIC DEVIATION = 2.54419E+00

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TITLE
HAMBURG DOLOMITE

FREQUENCY TABLE FOR COLUMN 27 (V)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	7	7	20.00	65.71
1.2E+01 -	1.8E+01	2	9	5.71	45.71
1.8E+01 -	2.6E+01	4	13	11.43	40.00
2.6E+01 -	3.8E+01	2	15	5.71	28.57
3.8E+01 -	5.6E+01	4	19	11.43	22.86
5.6E+01 -	8.3E+01	1	20	2.86	11.43
8.3E+01 -	1.2E+02	2	22	5.71	8.57
1.2E+02 -	1.8E+02	1	23	2.86	2.86

HISTOGRAM FOR COLUMN 27 (V)

```
1.0E+01 XXXXXXXXXXXXXXXXXXX
1.5E+01 XXXXXX
2.0E+01 XXXXXXXXXXX
3.0E+01 XXXXXX
5.0E+01 XXXXXXXXXXX
7.0E+01 XXX
1.0E+02 XXXXXX
1.5E+02 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	12	0	0	0	0	23
0.00	34.29			0.00	0.00	

MAXIMUM = 1.50000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 2.54418E+01
GEOMETRIC DEVIATION = 2.38951E+00

TITLE
POGONIP GROUP

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
HG	0	0	0	0	0	0	23
MN	0	0	0	0	0	4	19
AG	15	1	0	0	0	0	7
B	3	3	0	0	0	0	17
BA	0	7	0	0	0	0	16
CO	6	6	0	0	0	0	11
CU	1	8	0	0	0	0	14
MO	11	4	0	0	0	0	8
PB	3	6	0	0	0	0	14
SB	18	2	0	0	0	0	3
V	2	2	0	0	0	0	19

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TITLE

ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS
HG	0.193163	3.29	23 SAMPLES AND 23 ANALYTICAL VALUES.
MN	********	******	4 GREATER THAN VALUES. NO COMPUTATIONS.
AG	0.095200	18.72	16 NOT DETECTED, LESS THAN, OR TRACE VALUES. 7 REPORTED VALUES.
B	19.578792	3.98	6 NOT DETECTED, LESS THAN, OR TRACE VALUES. 17 REPORTED VALUES.
BA	61.208433	5.33	7 NOT DETECTED, LESS THAN, OR TRACE VALUES. 16 REPORTED VALUES.
CO	3.683763	6.60	12 NOT DETECTED, LESS THAN, OR TRACE VALUES. 11 REPORTED VALUES.
CU	9.367699	19.71	9 NOT DETECTED, LESS THAN, OR TRACE VALUES. 14 REPORTED VALUES.
MO	0.939076	57.76	15 NOT DETECTED, LESS THAN, OR TRACE VALUES. 8 REPORTED VALUES.
PB	13.300607	7.61	9 NOT DETECTED, LESS THAN, OR TRACE VALUES. 14 REPORTED VALUES.
SB	32.761670	2.30	20 NOT DETECTED, LESS THAN, OR TRACE VALUES. 3 REPORTED VALUES.
V	23.572127	2.80	4 NOT DETECTED, LESS THAN, OR TRACE VALUES. 19 REPORTED VALUES.

TITLE
POGONIP GROUP

FREQUENCY TABLE FOR COLUMN 2 (HG)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	0	0	0.00	100.00
2.6E-02 -	3.8E-02	0	0	0.00	100.00
3.8E-02 -	5.6E-02	1	1	4.35	100.00
5.6E-02 -	8.3E-02	6	7	26.09	95.65
8.3E-02 -	1.2E-01	2	9	8.70	69.57
1.2E-01 -	1.8E-01	3	12	13.04	60.87
1.8E-01 -	2.6E-01	5	17	21.74	47.83
2.6E-01 -	3.8E-01	1	18	4.35	26.09
3.8E-01 -	5.6E-01	1	19	4.35	21.74
5.6E-01 -	8.3E-01	1	20	4.35	17.39
8.3E-01 -	1.2E+00	0	20	0.00	13.04
1.2E+00 -	1.8E+00	1	21	4.35	13.04
1.8E+00 -	2.6E+00	1	22	4.35	8.70
2.6E+00 -	3.8E+00	1	23	4.35	4.35

HISTOGRAM FOR COLUMN 2 (HG)

```
5.0E-02 XXXX
7.0E-02 XXXXXXXXXXXXXXXXXXXXXXXX
1.0E-01 XXXXXXXX
1.5E-01 XXXXXXXXXXXX
2.0E-01 XXXXXXXXXXXXXXXXXXXX
3.0E-01 XXXX
5.0E-01 XXXX
7.0E-01 XXXX
1.0E+00
1.5E+00 XXXX
2.0E+00 XXXX
3.0E+00 XXXX
```

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

MAXIMUM = 3.50000E+00
MINIMUM = 5.00000E-02
GEOMETRIC MEAN = 1.93163E-01
GEOMETRIC DEVIATION = 3.29298E+00

TITLE
POGONIP GROUP

FREQUENCY TABLE FOR COLUMN 7 (MN)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	0	0	0.00	100.00
1.2E+01 -	1.8E+01	0	0	0.00	100.00
1.8E+01 -	2.6E+01	2	2	8.70	100.00
2.6E+01 -	3.8E+01	1	3	4.35	91.30
3.8E+01 -	5.6E+01	0	3	0.00	86.96
5.6E+01 -	8.3E+01	1	4	4.35	86.96
8.3E+01 -	1.2E+02	1	5	4.35	82.61
1.2E+02 -	1.8E+02	2	7	8.70	78.26
1.8E+02 -	2.6E+02	1	8	4.35	69.57
2.6E+02 -	3.8E+02	3	11	13.04	65.22
3.8E+02 -	5.6E+02	1	12	4.35	52.17
5.6E+02 -	8.3E+02	0	12	0.00	47.83
8.3E+02 -	1.2E+03	1	13	4.35	47.83
1.2E+03 -	1.8E+03	2	15	8.70	43.48
1.8E+03 -	2.6E+03	2	17	8.70	34.78
2.6E+03 -	3.8E+03	1	18	4.35	26.09
3.8E+03 -	5.6E+03	1	19	4.35	21.74

HISTOGRAM FOR COLUMN 7 (MN)

```
       2.0E+01 XXXXXXXXX
       3.0E+01 XXXX
       5.0E+01
       7.0E+01 XXXX
       1.0E+02 XXXX
       1.5E+02 XXXXXXXXX
       2.0E+02 XXXX
       3.0E+02 XXXXXXXXXXXXX
       5.0E+02 XXXX
       7.0E+02
       1.0E+03 XXXX
       1.5E+03 XXXXXXXXX
       2.0E+03 XXXXXXXXX
       3.0E+03 XXXX
       5.0E+03 XXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	4	19
0.00	0.00			0.00	17.39	

MAXIMUM = 5.00000E+03
MINIMUM = 2.00000E+01
GEOMETRIC MEAN = 3.29456E+02
GEOMETRIC DEVIATION = 5.43276E+00

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TITLE
POGONIP GROUP

FREQUENCY TABLE FOR COLUMN 8 (AG)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E-01 -	5.6E-01	0	0	0.00	30.43
5.6E-01 -	8.3E-01	0	0	0.00	30.43
8.3E-01 -	1.2E+00	2	2	8.70	30.43
1.2E+00 -	1.8E+00	1	3	4.35	21.74
1.8E+00 -	2.6E+00	1	4	4.35	17.39
2.6E+00 -	3.8E+00	0	4	0.00	13.04
3.8E+00 -	5.6E+00	0	4	0.00	13.04
5.6E+00 -	8.3E+00	0	4	0.00	13.04
8.3E+00 -	1.2E+01	3	7	13.04	13.04

HISTOGRAM FOR COLUMN 8 (AG)

```
1.0E+00 XXXXXXXXX
1.5E+00 XXXX
2.0E+00 XXXX
3.0E+00
5.0E+00
7.0E+00
1.0E+01 XXXXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
15	1	0	0	0	0	7
65.22	4.35			0.00	0.00	

MAXIMUM = 1.00000E+01
MINIMUM = 1.00000E+00
GEOMETRIC MEAN = 3.13857E+00
GEOMETRIC DEVIATION = 3.03448E+00

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TITLE
POGONIP GROUP

FREQUENCY TABLE FOR COLUMN 10 (B)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	3	3	13.04	73.91
1.2E+01 -	1.8E+01	3	6	13.04	60.87
1.8E+01 -	2.6E+01	2	8	8.70	47.83
2.6E+01 -	3.8E+01	0	8	0.00	39.13
3.8E+01 -	5.6E+01	4	12	17.39	39.13
5.6E+01 -	8.3E+01	0	12	0.00	21.74
8.3E+01 -	1.2E+02	3	15	13.04	21.74
1.2E+02 -	1.8E+02	1	16	4.35	8.70
1.8E+02 -	2.6E+02	1	17	4.35	4.35

HISTOGRAM FOR COLUMN 10 (B)

```
1.0E+01 XXXXXXXXXXXXX
1.5E+01 XXXXXXXXXXXXX
2.0E+01 XXXXXXXXX
3.0E+01
5.0E+01 XXXXXXXXXXXXXXXXX
7.0E+01
1.0E+02 XXXXXXXXXXXXX
1.5E+02 XXXX
2.0E+02 XXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
3	3	0	0	0	0	17
13.04	13.04			0.00	0.00	

MAXIMUM = 2.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 3.57386E+01
GEOMETRIC DEVIATION = 2.75668E+00

TITLE
POGONIP GROUP

FREQUENCY TABLE FOR COLUMN 11 (BA)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	0	0	0.00	69.57
2.6E+01 -	3.8E+01	1	1	4.35	69.57
3.8E+01 -	5.6E+01	1	2	4.35	65.22
5.6E+01 -	8.3E+01	1	3	4.35	60.87
8.3E+01 -	1.2E+02	2	5	8.70	56.52
1.2E+02 -	1.8E+02	4	9	17.39	47.83
1.8E+02 -	2.6E+02	2	11	8.70	30.43
2.6E+02 -	3.8E+02	3	14	13.04	21.74
3.8E+02 -	5.6E+02	1	15	4.35	8.70
5.6E+02 -	8.3E+02	1	16	4.35	4.35

HISTOGRAM FOR COLUMN 11 (BA)

```
3.0E+01 XXXX
5.0E+01 XXXX
7.0E+01 XXXX
1.0E+02 XXXXXXXXX
1.5E+02 XXXXXXXXXXXXXXXX
2.0E+02 XXXXXXXXX
3.0E+02 XXXXXXXXXXXX
5.0E+02 XXXX
7.0E+02 XXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	7	0	0	0	0	16
0.00	30.43			0.00	0.00	

MAXIMUM = 7.00000E+02
MINIMUM = 3.00000E+01
GEOMETRIC MEAN = 1.60857E+02
GEOMETRIC DEVIATION = 2.26793E+00

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TITLE
POGONIP GROUP

FREQUENCY TABLE FOR COLUMN 15 (CO)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	2	2	8.70	47.83
5.6E+00 -	8.3E+00	0	2	0.00	39.13
8.3E+00 -	1.2E+01	2	4	8.70	39.13
1.2E+01 -	1.8E+01	3	7	13.04	30.43
1.8E+01 -	2.6E+01	0	7	0.00	17.39
2.6E+01 -	3.8E+01	1	8	4.35	17.39
3.8E+01 -	5.6E+01	1	9	4.35	13.04
5.6E+01 -	8.3E+01	1	10	4.35	8.70
8.3E+01 -	1.2E+02	1	11	4.35	4.35

HISTOGRAM FOR COLUMN 15 (CO)

```
5.0E+00 XXXXXXXXX
7.0E+00
1.0E+01 XXXXXXXXX
1.5E+01 XXXXXXXXXXXXX
2.0E+01
3.0E+01 XXXX
5.0E+01 XXXX
7.0E+01 XXXX
1.0E+02 XXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
6	6	0	0	0	0	11
26.09	26.09			0.00	0.00	

MAXIMUM = 1.00000E+02
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 1.85330E+01
GEOMETRIC DEVIATION = 2.73903E+00

TITLE
POGONIP GROUP

FREQUENCY TABLE FOR COLUMN 17 (CU)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	3	3	13.04	60.87
5.6E+00 -	8.3E+00	0	3	0.00	47.83
8.3E+00 -	1.2E+01	1	4	4.35	47.83
1.2E+01 -	1.8E+01	0	4	0.00	43.48
1.8E+01 -	2.6E+01	0	4	0.00	43.48
2.6E+01 -	3.8E+01	1	5	4.35	43.48
3.8E+01 -	5.6E+01	1	6	4.35	39.13
5.6E+01 -	8.3E+01	0	6	0.00	34.78
8.3E+01 -	1.2E+02	2	8	8.70	34.78
1.2E+02 -	1.8E+02	3	11	13.04	26.09
1.8E+02 -	2.6E+02	0	11	0.00	13.04
2.6E+02 -	3.8E+02	2	13	8.70	13.04
3.8E+02 -	5.6E+02	0	13	0.00	4.35
5.6E+02 -	8.3E+02	0	13	0.00	4.35
8.3E+02 -	1.2E+03	0	13	0.00	4.35
1.2E+03 -	1.8E+03	0	13	0.00	4.35
1.8E+03 -	2.6E+03	0	13	0.00	4.35
2.6E+03 -	3.8E+03	1	14	4.35	4.35

HISTOGRAM FOR COLUMN 17 (CU)

```
5.0E+00 XXXXXXXXXXXX
7.0E+00
1.0E+01 XXXX
1.5E+01
2.0E+01
3.0E+01 XXXX
5.0E+01 XXXX
7.0E+01
1.0E+02 XXXXXXXX
1.5E+02 XXXXXXXXXXXX
2.0E+02
3.0E+02 XXXXXXXX
5.0E+02
7.0E+02
1.0E+03
1.5E+03
2.0E+03
3.0E+03 XXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	8	0	0	0	0	14
4.35	34.78			0.00	0.00	

MAXIMUM = 3.00000E+03
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 6.34354E+01
GEOMETRIC DEVIATION = 6.52443E+00

TITLE
POGONIP GROUP

FREQUENCY TABLE FOR COLUMN 19 (MO)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	0	0	0.00	34.78
5.6E+00 -	8.3E+00	0	0	0.00	34.78
8.3E+00 -	1.2E+01	0	0	0.00	34.78
1.2E+01 -	1.8E+01	1	1	4.35	34.78
1.8E+01 -	2.6E+01	1	2	4.35	30.43
2.6E+01 -	3.8E+01	1	3	4.35	26.09
3.8E+01 -	5.6E+01	1	4	4.35	21.74
5.6E+01 -	8.3E+01	1	5	4.35	17.39
8.3E+01 -	1.2E+02	0	5	0.00	13.04
1.2E+02 -	1.8E+02	0	5	0.00	13.04
1.8E+02 -	2.6E+02	2	7	8.70	13.04
2.6E+02 -	3.8E+02	0	7	0.00	4.35
3.8E+02 -	5.6E+02	0	7	0.00	4.35
5.6E+02 -	8.3E+02	0	7	0.00	4.35
8.3E+02 -	1.2E+03	0	7	0.00	4.35
1.2E+03 -	1.8E+03	0	7	0.00	4.35
1.8E+03 -	2.6E+03	1	8	4.35	4.35

HISTOGRAM FOR COLUMN 19 (MO)

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

N	L	H	B	T	G	ANALYTICAL VALUES
11	4	0	0	0	0	8
47.83	17.39			0.00	0.00	

MAXIMUM = 2.00000E+03
MINIMUM = 1.50000E+01
GEOMETRIC MEAN = 8.41734E+01
GEOMETRIC DEVIATION = 4.95843E+00

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TITLE
POGONIP GROUP

FREQUENCY TABLE FOR COLUMN 22 (PB)

LIMITS LOWER -	UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	4	4	17.39	60.87
1.2E+01 -	1.8E+01	0	4	0.00	43.48
1.8E+01 -	2.6E+01	1	5	4.35	43.48
2.6E+01 -	3.8E+01	2	7	8.70	39.13
3.8E+01 -	5.6E+01	1	8	4.35	30.43
5.6E+01 -	8.3E+01	2	10	8.70	26.09
8.3E+01 -	1.2E+02	1	11	4.35	17.39
1.2E+02 -	1.8E+02	1	12	4.35	13.04
1.8E+02 -	2.6E+02	0	12	0.00	8.70
2.6E+02 -	3.8E+02	1	13	4.35	8.70
3.8E+02 -	5.6E+02	0	13	0.00	4.35
5.6E+02 -	8.3E+02	0	13	0.00	4.35
8.3E+02 -	1.2E+03	1	14	4.35	4.35

HISTOGRAM FOR COLUMN 22 (PB)

```
1.0E+01 XXXXXXXXXXXXXXXX
1.5E+01
2.0E+01 XXXX
3.0E+01 XXXXXXXXX
5.0E+01 XXXX
7.0E+01 XXXXXXXXX
1.0E+02 XXXX
1.5E+02 XXXX
2.0E+02
3.0E+02 XXXX
5.0E+02
7.0E+02
1.0E+03 XXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
3	6	0	0	0	0	14
13.04	26.09			0.00	0.00	

MAXIMUM = 1.00000E+03
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 4.61443E+01
GEOMETRIC DEVIATION = 4.08320E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
POGONIP GROUP

FREQUENCY TABLE FOR COLUMN 23 (SB)

LIMITS LOWER - UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+01 - 1.2E+02	1	1	4.35	13.04
1.2E+02 - 1.8E+02	2	3	8.70	8.70

HISTOGRAM FOR COLUMN 23 (SB)

1.0E+02 XXXX
1.5E+02 XXXXXXXXX

N	L	H	B	T	G	ANALYTICAL VALUES
18	2	0	0	0	0	3
78.26	8.70			0.00	0.00	

MAXIMUM = 1.50000E+02
MINIMUM = 1.00000E+02
GEOMETRIC MEAN = 1.31037E+02
GEOMETRIC DEVIATION = 1.26377E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
POGONIP GROUP

FREQUENCY TABLE FOR COLUMN 27 (V)

LIMITS LOWER - UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 - 1.2E+01	4	4	17.39	82.61
1.2E+01 - 1.8E+01	0	4	0.00	65.22
1.8E+01 - 2.6E+01	2	6	8.70	65.22
2.6E+01 - 3.8E+01	4	10	17.39	56.52
3.8E+01 - 5.6E+01	3	13	13.04	39.13
5.6E+01 - 8.3E+01	5	18	21.74	26.09
8.3E+01 - 1.2E+02	1	19	4.35	4.35

HISTOGRAM FOR COLUMN 27 (V)

1.0E+01 XXXXXXXXXXXXXXXXX
1.5E+01
2.0E+01 XXXXXXXXX
3.0E+01 XXXXXXXXXXXXXXXXX
5.0E+01 XXXXXXXXXXXXX
7.0E+01 XXXXXXXXXXXXXXXXXXXXX
1.0E+02 XXXX

N	L	H	B	T	G	ANALYTICAL VALUES
2	2	0	0	0	0	19
8.70	8.70			0.00	0.00	

MAXIMUM = 1.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 3.29248E+01
GEOMETRIC DEVIATION = 2.17081E+00

TITLE
EUREKA QUARTZITE

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
AU	11	5	0	0	0	0	2
HG	1	0	0	0	0	0	17
MN	1	0	0	0	0	0	17
B	8	1	0	0	0	0	9
BA	2	1	0	0	0	0	15
CU	1	7	0	0	0	0	10
PB	4	2	0	0	0	0	12
SB	15	0	0	0	0	0	3
V	1	3	0	0	0	0	14

TITLE

ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS	
AU	0.001003	10.83	16 NOT DETECTED, LESS THAN, OR TRACE VALUES.	2 REPORTED VALUES.
HG	0.179927	2.81	1 NOT DETECTED, LESS THAN, OR TRACE VALUES.	17 REPORTED VALUES.
MN	136.453732	3.43	1 NOT DETECTED, LESS THAN, OR TRACE VALUES.	17 REPORTED VALUES.
B	8.644258	3.03	9 NOT DETECTED, LESS THAN, OR TRACE VALUES.	9 REPORTED VALUES.
BA	80.176040	5.04	3 NOT DETECTED, LESS THAN, OR TRACE VALUES.	15 REPORTED VALUES.
CU	4.877262	3.08	8 NOT DETECTED, LESS THAN, OR TRACE VALUES.	10 REPORTED VALUES.
PB	9.935347	2.37	6 NOT DETECTED, LESS THAN, OR TRACE VALUES.	12 REPORTED VALUES.
SB	17.047652	5.19	15 NOT DETECTED, LESS THAN, OR TRACE VALUES.	3 REPORTED VALUES.
V	13.839587	2.21	4 NOT DETECTED, LESS THAN, OR TRACE VALUES.	14 REPORTED VALUES.

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
EUREKA QUARTZITE

FREQUENCY TABLE FOR COLUMN 1 (AU)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	0	0	0.00	11.11
2.6E-02 -	3.8E-02	0	0	0.00	11.11
3.8E-02 -	5.6E-02	1	1	5.56	11.11
5.6E-02 -	8.3E-02	0	1	0.00	5.56
8.3E-02 -	1.2E-01	1	2	5.56	5.56

HISTOGRAM FOR COLUMN 1 (AU)

```
5.0E-02 XXXXXX
7.0E-02
1.0E-01 XXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
11	5	0	0	0	0	2
61.11	27.78			0.00	0.00	

MAXIMUM = 1.00000E-01
MINIMUM = 4.00000E-02
GEOMETRIC MEAN = 6.32456E-02
GEOMETRIC DEVIATION = 1.91155E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
EUREKA QUARTZITE

FREQUENCY TABLE FOR COLUMN 2 (HG)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	0	0	0.00	94.44
2.6E-02 -	3.8E-02	0	0	0.00	94.44
3.8E-02 -	5.6E-02	0	0	0.00	94.44
5.6E-02 -	8.3E-02	3	3	16.67	94.44
8.3E-02 -	1.2E-01	2	5	11.11	77.78
1.2E-01 -	1.8E-01	3	8	16.67	66.67
1.8E-01 -	2.6E-01	2	10	11.11	50.00
2.6E-01 -	3.8E-01	1	11	5.56	38.89
3.8E-01 -	5.6E-01	4	15	22.22	33.33
5.6E-01 -	8.3E-01	2	17	11.11	11.11

HISTOGRAM FOR COLUMN 2 (HG)

```
7.0E-02 XXXXXXXXXXXXXXXXX
1.0E-01 XXXXXXXXXXX
1.5E-01 XXXXXXXXXXXXXXXXX
2.0E-01 XXXXXXXXXXX
3.0E-01 XXXXXX
5.0E-01 XXXXXXXXXXXXXXXXXXXXX
7.0E-01 XXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	0	0	0	0	0	17
5.56	0.00			0.00	0.00	

MAXIMUM = 7.00000E-01
MINIMUM = 6.00000E-02
GEOMETRIC MEAN = 2.10546E-01
GEOMETRIC DEVIATION = 2.28269E+00

TITLE
EUREKA QUARTZITE

FREQUENCY TABLE FOR COLUMN 7 (MN)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	0	0	0.00	94.44
1.2E+01 -	1.8E+01	0	0	0.00	94.44
1.8E+01 -	2.6E+01	1	1	5.56	94.44
2.6E+01 -	3.8E+01	0	1	0.00	88.89
3.8E+01 -	5.6E+01	2	3	11.11	88.89
5.6E+01 -	8.3E+01	0	3	0.00	77.78
8.3E+01 -	1.2E+02	3	6	16.67	77.78
1.2E+02 -	1.8E+02	3	9	16.67	61.11
1.8E+02 -	2.6E+02	3	12	16.67	44.44
2.6E+02 -	3.8E+02	1	13	5.56	27.78
3.8E+02 -	5.6E+02	2	15	11.11	22.22
5.6E+02 -	8.3E+02	2	17	11.11	11.11

HISTOGRAM FOR COLUMN 7 (MN)

```
2.0E+01 XXXXXX
3.0E+01
5.0E+01 XXXXXXXXXX
7.0E+01
1.0E+02 XXXXXXXXXXXXXXXX
1.5E+02 XXXXXXXXXXXXXXXX
2.0E+02 XXXXXXXXXXXXXXXX
3.0E+02 XXXXXX
5.0E+02 XXXXXXXXXX
7.0E+02 XXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	0	0	0	0	0	17
5.56	0.00			0.00	0.00	

MAXIMUM = 7.00000E+02
MINIMUM = 2.00000E+01
GEOMETRIC MEAN = 1.64963E+02
GEOMETRIC DEVIATION = 2.64921E+00

TITLE
EUREKA QUARTZITE

FREQUENCY TABLE FOR COLUMN 10 (B)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	2	2	11.11	50.00
1.2E+01 -	1.8E+01	0	2	0.00	38.89
1.8E+01 -	2.6E+01	4	6	22.22	38.89
2.6E+01 -	3.8E+01	2	8	11.11	16.67
3.8E+01 -	5.6E+01	0	8	0.00	5.56
5.6E+01 -	8.3E+01	1	9	5.56	5.56

HISTOGRAM FOR COLUMN 10 (B)

```
1.0E+01 XXXXXXXXXX
1.5E+01
2.0E+01 XXXXXXXXXXXXXXXXXXXX
3.0E+01 XXXXXXXXXX
5.0E+01
7.0E+01 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
8	1	0	0	0	0	9
44.44	5.56			0.00	0.00	

MAXIMUM = 7.00000E+01
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 2.15634E+01
GEOMETRIC DEVIATION = 1.80844E+00

