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Analytical results of rock samples and revised geologic map
of the Dugway Mining District, Tooele County, Utah

By

D. L. Kelley¹, B. F. Arbogast¹, B. M. Adrian¹,
and R. A. Yambrick¹

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¹U.S. Geological Survey, Denver, CO 80225

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STUDIES RELATED TO CUSMAP

During the 1986 field season, a lithogeochemical survey was conducted in the Dugway Mining District, Tooele County, Utah. The geochemical sampling program is one of numerous multidisciplinary studies associated with the Conterminous United States Mineral Appraisal Program (CUSMAP) in the Delta 1°x2° quadrangle. An earlier geologic map by Staatz and Carr (1964) was revised and alteration associated with mineralization was mapped. This report contains the revised geologic map (pl. 1), sample localities (pl. 1), and the analytical results for 185 rocks (table 2).

INTRODUCTION

The Dugway Mining District is located in the northern part of the Dugway Range, Tooele County, west-central Utah, about 75 miles (120 km) northwest of Delta, Utah (figure 1). The district is about 45 miles (72 km) east of the Nevada-Utah border and 45 miles (72 km) west of the Tintic Mining District. Since the discovery of mineralization in the northern Dugway Range in 1869, the Dugway Mining District has produced an estimated 1,200 tons of Pb-Zn-Ag-Cu ore (Staatz and Carr, 1964).

GENERAL GEOLOGY

The northern Dugway Range consists of miogeoclinal sedimentary rocks of Early Cambrian to Late Mississippian age, and minor rhyodacitic volcanic rocks of Tertiary age (Staatz and Carr, 1964). Sedimentary rocks are primarily transgressive and regressive carbonate and siliciclastic sequences. Minor folding of these sedimentary rocks occurred during the Cretaceous Sevier Orogeny. The largest of these folds is a broad syncline located east of the mining district along Buckhorn Canyon. At least two episodes of faulting postdate Sevier deformation: (1) development of the Buckhorn normal fault (pl. 1), and (2) development of high angle normal faults which postdate the Buckhorn fault. The Buckhorn fault lies within the Dugway Mining District and can be traced for about 10 miles (16 km) (pl. 1). The fault trends NW, dips about 60° NE, and juxtaposes down-dropped Devonian-Mississippian rocks to the east with Cambrian rocks to the west. High-angle normal faults and three en echelon grabens offset the Buckhorn fault. Small rhyodacite vent complexes and dikes occur along the Buckhorn fault and along other younger, high-angle normal faults.

Mineralization in the northern Dugway Range consists of base metal fissure veins and minor replacement of carbonate host rocks. Alteration is present as jasperoid and bleached carbonate rocks. Both mineralization and alteration are localized along the Buckhorn fault and other high-angle normal faults. At two localities mineralized quartz veins cut outflow breccia indicating that mineralization was the most recent event.

SAMPLE COLLECTION AND PREPARATION

Unaltered, altered, and mineralized rock samples were collected from outcrop. A total of 185 samples were collected from the district, which includes an area of about 8 square miles (pl. 1). Brief rock descriptions are given in table 3. All rocks were crushed and ground to a fine powder (-100 mesh). Representative hand specimens for all samples were saved for further study.

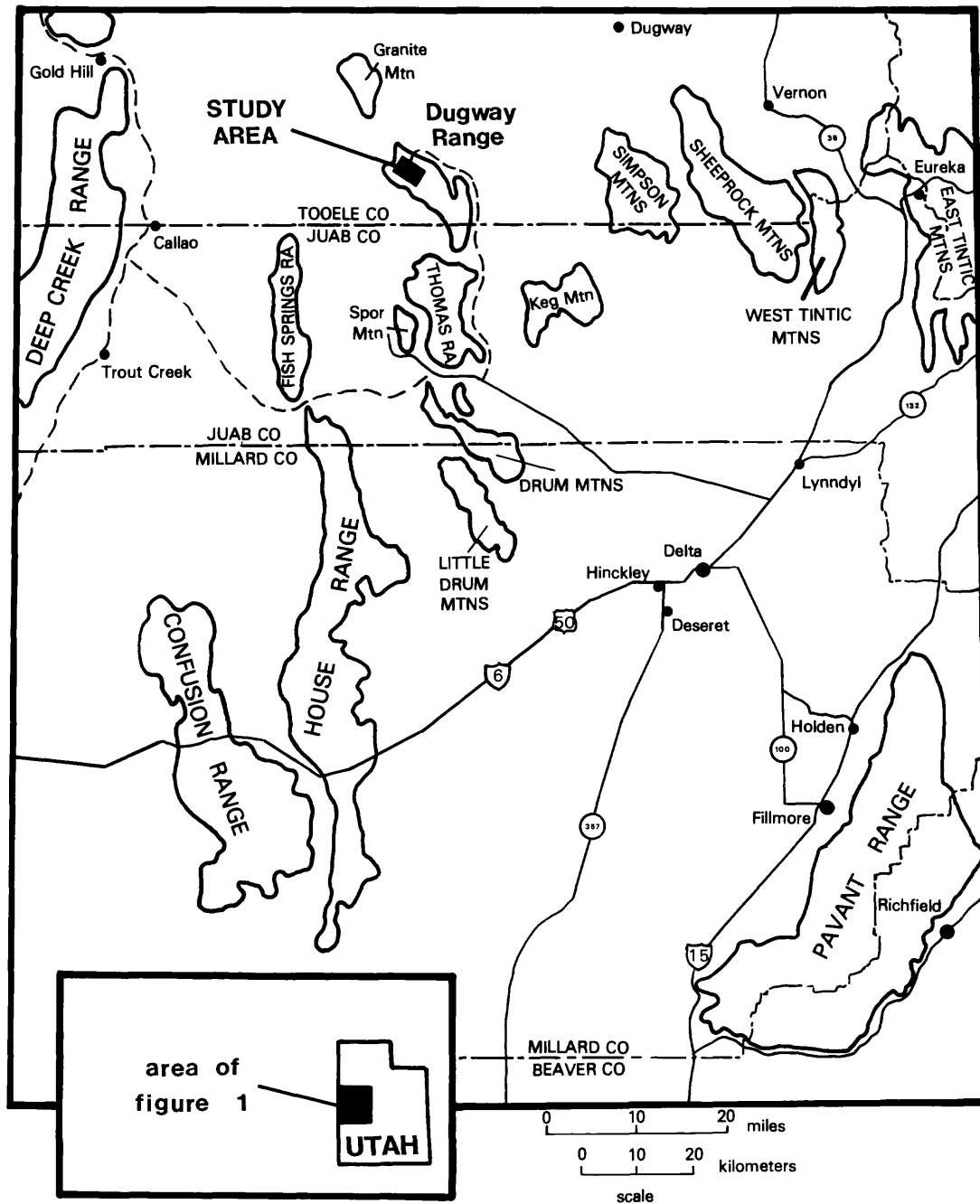


Figure 1. Location map showing study area.