TITLE
EUREKA QUARTZITE

FREQUENCY TABLE FOR COLUMN 11 (BA)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	1	1	5.56	83.33
2.6E+01 -	3.8E+01	1	2	5.56	77.78
3.8E+01 -	5.6E+01	4	6	22.22	72.22
5.6E+01 -	8.3E+01	0	6	0.00	50.00
8.3E+01 -	1.2E+02	2	8	11.11	50.00
1.2E+02 -	1.8E+02	1	9	5.56	38.89
1.8E+02 -	2.6E+02	1	10	5.56	33.33
2.6E+02 -	3.8E+02	3	13	16.67	27.78
3.8E+02 -	5.6E+02	1	14	5.56	11.11
5.6E+02 -	8.3E+02	0	14	0.00	5.56
8.3E+02 -	1.2E+03	0	14	0.00	5.56
1.2E+03 -	1.8E+03	0	14	0.00	5.56
1.8E+03 -	2.6E+03	0	14	0.00	5.56
2.6E+03 -	3.8E+03	1	15	5.56	5.56

HISTOGRAM FOR COLUMN 11 (BA)

```
2.0E+01 XXXXXX
3.0E+01 XXXXXX
5.0E+01 XXXXXXXXXXXXXXXXXXXXX
7.0E+01
1.0E+02 XXXXXXXXXX
1.5E+02 XXXXXX
2.0E+02 XXXXXX
3.0E+02 XXXXXXXXXXXXXXXXX
5.0E+02 XXXXXX
7.0E+02
1.0E+03
1.5E+03
2.0E+03
3.0E+03 XXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
2	1	0	0	0	0	15
11.11	5.56			0.00	0.00	

MAXIMUM = 3.00000E+03
MINIMUM = 2.00000E+01
GEOMETRIC MEAN = 1.28995E+02
GEOMETRIC DEVIATION = 3.64446E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
EUREKA QUARTZITE

FREQUENCY TABLE FOR COLUMN 17 (CU)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	2	2	11.11	55.56
5.6E+00 -	8.3E+00	1	3	5.56	44.44
8.3E+00 -	1.2E+01	2	5	11.11	38.89
1.2E+01 -	1.8E+01	3	8	16.67	27.78
1.8E+01 -	2.6E+01	1	9	5.56	11.11
2.6E+01 -	3.8E+01	1	10	5.56	5.56

HISTOGRAM FOR COLUMN 17 (CU)

```
5.0E+00 XXXXXXXXXX
7.0E+00 XXXXXX
1.0E+01 XXXXXXXXXX
1.5E+01 XXXXXXXXXXXXXXXX
2.0E+01 XXXXXX
3.0E+01 XXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	7	0	0	0	0	10
5.56	38.89			0.00	0.00	

MAXIMUM = 3.00000E+01
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 1.13487E+01
GEOMETRIC DEVIATION = 1.79987E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
EUREKA QUARTZITE

FREQUENCY TABLE FOR COLUMN 22 (PB)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	8	8	44.44	66.67
1.2E+01 -	1.8E+01	0	8	0.00	22.22
1.8E+01 -	2.6E+01	2	10	11.11	22.22
2.6E+01 -	3.8E+01	1	11	5.56	11.11
3.8E+01 -	5.6E+01	0	11	0.00	5.56
5.6E+01 -	8.3E+01	0	11	0.00	5.56
8.3E+01 -	1.2E+02	1	12	5.56	5.56

HISTOGRAM FOR COLUMN 22 (PB)

```
1.0E+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.5E+01
2.0E+01 XXXXXXXXXX
3.0E+01 XXXXXX
5.0E+01
7.0E+01
1.0E+02 XXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
4	2	0	0	0	0	12
22.22	11.11			0.00	0.00	

MAXIMUM = 1.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 1.49027E+01
GEOMETRIC DEVIATION = 2.03590E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
EUREKA QUARTZITE

FREQUENCY TABLE FOR COLUMN 23 (SB)

LIMITS LOWER -	UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+01 -	1.2E+02	1	1	5.56	16.67
1.2E+02 -	1.8E+02	0	1	0.00	11.11
1.8E+02 -	2.6E+02	0	1	0.00	11.11
2.6E+02 -	3.8E+02	2	3	11.11	11.11

HISTOGRAM FOR COLUMN 23 (SB)

```
1.0E+02 XXXXXX
1.5E+02
2.0E+02
3.0E+02 XXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
15	0	0	0	0	0	3
83.33	0.00			0.00	0.00	

MAXIMUM = 3.00000E+02
MINIMUM = 1.00000E+02
GEOMETRIC MEAN = 2.08008E+02
GEOMETRIC DEVIATION = 1.88567E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
EUREKA QUARTZITE

FREQUENCY TABLE FOR COLUMN 27 (V)

LIMITS LOWER -	UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	5	5	27.78	77.78
1.2E+01 -	1.8E+01	3	8	16.67	50.00
1.8E+01 -	2.6E+01	2	10	11.11	33.33
2.6E+01 -	3.8E+01	1	11	5.56	22.22
3.8E+01 -	5.6E+01	3	14	16.67	16.67

HISTOGRAM FOR COLUMN 27 (V)

```
1.0E+01 XXXXXXXXXXXXXXXXXXXXXXXXXX
1.5E+01 XXXXXXXXXXXXXXXX
2.0E+01 XXXXXXXXXX
3.0E+01 XXXXXX
5.0E+01 XXXXXXXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	3	0	0	0	0	14
5.56	16.67			0.00	0.00	

MAXIMUM = 5.00000E+01
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 1.83907E+01
GEOMETRIC DEVIATION = 1.88625E+00

TITLE
HANSON CREEK FORMATION

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
AU	17	15	0	0	0	0	8
HG	0	0	0	0	0	2	38
MN	0	1	0	0	0	3	36
AG	29	0	0	0	0	0	11
B	13	7	0	0	0	1	19
BA	2	5	0	0	0	1	32
CO	26	6	0	0	0	0	8
CU	3	11	0	0	0	0	26
MO	28	4	0	0	0	0	8
PB	6	5	0	0	0	0	29
SB	30	1	0	0	0	0	9
V	0	4	0	0	0	0	36

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE

ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS
AU	0.002559	9.30	32 NOT DETECTED, LESS THAN, OR TRACE VALUES. 8 REPORTED VALUES.
HG	********	******	1 VALUES LESS THAN SPECIFIED LIMIT OF DETECTION. NO COMPUTATIONS.
MN	********	******	3 GREATER THAN VALUES. NO COMPUTATIONS.
AG	0.117383	7.37	29 NOT DETECTED, LESS THAN, OR TRACE VALUES. 11 REPORTED VALUES.
B	********	******	1 GREATER THAN VALUES. NO COMPUTATIONS.
BA	********	******	1 GREATER THAN VALUES. NO COMPUTATIONS.
CO	1.365183	3.48	32 NOT DETECTED, LESS THAN, OR TRACE VALUES. 8 REPORTED VALUES.
CU	5.349980	3.95	14 NOT DETECTED, LESS THAN, OR TRACE VALUES. 26 REPORTED VALUES.
MO	0.579782	9.00	32 NOT DETECTED, LESS THAN, OR TRACE VALUES. 8 REPORTED VALUES.
PB	********	******	1 VALUES LESS THAN SPECIFIED LIMIT OF DETECTION. NO COMPUTATIONS.
SB	14.104551	10.52	31 NOT DETECTED, LESS THAN, OR TRACE VALUES. 9 REPORTED VALUES.
V	18.778083	2.37	4 NOT DETECTED, LESS THAN, OR TRACE VALUES. 36 REPORTED VALUES.

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
HANSON CREEK FORMATION

FREQUENCY TABLE FOR COLUMN 1 (AU)

LIMITS LOWER -	UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	4	4	10.00	20.00
2.6E-02 -	3.8E-02	0	4	0.00	10.00
3.8E-02 -	5.6E-02	1	5	2.50	10.00
5.6E-02 -	8.3E-02	1	6	2.50	7.50
8.3E-02 -	1.2E-01	0	6	0.00	5.00
1.2E-01 -	1.8E-01	0	6	0.00	5.00
1.8E-01 -	2.6E-01	0	6	0.00	5.00
2.6E-01 -	3.8E-01	1	7	2.50	5.00
3.8E-01 -	5.6E-01	1	8	2.50	2.50

HISTOGRAM FOR COLUMN 1 (AU)

```
2.0E-02 XXXXXXXXXX
3.0E-02
5.0E-02 XXX
7.0E-02 XXX
1.0E-01
1.5E-01
2.0E-01
3.0E-01 XXX
5.0E-01 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
17	15	0	0	0	0	8
42.50	37.50			0.00	0.00	

MAXIMUM = 5.00000E-01
MINIMUM = 2.00000E-02
GEOMETRIC MEAN = 5.24871E-02
GEOMETRIC DEVIATION = 3.69045E+00

TITLE
HANSON CREEK FORMATION

FREQUENCY TABLE FOR COLUMN 2 (HG)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	2	2	5.00	100.00
2.6E-02 -	3.8E-02	1	3	2.50	95.00
3.8E-02 -	5.6E-02	1	4	2.50	92.50
5.6E-02 -	8.3E-02	5	9	12.50	90.00
8.3E-02 -	1.2E-01	5	14	12.50	77.50
1.2E-01 -	1.8E-01	2	16	5.00	65.00
1.8E-01 -	2.6E-01	5	21	12.50	60.00
2.6E-01 -	3.8E-01	2	23	5.00	47.50
3.8E-01 -	5.6E-01	4	27	10.00	42.50
5.6E-01 -	8.3E-01	6	33	15.00	32.50
8.3E-01 -	1.2E+00	0	33	0.00	17.50
1.2E+00 -	1.8E+00	2	35	5.00	17.50
1.8E+00 -	2.6E+00	1	36	2.50	12.50
2.6E+00 -	3.8E+00	1	37	2.50	10.00
3.8E+00 -	5.6E+00	0	37	0.00	7.50
5.6E+00 -	8.3E+00	1	38	2.50	7.50

HISTOGRAM FOR COLUMN 2 (HG)

```
2.0E-02 XXXXX
3.0E-02 XXX
5.0E-02 XXX
7.0E-02 XXXXXXXXXXXX
1.0E-01 XXXXXXXXXXXX
1.5E-01 XXXXX
2.0E-01 XXXXXXXXXXXX
3.0E-01 XXXXX
5.0E-01 XXXXXXXXX
7.0E-01 XXXXXXXXXXXXXX
1.0E+00
1.5E+00 XXXXX
2.0E+00 XXX
3.0E+00 XXX
5.0E+00
7.0E+00 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	2	38
0.00	0.00			0.00	5.00	

MAXIMUM = 6.50000E+00
MINIMUM = 1.80000E-02
GEOMETRIC MEAN = 2.45675E-01
GEOMETRIC DEVIATION = 3.89426E+00

TITLE
HANSON CREEK FORMATION

FREQUENCY TABLE FOR COLUMN 7 (MN)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	0	0	0.00	97.50
1.2E+01 -	1.8E+01	0	0	0.00	97.50
1.8E+01 -	2.6E+01	0	0	0.00	97.50
2.6E+01 -	3.8E+01	1	1	2.50	97.50
3.8E+01 -	5.6E+01	0	1	0.00	95.00
5.6E+01 -	8.3E+01	3	4	7.50	95.00
8.3E+01 -	1.2E+02	1	5	2.50	87.50
1.2E+02 -	1.8E+02	8	13	20.00	85.00
1.8E+02 -	2.6E+02	6	19	15.00	65.00
2.6E+02 -	3.8E+02	6	25	15.00	50.00
3.8E+02 -	5.6E+02	3	28	7.50	35.00
5.6E+02 -	8.3E+02	3	31	7.50	27.50
8.3E+02 -	1.2E+03	2	33	5.00	20.00
1.2E+03 -	1.8E+03	0	33	0.00	15.00
1.8E+03 -	2.6E+03	1	34	2.50	15.00
2.6E+03 -	3.8E+03	1	35	2.50	12.50
3.8E+03 -	5.6E+03	1	36	2.50	10.00

HISTOGRAM FOR COLUMN 7 (MN)

```
3.0E+01 XXX
5.0E+01
7.0E+01 XXXXXXXX
1.0E+02 XXX
1.5E+02 XXXXXXXXXXXXXXXXXXX
2.0E+02 XXXXXXXXXXXXXXX
3.0E+02 XXXXXXXXXXXXXXX
5.0E+02 XXXXXXXX
7.0E+02 XXXXXXXX
1.0E+03 XXXXX
1.5E+03
2.0E+03 XXX
3.0E+03 XXX
5.0E+03 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	1	0	0	0	3	36
0.00	2.50			0.00	7.50	

MAXIMUM = 5.00000E+03
MINIMUM = 3.00000E+01
GEOMETRIC MEAN = 2.81827E+02
GEOMETRIC DEVIATION = 2.92053E+00

TITLE
HANSON CREEK FORMATION

FREQUENCY TABLE FOR COLUMN 8 (AG)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E-01 -	5.6E-01	3	3	7.50	27.50
5.6E-01 -	8.3E-01	1	4	2.50	20.00
8.3E-01 -	1.2E+00	2	6	5.00	17.50
1.2E+00 -	1.8E+00	1	7	2.50	12.50
1.8E+00 -	2.6E+00	2	9	5.00	10.00
2.6E+00 -	3.8E+00	0	9	0.00	5.00
3.8E+00 -	5.6E+00	0	9	0.00	5.00
5.6E+00 -	8.3E+00	2	11	5.00	5.00

HISTOGRAM FOR COLUMN 8 (AG)

```
5.0E-01 XXXXXXXX
7.0E-01 XXX
1.0E+00 XXXXX
1.5E+00 XXX
2.0E+00 XXXXX
3.0E+00
5.0E+00
7.0E+00 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
29	0	0	0	0	0	11
72.50	0.00			0.00	0.00	

MAXIMUM = 7.00000E+00
MINIMUM = 5.00000E-01
GEOMETRIC MEAN = 1.34343E+00
GEOMETRIC DEVIATION = 2.62425E+00

TITLE
HANSON CREEK FORMATION

FREQUENCY TABLE FOR COLUMN 10 (B)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	7	7	17.50	50.00
1.2E+01 -	1.8E+01	0	7	0.00	32.50
1.8E+01 -	2.6E+01	2	9	5.00	32.50
2.6E+01 -	3.8E+01	1	10	2.50	27.50
3.8E+01 -	5.6E+01	3	13	7.50	25.00
5.6E+01 -	8.3E+01	3	16	7.50	17.50
8.3E+01 -	1.2E+02	1	17	2.50	10.00
1.2E+02 -	1.8E+02	0	17	0.00	7.50
1.8E+02 -	2.6E+02	1	18	2.50	7.50
2.6E+02 -	3.8E+02	1	19	2.50	5.00

HISTOGRAM FOR COLUMN 10 (B)

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

N	L	H	B	T	G	ANALYTICAL VALUES
13	7	0	0	0	1	19
32.50	17.50			0.00	2.50	

MAXIMUM = 3.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 3.15827E+01
GEOMETRIC DEVIATION = 3.02195E+00

TITLE
HANSON CREEK FORMATION

FREQUENCY TABLE FOR COLUMN 11 (BA)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	10	10	25.00	82.50
2.6E+01 -	3.8E+01	3	13	7.50	57.50
3.8E+01 -	5.6E+01	4	17	10.00	50.00
5.6E+01 -	8.3E+01	1	18	2.50	40.00
8.3E+01 -	1.2E+02	1	19	2.50	37.50
1.2E+02 -	1.8E+02	3	22	7.50	35.00
1.8E+02 -	2.6E+02	4	26	10.00	27.50
2.6E+02 -	3.8E+02	2	28	5.00	17.50
3.8E+02 -	5.6E+02	1	29	2.50	12.50
5.6E+02 -	8.3E+02	1	30	2.50	10.00
8.3E+02 -	1.2E+03	0	30	0.00	7.50
1.2E+03 -	1.8E+03	1	31	2.50	7.50
1.8E+03 -	2.6E+03	1	32	2.50	5.00

HISTOGRAM FOR COLUMN 11 (BA)

```
2.0E+01 XXXXXXXXXXXXXXXXXXXXXXXX
3.0E+01 XXXXXXXX
5.0E+01 XXXXXXXXXX
7.0E+01 XXX
1.0E+02 XXX
1.5E+02 XXXXXXXX
2.0E+02 XXXXXXXXXX
3.0E+02 XXXXX
5.0E+02 XXX
7.0E+02 XXX
1.0E+03
1.5E+03 XXX
2.0E+03 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
2	5	0	0	0	1	32
5.00	12.50			0.00	2.50	

MAXIMUM = 2.00000E+03
MINIMUM = 2.00000E+01
GEOMETRIC MEAN = 7.93784E+01
GEOMETRIC DEVIATION = 3.93181E+00

TITLE
HANSON CREEK FORMATION

FREQUENCY TABLE FOR COLUMN 15 (CO)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	3	3	7.50	20.00
5.6E+00 -	8.3E+00	1	4	2.50	12.50
8.3E+00 -	1.2E+01	3	7	7.50	10.00
1.2E+01 -	1.8E+01	0	7	0.00	2.50
1.8E+01 -	2.6E+01	1	8	2.50	2.50

HISTOGRAM FOR COLUMN 15 (CO)

```
5.0E+00 XXXXXXXX
7.0E+00 XXX
1.0E+01 XXXXXXXX
1.5E+01
2.0E+01 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
26	6	0	0	0	0	8
65.00	15.00			0.00	0.00	

MAXIMUM = 2.00000E+01
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 8.04229E+00
GEOMETRIC DEVIATION = 1.62960E+00

TITLE
HANSON CREEK FORMATION

FREQUENCY TABLE FOR COLUMN 17 (CU)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	8	8	20.00	65.00
5.6E+00 -	8.3E+00	5	13	12.50	45.00
8.3E+00 -	1.2E+01	6	19	15.00	32.50
1.2E+01 -	1.8E+01	2	21	5.00	17.50
1.8E+01 -	2.6E+01	3	24	7.50	12.50
2.6E+01 -	3.8E+01	0	24	0.00	5.00
3.8E+01 -	5.6E+01	0	24	0.00	5.00
5.6E+01 -	8.3E+01	0	24	0.00	5.00
8.3E+01 -	1.2E+02	0	24	0.00	5.00
1.2E+02 -	1.8E+02	1	25	2.50	5.00
1.8E+02 -	2.6E+02	0	25	0.00	2.50
2.6E+02 -	3.8E+02	0	25	0.00	2.50
3.8E+02 -	5.6E+02	1	26	2.50	2.50

HISTOGRAM FOR COLUMN 17 (CU)

```
5.0E+00 XXXXXXXXXXXXXXXXXXX
7.0E+00 XXXXXXXXXXXXX
1.0E+01 XXXXXXXXXXXXXXX
1.5E+01 XXXXX
2.0E+01 XXXXXXXX
3.0E+01
5.0E+01
7.0E+01
1.0E+02
1.5E+02 XXX
2.0E+02
3.0E+02
5.0E+02 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
3	11	0	0	0	0	26
7.50	27.50			0.00	0.00	

MAXIMUM = 5.00000E+02
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 1.08754E+01
GEOMETRIC DEVIATION = 2.91983E+00

TITLE
HANSON CREEK FORMATION

FREQUENCY TABLE FOR COLUMN 19 (MO)

LIMITS		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
LOWER -	UPPER				
3.8E+00 -	5.6E+00	2	2	5.00	20.00
5.6E+00 -	8.3E+00	2	4	5.00	15.00
8.3E+00 -	1.2E+01	2	6	5.00	10.00
1.2E+01 -	1.8E+01	1	7	2.50	5.00
1.8E+01 -	2.6E+01	0	7	0.00	2.50
2.6E+01 -	3.8E+01	0	7	0.00	2.50
3.8E+01 -	5.6E+01	0	7	0.00	2.50
5.6E+01 -	8.3E+01	0	7	0.00	2.50
8.3E+01 -	1.2E+02	0	7	0.00	2.50
1.2E+02 -	1.8E+02	0	7	0.00	2.50
1.8E+02 -	2.6E+02	1	8	2.50	2.50

HISTOGRAM FOR COLUMN 19 (MO)

```
5.0E+00 XXXXX
7.0E+00 XXXXX
1.0E+01 XXXXX
1.5E+01 XXX
2.0E+01
3.0E+01
5.0E+01
7.0E+01
1.0E+02
1.5E+02
2.0E+02 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
28	4	0	0	0	0	8
70.00	10.00			0.00	0.00	

MAXIMUM = 2.00000E+02
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 1.17668E+01
GEOMETRIC DEVIATION = 3.33245E+00

TITLE
HANSON CREEK FORMATION

FREQUENCY TABLE FOR COLUMN 22 (PB)

LIMITS LOWER -	UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	6	6	15.00	72.50
1.2E+01 -	1.8E+01	2	8	5.00	57.50
1.8E+01 -	2.6E+01	8	16	20.00	52.50
2.6E+01 -	3.8E+01	4	20	10.00	32.50
3.8E+01 -	5.6E+01	2	22	5.00	22.50
5.6E+01 -	8.3E+01	1	23	2.50	17.50
8.3E+01 -	1.2E+02	0	23	0.00	15.00
1.2E+02 -	1.8E+02	1	24	2.50	15.00
1.8E+02 -	2.6E+02	1	25	2.50	12.50
2.6E+02 -	3.8E+02	1	26	2.50	10.00
3.8E+02 -	5.6E+02	0	26	0.00	7.50
5.6E+02 -	8.3E+02	0	26	0.00	7.50
8.3E+02 -	1.2E+03	0	26	0.00	7.50
1.2E+03 -	1.8E+03	0	26	0.00	7.50
1.8E+03 -	2.6E+03	0	26	0.00	7.50
2.6E+03 -	3.8E+03	1	27	2.50	7.50
3.8E+03 -	5.6E+03	0	27	0.00	5.00
5.6E+03 -	8.3E+03	1	28	2.50	5.00

HISTOGRAM FOR COLUMN 22 (PB)

```
1.0E+01 XXXXXXXXXXXXXX
1.5E+01 XXXXX
2.0E+01 XXXXXXXXXXXXXXXXXXX
3.0E+01 XXXXXXXXXX
5.0E+01 XXXXX
7.0E+01 XXX
1.0E+02
1.5E+02 XXX
2.0E+02 XXX
3.0E+02 XXX
5.0E+02
7.0E+02
1.0E+03
1.5E+03
2.0E+03
3.0E+03 XXX
5.0E+03
7.0E+03 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
6	5	0	0	0	0	29
15.00	12.50			0.00	0.00	

MAXIMUM = 7.00000E+03
MINIMUM = 1.50000E+00
GEOMETRIC MEAN = 3.38696E+01
GEOMETRIC DEVIATION = 5.52080E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
HANSON CREEK FORMATION

FREQUENCY TABLE FOR COLUMN 23 (SB)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+01 -	1.2E+02	2	2	5.00	22.50
1.2E+02 -	1.8E+02	1	3	2.50	17.50
1.8E+02 -	2.6E+02	2	5	5.00	15.00
2.6E+02 -	3.8E+02	0	5	0.00	10.00
3.8E+02 -	5.6E+02	1	6	2.50	10.00
5.6E+02 -	8.3E+02	1	7	2.50	7.50
8.3E+02 -	1.2E+03	0	7	0.00	5.00
1.2E+03 -	1.8E+03	2	9	5.00	5.00

HISTOGRAM FOR COLUMN 23 (SB)

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

N	L	H	B	T	G	ANALYTICAL VALUES
30	1	0	0	0	0	9
75.00	2.50			0.00	0.00	

MAXIMUM = 1.50000E+03
MINIMUM = 1.00000E+02
GEOMETRIC MEAN = 3.30657E+02
GEOMETRIC DEVIATION = 2.93892E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
HANSON CREEK FORMATION

FREQUENCY TABLE FOR COLUMN 27 (V)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	11	11	27.50	90.00
1.2E+01 -	1.8E+01	5	16	12.50	62.50
1.8E+01 -	2.6E+01	9	25	22.50	50.00
2.6E+01 -	3.8E+01	2	27	5.00	27.50
3.8E+01 -	5.6E+01	5	32	12.50	22.50
5.6E+01 -	8.3E+01	2	34	5.00	10.00
8.3E+01 -	1.2E+02	0	34	0.00	5.00
1.2E+02 -	1.8E+02	2	36	5.00	5.00

HISTOGRAM FOR COLUMN 27 (V)

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

N	L	H	B	T	G	ANALYTICAL VALUES
0	4	0	0	0	0	36
0.00	10.00			0.00	0.00	

MAXIMUM = 1.50000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 2.16565E+01
GEOMETRIC DEVIATION = 2.17996E+00

TITLE
VEINS IN HANSON CREEK FM

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
AU	4	5	0	0	0	0	19
HG	0	0	0	0	0	14	14
MN	0	1	0	0	0	0	27
AG	5	0	0	0	0	0	23
B	4	7	0	0	0	0	17
BA	0	2	0	0	0	1	25
CO	17	5	0	0	0	0	6
CU	0	1	0	0	0	0	27
MO	8	3	0	0	0	0	17
PB	2	3	0	0	0	12	11
SB	2	0	0	0	0	11	15
V	0	1	0	0	0	0	27

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TITLE

ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS
AU	0.117154	22.33	9 NOT DETECTED, LESS THAN, OR TRACE VALUES. 19 REPORTED VALUES.
HG	********	******	14 GREATER THAN VALUES. NO COMPUTATIONS.
MN	164.023474	4.16	1 NOT DETECTED, LESS THAN, OR TRACE VALUES. 27 REPORTED VALUES.
AG	11.812738	33.28	5 NOT DETECTED, LESS THAN, OR TRACE VALUES. 23 REPORTED VALUES.
B	11.556659	3.83	11 NOT DETECTED, LESS THAN, OR TRACE VALUES. 17 REPORTED VALUES.
BA	********	******	1 GREATER THAN VALUES. NO COMPUTATIONS.
CO	1.145381	4.88	22 NOT DETECTED, LESS THAN, OR TRACE VALUES. 6 REPORTED VALUES.
CU	257.160339	11.82	1 NOT DETECTED, LESS THAN, OR TRACE VALUES. 27 REPORTED VALUES.
MO	5.117967	3.57	11 NOT DETECTED, LESS THAN, OR TRACE VALUES. 17 REPORTED VALUES.
PB	********	******	12 GREATER THAN VALUES. NO COMPUTATIONS.
SB	********	******	11 GREATER THAN VALUES. NO COMPUTATIONS.
V	77.819691	4.46	1 NOT DETECTED, LESS THAN, OR TRACE VALUES. 27 REPORTED VALUES.