SAMPLE ANALYSIS

Emission spectrographic and atomic absorption analytical methods were used in this study. A total of 36 elements were determined; table 1 shows the method used and the determination limits for each of these elements. The lower determination limit for Au, As, Cd, Bi, and Sb using the emission spectrographic method is high (table 1). Therefore, more sensitive atomic absorption methods for these elements were used. Emission spectrography analysis was performed by B. F. Arbogast and B. M. Adrian. Atomic absorption analysis was performed by D. L. Kelley.

Spectrographic Method

Rock samples were analyzed for 31 elements using a semiquantitative, direct-current arc emission spectrographic method (Grimes and Marranzino, 1968). Spectrographic results were obtained by visual comparison of spectra derived from the sample against spectra obtained from standards. Standard concentrations are geometrically spaced over any given order of magnitude of concentration as follows: 100, 50, 20, 10, and so forth. The precision of the analytical method is \pm one reporting interval at the 83% confidence level and \pm two reporting intervals at the 96% confidence level (Motooka and Grimes, 1976). Values determined for major elements (Fe, Mg, Ca, Ti) are given in weight percent; all others are in parts per million (micrograms/gram or ppm). Analytical data for samples from the Dugway Mining District are given in table 2.

Wet Chemical Methods

Gold

All samples were treated with a solution of concentrated hydrobromic acid and 0.5% bromine. Gold bromide complexes were extracted with methyl isobutyl ketone and then analyzed.

Gold concentrations were determined by using both the flame and flameless atomic absorption spectrophotometric methods. Samples having Au concentrations of 0.05 ppm or greater were determined using a flame method (Thompson and others, 1968) and those having detectable Au but less than 0.05 ppm, were determined using a flameless graphite furnace technique (Meier, 1980). Use of the flameless method allowed detection of Au concentrations down to 0.002 ppm.

Arsenic-Cadmium-Bismuth-Antimony

All samples were treated with a hydrochloric acid-hydrogen peroxide solution and As, Cd, Bi, and Sb complexes were extracted using methyl isobutyl ketone (O'Leary and Viets, 1986). Metal concentrations were determined using a flame atomic absorption spectrophotometer.

REFERENCES

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Table 1.--Analytical methods used for rock samples

[ES=emission spectrography; AA=atomic absorption; GF=flameless graphite furnace]

Element	Method used	Determination limit	
		Lower	Upper
Percent			
Iron (Fe)	ES	0.05	20
Magnesium (Mg)	ES	0.02	10
Calcium (Ca)	ES	0.05	20
Titanium (Ti)	ES	0.002	1
Parts per million			
Manganese (Mn)	ES	10	5,000
Silver (Ag)	ES	0.5	5,000
Arsenic (As)	ES	200	10,000
Gold (Au)	ES	10	500
Boron (B)	ES	10	2,000
Barium (Ba)	ES	20	5,000
Beryllium (Be)	ES	1	1,000
Bismuth (Bi)	ES	10	1,000
Cadmium (Cd)	ES	20	500
Cobalt (Co)	ES	5	2,000
Chromium (Cr)	ES	10	5,000
Copper (Cu)	ES	5	20,000
Lanthanum (La)	ES	20	1,000
Molybdenum (Mo)	ES	5	2,000
Niobium (Nb)	ES	20	2,000
Nickel (Ni)	ES	5	5,000
Lead (Pb)	ES	10	20,000
Antimony (Sb)	ES	100	10,000
Scandium (Sc)	ES	5	100
Tin (Sn)	ES	10	1,000
Strontium (Sr)	ES	100	5,000
Vanadium (V)	ES	10	10,000
Tungsten (W)	ES	50	10,000
Yttrium (Y)	ES	10	2,000
Zinc (Zn)	ES	200	10,000
Zirconium (Zr)	ES	10	1,000
Thorium (Th)	ES	100	2,000
Gold (Au)	AA	0.05	1,000
Gold (Au)	GF	0.002	0.05
Arsenic (As)	AA	10	2,000
Cadmium (Cd)	AA	1	100
Bismuth (Bi)	AA	1	1,000
Antimony (Sb)	AA	2	1,000

Table 2.---Analytical Results of Rock Samples (N=not detected; L=detected but less than the lower determination limit;
G=greater than the upper determination limit).

Sample # (see Plate 1)	Fe%	Mg%	Ca%	Ti%	Mn	Ag	As	Au	B	Ba
1	10.00	0.50	0.20	0.010	700.00	50.00	1000.00	10.00N	50.00	30.00
2	0.20	10.00G	20.00G	0.010	2000.00	1.00	200.00N	10.00N	10.00N	500.00
3	5.00	0.20	0.30	0.100	200.00	50.00	200.00N	10.00N	50.00	100.00
4	7.00	10.00	0.50	0.010	5000.00G	3.00	200.00N	10.00N	20.00	300.00
5	20.00G	0.20	2.00	0.020	500.00	10.00	700.00	10.00N	10.00L	200.00
6	1.00	0.30	20.00G	0.020	5000.00G	10.00	200.00N	10.00N	20.00	5000.00G
7	10.00	1.00	5.00	0.010	5000.00G	100.00	200.00N	10.00N	10.00L	500.00
8	0.20	0.50	3.00	0.002	3000.00	50.00	200.00N	10.00N	10.00N	5000.00G
9	20.00G	0.10	0.20	0.100	150.00	2.00	1000.00	10.00N	10.00	700.00
10	0.70	0.10	0.20	0.500	100.00	100.00	200.00N	10.00N	30.00	5000.00G
11	10.00	0.02	0.20	0.100	100.00	200.00	200.00N	10.00N	10.00	100.00
12	20.00G	0.05	5.00	0.070	200.00	100.00	3000.00	10.00N	10.00L	1000.00
13	3.00	2.00	20.00G	0.010	5000.00G	500.00	200.00N	10.00N	10.00	3000.00
14	1.00	10.00G	20.00G	0.010	5000.00G	2.00	200.00N	10.00N	10.00N	50.00
15	7.00	5.00	20.00G	0.005	5000.00G	5.00	200.00N	10.00N	10.00N	1000.00
16	1.50	1.50	0.50	0.050	1000.00	10.00	200.00L	10.00N	30.00	2000.00
17	5.00	7.00	0.50	0.500	1500.00	5.00	200.00N	10.00N	20.00	50.00
18	20.00G	2.00	0.20	0.005	1000.00	3.00	200.00N	10.00N	10.00N	50.00
19	20.00G	0.50	1.00	0.020	2000.00	0.50L	200.00N	10.00N	10.00L	200.00
20	5.00	5.00	5.00	1.000	500.00	0.50N	200.00N	10.00N	20.00	2000.00
21	0.70	0.20	2.00	0.010	100.00	50.00	200.00N	10.00N	20.00	5000.00G
22	5.00	5.00	0.20	0.200	5000.00	5.00	200.00N	10.00N	20.00	50.00
23	7.00	0.50	0.50	0.020	3000.00	200.00	200.00L	10.00N	10.00	100.00
24	3.00	5.00	20.00G	0.100	5000.00	100.00	200.00N	10.00N	70.00	5000.00G
25	7.00	1.00	3.00	0.200	5000.00	100.00	200.00N	10.00N	50.00	1000.00
26	20.00G	0.50	5.00	0.020	5000.00G	70.00	200.00N	10.00N	10.00N	1000.00
27	20.00G	1.50	5.00	0.100	500.00	2.00	200.00N	10.00N	10.00N	100.00
28	2.00	0.10	0.05	0.020	100.00	1000.00	200.00N	10.00N	30.00	500.00
29	20.00G	5.00	5.00	0.200	700.00	10.00	200.00N	10.00N	10.00N	20.00
30	20.00G	0.50	20.00G	0.002	200.00	10.00	200.00N	10.00N	20.00	20.00
31	2.00	0.10	1.00	0.050	50.00	200.00	200.00N	10.00N	50.00	300.00
32	20.00G	0.10	0.50	0.100	300.00	150.00	700.00	30.00	10.00L	50.00
33	7.00	1.50	0.20	0.150	2000.00	50.00	200.00N	10.00N	20.00	1000.00
34	20.00G	0.50	1.00	0.200	1500.00	2.00	200.00N	10.00N	10.00L	50.00
35	20.00	2.00	20.00G	0.005	1000.00	200.00	200.00N	10.00N	10.00L	20.00
36	15.00	1.00	3.00	0.200	5000.00	5.00	200.00N	10.00N	50.00	100.00
37	10.00	0.20	2.00	0.010	2000.00	7.00	200.00N	10.00N	50.00	5000.00G
38	10.00	2.00	0.10	0.070	1000.00	10.00	200.00N	10.00N	50.00	100.00
39	20.00G	0.20	0.10	0.150	200.00	1.00	200.00N	10.00N	30.00	50.00
40	10.00	2.00	0.20	0.200	1000.00	50.00	200.00N	10.00N	50.00	150.00
41	5.00	1.50	0.50	0.100	2000.00	50.00	200.00N	10.00N	50.00	200.00
42	20.00	7.00	10.00	0.010	5000.00G	2.00	500.00	10.00N	10.00N	20.00
43	10.00	0.20	20.00G	0.020	5000.00	100.00	200.00N	10.00N	50.00	70.00
44	20.00G	0.10	0.20	0.010	200.00	200.00	200.00N	10.00N	10.00L	5000.00
45	20.00G	2.00	1.00	0.050	1500.00	2.00	200.00N	10.00N	50.00	50.00

Table 2.--Cont.

Sample #	Be	Bi	Cd	Co	Cr	Cu	La	Mo	Nb	Ni
1	7.00	10.00N	100.00	5.00N	10.00L	700.00	20.00N	20.00	20.00N	5.00
2	1.00N	10.00N	20.00N	5.00N	10.00L	5.00L	20.00N	5.00N	20.00N	5.00N
3	1.00	10.00N	70.00	5.00N	30.00	3000.00	20.00N	500.00	20.00N	5.00
4	10.00	10.00N	50.00	5.00N	10.00L	100.00	20.00N	10.00	20.00N	5.00
5	1.00N	10.00N	20.00N	5.00L	10.00N	700.00	20.00N	50.00	20.00N	5.00N
6	3.00	10.00N	20.00N	5.00N	10.00L	20.00	20.00N	20.00	20.00N	5.00
7	15.00	10.00N	200.00	5.00N	10.00L	1000.00	20.00N	5.00N	20.00N	5.00L
8	1.00L	10.00N	20.00N	5.00N	10.00L	20.00	20.00N	5.00N	20.00N	5.00N
9	1.00	10.00N	50.00	5.00L	10.00N	5000.00	20.00N	200.00	20.00N	5.00L
10	1.00	10.00N	20.00N	5.00L	10.00	70.00	20.00N	70.00	20.00N	5.00
11	1.00L	10.00N	20.00N	5.00L	10.00N	3000.00	20.00N	150.00	20.00N	5.00L
12	5.00	10.00N	20.00N	5.00N	10.00L	200.00	20.00N	100.00	20.00N	5.00L
13	2.00	10.00N	500.00	5.00N	10.00L	500.00	20.00N	700.00	20.00N	5.00L
14	1.00	10.00N	500.00G	5.00N	10.00L	5000.00	20.00N	5.00N	20.00N	5.00L
15	3.00	10.00N	20.00N	5.00N	10.00L	20.00	20.00N	50.00	20.00N	5.00L
16	15.00	10.00N	20.00N	5.00N	10.00L	200.00	20.00N	200.00	20.00N	5.00L
17	3.00	10.00N	20.00N	5.00L	50.00	300.00	20.00N	5.00N	20.00N	20.00
18	2.00	10.00N	20.00N	5.00L	10.00N	5000.00	20.00N	10.00	20.00N	5.00N
19	10.00	10.00N	20.00N	5.00L	10.00L	200.00	20.00N	5.00N	20.00N	5.00L
20	1.00N	10.00N	20.00N	50.00	1500.00	20.00	50.00	5.00N	20.00N	200.00
21	30.00	10.00N	100.00	5.00L	10.00L	300.00	20.00N	20.00	20.00N	5.00L
22	2.00	10.00N	20.00	10.00	70.00	7000.00	20.00N	7.00	20.00N	20.00
23	15.00	10.00N	500.00	5.00N	10.00L	1000.00	20.00N	10.00	20.00N	5.00L
24	2.00	10.00N	20.00N	5.00	20.00	10000.00	20.00N	100.00	20.00N	5.00
25	5.00	10.00N	50.00	15.00	10.00	10000.00	20.00L	50.00	20.00N	10.00
26	2.00	10.00N	200.00	5.00N	10.00N	1000.00	20.00N	10.00	20.00N	5.00N
27	20.00	10.00N	20.00N	5.00	20.00	500.00	20.00N	15.00	20.00N	5.00
28	3.00	10.00N	20.00N	5.00N	10.00L	20000.00	20.00N	200.00	20.00N	5.00
29	2.00	50.00	20.00N	15.00	10.00N	2000.00	20.00N	1000.00	20.00N	5.00
30	30.00	10.00L	20.00N	5.00N	20.00	100.00	20.00	10.00	20.00N	5.00L
31	1.00	10.00N	20.00	10.00	10.00N	15000.00	20.00N	2000.00	20.00N	10.00
32	5.00	10.00N	20.00N	5.00L	10.00N	200.00	20.00N	10.00	20.00N	5.00N
33	3.00	10.00N	150.00	5.00N	20.00	5000.00	20.00N	20.00	20.00N	5.00
34	20.00	10.00N	20.00N	5.00L	20.00	500.00	20.00N	10.00	20.00N	5.00L
35	15.00	70.00	20.00N	10.00	10.00N	1000.00	20.00N	20.00	20.00N	5.00L
36	3.00	10.00	20.00N	5.00L	30.00	7000.00	20.00N	100.00	20.00N	5.00
37	1000.00	10.00N	20.00N	5.00N	10.00N	1000.00N	20.00N	5.00N	20.00N	5.00L
38	5.00	10.00N	20.00N	5.00N	20.00	5000.00	20.00N	5.00N	20.00N	10.00
39	1.00	10.00N	20.00N	5.00N	30.00	7000.00	20.00N	5.00N	20.00N	5.00L
40	10.00	10.00N	20.00L	5.00N	30.00	100.00	20.00N	5.00N	20.00N	5.00
41	15.00	15.00	150.00	5.00N	20.00	1500.00	20.00N	5.00N	20.00N	5.00
42	1.00L	10.00N	200.00	10.00	10.00N	1000.00	20.00N	5.00N	20.00N	7.00
43	50.00	50.00	20.00N	5.00	10.00N	100.00	20.00N	5.00N	20.00N	5.00
44	2.00	50.00	20.00N	5.00N	10.00	1000.00	20.00N	5.00N	20.00N	5.00N
45	10.00	20.00	20.00N	5.00L	20.00	20000.00	20.00N	5.00N	20.00N	20.00