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/19/80

TITLE
VEINS IN HANSON CREEK FM

FREQUENCY TABLE FOR COLUMN 1 (AU)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	1	1	3.57	67.86
2.6E-02 -	3.8E-02	0	1	0.00	64.29
3.8E-02 -	5.6E-02	0	1	0.00	64.29
5.6E-02 -	8.3E-02	1	2	3.57	64.29
8.3E-02 -	1.2E-01	2	4	7.14	60.71
1.2E-01 -	1.8E-01	1	5	3.57	53.57
1.8E-01 -	2.6E-01	1	6	3.57	50.00
2.6E-01 -	3.8E-01	1	7	3.57	46.43
3.8E-01 -	5.6E-01	0	7	0.00	42.86
5.6E-01 -	8.3E-01	2	9	7.14	42.86
8.3E-01 -	1.2E+00	4	13	14.29	35.71
1.2E+00 -	1.8E+00	0	13	0.00	21.43
1.8E+00 -	2.6E+00	1	14	3.57	21.43
2.6E+00 -	3.8E+00	2	16	7.14	17.86
3.8E+00 -	5.6E+00	1	17	3.57	10.71
5.6E+00 -	8.3E+00	1	18	3.57	7.14
8.3E+00 -	1.2E+01	0	18	0.00	3.57
1.2E+01 -	1.8E+01	0	18	0.00	3.57
1.8E+01 -	2.6E+01	1	19	3.57	3.57

HISTOGRAM FOR COLUMN 1 (AU)

```
2.0E-02 XXXX
3.0E-02
5.0E-02
7.0E-02 XXXX
1.0E-01 XXXXXXX
1.5E-01 XXXX
2.0E-01 XXXX
3.0E-01 XXXX
5.0E-01
7.0E-01 XXXXXXX
1.0E+00 XXXXXXXXXXXXXX
1.5E+00
2.0E+00 XXXX
3.0E+00 XXXXXXX
5.0E+00 XXXX
7.0E+00 XXXX
1.0E+01
1.5E+01
2.0E+01 XXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
4	5	0	0	0	0	19
14.29	17.86			0.00	0.00	

MAXIMUM = 1.80000E+01
MINIMUM = 2.00000E-02
GEOMETRIC MEAN = 7.05315E-01
GEOMETRIC DEVIATION = 5.71611E+00

TITLE
VEINS IN HANSON CREEK FM

FREQUENCY TABLE FOR COLUMN 2 (HG)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	0	0	0.00	100.00
2.6E-02 -	3.8E-02	0	0	0.00	100.00
3.8E-02 -	5.6E-02	0	0	0.00	100.00
5.6E-02 -	8.3E-02	0	0	0.00	100.00
8.3E-02 -	1.2E-01	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	3.57	100.00
5.6E-01 -	8.3E-01	3	4	10.71	96.43
8.3E-01 -	1.2E+00	4	8	14.29	85.71
1.2E+00 -	1.8E+00	2	10	7.14	71.43
1.8E+00 -	2.6E+00	0	10	0.00	64.29
2.6E+00 -	3.8E+00	2	12	7.14	64.29
3.8E+00 -	5.6E+00	1	13	3.57	57.14
5.6E+00 -	8.3E+00	1	14	3.57	53.57

HISTOGRAM FOR COLUMN 2 (HG)

```
5.0E-01 XXXX
7.0E-01 XXXXXXXXXX
1.0E+00 XXXXXXXXXXXXX
1.5E+00 XXXXXXX
2.0E+00 -
3.0E+00 XXXXXXX
5.0E+00 XXXX
7.0E+00 XXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	14	14
0.00	0.00			0.00	50.00	

MAXIMUM = 8.00000E+00
MINIMUM = 4.50000E-01
GEOMETRIC MEAN = 1.39524E+00
GEOMETRIC DEVIATION = 2.40998E+00

TITLE
VEINS IN HANSON CREEK FM

FREQUENCY TABLE FOR COLUMN 7 (MN)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	0	0	0.00	96.43
1.2E+01 -	1.8E+01	1	1	3.57	96.43
1.8E+01 -	2.6E+01	1	2	3.57	92.86
2.6E+01 -	3.8E+01	3	5	10.71	89.29
3.8E+01 -	5.6E+01	2	7	7.14	78.57
5.6E+01 -	8.3E+01	0	7	0.00	71.43
8.3E+01 -	1.2E+02	2	9	7.14	71.43
1.2E+02 -	1.8E+02	1	10	3.57	64.29
1.8E+02 -	2.6E+02	3	13	10.71	60.71
2.6E+02 -	3.8E+02	4	17	14.29	50.00
3.8E+02 -	5.6E+02	5	22	17.86	35.71
5.6E+02 -	8.3E+02	3	25	10.71	17.86
8.3E+02 -	1.2E+03	2	27	7.14	7.14

HISTOGRAM FOR COLUMN 7 (MN)

```
       1.5E+01 XXXX
       2.0E+01 XXXX
       3.0E+01 XXXXXXXXXX
       5.0E+01 XXXXXXX
       7.0E+01
       1.0E+02 XXXXXXX
       1.5E+02 XXXX
       2.0E+02 XXXXXXXXXX
       3.0E+02 XXXXXXXXXXXXX
       5.0E+02 XXXXXXXXXXXXXXXXX
       7.0E+02 XXXXXXXXXX
       1.0E+03 XXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	1	0	0	0	0	27
0.00	3.57			0.00	0.00	

MAXIMUM = 1.00000E+03
MINIMUM = 1.50000E+01
GEOMETRIC MEAN = 1.86753E+02
GEOMETRIC DEVIATION = 3.58125E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/19/80

TITLE
VEINS IN HANSON CREEK FM

FREQUENCY TABLE FOR COLUMN 8 (AG)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E-01 -	5.6E-01	2	2	7.14	82.14
5.6E-01 -	8.3E-01	1	3	3.57	75.00
8.3E-01 -	1.2E+00	1	4	3.57	71.43
1.2E+00 -	1.8E+00	1	5	3.57	67.86
1.8E+00 -	2.6E+00	1	6	3.57	64.29
2.6E+00 -	3.8E+00	0	6	0.00	60.71
3.8E+00 -	5.6E+00	0	6	0.00	60.71
5.6E+00 -	8.3E+00	2	8	7.14	60.71
8.3E+00 -	1.2E+01	0	8	0.00	53.57
1.2E+01 -	1.8E+01	1	9	3.57	53.57
1.8E+01 -	2.6E+01	0	9	0.00	50.00
2.6E+01 -	3.8E+01	0	9	0.00	50.00
3.8E+01 -	5.6E+01	0	9	0.00	50.00
5.6E+01 -	8.3E+01	3	12	10.71	50.00
8.3E+01 -	1.2E+02	0	12	0.00	39.29
1.2E+02 -	1.8E+02	3	15	10.71	39.29
1.8E+02 -	2.6E+02	2	17	7.14	28.57
2.6E+02 -	3.8E+02	1	18	3.57	21.43
3.8E+02 -	5.6E+02	1	19	3.57	17.86
5.6E+02 -	8.3E+02	3	22	10.71	14.29
8.3E+02 -	1.2E+03	0	22	0.00	3.57
1.2E+03 -	1.8E+03	1	23	3.57	3.57

HISTOGRAM FOR COLUMN 8 (AG)

```
5.0E-01 XXXXXXX
7.0E-01 XXXX
1.0E+00 XXXX
1.5E+00 XXXX
2.0E+00 XXXX
3.0E+00
5.0E+00
7.0E+00 XXXXXXX
1.0E+01
1.5E+01 XXXX
2.0E+01
3.0E+01
5.0E+01
7.0E+01 XXXXXXXXXXX
1.0E+02
1.5E+02 XXXXXXXXXXX
2.0E+02 XXXXXXX
3.0E+02 XXXX
5.0E+02 XXXX
7.0E+02 XXXXXXXXXXX
1.0E+03
1.5E+03 XXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
5	0	0	0	0	0	23
17.86	0.00			0.00	0.00	

MAXIMUM = 1.50000E+03
MINIMUM = 5.00000E-01
GEOMETRIC MEAN = 3.72636E+01
GEOMETRIC DEVIATION = 1.41630E+01

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/19/80

TITLE
VEINS IN HANSON CREEK FM

FREQUENCY TABLE FOR COLUMN 10 (B)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	4	4	14.29	60.71
1.2E+01 -	1.8E+01	3	7	10.71	46.43
1.8E+01 -	2.6E+01	2	9	7.14	35.71
2.6E+01 -	3.8E+01	3	12	10.71	28.57
3.8E+01 -	5.6E+01	1	13	3.57	17.86
5.6E+01 -	8.3E+01	2	15	7.14	14.29
8.3E+01 -	1.2E+02	1	16	3.57	7.14
1.2E+02 -	1.8E+02	0	16	0.00	3.57
1.8E+02 -	2.6E+02	1	17	3.57	3.57

HISTOGRAM FOR COLUMN 10 (B)

```
1.0E+01 XXXXXXXXXXXXX
1.5E+01 XXXXXXXXXX
2.0E+01 XXXXXXX
3.0E+01 XXXXXXXXXX
5.0E+01 XXXX
7.0E+01 XXXXXXX
1.0E+02 XXXX
1.5E+02
2.0E+02 XXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
4	7	0	0	0	0	17
14.29	25.00			0.00	0.00	

MAXIMUM = 2.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 2.67043E+01
GEOMETRIC DEVIATION = 2.47268E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/19/80

TITLE
VEINS IN HANSON CREEK FM

FREQUENCY TABLE FOR COLUMN 11 (BA)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	1	1	3.57	92.86
2.6E+01 -	3.8E+01	1	2	3.57	89.29
3.8E+01 -	5.6E+01	3	5	10.71	85.71
5.6E+01 -	8.3E+01	4	9	14.29	75.00
8.3E+01 -	1.2E+02	4	13	14.29	60.71
1.2E+02 -	1.8E+02	4	17	14.29	46.43
1.8E+02 -	2.6E+02	2	19	7.14	32.14
2.6E+02 -	3.8E+02	4	23	14.29	25.00
3.8E+02 -	5.6E+02	1	24	3.57	10.71
5.6E+02 -	8.3E+02	0	24	0.00	7.14
8.3E+02 -	1.2E+03	1	25	3.57	7.14

HISTOGRAM FOR COLUMN 11 (BA)

```
2.0E+01 XXXX
3.0E+01 XXXX
5.0E+01 XXXXXXXXXX
7.0E+01 XXXXXXXXXXXXX
1.0E+02 XXXXXXXXXXXXX
1.5E+02 XXXXXXXXXXXXX
2.0E+02 XXXXXXX
3.0E+02 XXXXXXXXXXXX
5.0E+02 XXXX
7.0E+02
1.0E+03 XXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	2	0	0	0	1	25
0.00	7.14			0.00	3.57	

MAXIMUM = 1.00000E+03
MINIMUM = 2.00000E+01
GEOMETRIC MEAN = 1.22116E+02
GEOMETRIC DEVIATION = 2.45337E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/19/80

TITLE
VEINS IN HANSON CREEK FM

FREQUENCY TABLE FOR COLUMN 15 (CO)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	1	1	3.57	21.43
5.6E+00 -	8.3E+00	0	1	0.00	17.86
8.3E+00 -	1.2E+01	3	4	10.71	17.86
1.2E+01 -	1.8E+01	1	5	3.57	7.14
1.8E+01 -	2.6E+01	1	6	3.57	3.57

HISTOGRAM FOR COLUMN 15 (CO)

```
5.0E+00 XXXX
7.0E+00
1.0E+01 XXXXXXXXXX
1.5E+01 XXXX
2.0E+01 XXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
17	5	0	0	0	0	6
60.71	17.86			0.00	0.00	

MAXIMUM = 2.00000E+01
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 1.06991E+01
GEOMETRIC DEVIATION = 1.59775E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/19/80

TITLE
VEINS IN HANSON CREEK FM

FREQUENCY TABLE FOR COLUMN 17 (CU)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	2	2	7.14	96.43
5.6E+00 -	8.3E+00	0	2	0.00	89.29
8.3E+00 -	1.2E+01	1	3	3.57	89.29
1.2E+01 -	1.8E+01	1	4	3.57	85.71
1.8E+01 -	2.6E+01	2	6	7.14	82.14
2.6E+01 -	3.8E+01	0	6	0.00	75.00
3.8E+01 -	5.6E+01	3	9	10.71	75.00
5.6E+01 -	8.3E+01	0	9	0.00	64.29
8.3E+01 -	1.2E+02	1	10	3.57	64.29
1.2E+02 -	1.8E+02	0	10	0.00	60.71
1.8E+02 -	2.6E+02	0	10	0.00	60.71
2.6E+02 -	3.8E+02	1	11	3.57	60.71
3.8E+02 -	5.6E+02	1	12	3.57	57.14
5.6E+02 -	8.3E+02	2	14	7.14	53.57
8.3E+02 -	1.2E+03	4	18	14.29	46.43
1.2E+03 -	1.8E+03	3	21	10.71	32.14
1.8E+03 -	2.6E+03	0	21	0.00	21.43
2.6E+03 -	3.8E+03	3	24	10.71	21.43
3.8E+03 -	5.6E+03	2	26	7.14	10.71
5.6E+03 -	8.3E+03	1	27	3.57	3.57

HISTOGRAM FOR COLUMN 17 (CU)

```
5.0E+00 XXXXXXX
7.0E+00
1.0E+01 XXXX
1.5E+01 XXXX
2.0E+01 XXXXXXX
3.0E+01
5.0E+01 XXXXXXXXXXX
7.0E+01
1.0E+02 XXXX
1.5E+02
2.0E+02
3.0E+02 XXXX
5.0E+02 XXXX
7.0E+02 XXXXXXX
1.0E+03 XXXXXXXXXXXXXX
1.5E+03 XXXXXXXXXX
2.0E+03
3.0E+03 XXXXXXXXXX
5.0E+03 XXXXXXX
7.0E+03 XXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	1	0	0	0	0	27
0.00	3.57			0.00	0.00	

MAXIMUM = 7.00000E+03
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 3.11994E+02
GEOMETRIC DEVIATION = 9.88413E+00

TITLE
VEINS IN HANSON CREEK FM

FREQUENCY TABLE FOR COLUMN 19 (MO)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	2	2	7.14	60.71
5.6E+00 -	8.3E+00	7	9	25.00	53.57
8.3E+00 -	1.2E+01	3	12	10.71	28.57
1.2E+01 -	1.8E+01	0	12	0.00	17.86
1.8E+01 -	2.6E+01	4	16	14.29	17.86
2.6E+01 -	3.8E+01	0	16	0.00	3.57
3.8E+01 -	5.6E+01	0	16	0.00	3.57
5.6E+01 -	8.3E+01	0	16	0.00	3.57
8.3E+01 -	1.2E+02	0	16	0.00	3.57
1.2E+02 -	1.8E+02	0	16	0.00	3.57
1.8E+02 -	2.6E+02	1	17	3.57	3.57

HISTOGRAM FOR COLUMN 19 (MO)

```
       5.0E+00 XXXXXXX
       7.0E+00 XXXXXXXXXXXXXXXXXXXXXXXXX
       1.0E+01 XXXXXXXXXXX
       1.5E+01
       2.0E+01 XXXXXXXXXXXXXX
       3.0E+01
       5.0E+01
       7.0E+01
       1.0E+02
       1.5E+02
       2.0E+02 XXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
8	3	0	0	0	0	17
28.57	10.71			0.00	0.00	

MAXIMUM = 2.00000E+02
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 1.11728E+01
GEOMETRIC DEVIATION = 2.42358E+00

TITLE
VEINS IN HANSON CREEK FM

FREQUENCY TABLE FOR COLUMN 22 (PB)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	0	0	0.00	82.14
1.2E+01 -	1.8E+01	1	1	3.57	82.14
1.8E+01 -	2.6E+01	0	1	0.00	78.57
2.6E+01 -	3.8E+01	0	1	0.00	78.57
3.8E+01 -	5.6E+01	0	1	0.00	78.57
5.6E+01 -	8.3E+01	1	2	3.57	78.57
8.3E+01 -	1.2E+02	0	2	0.00	75.00
1.2E+02 -	1.8E+02	1	3	3.57	75.00
1.8E+02 -	2.6E+02	0	3	0.00	71.43
2.6E+02 -	3.8E+02	2	5	7.14	71.43
3.8E+02 -	5.6E+02	0	5	0.00	64.29
5.6E+02 -	8.3E+02	0	5	0.00	64.29
8.3E+02 -	1.2E+03	0	5	0.00	64.29
1.2E+03 -	1.8E+03	1	6	3.57	64.29
1.8E+03 -	2.6E+03	1	7	3.57	60.71
2.6E+03 -	3.8E+03	2	9	7.14	57.14
3.8E+03 -	5.6E+03	1	10	3.57	50.00
5.6E+03 -	8.3E+03	0	10	0.00	46.43
8.3E+03 -	1.2E+04	0	10	0.00	46.43
1.2E+04 -	1.8E+04	0	10	0.00	46.43
1.8E+04 -	2.6E+04	1	11	3.57	46.43

HISTOGRAM FOR COLUMN 22 (PB)

```
1.5E+01 XXXX
2.0E+01
3.0E+01
5.0E+01
7.0E+01 XXXX
1.0E+02
1.5E+02 XXXX
2.0E+02
3.0E+02 XXXXXXX
5.0E+02
7.0E+02
1.0E+03
1.5E+03 XXXX
2.0E+03 XXXX
3.0E+03 XXXXXXX
5.0E+03 XXXX
7.0E+03
1.0E+04
1.5E+04
2.0E+04 XXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
2	3	0	0	0	12	11
7.14	10.71			0.00	42.86	

MAXIMUM = 2.00000E+04
MINIMUM = 1.50000E+01
GEOMETRIC MEAN = 7.43313E+02
GEOMETRIC DEVIATION = 8.31520E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/19/80

TITLE
VEINS IN HANSON CREEK FM

FREQUENCY TABLE FOR COLUMN 23 (SB)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+01 -	1.2E+02	3	3	10.71	92.86
1.2E+02 -	1.8E+02	2	5	7.14	82.14
1.8E+02 -	2.6E+02	2	7	7.14	75.00
2.6E+02 -	3.8E+02	3	10	10.71	67.86
3.8E+02 -	5.6E+02	1	11	3.57	57.14
5.6E+02 -	8.3E+02	0	11	0.00	53.57
8.3E+02 -	1.2E+03	0	11	0.00	53.57
1.2E+03 -	1.8E+03	0	11	0.00	53.57
1.8E+03 -	2.6E+03	0	11	0.00	53.57
2.6E+03 -	3.8E+03	0	11	0.00	53.57
3.8E+03 -	5.6E+03	1	12	3.57	53.57
5.6E+03 -	8.3E+03	2	14	7.14	50.00
8.3E+03 -	1.2E+04	1	15	3.57	42.86

HISTOGRAM FOR COLUMN 23 (SB)

```
1.0E+02 XXXXXXXXXX
1.5E+02 XXXXXX
2.0E+02 XXXXXX
3.0E+02 XXXXXXXXXX
5.0E+02 XXXX
7.0E+02
1.0E+03
1.5E+03
2.0E+03
3.0E+03
5.0E+03 XXXX
7.0E+03 XXXXXX
1.0E+04 XXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
2	0	0	0	0	11	15
7.14	0.00			0.00	39.29	

MAXIMUM = 1.00000E+04
MINIMUM = 1.00000E+02
GEOMETRIC MEAN = 4.99171E+02
GEOMETRIC DEVIATION = 5.57524E+00

TITLE
VEINS IN HANSON CREEK FM

FREQUENCY TABLE FOR COLUMN 27 (V)

LIMITS LOWER -	UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	1	1	3.57	96.43
1.2E+01 -	1.8E+01	0	1	0.00	92.86
1.8E+01 -	2.6E+01	5	6	17.86	92.86
2.6E+01 -	3.8E+01	3	9	10.71	75.00
3.8E+01 -	5.6E+01	1	10	3.57	64.29
5.6E+01 -	8.3E+01	6	16	21.43	60.71
8.3E+01 -	1.2E+02	2	18	7.14	39.29
1.2E+02 -	1.8E+02	3	21	10.71	32.14
1.8E+02 -	2.6E+02	0	21	0.00	21.43
2.6E+02 -	3.8E+02	3	24	10.71	21.43
3.8E+02 -	5.6E+02	0	24	0.00	10.71
5.6E+02 -	8.3E+02	0	24	0.00	10.71
8.3E+02 -	1.2E+03	1	25	3.57	10.71
1.2E+03 -	1.8E+03	1	26	3.57	7.14
1.8E+03 -	2.6E+03	0	26	0.00	3.57
2.6E+03 -	3.8E+03	1	27	3.57	3.57

HISTOGRAM FOR COLUMN 27 (V)

```
1.0E+01 XXXX
1.5E+01
2.0E+01 XXXXXXXXXXXXXXXXX
3.0E+01 XXXXXXXXXX
5.0E+01 XXXX
7.0E+01 XXXXXXXXXXXXXXXXXXX
1.0E+02 XXXXXX
1.5E+02 XXXXXXXXXX
2.0E+02
3.0E+02 XXXXXXXXXX
5.0E+02
7.0E+02
1.0E+03 XXXX
1.5E+03 XXXX
2.0E+03
3.0E+03 XXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	1	0	0	0	0	27
0.00	3.57			0.00	0.00	

MAXIMUM = 3.00000E+03
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 8.66439E+01
GEOMETRIC DEVIATION = 4.09137E+00

TITLE
ROBERTS MOUNTAINS FORMATION

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
AU	19	17	0	0	0	0	42
HG	2	0	0	0	0	1	75
MN	0	0	0	0	0	0	78
AG	48	2	0	0	0	0	28
B	13	6	0	0	0	0	59
BA	1	0	0	0	0	2	75
CO	24	10	0	0	0	0	44
CU	4	4	0	0	0	0	70
MO	57	2	0	0	0	0	19
PB	16	4	0	0	0	0	58
SB	52	1	0	0	0	0	25
V	0	0	0	0	0	0	78

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE

ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS
AU	0.016357	9.54	36 NOT DETECTED, LESS THAN, OR TRACE VALUES. 42 REPORTED VALUES.
HG	********	******	1 GREATER THAN VALUES. NO COMPUTATIONS.
MN	213.138010	3.04	78 SAMPLES AND 78 ANALYTICAL VALUES.
AG	0.259174	3.21	50 NOT DETECTED, LESS THAN, OR TRACE VALUES. 28 REPORTED VALUES.
B	25.751872	4.05	19 NOT DETECTED, LESS THAN, OR TRACE VALUES. 59 REPORTED VALUES.
BA	********	******	2 GREATER THAN VALUES. NO COMPUTATIONS.
CO	4.238927	2.31	34 NOT DETECTED, LESS THAN, OR TRACE VALUES. 44 REPORTED VALUES.
CU	********	******	1 VALUES LESS THAN SPECIFIED LIMIT OF DETECTION. NO COMPUTATIONS.
MO	1.200636	5.66	59 NOT DETECTED, LESS THAN, OR TRACE VALUES. 19 REPORTED VALUES.
PB	********	******	1 VALUES LESS THAN SPECIFIED LIMIT OF DETECTION. NO COMPUTATIONS.
SB	********	******	2 VALUES LESS THAN SPECIFIED LIMIT OF DETECTION. NO COMPUTATIONS.
V	149.090948	2.92	78 SAMPLES AND 78 ANALYTICAL VALUES.