Table 2.--Cont.

Sample #	Pb	Sb	Se	Sn	Sr	V	W	Y	Zn	Zr
1	20000.00G	200.00	5.00N	10.00N	100.00N	20.00	50.00N	10.00L	10000.00G	10.00N
2	70.00	100.00N	5.00L	10.00N	100.00L	10.00	50.00N	10.00L	200.00N	10.00L
3	10000.00	100.00L	5.00L	10.00N	100.00N	100.00	50.00N	10.00	2000.00	100.00
4	7000.00	100.00N	5.00N	10.00N	100.00N	20.00	50.00N	10.00	10000.00G	10.00L
5	7000.00	100.00N	5.00N	10.00N	100.00N	20.00	50.00N	10.00	5000.00	10.00N
6	100.00	100.00L	5.00N	10.00N	5000.00	30.00	50.00N	10.00	2000.00	50.00
7	20000.00G	100.00	5.00N	10.00N	200.00	70.00	50.00N	10.00L	10000.00G	10.00N
8	15000.00	100.00N	5.00N	10.00N	5000.00G	10.00L	50.00N	10.00L	2000.00	10.00N
9	10000.00	100.00	5.00N	10.00N	100.00N	30.00	50.00N	10.00	10000.00G	50.00
10	1000.00	100.00N	5.00N	10.00N	200.00	30.00	50.00N	10.00	1000.00	200.00
11	20000.00G	150.00	5.00N	10.00N	100.00	10.00	50.00N	10.00N	2000.00	30.00
12	10000.00	500.00	5.00N	10.00N	100.00N	10.00	50.00N	10.00	5000.00	10.00L
13	20000.00G	100.00N	5.00N	10.00N	200.00	30.00	50.00N	10.00	10000.00G	10.00N
14	5000.00	100.00N	5.00N	10.00N	100.00	20.00	10.00N	20.00	10000.00G	10.00L
15	500.00	100.00N	5.00N	10.00N	300.00	20.00	50.00N	10.00L	5000.00	10.00N
16	1500.00	100.00L	5.00N	10.00N	100.00N	30.00	50.00N	10.00L	2000.00	20.00
17	500.00	100.00L	10.00	10.00N	100.00N	100.00	50.00N	20.00	5000.00	500.00
18	1000.00	100.00N	5.00N	10.00N	100.00N	10.00	700.00	10.00	10000.00	20.00
19	1000.00	100.00N	5.00N	10.00N	100.00N	20.00	500.00	15.00	1500.00	10.00L
20	50.00	100.00N	50.00	10.00N	500.00	200.00	50.00N	20.00	200.00L	200.00
21	20000.00G	100.00L	5.00N	10.00N	100.00	10.00	50.00N	100.00	10000.00	10.00N
22	7000.00	100.00N	5.00L	10.00N	100.00N	70.00	50.00N	15.00	10000.00	200.00
23	20000.00G	150.00	5.00N	10.00N	300.00	20.00	1000.00	20.00	10000.00G	10.00N
24	20000.00G	500.00	5.00	10.00N	5000.00	200.00	50.00N	10.00	10000.00	30.00
25	20000.00G	100.00N	5.00N	10.00N	500.00	50.00	50.00N	10.00	10000.00G	200.00
26	10000.00	100.00N	5.00N	10.00N	100.00N	20.00	50.00N	20.00	10000.00	10.00N
27	5000.00	100.00N	7.00	10.00N	100.00N	50.00	5000.00	70.00	5000.00	10.00N
28	20000.00G	500.00	5.00N	10.00N	100.00N	20.00	50.00N	10.00L	500.00	1000.00G
29	200.00	100.00N	5.00	10.00N	100.00N	50.00	50.00N	15.00	500.00	200.00
30	20000.00G	100.00N	5.00N	10.00N	100.00N	10.00	50.00N	1000.00	1000.00	10.00L
31	10000.00	500.00	5.00N	20.00	100.00N	1000.00	50.00N	15.00	3000.00	10.00L
32	15000.00	100.00	5.00N	10.00N	100.00N	30.00	500.00	10.00L	3000.00	50.00
33	20000.00	100.00N	5.00N	10.00N	100.00N	15.00	50.00N	10.00N	10000.00G	50.00
34	5000.00	100.00N	5.00	10.00N	100.00N	70.00	500.00	30.00	7000.00	70.00
35	20000.00G	100.00N	5.00N	10.00N	500.00	15.00	100.00	50.00	2000.00	10.00N
36	10000.00	100.00N	5.00N	10.00N	100.00N	100.00	50.00N	10.00	7000.00	200.00
37	5000.00	100.00N	5.00N	10.00N	3000.00	20.00	50.00L	20.00	5000.00	10.00N
38	150.00	100.00N	5.00N	10.00N	100.00N	30.00	50.00N	10.00L	200.00	50.00
39	100.00	100.00N	5.00N	10.00N	100.00N	100.00	50.00N	15.00	1000.00	70.00
40	20000.00G	100.00N	5.00N	10.00N	100.00N	50.00	150.00	20.00	10000.00G	200.00
41	20000.00G	100.00N	5.00N	10.00N	100.00N	30.00	50.00N	10.00L	10000.00G	50.00
42	300.00	100.00N	5.00N	10.00N	100.00	30.00	50.00N	10.00	10000.00G	10.00L
43	10000.00	100.00N	5.00N	10.00N	100.00N	50.00	100.00	100.00	200.00	10.00
44	20000.00G	100.00N	5.00N	10.00N	200.00	20.00	200.00	10.00L	200.00	10.00N
45	2000.00	100.00N	5.00N	10.00N	100.00N	70.00	50.00N	70.00	7000.00	10.00N

Table 2.--Cont.

Sample #	Th	Au-AA	AS-AA	Cd-AA	Bi-AA	Sb-AA
1	100.00N	0.040	1100.00	37.00	3.00	54.00
2	100.00N	0.002N	10.00N	0.10N	1.00N	2.00N
3	100.00N	0.008	10.00	38.00	7.00	34.00
4	100.00N	0.004	20.00	26.00	1.00N	2.00L
5	100.00N	0.006	770.00	2.80	1.00N	4.00
6	100.00N	0.004	30.00	1.20	1.00N	2.00L
7	100.00N	0.038	70.00	100.00G	1.00N	32.00
8	100.00N	0.002	10.00N	0.60	1.00N	2.00N
9	100.00N	0.006	1200.00	26.00	1.00N	38.00
10	100.00N	6.600	20.00	0.50	1.00N	6.00
11	100.00N	0.350	250.00	2.50	7.00	58.00
12	100.00N	0.100	2000.00G	3.80	1.00N	350.00
13	100.00N	0.100	50.00	100.00G	1.00N	20.00
14	100.00N	0.026	20.00	100.00G	1.00N	2.00N
15	100.00N	0.002N	20.00	4.90	1.00N	6.00
16	100.00N	0.300	100.00	0.90	1.00N	8.00
17	100.00N	0.002	10.00L	8.00	1.00	2.00N
18	100.00N	0.100	30.00	4.50	8.00	2.00L
19	100.00N	0.002L	20.00	0.40	1.00L	2.00L
20	100.00N	0.002L	10.00N	0.10N	1.00N	2.00N
21	100.00N	0.100	10.00	96.00	1.00N	10.00
22	100.00N	0.002	10.00N	34.00	1.00N	2.00N
23	100.00N	0.200	140.00	100.00G	1.00L	62.00
24	100.00N	0.700	500.00	3.60	1.00N	400.00
25	100.00N	1.700	30.00	36.00	1.00N	12.00
26	100.00N	0.044	60.00	100.00G	1.00N	6.00
27	100.00N	0.014	10.00	2.40	1.00	2.00L
28	100.00N	0.350	20.00	0.20	1.00N	170.00
29	100.00N	0.038	70.00	0.20	43.00	2.00L
30	100.00N	0.038	10.00N	0.40	3.00	2.00L
31	100.00N	0.042	230.00	12.00	1.00N	320.00
32	100.00N	64.000	860.00	2.40	25.00	62.00
33	100.00N	0.500	10.00	87.00	1.00N	2.00
34	100.00N	0.006	80.00	3.60	1.00	2.00
35	100.00N	0.500	30.00	16.00	120.00	38.00
36	100.00N	0.250	40.00	4.50	8.00	2.00
37	100.00N	0.012	10.00	3.80	1.00L	2.00N
38	100.00N	0.004	10.00L	0.30	1.00N	2.00N
39	100.00N	0.004	20.00	0.10L	1.00N	2.00N
40	100.00N	0.004	20.00	12.00	1.00N	2.00
41	100.00N	0.400	10.00N	65.00	4.00	20.00
42	100.00N	0.002L	1300.00	100.00G	1.00N	6.00
43	100.00N	0.200	10.00	0.60	42.00	2.00
44	100.00N	2.100	10.00N	0.20	51.00	24.00
45	100.00N	0.200	450.00	7.00	20.00	2.00L

Table 2.--Cont.