TITLE
ROBERTS MOUNTAINS FORMATION

FREQUENCY TABLE FOR COLUMN 1 (AU)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	17	17	21.79	53.85
2.6E-02 -	3.8E-02	0	17	0.00	32.05
3.8E-02 -	5.6E-02	6	23	7.69	32.05
5.6E-02 -	8.3E-02	4	27	5.13	24.36
8.3E-02 -	1.2E-01	4	31	5.13	19.23
1.2E-01 -	1.8E-01	1	32	1.28	14.10
1.8E-01 -	2.6E-01	2	34	2.56	12.82
2.6E-01 -	3.8E-01	2	36	2.56	10.26
3.8E-01 -	5.6E-01	1	37	1.28	7.69
5.6E-01 -	8.3E-01	2	39	2.56	6.41
8.3E-01 -	1.2E+00	1	40	1.28	3.85
1.2E+00 -	1.8E+00	1	41	1.28	2.56
1.8E+00 -	2.6E+00	0	41	0.00	1.28
2.6E+00 -	3.8E+00	0	41	0.00	1.28
3.8E+00 -	5.6E+00	0	41	0.00	1.28
5.6E+00 -	8.3E+00	0	41	0.00	1.28
8.3E+00 -	1.2E+01	0	41	0.00	1.28
1.2E+01 -	1.8E+01	0	41	0.00	1.28
1.8E+01 -	2.6E+01	0	41	0.00	1.28
2.6E+01 -	3.8E+01	0	41	0.00	1.28
3.8E+01 -	5.6E+01	0	41	0.00	1.28
5.6E+01 -	8.3E+01	0	41	0.00	1.28
8.3E+01 -	1.2E+02	1	42	1.28	1.28

HISTOGRAM FOR COLUMN 1 (AU)

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

N	L	H	B	T	G	ANALYTICAL VALUES
19	17	0	0	0	0	42
24.36	21.79			0.00	0.00	

MAXIMUM = 1.18000E+02
MINIMUM = 2.00000E-02
GEOMETRIC MEAN = 7.30880E-02
GEOMETRIC DEVIATION = 5.60374E+00

TITLE
ROBERTS MOUNTAINS FORMATION

FREQUENCY TABLE FOR COLUMN 2 (HG)

LIMITS LOWER - UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 - 2.6E-02	1	1	1.28	97.44
2.6E-02 - 3.8E-02	1	2	1.28	96.15
3.8E-02 - 5.6E-02	8	10	10.26	94.87
5.6E-02 - 8.3E-02	7	17	8.97	84.62
8.3E-02 - 1.2E-01	3	20	3.85	75.64
1.2E-01 - 1.8E-01	3	23	3.85	71.79
1.8E-01 - 2.6E-01	7	30	8.97	67.95
2.6E-01 - 3.8E-01	5	35	6.41	58.97
3.8E-01 - 5.6E-01	8	43	10.26	52.56
5.6E-01 - 8.3E-01	5	48	6.41	42.31
8.3E-01 - 1.2E+00	8	56	10.26	35.90
1.2E+00 - 1.8E+00	3	59	3.85	25.64
1.8E+00 - 2.6E+00	4	63	5.13	21.79
2.6E+00 - 3.8E+00	8	71	10.26	16.67
3.8E+00 - 5.6E+00	1	72	1.28	6.41
5.6E+00 - 8.3E+00	2	74	2.56	5.13
8.3E+00 - 1.2E+01	1	75	1.28	2.56

HISTOGRAM FOR COLUMN 2 (HG)

```
2.0E-02 X
3.0E-02 X
5.0E-02 XXXXXXXXX
7.0E-02 XXXXXXXX
1.0E-01 XXXX
1.5E-01 XXXX
2.0E-01 XXXXXXXX
3.0E-01 XXXXX
5.0E-01 XXXXXXXXX
7.0E-01 XXXXX
1.0E+00 XXXXXXXXX
1.5E+00 XXXX
2.0E+00 XXXX
3.0E+00 XXXXXXXXX
5.0E+00 X
7.0E+00 XX
1.0E+01 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
2	0	0	0	0	1	75
2.56	0.00			0.00	1.28	

MAXIMUM = 9.00000E+00
MINIMUM = 2.00000E-02
GEOMETRIC MEAN = 4.11021E-01
GEOMETRIC DEVIATION = 4.78549E+00

TITLE
ROBERTS MOUNTAINS FORMATION

FREQUENCY TABLE FOR COLUMN 7 (MN)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	0	0	0.00	100.00
1.2E+01 -	1.8E+01	0	0	0.00	100.00
1.8E+01 -	2.6E+01	3	3	3.85	100.00
2.6E+01 -	3.8E+01	2	5	2.56	96.15
3.8E+01 -	5.6E+01	4	9	5.13	93.59
5.6E+01 -	8.3E+01	4	13	5.13	88.46
8.3E+01 -	1.2E+02	5	18	6.41	83.33
1.2E+02 -	1.8E+02	6	24	7.69	76.92
1.8E+02 -	2.6E+02	28	52	35.90	69.23
2.6E+02 -	3.8E+02	11	63	14.10	33.33
3.8E+02 -	5.6E+02	5	68	6.41	19.23
5.6E+02 -	8.3E+02	1	69	1.28	12.82
8.3E+02 -	1.2E+03	4	73	5.13	11.54
1.2E+03 -	1.8E+03	1	74	1.28	6.41
1.8E+03 -	2.6E+03	0	74	0.00	5.13
2.6E+03 -	3.8E+03	2	76	2.56	5.13
3.8E+03 -	5.6E+03	2	78	2.56	2.56

HISTOGRAM FOR COLUMN 7 (MN)

```
2.0E+01 XXXX
3.0E+01 XXX
5.0E+01 XXXXX
7.0E+01 XXXXX
1.0E+02 XXXXXX
1.5E+02 XXXXXXXX
2.0E+02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3.0E+02 XXXXXXXXXXXXX
5.0E+02 XXXXXX
7.0E+02 X
1.0E+03 XXXXX
1.5E+03 X
2.0E+03
3.0E+03 XXX
5.0E+03 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	78
0.00	0.00			0.00	0.00	

MAXIMUM = 5.00000E+03
MINIMUM = 2.00000E+01
GEOMETRIC MEAN = 2.13138E+02
GEOMETRIC DEVIATION = 3.03963E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
ROBERTS MOUNTAINS FORMATION

FREQUENCY TABLE FOR COLUMN 8 (AG)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E-01 -	5.6E-01	8	8	10.26	35.90
5.6E-01 -	8.3E-01	7	15	8.97	25.64
8.3E-01 -	1.2E+00	5	20	6.41	16.67
1.2E+00 -	1.8E+00	3	23	3.85	10.26
1.8E+00 -	2.6E+00	4	27	5.13	6.41
2.6E+00 -	3.8E+00	1	28	1.28	1.28

HISTOGRAM FOR COLUMN 8 (AG)

```
5.0E-01 XXXXXXXXX
7.0E-01 XXXXXXXX
1.0E+00 XXXXX
1.5E+00 XXX
2.0E+00 XXXX
3.0E+00 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
48	2	0	0	0	0	28
61.54	2.56			0.00	0.00	

MAXIMUM = 3.00000E+00
MINIMUM = 5.00000E-01
GEOMETRIC MEAN = 8.99865E-01
GEOMETRIC DEVIATION = 1.72606E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
ROBERTS MOUNTAINS FORMATION

FREQUENCY TABLE FOR COLUMN 10 (B)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	7	7	8.97	75.64
1.2E+01 -	1.8E+01	3	10	3.85	66.67
1.8E+01 -	2.6E+01	6	16	7.69	62.82
2.6E+01 -	3.8E+01	5	21	6.41	55.13
3.8E+01 -	5.6E+01	11	32	14.10	48.72
5.6E+01 -	8.3E+01	9	41	11.54	34.62
8.3E+01 -	1.2E+02	12	53	15.38	23.08
1.2E+02 -	1.8E+02	2	55	2.56	7.69
1.8E+02 -	2.6E+02	2	57	2.56	5.13
2.6E+02 -	3.8E+02	1	58	1.28	2.56
3.8E+02 -	5.6E+02	1	59	1.28	1.28

HISTOGRAM FOR COLUMN 10 (B)

```
1.0E+01 XXXXXXXXX
1.5E+01 XXXX
2.0E+01 XXXXXXXX
3.0E+01 XXXXXX
5.0E+01 XXXXXXXXXXXXX
7.0E+01 XXXXXXXXXXX
1.0E+02 XXXXXXXXXXXXXXX
1.5E+02 XXX
2.0E+02 XXX
3.0E+02 X
5.0E+02 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
13	6	0	0	0	0	59
16.67	7.69			0.00	0.00	

MAXIMUM = 5.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 4.79096E+01
GEOMETRIC DEVIATION = 2.53698E+00

TITLE
ROBERTS MOUNTAINS FORMATION

FREQUENCY TABLE FOR COLUMN 11 (BA)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	1	1	1.28	98.72
2.6E+01 -	3.8E+01	0	1	0.00	97.44
3.8E+01 -	5.6E+01	2	3	2.56	97.44
5.6E+01 -	8.3E+01	4	7	5.13	94.87
8.3E+01 -	1.2E+02	9	16	11.54	89.74
1.2E+02 -	1.8E+02	13	29	16.67	78.21
1.8E+02 -	2.6E+02	10	39	12.82	61.54
2.6E+02 -	3.8E+02	18	57	23.08	48.72
3.8E+02 -	5.6E+02	5	62	6.41	25.64
5.6E+02 -	8.3E+02	5	67	6.41	19.23
8.3E+02 -	1.2E+03	5	72	6.41	12.82
1.2E+03 -	1.8E+03	2	74	2.56	6.41
1.8E+03 -	2.6E+03	1	75	1.28	3.85

HISTOGRAM FOR COLUMN 11 (BA)

```
2.0E+01 X
3.0E+01
5.0E+01 XXX
7.0E+01 XXXXX
1.0E+02 XXXXXXXXXXX
1.5E+02 XXXXXXXXXXXXXXXXX
2.0E+02 XXXXXXXXXXXX
3.0E+02 XXXXXXXXXXXXXXXXXXXXXXX
5.0E+02 XXXXXX
7.0E+02 XXXXXX
1.0E+03 XXXXXX
1.5E+03 XXX
2.0E+03 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	0	0	0	0	2	75
1.28	0.00			0.00	2.56	

MAXIMUM = 2.00000E+03
MINIMUM = 2.00000E+01
GEOMETRIC MEAN = 2.38712E+02
GEOMETRIC DEVIATION = 2.42343E+00

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TITLE
ROBERTS MOUNTAINS FORMATION

FREQUENCY TABLE FOR COLUMN 15 (CO)

LIMITS LOWER -	UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	23	23	29.49	56.41
5.6E+00 -	8.3E+00	6	29	7.69	26.92
8.3E+00 -	1.2E+01	9	38	11.54	19.23
1.2E+01 -	1.8E+01	2	40	2.56	7.69
1.8E+01 -	2.6E+01	1	41	1.28	5.13
2.6E+01 -	3.8E+01	2	43	2.56	3.85
3.8E+01 -	5.6E+01	1	44	1.28	1.28

HISTOGRAM FOR COLUMN 15 (CO)

```
5.0E+00 XXXXXXXXXXXXXXXXXXXXXXXXXXX
7.0E+00 XXXXXXXX
1.0E+01 XXXXXXXXXXX
1.5E+01 XXX
2.0E+01 X
3.0E+01 XXX
5.0E+01 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
24	10	0	0	0	0	44
30.77	12.82			0.00	0.00	

MAXIMUM = 5.00000E+01
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 7.48065E+00
GEOMETRIC DEVIATION = 1.76644E+00

TITLE
ROBERTS MOUNTAINS FORMATION

FREQUENCY TABLE FOR COLUMN 17 (CU)

LIMITS LOWER - UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 - 5.6E+00	11	11	14.10	89.74
5.6E+00 - 8.3E+00	5	16	6.41	75.64
8.3E+00 - 1.2E+01	20	36	25.64	69.23
1.2E+01 - 1.8E+01	5	41	6.41	43.59
1.8E+01 - 2.6E+01	10	51	12.82	37.18
2.6E+01 - 3.8E+01	7	58	8.97	24.36
3.8E+01 - 5.6E+01	3	61	3.85	15.38
5.6E+01 - 8.3E+01	6	67	7.69	11.54
8.3E+01 - 1.2E+02	1	68	1.28	3.85
1.2E+02 - 1.8E+02	1	69	1.28	2.56

HISTOGRAM FOR COLUMN 17 (CU)

```
5.0E+00 XXXXXXXXXXXXX
7.0E+00 XXXXXX
1.0E+01 XXXXXXXXXXXXXXXXXXXXXXXXX
1.5E+01 XXXXXX
2.0E+01 XXXXXXXXXXXXX
3.0E+01 XXXXXXXXX
5.0E+01 XXXX
7.0E+01 XXXXXXXX
1.0E+02 X
1.5E+02 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
4	4	0	0	0	0	70
5.13	5.13			0.00	0.00	

MAXIMUM = 1.50000E+02
MINIMUM = 1.00000E+00
GEOMETRIC MEAN = 1.45922E+01
GEOMETRIC DEVIATION = 2.50980E+00

TITLE
ROBERTS MOUNTAINS FORMATION

FREQUENCY TABLE FOR COLUMN 19 (MO)

LIMITS LOWER - UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 - 5.6E+00	3	3	3.85	24.36
5.6E+00 - 8.3E+00	2	5	2.56	20.51
8.3E+00 - 1.2E+01	6	11	7.69	17.95
1.2E+01 - 1.8E+01	4	15	5.13	10.26
1.8E+01 - 2.6E+01	1	16	1.28	5.13
2.6E+01 - 3.8E+01	2	18	2.56	3.85
3.8E+01 - 5.6E+01	1	19	1.28	1.28

HISTOGRAM FOR COLUMN 19 (MO)

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

N	L	H	B	T	G	ANALYTICAL VALUES
57	2	0	0	0	0	19
73.08	2.56			0.00	0.00	

MAXIMUM = 5.00000E+01
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 1.19149E+01
GEOMETRIC DEVIATION = 1.88675E+00

TITLE
ROBERTS MOUNTAINS FORMATION

FREQUENCY TABLE FOR COLUMN 22 (PB)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	13	13	16.67	74.36
1.2E+01 -	1.8E+01	10	23	12.82	57.69
1.8E+01 -	2.6E+01	16	39	20.51	44.87
2.6E+01 -	3.8E+01	5	44	6.41	24.36
3.8E+01 -	5.6E+01	3	47	3.85	17.95
5.6E+01 -	8.3E+01	2	49	2.56	14.10
8.3E+01 -	1.2E+02	3	52	3.85	11.54
1.2E+02 -	1.8E+02	1	53	1.28	7.69
1.8E+02 -	2.6E+02	2	55	2.56	6.41
2.6E+02 -	3.8E+02	0	55	0.00	3.85
3.8E+02 -	5.6E+02	0	55	0.00	3.85
5.6E+02 -	8.3E+02	0	55	0.00	3.85
8.3E+02 -	1.2E+03	0	55	0.00	3.85
1.2E+03 -	1.8E+03	1	56	1.28	3.85
1.8E+03 -	2.6E+03	0	56	0.00	2.56
2.6E+03 -	3.8E+03	1	57	1.28	2.56

HISTOGRAM FOR COLUMN 22 (PB)

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

N	L	H	B	T	G	ANALYTICAL VALUES
16	4	0	0	0	0	58
20.51	5.13			0.00	0.00	

MAXIMUM = 3.00000E+03
MINIMUM = 1.00000E+00
GEOMETRIC MEAN = 2.51004E+01
GEOMETRIC DEVIATION = 3.40858E+00

TITLE
ROBERTS MOUNTAINS FORMATION

FREQUENCY TABLE FOR COLUMN 23 (SB)

LIMITS LOWER -	UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+01 -	1.2E+02	6	6	7.69	32.05
1.2E+02 -	1.8E+02	5	11	6.41	24.36
1.8E+02 -	2.6E+02	4	15	5.13	17.95
2.6E+02 -	3.8E+02	4	19	5.13	12.82
3.8E+02 -	5.6E+02	2	21	2.56	7.69
5.6E+02 -	8.3E+02	1	22	1.28	5.13
8.3E+02 -	1.2E+03	1	23	1.28	3.85

HISTOGRAM FOR COLUMN 23 (SB)

```
1.0E+02 XXXXXXX
1.5E+02 XXXXX
2.0E+02 XXXX
3.0E+02 XXXX
5.0E+02 XX
7.0E+02 X
1.0E+03 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
52	1	0	0	0	0	25
66.67	1.28			0.00	0.00	

MAXIMUM = 1.00000E+03
MINIMUM = 7.00000E+01
GEOMETRIC MEAN = 1.89257E+02
GEOMETRIC DEVIATION = 2.02340E+00

TITLE
ROBERTS MOUNTAINS FORMATION

FREQUENCY TABLE FOR COLUMN 27 (V)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	2	2	2.56	100.00
1.2E+01 -	1.8E+01	2	4	2.56	97.44
1.8E+01 -	2.6E+01	2	6	2.56	94.87
2.6E+01 -	3.8E+01	1	7	1.28	92.31
3.8E+01 -	5.6E+01	3	10	3.85	91.03
5.6E+01 -	8.3E+01	8	18	10.26	87.18
8.3E+01 -	1.2E+02	15	33	19.23	76.92
1.2E+02 -	1.8E+02	14	47	17.95	57.69
1.8E+02 -	2.6E+02	7	54	8.97	39.74
2.6E+02 -	3.8E+02	10	64	12.82	30.77
3.8E+02 -	5.6E+02	6	70	7.69	17.95
5.6E+02 -	8.3E+02	5	75	6.41	10.26
8.3E+02 -	1.2E+03	1	76	1.28	3.85
1.2E+03 -	1.8E+03	1	77	1.28	2.56
1.8E+03 -	2.6E+03	1	78	1.28	1.28

HISTOGRAM FOR COLUMN 27 (V)

```
1.0E+01 XXX
1.5E+01 XXX
2.0E+01 XXX
3.0E+01 X
5.0E+01 XXXX
7.0E+01 XXXXXXXXXX
1.0E+02 XXXXXXXXXXXXXXXXXX
1.5E+02 XXXXXXXXXXXXXXXXX
2.0E+02 XXXXXXXX
3.0E+02 XXXXXXXXXXXX
5.0E+02 XXXXXXX
7.0E+02 XXXXXX
1.0E+03 X
1.5E+03 X
2.0E+03 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	78
0.00	0.00			0.00	0.00	

MAXIMUM = 2.00000E+03
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 1.49091E+02
GEOMETRIC DEVIATION = 2.91734E+00

TITLE
JASPEROID

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
AU	30	23	0	0	0	0	55
HG	0	0	0	0	0	5	103
MN	2	2	0	0	0	1	103
AG	71	14	0	0	0	0	23
B	10	6	0	0	0	0	92
BA	0	0	0	0	0	6	102
CO	65	10	0	0	0	0	33
CU	0	10	0	0	0	1	97
MO	68	4	0	0	0	0	36
PB	29	12	0	0	0	0	67
SB	44	5	0	0	0	0	59
V	0	0	0	0	0	0	108

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TITLE

ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS
AU	0.017853	12.51	53 NOT DETECTED, LESS THAN, OR TRACE VALUES. 55 REPORTED VALUES.
HG	********	******	5 GREATER THAN VALUES. NO COMPUTATIONS.
MN	********	******	1 GREATER THAN VALUES. NO COMPUTATIONS.
AG	********	******	1 VALUES LESS THAN SPECIFIED LIMIT OF DETECTION. NO COMPUTATIONS.
B	30.848380	2.88	16 NOT DETECTED, LESS THAN, OR TRACE VALUES. 92 REPORTED VALUES.
BA	********	******	6 GREATER THAN VALUES. NO COMPUTATIONS.
CO	1.680781	4.47	75 NOT DETECTED, LESS THAN, OR TRACE VALUES. 33 REPORTED VALUES.
CU	********	******	1 GREATER THAN VALUES. NO COMPUTATIONS.
MO	1.946556	5.38	72 NOT DETECTED, LESS THAN, OR TRACE VALUES. 36 REPORTED VALUES.
PB	9.486199	3.29	41 NOT DETECTED, LESS THAN, OR TRACE VALUES. 67 REPORTED VALUES.
SB	89.854957	2.63	49 NOT DETECTED, LESS THAN, OR TRACE VALUES. 59 REPORTED VALUES.
V	164.111145	2.86	108 SAMPLES AND 108 ANALYTICAL VALUES.

TITLE
JASPEROID

FREQUENCY TABLE FOR COLUMN 1 (AU)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	11	11	10.19	50.93
2.6E-02 -	3.8E-02	0	11	0.00	40.74
3.8E-02 -	5.6E-02	10	21	9.26	40.74
5.6E-02 -	8.3E-02	6	27	5.56	31.48
8.3E-02 -	1.2E-01	5	32	4.63	25.93
1.2E-01 -	1.8E-01	2	34	1.85	21.30
1.8E-01 -	2.6E-01	4	38	3.70	19.44
2.6E-01 -	3.8E-01	2	40	1.85	15.74
3.8E-01 -	5.6E-01	5	45	4.63	13.89
5.6E-01 -	8.3E-01	2	47	1.85	9.26
8.3E-01 -	1.2E+00	3	50	2.78	7.41
1.2E+00 -	1.8E+00	2	52	1.85	4.63
1.8E+00 -	2.6E+00	2	54	1.85	2.78
2.6E+00 -	3.8E+00	0	54	0.00	0.93
3.8E+00 -	5.6E+00	0	54	0.00	0.93
5.6E+00 -	8.3E+00	0	54	0.00	0.93
8.3E+00 -	1.2E+01	0	54	0.00	0.93
1.2E+01 -	1.8E+01	0	54	0.00	0.93
1.8E+01 -	2.6E+01	0	54	0.00	0.93
2.6E+01 -	3.8E+01	1	55	0.93	0.93

HISTOGRAM FOR COLUMN 1 (AU)

```
2.0E-02 XXXXXXXXX
3.0E-02
5.0E-02 XXXXXXXXX
7.0E-02 XXXXXX
1.0E-01 XXXXX
1.5E-01 XX
2.0E-01 XXXX
3.0E-01 XX
5.0E-01 XXXXX
7.0E-01 XX
1.0E+00 XXX
1.5E+00 XX
2.0E+00 XX
3.0E+00
5.0E+00
7.0E+00
1.0E+01
1.5E+01
2.0E+01
3.0E+01 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
30	23	0	0	0	0	55
27.78	21.30			0.00	0.00	

MAXIMUM = 3.20000E+01
MINIMUM = 2.00000E-02
GEOMETRIC MEAN = 1.24818E-01
GEOMETRIC DEVIATION = 5.00254E+00

TITLE
JASPEROID

FREQUENCY TABLE FOR COLUMN 2 (HG)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	0	0	0.00	100.00
2.6E-02 -	3.8E-02	0	0	0.00	100.00
3.8E-02 -	5.6E-02	1	1	0.93	100.00
5.6E-02 -	8.3E-02	0	1	0.00	99.07
8.3E-02 -	1.2E-01	6	7	5.56	99.07
1.2E-01 -	1.8E-01	0	7	0.00	93.52
1.8E-01 -	2.6E-01	13	20	12.04	93.52
2.6E-01 -	3.8E-01	7	27	6.48	81.48
3.8E-01 -	5.6E-01	6	33	5.56	75.00
5.6E-01 -	8.3E-01	14	47	12.96	69.44
8.3E-01 -	1.2E+00	13	60	12.04	56.48
1.2E+00 -	1.8E+00	12	72	11.11	44.44
1.8E+00 -	2.6E+00	14	86	12.96	33.33
2.6E+00 -	3.8E+00	4	90	3.70	20.37
3.8E+00 -	5.6E+00	4	94	3.70	16.67
5.6E+00 -	8.3E+00	5	99	4.63	12.96
8.3E+00 -	1.2E+01	4	103	3.70	8.33

HISTOGRAM FOR COLUMN 2 (HG)

```
       5.0E-02 X
       7.0E-02
       1.0E-01 XXXXXX
       1.5E-01
       2.0E-01 XXXXXXXXXXX
       3.0E-01 XXXXXX
       5.0E-01 XXXXXX
       7.0E-01 XXXXXXXXXXXX
       1.0E+00 XXXXXXXXXXX
       1.5E+00 XXXXXXXXXX
       2.0E+00 XXXXXXXXXXXX
       3.0E+00 XXXX
       5.0E+00 XXXX
       7.0E+00 XXXXX
       1.0E+01 XXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	5	103
0.00	0.00			0.00	4.63	

MAXIMUM = 1.00000E+01
MINIMUM = 4.00000E-02
GEOMETRIC MEAN = 9.07547E-01
GEOMETRIC DEVIATION = 3.36693E+00

TITLE
JASPEROID

FREQUENCY TABLE FOR COLUMN 7 (MN)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	5	5	4.63	96.30
1.2E+01 -	1.8E+01	1	6	0.93	91.67
1.8E+01 -	2.6E+01	15	21	13.89	90.74
2.6E+01 -	3.8E+01	7	28	6.48	76.85
3.8E+01 -	5.6E+01	16	44	14.81	70.37
5.6E+01 -	8.3E+01	10	54	9.26	55.56
8.3E+01 -	1.2E+02	15	69	13.89	46.30
1.2E+02 -	1.8E+02	4	73	3.70	32.41
1.8E+02 -	2.6E+02	16	89	14.81	28.70
2.6E+02 -	3.8E+02	9	98	8.33	13.89
3.8E+02 -	5.6E+02	1	99	0.93	5.56
5.6E+02 -	8.3E+02	2	101	1.85	4.63
8.3E+02 -	1.2E+03	2	103	1.85	2.78

HISTOGRAM FOR COLUMN 7 (MN)

```
       1.0E+01 XXXXX
       1.5E+01 X
       2.0E+01 XXXXXXXXXXXXX
       3.0E+01 XXXXXX
       5.0E+01 XXXXXXXXXXXXXXX
       7.0E+01 XXXXXXXXX
       1.0E+02 XXXXXXXXXXXXX
       1.5E+02 XXXX
       2.0E+02 XXXXXXXXXXXXXXX
       3.0E+02 XXXXXXXX
       5.0E+02 X
       7.0E+02 XX
       1.0E+03 XX
```

N	L	H	B	T	G	ANALYTICAL VALUES
2	2	0	0	0	1	103
1.85	1.85			0.00	0.93	

MAXIMUM = 1.00000E+03
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 7.62488E+01
GEOMETRIC DEVIATION = 2.96469E+00

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TITLE
JASPEROID

FREQUENCY TABLE FOR COLUMN 8 (AG)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E-01 -	5.6E-01	13	13	12.04	21.30
5.6E-01 -	8.3E-01	2	15	1.85	9.26
8.3E-01 -	1.2E+00	1	16	0.93	7.41
1.2E+00 -	1.8E+00	2	18	1.85	6.48
1.8E+00 -	2.6E+00	0	18	0.00	4.63
2.6E+00 -	3.8E+00	0	18	0.00	4.63
3.8E+00 -	5.6E+00	1	19	0.93	4.63
5.6E+00 -	8.3E+00	0	19	0.00	3.70
8.3E+00 -	1.2E+01	2	21	1.85	3.70
1.2E+01 -	1.8E+01	0	21	0.00	1.85
1.8E+01 -	2.6E+01	0	21	0.00	1.85
2.6E+01 -	3.8E+01	0	21	0.00	1.85
3.8E+01 -	5.6E+01	0	21	0.00	1.85
5.6E+01 -	8.3E+01	0	21	0.00	1.85
8.3E+01 -	1.2E+02	0	21	0.00	1.85
1.2E+02 -	1.8E+02	0	21	0.00	1.85
1.8E+02 -	2.6E+02	0	21	0.00	1.85
2.6E+02 -	3.8E+02	0	21	0.00	1.85
3.8E+02 -	5.6E+02	1	22	0.93	1.85

HISTOGRAM FOR COLUMN 8 (AG)