Sample #	Fe%	Mg%	Ca%	Ti%	Mn	Ag	As	Au	B	Ba
46	5.00	0.70	0.50	0.050	300.00	100.00	200.00N	10.00N	30.00	70.00
47	20.00	0.50	0.10	0.070	2000.00	0.50	500.00	10.00N	20.00	100.00
48	20.00G	0.50	20.00	0.070	300.00	100.00	200.00N	10.00N	20.00	5000.00G
49	1.50	10.00G	20.00G	0.150	3000.00	0.50L	200.00N	10.00N	10.00N	50.00
50	20.00G	0.20	0.20	0.005	150.00	150.00	200.00N	10.00N	10.00L	50.00
51	20.00	0.10	0.50	0.020	5000.00G	3.00	200.00L	10.00N	50.00	2000.00
52	20.00G	1.50	0.50	0.050	1000.00	2.00	200.00N	10.00N	10.00	300.00
53	20.00G	0.15	0.05	0.010	500.00	0.50N	500.00	10.00N	10.00L	50.00
54	20.00G	0.20	5.00	0.010	200.00	15.00	200.00N	10.00N	20.00	5000.00G
55	20.00G	2.00	0.05	0.050	500.00	5.00	200.00N	10.00N	10.00L	50.00
56	20.00	0.15	0.10	0.005	500.00	300.00	200.00N	10.00N	20.00	200.00
57	5.00	0.70	0.10	0.050	300.00	0.70	200.00N	10.00N	20.00	100.00
58	20.00G	1.00	10.00	0.020	500.00	0.50	200.00N	10.00N	10.00N	50.00
59	20.00G	0.20	0.10	0.020	2000.00	1.50	200.00N	10.00N	10.00L	30.00
60	20.00G	2.00	20.00	0.050	5000.00G	50.00	200.00N	10.00N	10.00N	30.00
61	20.00G	1.00	20.00G	0.010	1000.00	50.00	200.00N	10.00N	10.00	5000.00
62	7.00	2.00	0.30	0.200	3000.00	1.00	200.00N	10.00N	20.00	150.00
63	1.00	0.20	20.00G	0.010	300.00	300.00	200.00N	10.00N	10.00N	50.00
64	20.00G	1.00	0.20	0.050	1500.00	1.00	200.00N	10.00N	10.00	100.00
65	20.00	0.10	0.10	0.070	70.00	7.00	200.00N	10.00N	20.00	50.00
66	10.00	0.10	0.05L	0.002L	70.00	70.00	200.00N	10.00N	30.00	5000.00G
67	5.00	1.50	20.00G	0.002	5000.00G	10.00	200.00N	10.00N	10.00N	100.00
68	20.00	0.30	1.00	0.015	300.00	10.00	200.00N	10.00N	15.00	70.00
69	2.00	2.00	1.50	0.100	5000.00	50.00	200.00N	10.00N	20.00	3000.00
70	20.00G	0.50	1.00	0.050	700.00	3.00	200.00N	10.00N	10.00L	100.00
71	20.00G	0.10	0.05	0.020	2000.00	1.00	200.00N	10.00N	10.00	50.00
72	2.00	0.30	0.10	0.200	700.00	15.00	200.00N	10.00N	30.00	70.00
73	20.00G	0.20	0.10	0.070	100.00	20.00	1000.00	10.00N	15.00	50.00
74	20.00	0.50	3.00	0.070	2000.00	1.00	200.00N	10.00N	20.00	50.00
75	20.00G	3.00	1.00	0.020	2000.00	15.00	200.00N	10.00N	10.00	20.00
76	2.00	0.10	10.00	0.002	200.00	5.00	200.00N	10.00N	50.00	20.00L
77	20.00	3.00	10.00	0.010	5000.00G	7.00	200.00N	10.00N	10.00L	200.00
78	20.00G	2.00	5.00	0.002	2000.00	10.00	200.00L	10.00N	10.00	20.00
79	20.00G	3.00	1.00	0.010	2000.00	0.50N	200.00N	10.00N	30.00	300.00
80	0.70	0.20	20.00G	0.002L	5000.00	1.00N	200.00N	10.00N	10.00N	20.00L
81	2.00	2.00	7.00	0.030	5000.00G	2.00	200.00N	10.00N	10.00N	100.00
82	3.00	1.00	0.50	0.150	3000.00	3.00	200.00N	10.00N	50.00	20.00
83	15.00	2.00	0.15	0.070	3000.00	1.00	200.00N	10.00N	50.00	100.00
84	20.00	1.00	0.10	0.010	500.00	200.00	200.00N	10.00N	20.00	20.00L
85	20.00G	0.20	0.20	0.010	300.00	500.00	200.00L	10.00N	10.00L	20.00
86	7.00	1.50	20.00G	0.010	5000.00G	100.00	200.00N	10.00N	10.00N	20.00L
87	20.00G	0.50	1.00	0.100	2000.00	0.70	200.00	10.00N	20.00	300.00
88	10.00	1.50	20.00G	0.300	2000.00	10.00	200.00N	10.00N	30.00	5000.00G
89	10.00	5.00	20.00G	0.050	5000.00G	1.00	200.00N	10.00N	10.00N	20.00
90	20.00G	1.00	2.00	0.020	1000.00	100.00	200.00L	10.00N	20.00	50.00

Table 2.--Cont.