```
5.0E-01 XXXXXXXXXXX
7.0E-01 XX
1.0E+00 X
1.5E+00 XX
2.0E+00
3.0E+00
5.0E+00 X
7.0E+00
1.0E+01 XX
1.5E+01
2.0E+01
3.0E+01
5.0E+01
7.0E+01
1.0E+02
1.5E+02
2.0E+02
3.0E+02
5.0E+02 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
71	14	0	0	0	0	23
65.74	12.96			0.00	0.00	

MAXIMUM = 5.00000E+02
MINIMUM = 1.00000E-01
GEOMETRIC MEAN = 1.05417E+00
GEOMETRIC DEVIATION = 5.49610E+00

TITLE
JASPEROID

FREQUENCY TABLE FOR COLUMN 10 (B)

LIMITS LOWER -	UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	8	8	7.41	85.19
1.2E+01 -	1.8E+01	2	10	1.85	77.78
1.8E+01 -	2.6E+01	18	28	16.67	75.93
2.6E+01 -	3.8E+01	9	37	8.33	59.26
3.8E+01 -	5.6E+01	20	57	18.52	50.93
5.6E+01 -	8.3E+01	16	73	14.81	32.41
8.3E+01 -	1.2E+02	14	87	12.96	17.59
1.2E+02 -	1.8E+02	3	90	2.78	4.63
1.8E+02 -	2.6E+02	2	92	1.85	1.85

HISTOGRAM FOR COLUMN 10 (B)

```
1.0E+01 XXXXXXX
1.5E+01 XX
2.0E+01 XXXXXXXXXXXXXXXX
3.0E+01 XXXXXXXX
5.0E+01 XXXXXXXXXXXXXXXXXX
7.0E+01 XXXXXXXXXXXXXX
1.0E+02 XXXXXXXXXXXX
1.5E+02 XXX
2.0E+02 XX
```

N	L	H	B	T	G	ANALYTICAL VALUES
10	6	0	0	0	0	92
9.26	5.56			0.00	0.00	

MAXIMUM = 2.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 4.23772E+01
GEOMETRIC DEVIATION = 2.16921E+00

TITLE
JASPEROID

FREQUENCY TABLE FOR COLUMN 11 (BA)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	0	0	0.00	100.00
2.6E+01 -	3.8E+01	0	0	0.00	100.00
3.8E+01 -	5.6E+01	0	0	0.00	100.00
5.6E+01 -	8.3E+01	1	1	0.93	100.00
8.3E+01 -	1.2E+02	12	13	11.11	99.07
1.2E+02 -	1.8E+02	11	24	10.19	87.96
1.8E+02 -	2.6E+02	18	42	16.67	77.78
2.6E+02 -	3.8E+02	21	63	19.44	61.11
3.8E+02 -	5.6E+02	11	74	10.19	41.67
5.6E+02 -	8.3E+02	7	81	6.48	31.48
8.3E+02 -	1.2E+03	7	88	6.48	25.00
1.2E+03 -	1.8E+03	7	95	6.48	18.52
1.8E+03 -	2.6E+03	3	98	2.78	12.04
2.6E+03 -	3.8E+03	2	100	1.85	9.26
3.8E+03 -	5.6E+03	2	102	1.85	7.41

HISTOGRAM FOR COLUMN 11 (BA)

```
7.0E+01 X
1.0E+02 XXXXXXXXXX
1.5E+02 XXXXXXXXX
2.0E+02 XXXXXXXXXXXXXXX
3.0E+02 XXXXXXXXXXXXXXXXX
5.0E+02 XXXXXXXXX
7.0E+02 XXXXXX
1.0E+03 XXXXXX
1.5E+03 XXXXXX
2.0E+03 XXX
3.0E+03 XX
5.0E+03 XX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	6	102
0.00	0.00			0.00	5.56	

MAXIMUM = 5.00000E+03
MINIMUM = 7.00000E+01
GEOMETRIC MEAN = 3.56519E+02
GEOMETRIC DEVIATION = 2.64039E+00

TITLE
JASPEROID

FREQUENCY TABLE FOR COLUMN 15 (CO)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	17	17	15.74	30.56
5.6E+00 -	8.3E+00	4	21	3.70	14.81
8.3E+00 -	1.2E+01	5	26	4.63	11.11
1.2E+01 -	1.8E+01	3	29	2.78	6.48
1.8E+01 -	2.6E+01	2	31	1.85	3.70
2.6E+01 -	3.8E+01	0	31	0.00	1.85
3.8E+01 -	5.6E+01	0	31	0.00	1.85
5.6E+01 -	8.3E+01	0	31	0.00	1.85
8.3E+01 -	1.2E+02	0	31	0.00	1.85
1.2E+02 -	1.8E+02	1	32	0.93	1.85
1.8E+02 -	2.6E+02	0	32	0.00	0.93
2.6E+02 -	3.8E+02	1	33	0.93	0.93

HISTOGRAM FOR COLUMN 15 (CO)

```
5.0E+00 XXXXXXXXXXXXXXX
7.0E+00 XXXX
1.0E+01 XXXXX
1.5E+01 XXX
2.0E+01 XX
3.0E+01
5.0E+01
7.0E+01
1.0E+02
1.5E+02 X
2.0E+02
3.0E+02 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
65	10	0	0	0	0	33
60.19	9.26			0.00	0.00	

MAXIMUM = 3.00000E+02
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 8.72571E+00
GEOMETRIC DEVIATION = 2.56611E+00

TITLE
JASPEROID

FREQUENCY TABLE FOR COLUMN 17 (CU)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	20	20	18.52	90.74
5.6E+00 -	8.3E+00	9	29	8.33	72.22
8.3E+00 -	1.2E+01	17	46	15.74	63.89
1.2E+01 -	1.8E+01	11	57	10.19	48.15
1.8E+01 -	2.6E+01	11	68	10.19	37.96
2.6E+01 -	3.8E+01	6	74	5.56	27.78
3.8E+01 -	5.6E+01	12	86	11.11	22.22
5.6E+01 -	8.3E+01	3	89	2.78	11.11
8.3E+01 -	1.2E+02	5	94	4.63	8.33
1.2E+02 -	1.8E+02	0	94	0.00	3.70
1.8E+02 -	2.6E+02	0	94	0.00	3.70
2.6E+02 -	3.8E+02	1	95	0.93	3.70
3.8E+02 -	5.6E+02	1	96	0.93	2.78
5.6E+02 -	8.3E+02	1	97	0.93	1.85

HISTOGRAM FOR COLUMN 17 (CU)

```
       5.0E+00 XXXXXXXXXXXXXXXXXX
       7.0E+00 XXXXXXXX
       1.0E+01 XXXXXXXXXXXXXXXX
       1.5E+01 XXXXXXXXXX
       2.0E+01 XXXXXXXXXX
       3.0E+01 XXXXXX
       5.0E+01 XXXXXXXXXX
       7.0E+01 XXX
       1.0E+02 XXXXX
       1.5E+02
       2.0E+02
       3.0E+02 X
       5.0E+02 X
       7.0E+02 X
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	10	0	0	0	1	97
0.00	9.26			0.00	0.93	

MAXIMUM = 7.00000E+02
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 1.67147E+01
GEOMETRIC DEVIATION = 2.96445E+00

TITLE
JASPEROID

FREQUENCY TABLE FOR COLUMN 19 (MO)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	5	5	4.63	33.33
5.6E+00 -	8.3E+00	8	13	7.41	28.70
8.3E+00 -	1.2E+01	6	19	5.56	21.30
1.2E+01 -	1.8E+01	6	25	5.56	15.74
1.8E+01 -	2.6E+01	4	29	3.70	10.19
2.6E+01 -	3.8E+01	3	32	2.78	6.48
3.8E+01 -	5.6E+01	3	35	2.78	3.70
5.6E+01 -	8.3E+01	1	36	0.93	0.93

HISTOGRAM FOR COLUMN 19 (MO)

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

N	L	H	B	T	G	ANALYTICAL VALUES
68	4	0	0	0	0	36
62.96	3.70			0.00	0.00	

MAXIMUM = 7.00000E+01
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 1.28247E+01
GEOMETRIC DEVIATION = 2.10048E+00

TITLE
JASPEROID

FREQUENCY TABLE FOR COLUMN 22 (PB)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	34	34	31.48	62.04
1.2E+01 -	1.8E+01	7	41	6.48	30.56
1.8E+01 -	2.6E+01	13	54	12.04	24.07
2.6E+01 -	3.8E+01	4	58	3.70	12.04
3.8E+01 -	5.6E+01	5	63	4.63	8.33
5.6E+01 -	8.3E+01	0	63	0.00	3.70
8.3E+01 -	1.2E+02	0	63	0.00	3.70
1.2E+02 -	1.8E+02	1	64	0.93	3.70
1.8E+02 -	2.6E+02	0	64	0.00	2.78
2.6E+02 -	3.8E+02	2	66	1.85	2.78
3.8E+02 -	5.6E+02	0	66	0.00	0.93
5.6E+02 -	8.3E+02	0	66	0.00	0.93
8.3E+02 -	1.2E+03	0	66	0.00	0.93
1.2E+03 -	1.8E+03	0	66	0.00	0.93
1.8E+03 -	2.6E+03	1	67	0.93	0.93

HISTOGRAM FOR COLUMN 22 (PB)

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

N	L	H	B	T	G	ANALYTICAL VALUES
29	12	0	0	0	0	67
26.85	11.11			0.00	0.00	

MAXIMUM = 2.00000E+03
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 1.79244E+01
GEOMETRIC DEVIATION = 2.61324E+00

TITLE
JASPEROID

FREQUENCY TABLE FOR COLUMN 23 (SB)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+01 -	1.2E+02	22	22	20.37	54.63
1.2E+02 -	1.8E+02	6	28	5.56	34.26
1.8E+02 -	2.6E+02	19	47	17.59	28.70
2.6E+02 -	3.8E+02	5	52	4.63	11.11
3.8E+02 -	5.6E+02	6	58	5.56	6.48
5.6E+02 -	8.3E+02	0	58	0.00	0.93
8.3E+02 -	1.2E+03	0	58	0.00	0.93
1.2E+03 -	1.8E+03	0	58	0.00	0.93
1.8E+03 -	2.6E+03	0	58	0.00	0.93
2.6E+03 -	3.8E+03	1	59	0.93	0.93

HISTOGRAM FOR COLUMN 23 (SB)

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

N	L	H	B	T	G	ANALYTICAL VALUES
44	5	0	0	0	0	59
40.74	4.63			0.00	0.00	

MAXIMUM = 3.00000E+03
MINIMUM = 1.00000E+02
GEOMETRIC MEAN = 1.78403E+02
GEOMETRIC DEVIATION = 1.88963E+00

TITLE
JASPEROID

FREQUENCY TABLE FOR COLUMN 27 (V)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	0	0	0.00	100.00
1.2E+01 -	1.8E+01	0	0	0.00	100.00
1.8E+01 -	2.6E+01	6	6	5.56	100.00
2.6E+01 -	3.8E+01	5	11	4.63	94.44
3.8E+01 -	5.6E+01	9	20	8.33	89.81
5.6E+01 -	8.3E+01	7	27	6.48	81.48
8.3E+01 -	1.2E+02	10	37	9.26	75.00
1.2E+02 -	1.8E+02	15	52	13.89	65.74
1.8E+02 -	2.6E+02	22	74	20.37	51.85
2.6E+02 -	3.8E+02	12	86	11.11	31.48
3.8E+02 -	5.6E+02	10	96	9.26	20.37
5.6E+02 -	8.3E+02	4	100	3.70	11.11
8.3E+02 -	1.2E+03	6	106	5.56	7.41
1.2E+03 -	1.8E+03	1	107	0.93	1.85
1.8E+03 -	2.6E+03	1	108	0.93	0.93

HISTOGRAM FOR COLUMN 27 (V)

```
2.0E+01 XXXXXX
3.0E+01 XXXXX
5.0E+01 XXXXXXXX
7.0E+01 XXXXXX
1.0E+02 XXXXXXXXX
1.5E+02 XXXXXXXXXXXXX
2.0E+02 XXXXXXXXXXXXXXXXXXX
3.0E+02 XXXXXXXXXX
5.0E+02 XXXXXXXXX
7.0E+02 XXXX
1.0E+03 XXXXXX
1.5E+03 X
2.0E+03 X
```

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

MAXIMUM = 2.00000E+03
MINIMUM = 2.00000E+01
GEOMETRIC MEAN = 1.64111E+02
GEOMETRIC DEVIATION = 2.86047E+00

TITLE
SILURIAN & DEVONIAN LIMESTONE

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
AU	7	11	0	0	0	0	10
HG	0	1	0	0	0	0	27
MN	0	0	0	0	0	0	28
B	11	5	0	0	0	0	12
BA	0	0	0	0	0	0	28
CO	12	1	0	0	0	0	15
CU	1	4	0	0	0	0	23
PB	9	6	0	0	0	0	13
V	0	1	0	0	0	0	27

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE

ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS
AU	0.011607	2.76	18 NOT DETECTED, LESS THAN, OR TRACE VALUES. 10 REPORTED VALUES.
HG	0.081622	3.14	1 NOT DETECTED, LESS THAN, OR TRACE VALUES. 27 REPORTED VALUES.
MN	339.478096	2.29	28 SAMPLES AND 28 ANALYTICAL VALUES.
B	5.803218	5.10	16 NOT DETECTED, LESS THAN, OR TRACE VALUES. 12 REPORTED VALUES.
BA	243.540470	4.16	28 SAMPLES AND 28 ANALYTICAL VALUES.
CO	4.426494	2.66	13 NOT DETECTED, LESS THAN, OR TRACE VALUES. 15 REPORTED VALUES.
CU	12.294484	3.65	5 NOT DETECTED, LESS THAN, OR TRACE VALUES. 23 REPORTED VALUES.
PB	7.334610	2.79	15 NOT DETECTED, LESS THAN, OR TRACE VALUES. 13 REPORTED VALUES.
V	76.626170	3.20	1 NOT DETECTED, LESS THAN, OR TRACE VALUES. 27 REPORTED VALUES.

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
SILURIAN & DEVONIAN LIMESTONE

FREQUENCY TABLE FOR COLUMN 1 (AU)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	6	6	21.43	35.71
2.6E-02 -	3.8E-02	0	6	0.00	14.29
3.8E-02 -	5.6E-02	2	8	7.14	14.29
5.6E-02 -	8.3E-02	0	8	0.00	7.14
8.3E-02 -	1.2E-01	2	10	7.14	7.14

HISTOGRAM FOR COLUMN 1 (AU)

```
2.0E-02 XXXXXXXXXXXXXXXXXXXX
3.0E-02
5.0E-02 XXXXXXX
7.0E-02
1.0E-01 XXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
7	11	0	0	0	0	10
25.00	39.29			0.00	0.00	

MAXIMUM = 1.00000E-01
MINIMUM = 2.00000E-02
GEOMETRIC MEAN = 3.16979E-02
GEOMETRIC DEVIATION = 1.95110E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
SILURIAN & DEVONIAN LIMESTONE

FREQUENCY TABLE FOR COLUMN 2 (HG)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	0	0	0.00	96.43
2.6E-02 -	3.8E-02	7	7	25.00	96.43
3.8E-02 -	5.6E-02	7	14	25.00	71.43
5.6E-02 -	8.3E-02	2	16	7.14	46.43
8.3E-02 -	1.2E-01	1	17	3.57	39.29
1.2E-01 -	1.8E-01	2	19	7.14	35.71
1.8E-01 -	2.6E-01	3	22	10.71	28.57
2.6E-01 -	3.8E-01	3	25	10.71	17.86
3.8E-01 -	5.6E-01	0	25	0.00	7.14
5.6E-01 -	8.3E-01	1	26	3.57	7.14
8.3E-01 -	1.2E+00	1	27	3.57	3.57

HISTOGRAM FOR COLUMN 2 (HG)

```
3.0E-02 XXXXXXXXXXXXXXXXXXXXXXX
5.0E-02 XXXXXXXXXXXXXXXXXXXXXXX
7.0E-02 XXXXXXX
1.0E-01 XXXX
1.5E-01 XXXXXXX
2.0E-01 XXXXXXXXXXX
3.0E-01 XXXXXXXXXXX
5.0E-01
7.0E-01 XXXX
1.0E+00 XXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	1	0	0	0	0	27
0.00	3.57			0.00	0.00	

MAXIMUM = 9.00000E-01
MINIMUM = 3.00000E-02
GEOMETRIC MEAN = 8.80783E-02
GEOMETRIC DEVIATION = 2.97053E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
SILURIAN & DEVONIAN LIMESTONE

FREQUENCY TABLE FOR COLUMN 7 (MN)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	0	0	0.00	100.00
1.2E+01 -	1.8E+01	0	0	0.00	100.00
1.8E+01 -	2.6E+01	0	0	0.00	100.00
2.6E+01 -	3.8E+01	0	0	0.00	100.00
3.8E+01 -	5.6E+01	0	0	0.00	100.00
5.6E+01 -	8.3E+01	0	0	0.00	100.00
8.3E+01 -	1.2E+02	4	4	14.29	100.00
1.2E+02 -	1.8E+02	0	4	0.00	85.71
1.8E+02 -	2.6E+02	7	11	25.00	85.71
2.6E+02 -	3.8E+02	5	16	17.86	60.71
3.8E+02 -	5.6E+02	7	23	25.00	42.86
5.6E+02 -	8.3E+02	0	23	0.00	17.86
8.3E+02 -	1.2E+03	4	27	14.29	17.86
1.2E+03 -	1.8E+03	0	27	0.00	3.57
1.8E+03 -	2.6E+03	0	27	0.00	3.57
2.6E+03 -	3.8E+03	1	28	3.57	3.57

HISTOGRAM FOR COLUMN 7 (MN)

```
1.0E+02 XXXXXXXXXXXXX
1.5E+02
2.0E+02 XXXXXXXXXXXXXXXXXXXXXXXXX
3.0E+02 XXXXXXXXXXXXXXXXX
5.0E+02 XXXXXXXXXXXXXXXXXXXXXXXXX
7.0E+02
1.0E+03 XXXXXXXXXXXXX
1.5E+03
2.0E+03
3.0E+03 XXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	28
0.00	0.00			0.00	0.00	

MAXIMUM = 3.00000E+03
MINIMUM = 1.00000E+02
GEOMETRIC MEAN = 3.39478E+02
GEOMETRIC DEVIATION = 2.28703E+00

TITLE
SILURIAN & DEVONIAN LIMESTONE

FREQUENCY TABLE FOR COLUMN 10 (B)

LIMITS LOWER -	UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	6	6	21.43	42.86
1.2E+01 -	1.8E+01	0	6	0.00	21.43
1.8E+01 -	2.6E+01	1	7	3.57	21.43
2.6E+01 -	3.8E+01	0	7	0.00	17.86
3.8E+01 -	5.6E+01	2	9	7.14	17.86
5.6E+01 -	8.3E+01	0	9	0.00	10.71
8.3E+01 -	1.2E+02	3	12	10.71	10.71

HISTOGRAM FOR COLUMN 10 (B)

```
1.0E+01 XXXXXXXXXXXXXXXXXXXX
1.5E+01
2.0E+01 XXXX
3.0E+01
5.0E+01 XXXXXXX
7.0E+01
1.0E+02 XXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
11	5	0	0	0	0	12
39.29	17.86			0.00	0.00	

MAXIMUM = 1.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 2.46366E+01
GEOMETRIC DEVIATION = 2.81852E+00

TITLE
SILURIAN & DEVONIAN LIMESTONE

FREQUENCY TABLE FOR COLUMN 11 (BA)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	2	2	7.14	100.00
2.6E+01 -	3.8E+01	1	3	3.57	92.86
3.8E+01 -	5.6E+01	1	4	3.57	89.29
5.6E+01 -	8.3E+01	3	7	10.71	85.71
8.3E+01 -	1.2E+02	3	10	10.71	75.00
1.2E+02 -	1.8E+02	1	11	3.57	64.29
1.8E+02 -	2.6E+02	5	16	17.86	60.71
2.6E+02 -	3.8E+02	1	17	3.57	42.86
3.8E+02 -	5.6E+02	3	20	10.71	39.29
5.6E+02 -	8.3E+02	0	20	0.00	28.57
8.3E+02 -	1.2E+03	4	24	14.29	28.57
1.2E+03 -	1.8E+03	1	25	3.57	14.29
1.8E+03 -	2.6E+03	2	27	7.14	10.71
2.6E+03 -	3.8E+03	1	28	3.57	3.57

HISTOGRAM FOR COLUMN 11 (BA)

```
2.0E+01 XXXXXXX
3.0E+01 XXXX
5.0E+01 XXXX
7.0E+01 XXXXXXXXXX
1.0E+02 XXXXXXXXXX
1.5E+02 XXXX
2.0E+02 XXXXXXXXXXXXXXXXX
3.0E+02 XXXX
5.0E+02 XXXXXXXXXX
7.0E+02
1.0E+03 XXXXXXXXXXXX
1.5E+03 XXXX
2.0E+03 XXXXXX
3.0E+03 XXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	28
0.00	0.00			0.00	0.00	

MAXIMUM = 3.00000E+03
MINIMUM = 2.00000E+01
GEOMETRIC MEAN = 2.43540E+02
GEOMETRIC DEVIATION = 4.16237E+00

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TITLE
SILURIAN & DEVONIAN LIMESTONE

FREQUENCY TABLE FOR COLUMN 15 (CO)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	5	5	17.86	53.57
5.6E+00 -	8.3E+00	0	5	0.00	35.71
8.3E+00 -	1.2E+01	5	10	17.86	35.71
1.2E+01 -	1.8E+01	3	13	10.71	17.86
1.8E+01 -	2.6E+01	2	15	7.14	7.14

HISTOGRAM FOR COLUMN 15 (CO)

```
5.0E+00 XXXXXXXXXXXXXXXXX
7.0E+00
1.0E+01 XXXXXXXXXXXXXXXXX
1.5E+01 XXXXXXXXXX
2.0E+01 XXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
12	1	0	0	0	0	15
42.86	3.57			0.00	0.00	

MAXIMUM = 2.00000E+01
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 9.44088E+00
GEOMETRIC DEVIATION = 1.68447E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
SILURIAN & DEVONIAN LIMESTONE

FREQUENCY TABLE FOR COLUMN 17 (CU)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	5	5	17.86	82.14
5.6E+00 -	8.3E+00	0	5	0.00	64.29
8.3E+00 -	1.2E+01	2	7	7.14	64.29
1.2E+01 -	1.8E+01	3	10	10.71	57.14
1.8E+01 -	2.6E+01	8	18	28.57	46.43
2.6E+01 -	3.8E+01	0	18	0.00	17.86
3.8E+01 -	5.6E+01	2	20	7.14	17.86
5.6E+01 -	8.3E+01	0	20	0.00	10.71
8.3E+01 -	1.2E+02	2	22	7.14	10.71
1.2E+02 -	1.8E+02	0	22	0.00	3.57
1.8E+02 -	2.6E+02	1	23	3.57	3.57

HISTOGRAM FOR COLUMN 17 (CU)

```
5.0E+00 XXXXXXXXXXXXXXXXX
7.0E+00
1.0E+01 XXXXXXX
1.5E+01 XXXXXXXXXX
2.0E+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
3.0E+01
5.0E+01 XXXXXXX
7.0E+01
1.0E+02 XXXXXXX
1.5E+02
2.0E+02 XXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	4	0	0	0	0	23
3.57	14.29			0.00	0.00	

MAXIMUM = 2.00000E+02
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 1.84730E+01
GEOMETRIC DEVIATION = 2.76986E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
SILURIAN & DEVONIAN LIMESTONE

FREQUENCY TABLE FOR COLUMN 22 (PB)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	5	5	17.86	46.43
1.2E+01 -	1.8E+01	4	9	14.29	28.57
1.8E+01 -	2.6E+01	1	10	3.57	14.29
2.6E+01 -	3.8E+01	0	10	0.00	10.71
3.8E+01 -	5.6E+01	3	13	10.71	10.71

HISTOGRAM FOR COLUMN 22 (PB)

```
1.0E+01 XXXXXXXXXXXXXXXXX
1.5E+01 XXXXXXXXXXXXXX
2.0E+01 XXXX
3.0E+01
5.0E+01 XXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
9	6	0	0	0	0	13
32.14	21.43			0.00	0.00	

MAXIMUM = 5.00000E+01
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 1.73236E+01
GEOMETRIC DEVIATION = 1.90494E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
SILURIAN & DEVONIAN LIMESTONE

FREQUENCY TABLE FOR COLUMN 27 (V)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	1	1	3.57	96.43
1.2E+01 -	1.8E+01	0	1	0.00	92.86
1.8E+01 -	2.6E+01	5	6	17.86	92.86
2.6E+01 -	3.8E+01	1	7	3.57	75.00
3.8E+01 -	5.6E+01	2	9	7.14	71.43
5.6E+01 -	8.3E+01	0	9	0.00	64.29
8.3E+01 -	1.2E+02	8	17	28.57	64.29
1.2E+02 -	1.8E+02	4	21	14.29	35.71
1.8E+02 -	2.6E+02	2	23	7.14	21.43
2.6E+02 -	3.8E+02	2	25	7.14	14.29
3.8E+02 -	5.6E+02	2	27	7.14	7.14

HISTOGRAM FOR COLUMN 27 (V)

```
1.0E+01 XXXX
1.5E+01
2.0E+01 XXXXXXXXXXXXXXXXX
3.0E+01 XXXX
5.0E+01 XXXXXXX
7.0E+01
1.0E+02 XXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.5E+02 XXXXXXXXXXXXX
2.0E+02 XXXXXXX
3.0E+02 XXXXXXX
5.0E+02 XXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	1	0	0	0	0	27
0.00	3.57			0.00	0.00	

MAXIMUM = 5.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 8.45987E+01
GEOMETRIC DEVIATION = 2.88155E+00

TITLE
POPOVICH FORMATION

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
AU	4	15	0	0	0	0	27
HG	0	0	0	0	0	3	43
MN	1	0	0	0	0	0	45
AG	40	0	0	0	0	0	6
B	17	5	0	0	0	0	24
BA	0	1	0	0	0	1	44
CO	28	4	0	0	0	0	14
CU	4	13	0	0	0	0	29
MO	38	2	0	0	0	0	6
PB	26	1	0	0	0	0	19
SB	40	2	0	0	0	0	4
V	1	2	0	0	0	0	43

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE

ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS	
AU	0.019742	5.12	19 NOT DETECTED, LESS THAN, OR TRACE VALUES.	27 REPORTED VALUES.
HG	********	******	3 GREATER THAN VALUES. NO COMPUTATIONS.	
MN	151.125444	3.01	1 NOT DETECTED, LESS THAN, OR TRACE VALUES.	45 REPORTED VALUES.
AG	0.051730	6.04	40 NOT DETECTED, LESS THAN, OR TRACE VALUES.	6 REPORTED VALUES.
B	9.635874	5.98	22 NOT DETECTED, LESS THAN, OR TRACE VALUES.	24 REPORTED VALUES.
BA	********	******	1 GREATER THAN VALUES. NO COMPUTATIONS.	
CO	1.856857	4.06	32 NOT DETECTED, LESS THAN, OR TRACE VALUES.	14 REPORTED VALUES.
CU	6.705895	5.08	17 NOT DETECTED, LESS THAN, OR TRACE VALUES.	29 REPORTED VALUES.
MO	14.476437	3.21	40 NOT DETECTED, LESS THAN, OR TRACE VALUES.	6 REPORTED VALUES.
PB	3.757718	11.49	27 NOT DETECTED, LESS THAN, OR TRACE VALUES.	19 REPORTED VALUES.
SB	344.151707	4.43	42 NOT DETECTED, LESS THAN, OR TRACE VALUES.	4 REPORTED VALUES.
V	54.101144	3.75	3 NOT DETECTED, LESS THAN, OR TRACE VALUES.	43 REPORTED VALUES.