Sample #	Be	Bi	Cd	Co	Cr	Cu	La	Mo	Nb	Ni
46	10.00	10.00N	20.00N	5.00N	10.00L	700.00	20.00N	20.00	20.00N	5.00
47	5.00	50.00	20.00N	5.00L	20.00	20000.00	20.00N	5.00N	20.00N	30.00
48	5.00	10.00N	20.00N	5.00N	10.00	700.00	20.00N	5.00N	20.00N	5.00L
49	1.00L	10.00N	20.00N	5.00	30.00	20.00	20.00N	5.00	20.00N	15.00
50	5.00	100.00	20.00N	5.00L	10.00N	20000.00	20.00N	5.00N	20.00N	5.00N
51	20.00	10.00N	20.00N	5.00N	10.00L	500.00	20.00N	30.00	20.00N	10.00
52	5.00	10.00N	20.00N	5.00	10.00L	20000.00G	20.00N	5.00N	20.00N	5.00
53	2.00	10.00N	20.00N	5.00L	10.00	3000.00	20.00N	5.00L	20.00N	5.00L
54	7.00	70.00	20.00N	10.00	10.00N	20000.00G	20.00N	10.00	20.00N	5.00L
55	1.50	20.00	20.00N	5.00N	10.00N	15000.00	20.00N	10.00	20.00N	5.00
56	30.00	50.00	20.00N	5.00N	10.00L	150.00	20.00N	5.00N	20.00N	5.00
57	1.00	10.00N	20.00N	5.00N	10.00	50.00	20.00N	5.00N	20.00N	5.00
58	1.00	10.00N	20.00N	5.00L	10.00N	100.00	20.00N	5.00	20.00N	5.00N
59	20.00	10.00N	20.00N	5.00N	10.00N	50.00	20.00N	5.00N	20.00N	5.00
60	7.00	10.00N	20.00N	5.00N	20.00	300.00	20.00N	5.00N	20.00N	7.00
61	30.00	50.00	20.00N	7.00	10.00N	20000.00G	20.00N	5.00N	20.00N	7.00
62	1.00	10.00N	20.00N	5.00N	20.00	500.00	20.00N	15.00	20.00N	10.00
63	10.00	50.00	20.00N	5.00L	10.00L	500.00	100.00	5.00	20.00N	5.00L
64	5.00	10.00N	20.00N	10.00	10.00N	2000.00	20.00N	20.00	20.00N	5.00
65	2.00	50.00	20.00N	5.00	10.00L	1500.00	20.00N	5.00N	20.00N	5.00
66	70.00	10.00N	20.00N	5.00N	10.00N	500.00	20.00N	5.00N	20.00N	5.00
67	1.00	10.00N	500.00	5.00N	10.00N	200.00	20.00N	30.00	20.00N	5.00L
68	5.00	10.00N	70.00	5.00N	10.00N	20000.00G	20.00N	10.00	20.00N	5.00L
69	1.00	10.00N	20.00N	5.00N	10.00	500.00	20.00N	10.00	20.00N	7.00
70	10.00	10.00N	20.00N	5.00N	10.00L	200.00	20.00N	5.00N	20.00N	5.00L
71	3.00	10.00N	20.00N	5.00L	10.00L	2000.00	20.00N	7.00	20.00N	5.00
72	1.00	10.00N	20.00N	5.00N	10.00L	100.00	20.00N	5.00L	20.00N	5.00
73	2.00	10.00N	20.00N	5.00	10.00N	2000.00	20.00N	5.00L	20.00N	5.00L
74	10.00	10.00	20.00N	20.00	10.00L	10000.00	20.00N	5.00L	20.00N	5.00
75	10.00	10.00N	500.00	5.00L	10.00N	500.00	20.00N	7.00	20.00N	5.00
76	100.00	10.00N	20.00N	5.00N	10.00L	50.00	20.00N	10.00	20.00N	7.00
77	15.00	10.00N	200.00	5.00N	10.00L	200.00	20.00N	5.00L	20.00N	5.00L
78	15.00	10.00N	20.00L	5.00N	10.00N	200.00	20.00N	5.00L	20.00N	5.00L
79	2.00	10.00N	20.00N	5.00L	10.00N	20000.00G	20.00N	5.00N	20.00N	5.00L
80	100.00	15.00	20.00N	10.00	10.00N	500.00	100.00	5.00N	20.00N	5.00L
81	5.00	10.00N	500.00G	7.00	10.00L	700.00	20.00N	5.00L	20.00N	5.00
82	1.00L	10.00N	20.00N	5.00L	15.00	50.00	20.00N	5.00L	20.00N	7.00
83	7.00	10.00	20.00N	5.00L	10.00	10000.00	20.00N	5.00N	20.00N	20.00
84	1.00	15.00	100.00	5.00N	10.00L	20000.00G	20.00N	5.00L	20.00N	5.00L
85	1.00	10.00N	20.00L	5.00N	10.00N	20000.00	20.00N	10.00	20.00N	5.00N
86	1.00N	10.00N	500.00	5.00N	10.00L	500.00	20.00N	15.00	20.00N	5.00
87	2.00	100.00	20.00N	5.00	20.00	2000.00	20.00N	5.00L	20.00N	10.00
88	20.00	1000.00G	20.00N	5.00	200.00	20000.00G	50.00	5.00L	20.00N	30.00
89	1.00L	10.00N	20.00N	5.00N	10.00L	500.00	20.00N	10.00	20.00N	5.00L
90	5.00	100.00	300.00	5.00L	10.00N	7000.00	20.00N	5.00	20.00N	5.00L

Table 2.--Cont.

Sample #	Pb	Sb	Se	Sn	Str	V	W	Y	Zn	Zr
46	20000.00G	100.00N	5.00N	10.00N	500.00	100.00	50.00N	10.00	10000.00	50.00
47	200.00	100.00N	5.00N	10.00N	100.00N	70.00	500.00	50.00	5000.00	70.00
48	20000.00G	100.00N	5.00N	10.00N	1500.00	50.00	50.00N	20.00	2000.00	50.00
49	500.00	100.00N	5.00	10.00N	300.00	50.00	50.00N	10.00	300.00	70.00
50	500.00	100.00N	5.00	10.00N	100.00N	10.00	50.00N	15.00	1000.00	10.00N
51	15000.00	100.00N	5.00N	10.00N	1500.00	300.00	50.00N	30.00	10000.00G	10.00L
52	500.00	100.00N	5.00L	10.00N	100.00N	200.00	5000.00	20.00	1000.00	10.00L
53	1000.00	100.00N	7.00	10.00N	100.00N	100.00	1000.00	15.00	5000.00	20.00
54	1000.00	100.00N	5.00N	10.00N	200.00	30.00	700.00	10.00N	500.00	10.00L
55	200.00	100.00N	5.00L	30.00	100.00N	50.00	300.00	10.00	500.00	10.00
56	20000.00G	100.00N	5.00N	10.00N	100.00N	30.00	50.00N	10.00N	500.00	10.00N
57	200.00	100.00N	5.00N	10.00N	100.00N	10.00	50.00N	10.00L	200.00	50.00
58	2000.00	100.00N	5.00	20.00	100.00N	10.00	50.00N	10.00	2000.00	10.00
59	2000.00	100.00N	5.00N	10.00N	100.00N	10.00	50.00N	20.00	3000.00	20.00
60	20000.00G	100.00N	5.00L	10.00N	200.00	30.00	50.00N	50.00	10000.00	30.00
61	2000.00	100.00N	5.00L	15.00	100.00L	20.00	50.00N	500.00	700.00	10.00
62	2000.00	100.00N	5.00L	10.00N	100.00N	50.00	50.00N	10.00L	2000.00	100.00
63	20000.00G	100.00L	5.00N	10.00N	200.00	10.00	50.00N	500.00	200.00	70.00
64	5000.00	100.00N	5.00L	10.00N	100.00N	20.00	50.00N	50.00	10000.00	10.00L
65	1000.00	100.00N	5.00L	10.00N	100.00N	20.00	50.00N	10.00L	1000.00	50.00
66	10000.00	100.00L	5.00N	10.00N	5000.00	10.00	50.00N	10.00N	200.00L	10.00N
67	20000.00G	100.00N	5.00	10.00N	300.00	10.00	50.00N	50.00	10000.00G	10.00N
68	20000.00G	100.00N	5.00L	10.00N	200.00	15.00	50.00N	10.00	10000.00G	10.00N
69	20000.00G	100.00N	5.00L	10.00N	200.00	20.00	50.00N	10.00L	10000.00	50.00
70	20000.00	100.00N	5.00L	10.00N	100.00N	20.00	50.00N	15.00	10000.00	10.00L
71	10000.00	100.00N	5.00L	30.00	100.00N	10.00	5000.00	20.00	5000.00	10.00L
72	20000.00G	100.00N	5.00L	10.00N	100.00N	15.00	50.00N	10.00	2000.00	100.00
73	1000.00	100.00N	7.00	10.00N	100.00N	50.00	1000.00	10.00	2000.00	10.00L
74	20000.00	100.00N	5.00	10.00N	100.00N	50.00	2000.00	200.00	5000.00	100.00
75	7000.00	100.00N	5.00L	10.00N	100.00N	10.00	500.00	10.00	10000.00G	10.00N
76	10000.00	100.00	5.00N	10.00N	100.00N	10.00	100.00	30.00	200.00	10.00N
77	15000.00	100.00N	5.00N	10.00N	150.00	10.00	50.00N	30.00	10000.00G	10.00N
78	2000.00	100.00N	5.00N	10.00N	100.00N	10.00L	50.00N	10.00L	5000.00	10.00N
79	300.00	100.00N	5.00L	10.00N	100.00N	50.00	50.00N	15.00	7000.00	10.00N
80	500.00	100.00N	5.00N	10.00N	100.00N	10.00L	50.00N	1000.00	200.00L	10.00L
81	20000.00	100.00	5.00L	10.00N	100.00N	20.00	50.00N	50.00	10000.00G	10.00L
82	20000.00	100.00N	5.00N	10.00N	100.00N	20.00	50.00N	10.00	7000.00	70.00
83	1000.00	100.00N	5.00L	10.00N	100.00N	50.00	50.00N	20.00	10000.00	10.00L
84	10000.00	100.00N	5.00N	10.00N	100.00N	30.00	50.00N	10.00L	10000.00G	10.00N
85	20000.00G	100.00L	5.00N	10.00N	700.00	10.00	50.00N	10.00N	10000.00G	10.00N
86	20000.00G	100.00N	5.00N	10.00N	500.00	30.00	50.00N	20.00	10000.00G	10.00N
87	3000.00	100.00N	5.00	10.00N	100.00L	100.00	50.00N	10.00	10000.00	10.00
88	2000.00	100.00N	10.00	10.00N	200.00	150.00	50.00L	1000.00	300.00	100.00
89	200.00	100.00N	5.00N	10.00N	500.00	30.00	50.00N	10.00	500.00	30.00
90	20000.00G	100.00N	5.00L	10.00N	1000.00	50.00	500.00	20.00	10000.00G	10.00N