TITLE
POPOVICH FORMATION

FREQUENCY TABLE FOR COLUMN 1 (AU)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	11	11	23.91	58.70
2.6E-02 -	3.8E-02	0	11	0.00	34.78
3.8E-02 -	5.6E-02	6	17	13.04	34.78
5.6E-02 -	8.3E-02	6	23	13.04	21.74
8.3E-02 -	1.2E-01	0	23	0.00	8.70
1.2E-01 -	1.8E-01	0	23	0.00	8.70
1.8E-01 -	2.6E-01	1	24	2.17	8.70
2.6E-01 -	3.8E-01	0	24	0.00	6.52
3.8E-01 -	5.6E-01	0	24	0.00	6.52
5.6E-01 -	8.3E-01	0	24	0.00	6.52
8.3E-01 -	1.2E+00	2	26	4.35	6.52
1.2E+00 -	1.8E+00	1	27	2.17	2.17

HISTOGRAM FOR COLUMN 1 (AU)

```
2.0E-02 XXXXXXXXXXXXXXXXXXXXXX
3.0E-02
5.0E-02 XXXXXXXXXXXX
7.0E-02 XXXXXXXXXXXX
1.0E-01
1.5E-01
2.0E-01 XX
3.0E-01
5.0E-01
7.0E-01
1.0E+00 XXXX
1.5E+00 XX
```

N	L	H	B	T	G	ANALYTICAL VALUES
4	15	0	0	0	0	27
8.70	32.61			0.00	0.00	

MAXIMUM = 1.40000E+00
MINIMUM = 2.00000E-02
GEOMETRIC MEAN = 5.17928E-02
GEOMETRIC DEVIATION = 3.59499E+00

TITLE
POPOVICH FORMATION

FREQUENCY TABLE FOR COLUMN 2 (HG)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	1	1	2.17	100.00
2.6E-02 -	3.8E-02	4	5	8.70	97.83
3.8E-02 -	5.6E-02	7	12	15.22	89.13
5.6E-02 -	8.3E-02	7	19	15.22	73.91
8.3E-02 -	1.2E-01	1	20	2.17	58.70
1.2E-01 -	1.8E-01	3	23	6.52	56.52
1.8E-01 -	2.6E-01	0	23	0.00	50.00
2.6E-01 -	3.8E-01	3	26	6.52	50.00
3.8E-01 -	5.6E-01	4	30	8.70	43.48
5.6E-01 -	8.3E-01	4	34	8.70	34.78
8.3E-01 -	1.2E+00	7	41	15.22	26.09
1.2E+00 -	1.8E+00	1	42	2.17	10.87
1.8E+00 -	2.6E+00	1	43	2.17	8.70

HISTOGRAM FOR COLUMN 2 (HG)

```
2.0E-02 XX
3.0E-02 XXXXXXXXX
5.0E-02 XXXXXXXXXXXXXXX
7.0E-02 XXXXXXXXXXXXXXX
1.0E-01 XX
1.5E-01 XXXXXXX
2.0E-01
3.0E-01 XXXXXXX
5.0E-01 XXXXXXXXX
7.0E-01 XXXXXXXXX
1.0E+00 XXXXXXXXXXXXXXX
1.5E+00 XX
2.0E+00 XX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	3	43
0.00	0.00			0.00	6.52	

MAXIMUM = 1.80000E+00
MINIMUM = 2.00000E-02
GEOMETRIC MEAN = 1.81693E-01
GEOMETRIC DEVIATION = 3.99199E+00

TITLE
POPOVICH FORMATION

FREQUENCY TABLE FOR COLUMN 7 (MN)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	0	0	0.00	97.83
1.2E+01 -	1.8E+01	0	0	0.00	97.83
1.8E+01 -	2.6E+01	4	4	8.70	97.83
2.6E+01 -	3.8E+01	1	5	2.17	89.13
3.8E+01 -	5.6E+01	2	7	4.35	86.96
5.6E+01 -	8.3E+01	0	7	0.00	82.61
8.3E+01 -	1.2E+02	6	13	13.04	82.61
1.2E+02 -	1.8E+02	9	22	19.57	69.57
1.8E+02 -	2.6E+02	10	32	21.74	50.00
2.6E+02 -	3.8E+02	6	38	13.04	28.26
3.8E+02 -	5.6E+02	4	42	8.70	15.22
5.6E+02 -	8.3E+02	1	43	2.17	6.52
8.3E+02 -	1.2E+03	1	44	2.17	4.35
1.2E+03 -	1.8E+03	0	44	0.00	2.17
1.8E+03 -	2.6E+03	1	45	2.17	2.17

HISTOGRAM FOR COLUMN 7 (MN)

```
       2.0E+01 XXXXXXXXX
       3.0E+01 XX
       5.0E+01 XXXX
       7.0E+01
       1.0E+02 XXXXXXXXXXXXX
       1.5E+02 XXXXXXXXXXXXXXXXXXX
       2.0E+02 XXXXXXXXXXXXXXXXXXXXXX
       3.0E+02 XXXXXXXXXXXXX
       5.0E+02 XXXXXXXXX
       7.0E+02 XX
       1.0E+03 XX
       1.5E+03
       2.0E+03 XX
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	0	0	0	0	0	45
2.17	0.00			0.00	0.00	

MAXIMUM = 2.00000E+03
MINIMUM = 2.00000E+01
GEOMETRIC MEAN = 1.62422E+02
GEOMETRIC DEVIATION = 2.72245E+00

TITLE
POPOVICH FORMATION

FREQUENCY TABLE FOR COLUMN 8 (AG)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E-01 -	5.6E-01	1	1	2.17	13.04
5.6E-01 -	8.3E-01	1	2	2.17	10.87
8.3E-01 -	1.2E+00	3	5	6.52	8.70
1.2E+00 -	1.8E+00	0	5	0.00	2.17
1.8E+00 -	2.6E+00	0	5	0.00	2.17
2.6E+00 -	3.8E+00	1	6	2.17	2.17

HISTOGRAM FOR COLUMN 8 (AG)

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

N	L	H	B	T	G	ANALYTICAL VALUES
40	0	0	0	0	0	6
86.96	0.00			0.00	0.00	

MAXIMUM = 3.00000E+00
MINIMUM = 5.00000E-01
GEOMETRIC MEAN = 1.00816E+00
GEOMETRIC DEVIATION = 1.82643E+00

TITLE
POPOVICH FORMATION

FREQUENCY TABLE FOR COLUMN 10 (B)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	4	4	8.70	52.17
1.2E+01 -	1.8E+01	0	4	0.00	43.48
1.8E+01 -	2.6E+01	5	9	10.87	43.48
2.6E+01 -	3.8E+01	4	13	8.70	32.61
3.8E+01 -	5.6E+01	3	16	6.52	23.91
5.6E+01 -	8.3E+01	2	18	4.35	17.39
8.3E+01 -	1.2E+02	4	22	8.70	13.04
1.2E+02 -	1.8E+02	0	22	0.00	4.35
1.8E+02 -	2.6E+02	1	23	2.17	4.35
2.6E+02 -	3.8E+02	0	23	0.00	2.17
3.8E+02 -	5.6E+02	1	24	2.17	2.17

HISTOGRAM FOR COLUMN 10 (B)

```
1.0E+01 XXXXXXXXX
1.5E+01
2.0E+01 XXXXXXXXXX
3.0E+01 XXXXXXXXX
5.0E+01 XXXXXXX
7.0E+01 XXXX
1.0E+02 XXXXXXXXX
1.5E+02
2.0E+02 XX
3.0E+02
5.0E+02 XX
```

N	L	H	B	T	G	ANALYTICAL VALUES
17	5	0	0	0	0	24
36.96	10.87			0.00	0.00	

MAXIMUM = 5.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 3.90569E+01
GEOMETRIC DEVIATION = 2.74845E+00

TITLE
POPOVICH FORMATION

FREQUENCY TABLE FOR COLUMN 11 (BA)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	1	1	2.17	97.83
2.6E+01 -	3.8E+01	0	1	0.00	95.65
3.8E+01 -	5.6E+01	4	5	8.70	95.65
5.6E+01 -	8.3E+01	5	10	10.87	86.96
8.3E+01 -	1.2E+02	4	14	8.70	76.09
1.2E+02 -	1.8E+02	6	20	13.04	67.39
1.8E+02 -	2.6E+02	4	24	8.70	54.35
2.6E+02 -	3.8E+02	6	30	13.04	45.65
3.8E+02 -	5.6E+02	4	34	8.70	32.61
5.6E+02 -	8.3E+02	4	38	8.70	23.91
8.3E+02 -	1.2E+03	2	40	4.35	15.22
1.2E+03 -	1.8E+03	2	42	4.35	10.87
1.8E+03 -	2.6E+03	2	44	4.35	6.52

HISTOGRAM FOR COLUMN 11 (BA)

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

N	L	H	B	T	G	ANALYTICAL VALUES
0	1	0	0	0	1	44
0.00	2.17			0.00	2.17	

MAXIMUM = 2.00000E+03
MINIMUM = 2.00000E+01
GEOMETRIC MEAN = 2.25947E+02
GEOMETRIC DEVIATION = 3.09194E+00

TITLE
POPOVICH FORMATION

FREQUENCY TABLE FOR COLUMN 15 (CO)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	6	6	13.04	30.43
5.6E+00 -	8.3E+00	1	7	2.17	17.39
8.3E+00 -	1.2E+01	4	11	8.70	15.22
1.2E+01 -	1.8E+01	0	11	0.00	6.52
1.8E+01 -	2.6E+01	1	12	2.17	6.52
2.6E+01 -	3.8E+01	1	13	2.17	4.35
3.8E+01 -	5.6E+01	1	14	2.17	2.17

HISTOGRAM FOR COLUMN 15 (CO)

```
5.0E+00 XXXXXXXXXXXX
7.0E+00 XX
1.0E+01 XXXXXXXXX
1.5E+01
2.0E+01 XX
3.0E+01 XX
5.0E+01 XX
```

N	L	H	B	T	G	ANALYTICAL VALUES
28	4	0	0	0	0	14
60.87	8.70			0.00	0.00	

MAXIMUM = 5.00000E+01
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 9.23488E+00
GEOMETRIC DEVIATION = 2.10466E+00

TITLE
POPOVICH FORMATION

FREQUENCY TABLE FOR COLUMN 17 (CU)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	6	6	13.04	63.04
5.6E+00 -	8.3E+00	3	9	6.52	50.00
8.3E+00 -	1.2E+01	4	13	8.70	43.48
1.2E+01 -	1.8E+01	3	16	6.52	34.78
1.8E+01 -	2.6E+01	2	18	4.35	28.26
2.6E+01 -	3.8E+01	2	20	4.35	23.91
3.8E+01 -	5.6E+01	4	24	8.70	19.57
5.6E+01 -	8.3E+01	3	27	6.52	10.87
8.3E+01 -	1.2E+02	1	28	2.17	4.35
1.2E+02 -	1.8E+02	1	29	2.17	2.17

HISTOGRAM FOR COLUMN 17 (CU)

```
5.0E+00 XXXXXXXXXXXX
7.0E+00 XXXXXXX
1.0E+01 XXXXXXXXX
1.5E+01 XXXXXXX
2.0E+01 XXXX
3.0E+01 XXXX
5.0E+01 XXXXXXXXX
7.0E+01 XXXXXXX
1.0E+02 XX
1.5E+02 XX
```

N	L	H	B	T	G	ANALYTICAL VALUES
4	13	0	0	0	0	29
8.70	28.26			0.00	0.00	

MAXIMUM = 1.50000E+02
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 1.78833E+01
GEOMETRIC DEVIATION = 2.89752E+00

TITLE
POPOVICH FORMATION

FREQUENCY TABLE FOR COLUMN 19 (MO)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	2	2	4.35	13.04
5.6E+00 -	8.3E+00	1	3	2.17	8.70
8.3E+00 -	1.2E+01	0	3	0.00	6.52
1.2E+01 -	1.8E+01	1	4	2.17	6.52
1.8E+01 -	2.6E+01	0	4	0.00	4.35
2.6E+01 -	3.8E+01	0	4	0.00	4.35
3.8E+01 -	5.6E+01	1	5	2.17	4.35
5.6E+01 -	8.3E+01	1	6	2.17	2.17

HISTOGRAM FOR COLUMN 19 (MO)

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

N	L	H	B	T	G	ANALYTICAL VALUES
38	2	0	0	0	0	6
82.61	4.35			0.00	0.00	

MAXIMUM = 7.00000E+01
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 1.44721E+01
GEOMETRIC DEVIATION = 3.21238E+00

TITLE
POPOVICH FORMATION

FREQUENCY TABLE FOR COLUMN 22 (PB)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	7	7	15.22	41.30
1.2E+01 -	1.8E+01	2	9	4.35	26.09
1.8E+01 -	2.6E+01	3	12	6.52	21.74
2.6E+01 -	3.8E+01	3	15	6.52	15.22
3.8E+01 -	5.6E+01	2	17	4.35	8.70
5.6E+01 -	8.3E+01	0	17	0.00	4.35
8.3E+01 -	1.2E+02	0	17	0.00	4.35
1.2E+02 -	1.8E+02	0	17	0.00	4.35
1.8E+02 -	2.6E+02	0	17	0.00	4.35
2.6E+02 -	3.8E+02	0	17	0.00	4.35
3.8E+02 -	5.6E+02	0	17	0.00	4.35
5.6E+02 -	8.3E+02	0	17	0.00	4.35
8.3E+02 -	1.2E+03	0	17	0.00	4.35
1.2E+03 -	1.8E+03	0	17	0.00	4.35
1.8E+03 -	2.6E+03	1	18	2.17	4.35
2.6E+03 -	3.8E+03	0	18	0.00	2.17
3.8E+03 -	5.6E+03	0	18	0.00	2.17
5.6E+03 -	8.3E+03	1	19	2.17	2.17

HISTOGRAM FOR COLUMN 22 (PB)

```
1.0E+01 XXXXXXXXXXXXXXX
1.5E+01 XXXX
2.0E+01 XXXXXXX
3.0E+01 XXXXXXX
5.0E+01 XXXX
7.0E+01
1.0E+02
1.5E+02
2.0E+02
3.0E+02
5.0E+02
7.0E+02
1.0E+03
1.5E+03
2.0E+03 XX
3.0E+03
5.0E+03
7.0E+03 XX
```

N	L	H	B	T	G	ANALYTICAL VALUES
26	1	0	0	0	0	19
56.52	2.17			0.00	0.00	

MAXIMUM = 7.00000E+03
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 3.06074E+01
GEOMETRIC DEVIATION = 5.99969E+00

TITLE
POPOVICH FORMATION

FREQUENCY TABLE FOR COLUMN 23 (SB)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+01 -	1.2E+02	2	2	4.35	8.70
1.2E+02 -	1.8E+02	0	2	0.00	4.35
1.8E+02 -	2.6E+02	0	2	0.00	4.35
2.6E+02 -	3.8E+02	0	2	0.00	4.35
3.8E+02 -	5.6E+02	0	2	0.00	4.35
5.6E+02 -	8.3E+02	1	3	2.17	4.35
8.3E+02 -	1.2E+03	0	3	0.00	2.17
1.2E+03 -	1.8E+03	0	3	0.00	2.17
1.8E+03 -	2.6E+03	1	4	2.17	2.17

HISTOGRAM FOR COLUMN 23 (SB)

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

N	L	H	B	T	G	ANALYTICAL VALUES
40	2	0	0	0	0	4
86.96	4.35			0.00	0.00	

MAXIMUM = 2.00000E+03
MINIMUM = 1.00000E+02
GEOMETRIC MEAN = 3.43979E+02
GEOMETRIC DEVIATION = 4.43497E+00

TITLE
POPOVICH FORMATION

FREQUENCY TABLE FOR COLUMN 27 (V)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	2	2	4.35	93.48
1.2E+01 -	1.8E+01	2	4	4.35	89.13
1.8E+01 -	2.6E+01	9	13	19.57	84.78
2.6E+01 -	3.8E+01	3	16	6.52	65.22
3.8E+01 -	5.6E+01	6	22	13.04	58.70
5.6E+01 -	8.3E+01	2	24	4.35	45.65
8.3E+01 -	1.2E+02	8	32	17.39	41.30
1.2E+02 -	1.8E+02	2	34	4.35	23.91
1.8E+02 -	2.6E+02	3	37	6.52	19.57
2.6E+02 -	3.8E+02	3	40	6.52	13.04
3.8E+02 -	5.6E+02	0	40	0.00	6.52
5.6E+02 -	8.3E+02	2	42	4.35	6.52
8.3E+02 -	1.2E+03	1	43	2.17	2.17

HISTOGRAM FOR COLUMN 27 (V)

```
1.0E+01 XXXX
1.5E+01 XXXX
2.0E+01 XXXXXXXXXXXXXXXXXXX
3.0E+01 XXXXXXX
5.0E+01 XXXXXXXXXXXXX
7.0E+01 XXXX
1.0E+02 XXXXXXXXXXXXXXXXX
1.5E+02 XXXX
2.0E+02 XXXXXXX
3.0E+02 XXXXXXX
5.0E+02
7.0E+02 XXXX
1.0E+03 XX
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	2	0	0	0	0	43
2.17	4.35			0.00	0.00	

MAXIMUM = 1.00000E+03
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 6.43020E+01
GEOMETRIC DEVIATION = 3.25440E+00

TITLE
LIMESTONE - TRANS. ASSEMBLAGE

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
HG	0	0	0	0	0	0	12
MN	0	0	0	0	0	0	12
B	7	1	0	0	0	0	4
BA	0	0	0	0	0	0	12
CO	10	0	0	0	0	0	2
CU	5	1	0	0	0	0	6
MO	9	1	0	0	0	0	2
V	1	3	0	0	0	0	8

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE

ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS
HG	0.099735	1.58	12 SAMPLES AND 12 ANALYTICAL VALUES.
MN	156.670567	1.75	12 SAMPLES AND 12 ANALYTICAL VALUES.
B	3.017072	13.91	8 NOT DETECTED, LESS THAN, OR TRACE VALUES. 4 REPORTED VALUES.
BA	355.333660	2.70	12 SAMPLES AND 12 ANALYTICAL VALUES.
CO	1.169181	3.54	10 NOT DETECTED, LESS THAN, OR TRACE VALUES. 2 REPORTED VALUES.
CU	4.517660	3.69	6 NOT DETECTED, LESS THAN, OR TRACE VALUES. 6 REPORTED VALUES.
MO	1.169181	3.54	10 NOT DETECTED, LESS THAN, OR TRACE VALUES. 2 REPORTED VALUES.
V	11.643712	5.05	4 NOT DETECTED, LESS THAN, OR TRACE VALUES. 8 REPORTED VALUES.

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
LIMESTONE - TRANS. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 2 (HG)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	0	0	0.00	100.00
2.6E-02 -	3.8E-02	0	0	0.00	100.00
3.8E-02 -	5.6E-02	2	2	16.67	100.00
5.6E-02 -	8.3E-02	1	3	8.33	83.33
8.3E-02 -	1.2E-01	6	9	50.00	75.00
1.2E-01 -	1.8E-01	2	11	16.67	25.00
1.8E-01 -	2.6E-01	1	12	8.33	8.33

HISTOGRAM FOR COLUMN 2 (HG)

```
5.0E-02 XXXXXXXXXXXXXXXX
7.0E-02 XXXXXXXX
1.0E-01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.5E-01 XXXXXXXXXXXXXXXX
2.0E-01 XXXXXXXX
```

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

MAXIMUM = 2.60000E-01
MINIMUM = 5.00000E-02
GEOMETRIC MEAN = 9.97350E-02
GEOMETRIC DEVIATION = 1.57530E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
LIMESTONE - TRANS. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 7 (MN)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	0	0	0.00	100.00
1.2E+01 -	1.8E+01	0	0	0.00	100.00
1.8E+01 -	2.6E+01	0	0	0.00	100.00
2.6E+01 -	3.8E+01	1	1	8.33	100.00
3.8E+01 -	5.6E+01	0	1	0.00	91.67
5.6E+01 -	8.3E+01	0	1	0.00	91.67
8.3E+01 -	1.2E+02	0	1	0.00	91.67
1.2E+02 -	1.8E+02	5	6	41.67	91.67
1.8E+02 -	2.6E+02	5	11	41.67	50.00
2.6E+02 -	3.8E+02	1	12	8.33	8.33

HISTOGRAM FOR COLUMN 7 (MN)

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

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

MAXIMUM = 3.00000E+02
MINIMUM = 3.00000E+01
GEOMETRIC MEAN = 1.56671E+02
GEOMETRIC DEVIATION = 1.75241E+00

TITLE
LIMESTONE - TRANS. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 10 (B)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	0	0	0.00	33.33
1.2E+01 -	1.8E+01	0	0	0.00	33.33
1.8E+01 -	2.6E+01	1	1	8.33	33.33
2.6E+01 -	3.8E+01	0	1	0.00	25.00
3.8E+01 -	5.6E+01	1	2	8.33	25.00
5.6E+01 -	8.3E+01	1	3	8.33	16.67
8.3E+01 -	1.2E+02	0	3	0.00	8.33
1.2E+02 -	1.8E+02	0	3	0.00	8.33
1.8E+02 -	2.6E+02	1	4	8.33	8.33

HISTOGRAM FOR COLUMN 10 (B)

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

N	L	H	B	T	G	ANALYTICAL VALUES
7	1	0	0	0	0	4
58.33	8.33			0.00	0.00	

MAXIMUM = 2.00000E+02
MINIMUM = 2.00000E+01
GEOMETRIC MEAN = 6.11691E+01
GEOMETRIC DEVIATION = 2.58776E+00

TITLE
LIMESTONE - TRANS. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 11 (BA)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	0	0	0.00	100.00
2.6E+01 -	3.8E+01	0	0	0.00	100.00
3.8E+01 -	5.6E+01	0	0	0.00	100.00
5.6E+01 -	8.3E+01	1	1	8.33	100.00
8.3E+01 -	1.2E+02	1	2	8.33	91.67
1.2E+02 -	1.8E+02	2	4	16.67	83.33
1.8E+02 -	2.6E+02	1	5	8.33	66.67
2.6E+02 -	3.8E+02	0	5	0.00	58.33
3.8E+02 -	5.6E+02	2	7	16.67	58.33
5.6E+02 -	8.3E+02	3	10	25.00	41.67
8.3E+02 -	1.2E+03	1	11	8.33	16.67
1.2E+03 -	1.8E+03	1	12	8.33	8.33

HISTOGRAM FOR COLUMN 11 (BA)

```
7.0E+01 XXXXXXXX
1.0E+02 XXXXXXXX
1.5E+02 XXXXXXXXXXXXXXXX
2.0E+02 XXXXXXXX
3.0E+02
5.0E+02 XXXXXXXXXXXXXXXX
7.0E+02 XXXXXXXXXXXXXXXXXXXXXXXX
1.0E+03 XXXXXXXX
1.5E+03 XXXXXXXX
```

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

MAXIMUM = 1.50000E+03
MINIMUM = 7.00000E+01
GEOMETRIC MEAN = 3.55334E+02
GEOMETRIC DEVIATION = 2.69626E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
LIMESTONE - TRANS. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 15 (CO)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	0	0	0.00	16.67
5.6E+00 -	8.3E+00	1	1	8.33	16.67
8.3E+00 -	1.2E+01	1	2	8.33	8.33

HISTOGRAM FOR COLUMN 15 (CO)

7.0E+00 XXXXXXXX
1.0E+01 XXXXXXXX

N	L	H	B	T	G	ANALYTICAL VALUES
10	0	0	0	0	0	2
83.33	0.00			0.00	0.00	

MAXIMUM = 1.00000E+01
MINIMUM = 7.00000E+00
GEOMETRIC MEAN = 8.36660E+00
GEOMETRIC DEVIATION = 1.28686E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
LIMESTONE - TRANS. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 17 (CU)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	0	0	0.00	50.00
5.6E+00 -	8.3E+00	1	1	8.33	50.00
8.3E+00 -	1.2E+01	1	2	8.33	41.67
1.2E+01 -	1.8E+01	1	3	8.33	33.33
1.8E+01 -	2.6E+01	3	6	25.00	25.00

HISTOGRAM FOR COLUMN 17 (CU)

7.0E+00 XXXXXXXX
1.0E+01 XXXXXXXX
1.5E+01 XXXXXXXX
2.0E+01 XXXXXXXXXXXXXXXXXXXXXXXX

N	L	H	B	T	G	ANALYTICAL VALUES
5	1	0	0	0	0	6
41.67	8.33			0.00	0.00	

MAXIMUM = 2.00000E+01
MINIMUM = 7.00000E+00
GEOMETRIC MEAN = 1.42576E+01
GEOMETRIC DEVIATION = 1.55626E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
LIMESTONE - TRANS. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 19 (MO)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	0	0	0.00	16.67
5.6E+00 -	8.3E+00	1	1	8.33	16.67
8.3E+00 -	1.2E+01	1	2	8.33	8.33

HISTOGRAM FOR COLUMN 19 (MO)

```
7.0E+00 XXXXXXXX
1.0E+01 XXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
9	1	0	0	0	0	2
75.00	8.33			0.00	0.00	

MAXIMUM = 1.00000E+01
MINIMUM = 7.00000E+00
GEOMETRIC MEAN = 8.36660E+00
GEOMETRIC DEVIATION = 1.28686E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
LIMESTONE - TRANS. ASSEMBLAGE

FREQUENCY TABLE FOR COLUMN 27 (V)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	5	5	41.67	66.67
1.2E+01 -	1.8E+01	0	5	0.00	25.00
1.8E+01 -	2.6E+01	0	5	0.00	25.00
2.6E+01 -	3.8E+01	0	5	0.00	25.00
3.8E+01 -	5.6E+01	0	5	0.00	25.00
5.6E+01 -	8.3E+01	2	7	16.67	25.00
8.3E+01 -	1.2E+02	0	7	0.00	8.33
1.2E+02 -	1.8E+02	0	7	0.00	8.33
1.8E+02 -	2.6E+02	0	7	0.00	8.33
2.6E+02 -	3.8E+02	1	8	8.33	8.33

HISTOGRAM FOR COLUMN 27 (V)

```
1.0E+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.5E+01
2.0E+01
3.0E+01
5.0E+01
7.0E+01 XXXXXXXXXXXXXXXXX
1.0E+02
1.5E+02
2.0E+02
3.0E+02 XXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	3	0	0	0	0	8
8.33	25.00			0.00	0.00	

MAXIMUM = 3.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 2.48837E+01
GEOMETRIC DEVIATION = 3.80349E+00

TITLE
ANDESITE

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
HG	0	0	0	0	0	0	13
MN	0	0	0	0	0	0	13
B	4	2	0	0	0	0	7
BA	0	0	0	0	0	0	13
CO	1	0	0	0	0	0	12
CU	0	0	0	0	0	0	13
PB	4	1	0	0	0	0	8
V	0	0	0	0	0	0	13

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/19/80

TITLE

ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS
HG	0.083442	1.77	13 SAMPLES AND 13 ANALYTICAL VALUES.
MN	628.985374	1.98	13 SAMPLES AND 13 ANALYTICAL VALUES.
B	9.085293	3.25	6 NOT DETECTED, LESS THAN, OR TRACE VALUES. 7 REPORTED VALUES.
BA	879.191261	2.56	13 SAMPLES AND 13 ANALYTICAL VALUES.
CO	24.218557	2.45	1 NOT DETECTED, LESS THAN, OR TRACE VALUES. 12 REPORTED VALUES.
CU	29.619524	8.51	13 SAMPLES AND 13 ANALYTICAL VALUES.
PB	9.516564	2.31	5 NOT DETECTED, LESS THAN, OR TRACE VALUES. 8 REPORTED VALUES.
V	121.975849	1.60	13 SAMPLES AND 13 ANALYTICAL VALUES.

TITLE
ANDESITE

FREQUENCY TABLE FOR COLUMN 2 (HG)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	0	0	0.00	100.00
2.6E-02 -	3.8E-02	1	1	7.69	100.00
3.8E-02 -	5.6E-02	0	1	0.00	92.31
5.6E-02 -	8.3E-02	7	8	53.85	92.31
8.3E-02 -	1.2E-01	2	10	15.38	38.46
1.2E-01 -	1.8E-01	1	11	7.69	23.08
1.8E-01 -	2.6E-01	2	13	15.38	15.38

HISTOGRAM FOR COLUMN 2 (HG)

```
3.0E-02 XXXXXXXX
5.0E-02
7.0E-02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.0E-01 XXXXXXXXXXXXXXX
1.5E-01 XXXXXXXX
2.0E-01 XXXXXXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	13
0.00	0.00			0.00	0.00	

MAXIMUM = 2.40000E-01
MINIMUM = 3.00000E-02
GEOMETRIC MEAN = 8.34418E-02
GEOMETRIC DEVIATION = 1.76590E+00

A470 · GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/19/80

TITLE
ANDESITE

FREQUENCY TABLE FOR COLUMN 7 (MN)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	0	0	0.00	100.00
1.2E+01 -	1.8E+01	0	0	0.00	100.00
1.8E+01 -	2.6E+01	0	0	0.00	100.00
2.6E+01 -	3.8E+01	0	0	0.00	100.00
3.8E+01 -	5.6E+01	0	0	0.00	100.00
5.6E+01 -	8.3E+01	0	0	0.00	100.00
8.3E+01 -	1.2E+02	1	1	7.69	100.00
1.2E+02 -	1.8E+02	0	1	0.00	92.31
1.8E+02 -	2.6E+02	0	1	0.00	92.31
2.6E+02 -	3.8E+02	0	1	0.00	92.31
3.8E+02 -	5.6E+02	5	6	38.46	92.31
5.6E+02 -	8.3E+02	3	9	23.08	53.85
8.3E+02 -	1.2E+03	2	11	15.38	30.77
1.2E+03 -	1.8E+03	2	13	15.38	15.38

HISTOGRAM FOR COLUMN 7 (MN)

```
1.0E+02 XXXXXXX
1.5E+02
2.0E+02
3.0E+02
5.0E+02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
7.0E+02 XXXXXXXXXXXXXXXXXXXXX
1.0E+03 XXXXXXXXXXXXXX
1.5E+03 XXXXXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	13
0.00	0.00			0.00	0.00	

MAXIMUM = 1.50000E+03
MINIMUM = 1.00000E+02
GEOMETRIC MEAN = 6.28985E+02
GEOMETRIC DEVIATION = 1.98248E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/19/80

TITLE
ANDESITE

FREQUENCY TABLE FOR COLUMN 10 (B)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	2	2	15.38	53.85
1.2E+01 -	1.8E+01	1	3	7.69	38.46
1.8E+01 -	2.6E+01	2	5	15.38	30.77
2.6E+01 -	3.8E+01	0	5	0.00	15.38
3.8E+01 -	5.6E+01	1	6	7.69	15.38
5.6E+01 -	8.3E+01	1	7	7.69	7.69

HISTOGRAM FOR COLUMN 10 (B)

```
1.0E+01 XXXXXXXXXXXXXX
1.5E+01 XXXXXXXX
2.0E+01 XXXXXXXXXXXXXX
3.0E+01
5.0E+01 XXXXXXXX
7.0E+01 XXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
4	2	0	0	0	0	7
30.77	15.38			0.00	0.00	

MAXIMUM = 7.00000E+01
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 2.14657E+01
GEOMETRIC DEVIATION = 2.12703E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/19/80

TITLE
ANDESITE

FREQUENCY TABLE FOR COLUMN 11 (BA)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	0	0	0.00	100.00
2.6E+01 -	3.8E+01	0	0	0.00	100.00
3.8E+01 -	5.6E+01	0	0	0.00	100.00
5.6E+01 -	8.3E+01	0	0	0.00	100.00
8.3E+01 -	1.2E+02	0	0	0.00	100.00
1.2E+02 -	1.8E+02	0	0	0.00	100.00
1.8E+02 -	2.6E+02	0	0	0.00	100.00
2.6E+02 -	3.8E+02	4	4	30.77	100.00
3.8E+02 -	5.6E+02	0	4	0.00	69.23
5.6E+02 -	8.3E+02	3	7	23.08	69.23
8.3E+02 -	1.2E+03	1	8	7.69	46.15
1.2E+03 -	1.8E+03	2	10	15.38	38.46
1.8E+03 -	2.6E+03	1	11	7.69	23.08
2.6E+03 -	3.8E+03	1	12	7.69	15.38
3.8E+03 -	5.6E+03	1	13	7.69	7.69

HISTOGRAM FOR COLUMN 11 (BA)

```
3.0E+02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
5.0E+02
7.0E+02 XXXXXXXXXXXXXXXXXXXXXXX
1.0E+03 XXXXXXXX
1.5E+03 XXXXXXXXXXXXXX
2.0E+03 XXXXXXXX
3.0E+03 XXXXXXXX
5.0E+03 XXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	13
0.00	0.00			0.00	0.00	

MAXIMUM = 5.00000E+03
MINIMUM = 3.00000E+02
GEOMETRIC MEAN = 8.79191E+02
GEOMETRIC DEVIATION = 2.55631E+00

TITLE
ANDESITE

FREQUENCY TABLE FOR COLUMN 15 (CO)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	0	0	0.00	92.31
5.6E+00 -	8.3E+00	0	0	0.00	92.31
8.3E+00 -	1.2E+01	0	0	0.00	92.31
1.2E+01 -	1.8E+01	3	3	23.08	92.31
1.8E+01 -	2.6E+01	3	6	23.08	69.23
2.6E+01 -	3.8E+01	3	9	23.08	46.15
3.8E+01 -	5.6E+01	0	9	0.00	23.08
5.6E+01 -	8.3E+01	2	11	15.38	23.08
8.3E+01 -	1.2E+02	1	12	7.69	7.69

HISTOGRAM FOR COLUMN 15 (CO)

```
1.5E+01 XXXXXXXXXXXXXXXXXXXXXX
2.0E+01 XXXXXXXXXXXXXXXXXXXXXX
3.0E+01 XXXXXXXXXXXXXXXXXXXXXX
5.0E+01
7.0E+01 XXXXXXXXXXXXXX
1.0E+02 XXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	0	0	0	0	0	12
7.69	0.00			0.00	0.00	

MAXIMUM = 1.00000E+02
MINIMUM = 1.50000E+01
GEOMETRIC MEAN = 2.90231E+01
GEOMETRIC DEVIATION = 1.93682E+00

TITLE
ANDESITE

FREQUENCY TABLE FOR COLUMN 17 (CU)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	3	3	23.08	100.00
5.6E+00 -	8.3E+00	2	5	15.38	76.92
8.3E+00 -	1.2E+01	2	7	15.38	61.54
1.2E+01 -	1.8E+01	0	7	0.00	46.15
1.8E+01 -	2.6E+01	1	8	7.69	46.15
2.6E+01 -	3.8E+01	0	8	0.00	38.46
3.8E+01 -	5.6E+01	1	9	7.69	38.46
5.6E+01 -	8.3E+01	1	10	7.69	30.77
8.3E+01 -	1.2E+02	0	10	0.00	23.08
1.2E+02 -	1.8E+02	1	11	7.69	23.08
1.8E+02 -	2.6E+02	0	11	0.00	15.38
2.6E+02 -	3.8E+02	1	12	7.69	15.38
3.8E+02 -	5.6E+02	0	12	0.00	7.69
5.6E+02 -	8.3E+02	0	12	0.00	7.69
8.3E+02 -	1.2E+03	0	12	0.00	7.69
1.2E+03 -	1.8E+03	0	12	0.00	7.69
1.8E+03 -	2.6E+03	0	12	0.00	7.69
2.6E+03 -	3.8E+03	0	12	0.00	7.69
3.8E+03 -	5.6E+03	0	12	0.00	7.69
5.6E+03 -	8.3E+03	1	13	7.69	7.69

HISTOGRAM FOR COLUMN 17 (CU)

```
5.0E+00 XXXXXXXXXXXXXXXXXXXXXX
7.0E+00 XXXXXXXXXXXXXX
1.0E+01 XXXXXXXXXXXXXX
1.5E+01
2.0E+01 XXXXXXXX
3.0E+01
5.0E+01 XXXXXXXX
7.0E+01 XXXXXXXX
1.0E+02
1.5E+02 XXXXXXXX
2.0E+02
3.0E+02 XXXXXXXX
5.0E+02
7.0E+02
1.0E+03
1.5E+03
2.0E+03
3.0E+03
5.0E+03
7.0E+03 XXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	13
0.00	0.00			0.00	0.00	

MAXIMUM = 7.00000E+03
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 2.96195E+01
GEOMETRIC DEVIATION = 8.51407E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/19/80

TITLE
ANDESITE

FREQUENCY TABLE FOR COLUMN 22 (PB)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	5	5	38.46	61.54
1.2E+01 -	1.8E+01	0	5	0.00	23.08
1.8E+01 -	2.6E+01	1	6	7.69	23.08
2.6E+01 -	3.8E+01	1	7	7.69	15.38
3.8E+01 -	5.6E+01	1	8	7.69	7.69

HISTOGRAM FOR COLUMN 22 (PB)

```
1.0E+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.5E+01
2.0E+01 XXXXXXXX
3.0E+01 XXXXXXXX
5.0E+01 XXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
4	1	0	0	0	0	8
30.77	7.69			0.00	0.00	

MAXIMUM = 5.00000E+01
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 1.52982E+01
GEOMETRIC DEVIATION = 1.88895E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/19/80

TITLE
ANDESITE

FREQUENCY TABLE FOR COLUMN 27 (V)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	0	0	0.00	100.00
1.2E+01 -	1.8E+01	0	0	0.00	100.00
1.8E+01 -	2.6E+01	0	0	0.00	100.00
2.6E+01 -	3.8E+01	0	0	0.00	100.00
3.8E+01 -	5.6E+01	1	1	7.69	100.00
5.6E+01 -	8.3E+01	2	3	15.38	92.31
8.3E+01 -	1.2E+02	3	6	23.08	76.92
1.2E+02 -	1.8E+02	3	9	23.08	53.85
1.8E+02 -	2.6E+02	4	13	30.77	30.77

HISTOGRAM FOR COLUMN 27 (V)

```
5.0E+01 XXXXXXXX
7.0E+01 XXXXXXXXXXXXXXX
1.0E+02 XXXXXXXXXXXXXXXXXXXXXXX
1.5E+02 XXXXXXXXXXXXXXXXXXXXXX
2.0E+02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	13
0.00	0.00			0.00	0.00	

MAXIMUM = 2.00000E+02
MINIMUM = 5.00000E+01
GEOMETRIC MEAN = 1.21976E+02
GEOMETRIC DEVIATION = 1.59802E+00

TITLE
GRANODIORITE - CRETACEOUS

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
AU	0	13	0	0	0	0	8
HG	0	0	0	0	0	0	21
MN	0	0	0	0	0	0	21
B	5	3	0	0	0	0	13
BA	0	0	0	0	0	0	21
CO	3	1	0	0	0	0	17
CU	2	0	0	0	0	0	19
MO	17	2	0	0	0	0	2
PB	6	1	0	0	0	0	14
V	0	0	0	0	0	0	21

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE

ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS
AU	0.008901	7.90	13 NOT DETECTED, LESS THAN, OR TRACE VALUES. 8 REPORTED VALUES.
HG	0.115501	3.51	21 SAMPLES AND 21 ANALYTICAL VALUES.
MN	497.185734	2.37	21 SAMPLES AND 21 ANALYTICAL VALUES.
B	10.377410	4.05	8 NOT DETECTED, LESS THAN, OR TRACE VALUES. 13 REPORTED VALUES.
BA	654.000267	1.98	21 SAMPLES AND 21 ANALYTICAL VALUES.
CO	12.593007	3.03	4 NOT DETECTED, LESS THAN, OR TRACE VALUES. 17 REPORTED VALUES.
CU	12.454533	2.52	2 NOT DETECTED, LESS THAN, OR TRACE VALUES. 19 REPORTED VALUES.
MO	0.718237	3.60	19 NOT DETECTED, LESS THAN, OR TRACE VALUES. 2 REPORTED VALUES.
PB	9.684247	1.56	7 NOT DETECTED, LESS THAN, OR TRACE VALUES. 14 REPORTED VALUES.
V	118.677003	2.18	21 SAMPLES AND 21 ANALYTICAL VALUES.

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
GRANODIORITE - CRETACEOUS

FREQUENCY TABLE FOR COLUMN 1 (AU)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	3	3	14.29	38.10
2.6E-02 -	3.8E-02	0	3	0.00	23.81
3.8E-02 -	5.6E-02	1	4	4.76	23.81
5.6E-02 -	8.3E-02	1	5	4.76	19.05
8.3E-02 -	1.2E-01	0	5	0.00	14.29
1.2E-01 -	1.8E-01	0	5	0.00	14.29
1.8E-01 -	2.6E-01	2	7	9.52	14.29
2.6E-01 -	3.8E-01	0	7	0.00	4.76
3.8E-01 -	5.6E-01	0	7	0.00	4.76
5.6E-01 -	8.3E-01	1	8	4.76	4.76

HISTOGRAM FOR COLUMN 1 (AU)

```
2.0E-02 XXXXXXXXXXXXX
3.0E-02
5.0E-02 XXXXX
7.0E-02 XXXXX
1.0E-01
1.5E-01
2.0E-01 XXXXXXXXXX
3.0E-01
5.0E-01
7.0E-01 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	13	0	0	0	0	8
0.00	61.90			0.00	0.00	

MAXIMUM = 6.00000E-01
MINIMUM = 2.00000E-02
GEOMETRIC MEAN = 6.62979E-02
GEOMETRIC DEVIATION = 3.58712E+00

TITLE
GRANODIORITE - CRETACEOUS

FREQUENCY TABLE FOR COLUMN 2 (HG)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	0	0	0.00	100.00
2.6E-02 -	3.8E-02	1	1	4.76	100.00
3.8E-02 -	5.6E-02	4	5	19.05	95.24
5.6E-02 -	8.3E-02	6	11	28.57	76.19
8.3E-02 -	1.2E-01	2	13	9.52	47.62
1.2E-01 -	1.8E-01	4	17	19.05	38.10
1.8E-01 -	2.6E-01	2	19	9.52	19.05
2.6E-01 -	3.8E-01	0	19	0.00	9.52
3.8E-01 -	5.6E-01	0	19	0.00	9.52
5.6E-01 -	8.3E-01	1	20	4.76	9.52
8.3E-01 -	1.2E+00	0	20	0.00	4.76
1.2E+00 -	1.8E+00	0	20	0.00	4.76
1.8E+00 -	2.6E+00	0	20	0.00	4.76
2.6E+00 -	3.8E+00	0	20	0.00	4.76
3.8E+00 -	5.6E+00	0	20	0.00	4.76
5.6E+00 -	8.3E+00	0	20	0.00	4.76
8.3E+00 -	1.2E+01	1	21	4.76	4.76

HISTOGRAM FOR COLUMN 2 (HG)

```
3.0E-02 XXXXX
5.0E-02 XXXXXXXXXXXXXXXXXX
7.0E-02 XXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.0E-01 XXXXXXXXXX
1.5E-01 XXXXXXXXXXXXXXXXXX
2.0E-01 XXXXXXXXXX
3.0E-01
5.0E-01
7.0E-01 XXXXX
1.0E+00
1.5E+00
2.0E+00
3.0E+00
5.0E+00
7.0E+00
1.0E+01 XXXXX
```

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

MAXIMUM = 1.00000E+01
MINIMUM = 3.00000E-02
GEOMETRIC MEAN = 1.15501E-01
GEOMETRIC DEVIATION = 3.51081E+00

TITLE
GRANODIORITE - CRETACEOUS

FREQUENCY TABLE FOR COLUMN 7 (MN)

LIMITS LOWER -	UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	0	0	0.00	100.00
1.2E+01 -	1.8E+01	0	0	0.00	100.00
1.8E+01 -	2.6E+01	0	0	0.00	100.00
2.6E+01 -	3.8E+01	0	0	0.00	100.00
3.8E+01 -	5.6E+01	0	0	0.00	100.00
5.6E+01 -	8.3E+01	1	1	4.76	100.00
8.3E+01 -	1.2E+02	1	2	4.76	95.24
1.2E+02 -	1.8E+02	0	2	0.00	90.48
1.8E+02 -	2.6E+02	3	5	14.29	90.48
2.6E+02 -	3.8E+02	2	7	9.52	76.19
3.8E+02 -	5.6E+02	2	9	9.52	66.67
5.6E+02 -	8.3E+02	5	14	23.81	57.14
8.3E+02 -	1.2E+03	6	20	28.57	33.33
1.2E+03 -	1.8E+03	0	20	0.00	4.76
1.8E+03 -	2.6E+03	1	21	4.76	4.76

HISTOGRAM FOR COLUMN 7 (MN)

```
       7.0E+01 XXXXX
       1.0E+02 XXXXX
       1.5E+02
       2.0E+02 XXXXXXXXXXXXX
       3.0E+02 XXXXXXXXX
       5.0E+02 XXXXXXXXX
       7.0E+02 XXXXXXXXXXXXXXXXXXXXXXX
       1.0E+03 XXXXXXXXXXXXXXXXXXXXXXXXXXX
       1.5E+03
       2.0E+03 XXXXX
```

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

MAXIMUM = 2.00000E+03
MINIMUM = 7.00000E+01
GEOMETRIC MEAN = 4.97186E+02
GEOMETRIC DEVIATION = 2.36827E+00

TITLE
GRANODIORITE - CRETACEOUS

FREQUENCY TABLE FOR COLUMN 10 (B)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	5	5	23.81	61.90
1.2E+01 -	1.8E+01	3	8	14.29	38.10
1.8E+01 -	2.6E+01	1	9	4.76	23.81
2.6E+01 -	3.8E+01	1	10	4.76	19.05
3.8E+01 -	5.6E+01	1	11	4.76	14.29
5.6E+01 -	8.3E+01	0	11	0.00	9.52
8.3E+01 -	1.2E+02	0	11	0.00	9.52
1.2E+02 -	1.8E+02	0	11	0.00	9.52
1.8E+02 -	2.6E+02	2	13	9.52	9.52

HISTOGRAM FOR COLUMN 10 (B)

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

N	L	H	B	T	G	ANALYTICAL VALUES
5	3	0	0	0	0	13
23.81	14.29			0.00	0.00	

MAXIMUM = 2.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 2.26162E+01
GEOMETRIC DEVIATION = 2.95207E+00

TITLE
GRANODIORITE - CRETACEOUS

FREQUENCY TABLE FOR COLUMN 11 (BA)

LIMITS LOWER - UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 - 2.6E+01	0	0	0.00	100.00
2.6E+01 - 3.8E+01	0	0	0.00	100.00
3.8E+01 - 5.6E+01	0	0	0.00	100.00
5.6E+01 - 8.3E+01	0	0	0.00	100.00
8.3E+01 - 1.2E+02	0	0	0.00	100.00
1.2E+02 - 1.8E+02	1	1	4.76	100.00
1.8E+02 - 2.6E+02	2	3	9.52	95.24
2.6E+02 - 3.8E+02	1	4	4.76	85.71
3.8E+02 - 5.6E+02	3	7	14.29	80.95
5.6E+02 - 8.3E+02	6	13	28.57	66.67
8.3E+02 - 1.2E+03	4	17	19.05	38.10
1.2E+03 - 1.8E+03	4	21	19.05	19.05

HISTOGRAM FOR COLUMN 11 (BA)

```
1.5E+02 XXXXX
2.0E+02 XXXXXXXXXX
3.0E+02 XXXXX
5.0E+02 XXXXXXXXXXXXX
7.0E+02 XXXXXXXXXXXXXXXXXXXXXXXXXXX
1.0E+03 XXXXXXXXXXXXXXXXXX
1.5E+03 XXXXXXXXXXXXXXXXXX
```

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

MAXIMUM = 1.50000E+03
MINIMUM = 1.50000E+02
GEOMETRIC MEAN = 6.54000E+02
GEOMETRIC DEVIATION = 1.97799E+00

TITLE
GRANODIORITE - CRETACEOUS

FREQUENCY TABLE FOR COLUMN 15 (CO)

LIMITS LOWER - UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 - 5.6E+00	2	2	9.52	80.95
5.6E+00 - 8.3E+00	0	2	0.00	71.43
8.3E+00 - 1.2E+01	3	5	14.29	71.43
1.2E+01 - 1.8E+01	1	6	4.76	57.14
1.8E+01 - 2.6E+01	5	11	23.81	52.38
2.6E+01 - 3.8E+01	3	14	14.29	28.57
3.8E+01 - 5.6E+01	2	16	9.52	14.29
5.6E+01 - 8.3E+01	1	17	4.76	4.76

HISTOGRAM FOR COLUMN 15 (CO)

```
5.0E+00 XXXXXXXXXX
7.0E+00
1.0E+01 XXXXXXXXXXXXX
1.5E+01 XXXXX
2.0E+01 XXXXXXXXXXXXXXXXXXXXXXX
3.0E+01 XXXXXXXXXXXXX
5.0E+01 XXXXXXXXXX
7.0E+01 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
3	1	0	0	0	0	17
14.29	4.76			0.00	0.00	

MAXIMUM = 7.00000E+01
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 1.90381E+01
GEOMETRIC DEVIATION = 2.12302E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
GRANODIORITE - CRETACEOUS

FREQUENCY TABLE FOR COLUMN 17 (CU)

LIMITS LOWER - UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 - 5.6E+00	2	2	9.52	90.48
5.6E+00 - 8.3E+00	3	5	14.29	80.95
8.3E+00 - 1.2E+01	2	7	9.52	66.67
1.2E+01 - 1.8E+01	6	13	28.57	57.14
1.8E+01 - 2.6E+01	3	16	14.29	28.57
2.6E+01 - 3.8E+01	1	17	4.76	14.29
3.8E+01 - 5.6E+01	0	17	0.00	9.52
5.6E+01 - 8.3E+01	1	18	4.76	9.52
8.3E+01 - 1.2E+02	1	19	4.76	4.76

HISTOGRAM FOR COLUMN 17 (CU)

```
5.0E+00 XXXXXXXXX
7.0E+00 XXXXXXXXXXXXX
1.0E+01 XXXXXXXXX
1.5E+01 XXXXXXXXXXXXXXXXXXXXXXXXXXX
2.0E+01 XXXXXXXXXXXXX
3.0E+01 XXXXX
5.0E+01
7.0E+01 XXXXX
1.0E+02 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
2	0	0	0	0	0	19
9.52	0.00			0.00	0.00	

MAXIMUM = 1.00000E+02
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 1.47644E+01
GEOMETRIC DEVIATION = 2.19933E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
GRANODIORITE - CRETACEOUS

FREQUENCY TABLE FOR COLUMN 19 (MO)

LIMITS LOWER - UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 - 5.6E+00	1	1	4.76	9.52
5.6E+00 - 8.3E+00	0	1	0.00	4.76
8.3E+00 - 1.2E+01	1	2	4.76	4.76

HISTOGRAM FOR COLUMN 19 (MO)

```
5.0E+00 XXXXX
7.0E+00
1.0E+01 XXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
17	2	0	0	0	0	2
80.95	9.52			0.00	0.00	

MAXIMUM = 1.00000E+01
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 7.07107E+00
GEOMETRIC DEVIATION = 1.63253E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
GRANODIORITE - CRETACEOUS

FREQUENCY TABLE FOR COLUMN 22 (PB)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	10	10	47.62	66.67
1.2E+01 -	1.8E+01	0	10	0.00	19.05
1.8E+01 -	2.6E+01	4	14	19.05	19.05

HISTOGRAM FOR COLUMN 22 (PB)

```
1.0E+01 XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX
1.5E+01
2.0E+01 XXXXXXXXXXXXXXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
6	1	0	0	0	0	14
28.57	4.76			0.00	0.00	

MAXIMUM = 2.00000E+01
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 1.21901E+01
GEOMETRIC DEVIATION = 1.38396E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
GRANODIORITE - CRETACEOUS

FREQUENCY TABLE FOR COLUMN 27 (V)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	0	0	0.00	100.00
1.2E+01 -	1.8E+01	0	0	0.00	100.00
1.8E+01 -	2.6E+01	1	1	4.76	100.00
2.6E+01 -	3.8E+01	1	2	4.76	95.24
3.8E+01 -	5.6E+01	3	5	14.29	90.48
5.6E+01 -	8.3E+01	0	5	0.00	76.19
8.3E+01 -	1.2E+02	4	9	19.05	76.19
1.2E+02 -	1.8E+02	4	13	19.05	57.14
1.8E+02 -	2.6E+02	6	19	28.57	38.10
2.6E+02 -	3.8E+02	1	20	4.76	9.52
3.8E+02 -	5.6E+02	1	21	4.76	4.76

HISTOGRAM FOR COLUMN 27 (V)

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

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

MAXIMUM = 5.00000E+02
MINIMUM = 2.00000E+01
GEOMETRIC MEAN = 1.18677E+02
GEOMETRIC DEVIATION = 2.18392E+00

TITLE
QUARTZ LATITE DIKES

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
AU	1	18	0	0	0	0	14
HG	1	0	0	0	0	1	31
MN	0	1	0	0	0	0	32
AG	29	0	0	0	0	0	4
B	1	4	0	0	0	0	28
BA	0	0	0	0	0	0	33
CO	14	7	0	0	0	0	12
CU	10	4	0	0	0	0	19
MO	20	7	0	0	0	0	6
PB	3	2	0	0	0	0	28
SB	27	0	0	0	0	0	6
V	0	3	0	0	0	0	30

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE

ELEMENT	GEOMETRIC MEAN	GEOMETRIC DEVIATION	REMARKS
AU	0.009016	31.38	19 NOT DETECTED, LESS THAN, OR TRACE VALUES. 14 REPORTED VALUES.
HG	********	******	1 GREATER THAN VALUES. NO COMPUTATIONS.
MN	133.834473	4.88	1 NOT DETECTED, LESS THAN, OR TRACE VALUES. 32 REPORTED VALUES.
AG	0.007815	29.39	29 NOT DETECTED, LESS THAN, OR TRACE VALUES. 4 REPORTED VALUES.
B	34.892311	4.67	5 NOT DETECTED, LESS THAN, OR TRACE VALUES. 28 REPORTED VALUES.
BA	553.108620	2.89	33 SAMPLES AND 33 ANALYTICAL VALUES.
CO	2.318574	4.63	21 NOT DETECTED, LESS THAN, OR TRACE VALUES. 12 REPORTED VALUES.
CU	9.128568	36.10	14 NOT DETECTED, LESS THAN, OR TRACE VALUES. 19 REPORTED VALUES.
MO	1.500284	2.90	27 NOT DETECTED, LESS THAN, OR TRACE VALUES. 6 REPORTED VALUES.
PB	********	******	1 VALUES LESS THAN SPECIFIED LIMIT OF DETECTION. NO COMPUTATIONS.
SB	49.960071	1.75	27 NOT DETECTED, LESS THAN, OR TRACE VALUES. 6 REPORTED VALUES.
V	67.978463	4.51	3 NOT DETECTED, LESS THAN, OR TRACE VALUES. 30 REPORTED VALUES.

TITLE
QUARTZ LATITE DIKES

FREQUENCY TABLE FOR COLUMN 1 (AU)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	1	1	3.03	42.42
2.6E-02 -	3.8E-02	0	1	0.00	39.39
3.8E-02 -	5.6E-02	1	2	3.03	39.39
5.6E-02 -	8.3E-02	4	6	12.12	36.36
8.3E-02 -	1.2E-01	4	10	12.12	24.24
1.2E-01 -	1.8E-01	0	10	0.00	12.12
1.8E-01 -	2.6E-01	0	10	0.00	12.12
2.6E-01 -	3.8E-01	0	10	0.00	12.12
3.8E-01 -	5.6E-01	0	10	0.00	12.12
5.6E-01 -	8.3E-01	0	10	0.00	12.12
8.3E-01 -	1.2E+00	0	10	0.00	12.12
1.2E+00 -	1.8E+00	0	10	0.00	12.12
1.8E+00 -	2.6E+00	0	10	0.00	12.12
2.6E+00 -	3.8E+00	3	13	9.09	12.12
3.8E+00 -	5.6E+00	0	13	0.00	3.03
5.6E+00 -	8.3E+00	1	14	3.03	3.03

HISTOGRAM FOR COLUMN 1 (AU)

```
2.0E-02 XXX
3.0E-02
5.0E-02 XXX
7.0E-02 XXXXXXXXXXX
1.0E-01 XXXXXXXXXXX
1.5E-01
2.0E-01
3.0E-01
5.0E-01
7.0E-01
1.0E+00
1.5E+00
2.0E+00
3.0E+00 XXXXXXXXX
5.0E+00
7.0E+00 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	18	0	0	0	0	14
3.03	54.55			0.00	0.00	

MAXIMUM = 8.00000E+00
MINIMUM = 2.00000E-02
GEOMETRIC MEAN = 2.13646E-01
GEOMETRIC DEVIATION = 7.40257E+00

TITLE
QUARTZ LATITE DIKES

FREQUENCY TABLE FOR COLUMN 2 (HG)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E-02 -	2.6E-02	0	0	0.00	96.97
2.6E-02 -	3.8E-02	1	1	3.03	96.97
3.8E-02 -	5.6E-02	2	3	6.06	93.94
5.6E-02 -	8.3E-02	7	10	21.21	87.88
8.3E-02 -	1.2E-01	2	12	6.06	66.67
1.2E-01 -	1.8E-01	4	16	12.12	60.61
1.8E-01 -	2.6E-01	4	20	12.12	48.48
2.6E-01 -	3.8E-01	0	20	0.00	36.36
3.8E-01 -	5.6E-01	0	20	0.00	36.36
5.6E-01 -	8.3E-01	1	21	3.03	36.36
8.3E-01 -	1.2E+00	0	21	0.00	33.33
1.2E+00 -	1.8E+00	3	24	9.09	33.33
1.8E+00 -	2.6E+00	4	28	12.12	24.24
2.6E+00 -	3.8E+00	1	29	3.03	12.12
3.8E+00 -	5.6E+00	0	29	0.00	9.09
5.6E+00 -	8.3E+00	0	29	0.00	9.09
8.3E+00 -	1.2E+01	2	31	6.06	9.09

HISTOGRAM FOR COLUMN 2 (HG)

```
3.0E-02 XXX
5.0E-02 XXXXXX
7.0E-02 XXXXXXXXXXXXXXXXXXXX
1.0E-01 XXXXXX
1.5E-01 XXXXXXXXXXXX
2.0E-01 XXXXXXXXXXXX
3.0E-01
5.0E-01
7.0E-01 XXX
1.0E+00
1.5E+00 XXXXXXXXX
2.0E+00 XXXXXXXXXXX
3.0E+00 XXX
5.0E+00
7.0E+00
1.0E+01 XXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	0	0	0	0	1	31
3.03	0.00			0.00	3.03	

MAXIMUM = 1.00000E+01
MINIMUM = 3.00000E-02
GEOMETRIC MEAN = 2.95884E-01
GEOMETRIC DEVIATION = 5.36443E+00

TITLE
QUARTZ LATITE DIKES

FREQUENCY TABLE FOR COLUMN 7 (MN)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	2	2	6.06	96.97
1.2E+01 -	1.8E+01	0	2	0.00	90.91
1.8E+01 -	2.6E+01	3	5	9.09	90.91
2.6E+01 -	3.8E+01	1	6	3.03	81.82
3.8E+01 -	5.6E+01	4	10	12.12	78.79
5.6E+01 -	8.3E+01	1	11	3.03	66.67
8.3E+01 -	1.2E+02	2	13	6.06	63.64
1.2E+02 -	1.8E+02	3	16	9.09	57.58
1.8E+02 -	2.6E+02	4	20	12.12	48.48
2.6E+02 -	3.8E+02	4	24	12.12	36.36
3.8E+02 -	5.6E+02	3	27	9.09	24.24
5.6E+02 -	8.3E+02	0	27	0.00	15.15
8.3E+02 -	1.2E+03	3	30	9.09	15.15
1.2E+03 -	1.8E+03	0	30	0.00	6.06
1.8E+03 -	2.6E+03	1	31	3.03	6.06
2.6E+03 -	3.8E+03	1	32	3.03	3.03

HISTOGRAM FOR COLUMN 7 (MN)

```
1.0E+01 XXXXXX
1.5E+01
2.0E+01 XXXXXXXXX
3.0E+01 XXX
5.0E+01 XXXXXXXXXXXX
7.0E+01 XXX
1.0E+02 XXXXXX
1.5E+02 XXXXXXXXX
2.0E+02 XXXXXXXXXXXX
3.0E+02 XXXXXXXXXXXX
5.0E+02 XXXXXXXXX
7.0E+02
1.0E+03 XXXXXXXXX
1.5E+03
2.0E+03 XXX
3.0E+03 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	1	0	0	0	0	32
0.00	3.03			0.00	0.00	

MAXIMUM = 3.00000E+03
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 1.48948E+02
GEOMETRIC DEVIATION = 4.40985E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
QUARTZ LATITE DIKES

FREQUENCY TABLE FOR COLUMN 8 (AG)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E-01 -	5.6E-01	0	0	0.00	12.12
5.6E-01 -	8.3E-01	0	0	0.00	12.12
8.3E-01 -	1.2E+00	1	1	3.03	12.12
1.2E+00 -	1.8E+00	1	2	3.03	9.09
1.8E+00 -	2.6E+00	0	2	0.00	6.06
2.6E+00 -	3.8E+00	0	2	0.00	6.06
3.8E+00 -	5.6E+00	2	4	6.06	6.06

HISTOGRAM FOR COLUMN 8 (AG)

```
1.0E+00 XXX
1.5E+00 XXX
2.0E+00
3.0E+00
5.0E+00 XXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
29	0	0	0	0	0	4
87.88	0.00			0.00	0.00	

MAXIMUM = 5.00000E+00
MINIMUM = 1.00000E+00
GEOMETRIC MEAN = 2.47462E+00
GEOMETRIC DEVIATION = 2.29070E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
QUARTZ LATITE DIKES

FREQUENCY TABLE FOR COLUMN 10 (B)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	5	5	15.15	84.85
1.2E+01 -	1.8E+01	3	8	9.09	69.70
1.8E+01 -	2.6E+01	2	10	6.06	60.61
2.6E+01 -	3.8E+01	2	12	6.06	54.55
3.8E+01 -	5.6E+01	3	15	9.09	48.48
5.6E+01 -	8.3E+01	1	16	3.03	39.39
8.3E+01 -	1.2E+02	4	20	12.12	36.36
1.2E+02 -	1.8E+02	2	22	6.06	24.24
1.8E+02 -	2.6E+02	4	26	12.12	18.18
2.6E+02 -	3.8E+02	0	26	0.00	6.06
3.8E+02 -	5.6E+02	1	27	3.03	6.06
5.6E+02 -	8.3E+02	1	28	3.03	3.03

HISTOGRAM FOR COLUMN 10 (B)

```
1.0E+01 XXXXXXXXXXXXXXX
1.5E+01 XXXXXXXXX
2.0E+01 XXXXXX
3.0E+01 XXXXXX
5.0E+01 XXXXXXXXX
7.0E+01 XXX
1.0E+02 XXXXXXXXXXXX
1.5E+02 XXXXXX
2.0E+02 XXXXXXXXXXXX
3.0E+02
5.0E+02 XXX
7.0E+02 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
1	4	0	0	0	0	28
3.03	12.12			0.00	0.00	

MAXIMUM = 7.00000E+02
MINIMUM = 1.00000E+01
GEOMETRIC MEAN = 5.23383E+01
GEOMETRIC DEVIATION = 3.57628E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
QUARTZ LATITE DIKES

FREQUENCY TABLE FOR COLUMN 11 (BA)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
1.8E+01 -	2.6E+01	0	0	0.00	100.00
2.6E+01 -	3.8E+01	1	1	3.03	100.00
3.8E+01 -	5.6E+01	1	2	3.03	96.97
5.6E+01 -	8.3E+01	0	2	0.00	93.94
8.3E+01 -	1.2E+02	1	3	3.03	93.94
1.2E+02 -	1.8E+02	1	4	3.03	90.91
1.8E+02 -	2.6E+02	3	7	9.09	87.88
2.6E+02 -	3.8E+02	3	10	9.09	78.79
3.8E+02 -	5.6E+02	3	13	9.09	69.70
5.6E+02 -	8.3E+02	6	19	18.18	60.61
8.3E+02 -	1.2E+03	8	27	24.24	42.42
1.2E+03 -	1.8E+03	4	31	12.12	18.18
1.8E+03 -	2.6E+03	0	31	0.00	6.06
2.6E+03 -	3.8E+03	2	33	6.06	6.06

HISTOGRAM FOR COLUMN 11 (BA)

```
3.0E+01 XXX
5.0E+01 XXX
7.0E+01
1.0E+02 XXX
1.5E+02 XXX
2.0E+02 XXXXXXXXX
3.0E+02 XXXXXXXXX
5.0E+02 XXXXXXXXX
7.0E+02 XXXXXXXXXXXXXXXXX
1.0E+03 XXXXXXXXXXXXXXXXXXXXXXX
1.5E+03 XXXXXXXXXXX
2.0E+03
3.0E+03 XXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	0	0	0	0	0	33
0.00	0.00			0.00	0.00	

MAXIMUM = 3.00000E+03
MINIMUM = 3.00000E+01
GEOMETRIC MEAN = 5.53109E+02
GEOMETRIC DEVIATION = 2.88801E+00

TITLE
QUARTZ LATITE DIKES

FREQUENCY TABLE FOR COLUMN 15 (CO)

LIMITS LOWER	- UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	4	4	12.12	36.36
5.6E+00 -	8.3E+00	1	5	3.03	24.24
8.3E+00 -	1.2E+01	1	6	3.03	21.21
1.2E+01 -	1.8E+01	0	6	0.00	18.18
1.8E+01 -	2.6E+01	4	10	12.12	18.18
2.6E+01 -	3.8E+01	2	12	6.06	6.06

HISTOGRAM FOR COLUMN 15 (CO)

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

N	L	H	B	T	G	ANALYTICAL VALUES
14	7	0	0	0	0	12
42.42	21.21			0.00	0.00	

MAXIMUM = 3.00000E+01
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 1.16577E+01
GEOMETRIC DEVIATION = 2.10608E+00

TITLE
QUARTZ LATITE DIKES

FREQUENCY TABLE FOR COLUMN 17 (CU)

LIMITS LOWER - UPPER	FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 - 5.6E+00	2	2	6.06	57.58
5.6E+00 - 8.3E+00	0	2	0.00	51.52
8.3E+00 - 1.2E+01	1	3	3.03	51.52
1.2E+01 - 1.8E+01	1	4	3.03	48.48
1.8E+01 - 2.6E+01	1	5	3.03	45.45
2.6E+01 - 3.8E+01	0	5	0.00	42.42
3.8E+01 - 5.6E+01	2	7	6.06	42.42
5.6E+01 - 8.3E+01	2	9	6.06	36.36
8.3E+01 - 1.2E+02	2	11	6.06	30.30
1.2E+02 - 1.8E+02	0	11	0.00	24.24
1.8E+02 - 2.6E+02	2	13	6.06	24.24
2.6E+02 - 3.8E+02	0	13	0.00	18.18
3.8E+02 - 5.6E+02	3	16	9.09	18.18
5.6E+02 - 8.3E+02	0	16	0.00	9.09
8.3E+02 - 1.2E+03	0	16	0.00	9.09
1.2E+03 - 1.8E+03	1	17	3.03	9.09
1.8E+03 - 2.6E+03	1	18	3.03	6.06
2.6E+03 - 3.8E+03	0	18	0.00	3.03
3.8E+03 - 5.6E+03	0	18	0.00	3.03
5.6E+03 - 8.3E+03	0	18	0.00	3.03
8.3E+03 - 1.2E+04	1	19	3.03	3.03

HISTOGRAM FOR COLUMN 17 (CU)

```
5.0E+00 XXXXX
7.0E+00
1.0E+01 XXX
1.5E+01 XXX
2.0E+01 XXX
3.0E+01
5.0E+01 XXXXX
7.0E+01 XXXXX
1.0E+02 XXXXX
1.5E+02
2.0E+02 XXXXX
3.0E+02
5.0E+02 XXXXXXXX
7.0E+02
1.0E+03
1.5E+03 XXX
2.0E+03 XXX
3.0E+03
5.0E+03
7.0E+03
1.0E+04 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
10	4	0	0	0	0	19
30.30	12.12			0.00	0.00	

MAXIMUM = 1.00000E+04
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 1.14805E+02
GEOMETRIC DEVIATION = 7.86246E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
QUARTZ LATITE DIKES

FREQUENCY TABLE FOR COLUMN 19 (MO)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
3.8E+00 -	5.6E+00	1	1	3.03	18.18
5.6E+00 -	8.3E+00	3	4	9.09	15.15
8.3E+00 -	1.2E+01	2	6	6.06	6.06

HISTOGRAM FOR COLUMN 19 (MO)

5.0E+00 XXX
7.0E+00 XXXXXXXXX
1.0E+01 XXXXXX

N	L	H	B	T	G	ANALYTICAL VALUES
20	7	0	0	0	0	6
60.61	21.21			0.00	0.00	

MAXIMUM = 1.00000E+01
MINIMUM = 5.00000E+00
GEOMETRIC MEAN = 7.45379E+00
GEOMETRIC DEVIATION = 1.29990E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
QUARTZ LATITE DIKES

FREQUENCY TABLE FOR COLUMN 22 (PB)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	8	8	24.24	84.85
1.2E+01 -	1.8E+01	5	13	15.15	60.61
1.8E+01 -	2.6E+01	4	17	12.12	45.45
2.6E+01 -	3.8E+01	6	23	18.18	33.33
3.8E+01 -	5.6E+01	3	26	9.09	15.15
5.6E+01 -	8.3E+01	0	26	0.00	6.06
8.3E+01 -	1.2E+02	1	27	3.03	6.06

HISTOGRAM FOR COLUMN 22 (PB)

1.0E+01 XXXXXXXXXXXXXXXXXXXXXX
1.5E+01 XXXXXXXXXXXXX
2.0E+01 XXXXXXXXXXX
3.0E+01 XXXXXXXXXXXXXXXXX
5.0E+01 XXXXXXXX
7.0E+01
1.0E+02 XXX

N	L	H	B	T	G	ANALYTICAL VALUES
3	2	0	0	0	0	28
9.09	6.06			0.00	0.00	

MAXIMUM = 1.00000E+02
MINIMUM = 1.50000E+00
GEOMETRIC MEAN = 1.81079E+01
GEOMETRIC DEVIATION = 2.20004E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
QUARTZ LATITE DIKES

FREQUENCY TABLE FOR COLUMN 23 (SB)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+01 -	1.2E+02	4	4	12.12	18.18
1.2E+02 -	1.8E+02	2	6	6.06	6.06

HISTOGRAM FOR COLUMN 23 (SB)

```
1.0E+02 XXXXXXXXXXX
1.5E+02 XXXXXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
27	0	0	0	0	0	6
81.82	0.00			0.00	0.00	

MAXIMUM = 1.50000E+02
MINIMUM = 1.00000E+02
GEOMETRIC MEAN = 1.14471E+02
GEOMETRIC DEVIATION = 1.23291E+00

A470 GEOCHEMICAL SUMMARY - U S G S STATPAC (01/23/78) DATE 3/18/80

TITLE
QUARTZ LATITE DIKES

FREQUENCY TABLE FOR COLUMN 27 (V)

LIMITS LOWER - UPPER		FREQ	FREQ CUM	PERCENT FREQ	PERCENT FREQ CUM
8.3E+00 -	1.2E+01	0	0	0.00	90.91
1.2E+01 -	1.8E+01	3	3	9.09	90.91
1.8E+01 -	2.6E+01	2	5	6.06	81.82
2.6E+01 -	3.8E+01	5	10	15.15	75.76
3.8E+01 -	5.6E+01	4	14	12.12	60.61
5.6E+01 -	8.3E+01	2	16	6.06	48.48
8.3E+01 -	1.2E+02	1	17	3.03	42.42
1.2E+02 -	1.8E+02	1	18	3.03	39.39
1.8E+02 -	2.6E+02	4	22	12.12	36.36
2.6E+02 -	3.8E+02	3	25	9.09	24.24
3.8E+02 -	5.6E+02	4	29	12.12	15.15
5.6E+02 -	8.3E+02	0	29	0.00	3.03
8.3E+02 -	1.2E+03	1	30	3.03	3.03

HISTOGRAM FOR COLUMN 27 (V)

```
1.5E+01 XXXXXXXXX
2.0E+01 XXXXXX
3.0E+01 XXXXXXXXXXXXXX
5.0E+01 XXXXXXXXXXX
7.0E+01 XXXXXX
1.0E+02 XXX
1.5E+02 XXX
2.0E+02 XXXXXXXXXXX
3.0E+02 XXXXXXXXX
5.0E+02 XXXXXXXXXXX
7.0E+02
1.0E+03 XXX
```

N	L	H	B	T	G	ANALYTICAL VALUES
0	3	0	0	0	0	30
0.00	9.09			0.00	0.00	

MAXIMUM = 1.00000E+03
MINIMUM = 1.50000E+01
GEOMETRIC MEAN = 8.98771E+01
GEOMETRIC DEVIATION = 3.54423E+00

Table 4.--Spearman correlation coefficients for elements that are statistically associated, directly or indirectly, with gold and silver at a confidence level of 99 percent.

	Gold				Silver			
Rock unit	Element	Correlation eoefficient	Degrees of freedom	Student's t test	Element	Correlation coefficient	Degrees of freedom	Student's t test
Veins Silurian assemblage	As	.78	10	3.97				
Veins-Hanson Creek Formation	As	.73	12	3.68	As	0.75	16	4.51
	Mo	.75	11	3.84				
Roberts Mountains Formations	Hg	.69	39	5.99				
Popovich Formation	Sc	.70	16	3.93				