Table 2.--Cont.

Sample #	Th	Au-AA	AS-AA	Cd-AA	Bi-AA	Sb-AA
46	100.00N	1.300	10.00	2.10	1.00	36.00
47	100.00N	0.028	500.00	4.00	13.00	2.00L
48	100.00N	0.008	100.00	3.20	1.00L	16.00
49	100.00N	0.002L	10.00N	0.30	1.00N	2.00L
50	100.00N	0.044	10.00N	0.30	130.00	2.00N
51	100.00N	0.002N	380.00	38.00	1.00N	10.00
52	100.00N	0.002L	20.00	22.00	1.00N	2.00
53	100.00N	0.002	750.00	1.30	31.00	6.00
54	100.00N	0.100	130.00	2.40	550.00	4.00
55	100.00N	0.300	30.00	0.40	29.00	2.00N
56	100.00N	0.750	30.00	0.90	65.00	2.00
57	100.00N	0.002N	10.00N	0.20	1.00N	2.00N
58	100.00N	0.058	20.00	4.80	20.00	2.00N
59	100.00N	0.002	10.00N	0.60	1.00N	2.00N
60	100.00N	0.002L	10.00N	100.00	1.00	6.00
61	100.00N	3.100	70.00	1.70	36.00	2.00N
62	100.00N	0.004	10.00	5.10	1.00N	2.00N
63	100.00N	0.004	10.00N	5.10	22.00	78.00
64	100.00N	0.052	10.00N	5.40	1.00N	2.00N
65	100.00N	0.038	50.00	0.60	18.00	2.00N
66	100.00N	0.020	10.00N	0.70	1.00N	2.00
67	100.00N	0.200	10.00	100.00	1.00N	2.00N
68	100.00N	0.100	10.00N	50.00	1.00N	38.00
69	100.00N	0.016	10.00	4.10	1.00N	8.00
70	100.00N	0.016	30.00	5.40	8.00	6.00
71	100.00N	0.650	110.00	1.80	9.00	2.00
72	100.00N	0.010	10.00N	1.90	1.00	2.00N
73	100.00N	0.150	680.00	4.20	15.00	2.00N
74	100.00N	0.600	10.00N	1.10	13.00	2.00
75	100.00N	0.006	50.00	100.00	1.00N	2.00N
76	100.00N	0.250	10.00N	1.40	1.00N	2.00N
77	100.00N	0.002	10.00N	100.00	1.00N	2.00N
78	100.00N	0.012	30.00	40.00	1.00N	2.00N
79	100.00N	0.006	10.00N	2.40	1.00N	2.00N
80	100.00N	0.650	10.00L	1.00	5.00	2.00N
81	100.00N	0.002L	10.00N	100.00	1.00N	2.00N
82	100.00N	0.008	10.00N	3.10	1.00	2.00N
83	100.00N	0.100	20.00	0.20	1.00N	2.00N
84	100.00N	0.100	30.00	100.00	1.00N	4.00
85	100.00N	0.250	190.00	26.00	1.00N	42.00
86	100.00N	0.016	90.00	100.00	12.00	2.00
87	100.00N	0.018	10.00	8.80	250.00	2.00N
88	100.00N	4.200	10.00	1.80	300.00	2.00N
89	100.00N	0.002	70.00	100.00	160.00	2.00
90	100.00N	0.054	70.00	100.00	170.00	2.00

Table 2.--Cont.

Sample #	Fe%	Mg%	Ca%	Ti%	Mn	Ag	As	Au	B	Ba
91	20.00	2.00	7.00	1.000	2000.00	20.00	200.00N	10.00N	20.00	500.00
92	7.00	1.00	10.00	0.200	500.00	50.00	200.00N	10.00N	50.00	200.00
93	20.00G	0.20	0.50	0.100	50.00	1.00	200.00N	10.00N	10.00	70.00
94	10.00	0.20	20.00G	0.050	2000.00	100.00	200.00N	50.00	70.00	20.00
95	15.00	0.30	5.00	0.050	300.00	3.00	200.00L	10.00N	30.00	100.00
96	15.00	0.15	20.00G	0.100	100.00	100.00	200.00N	10.00N	15.00	5000.00
97	5.00	0.10	10.00	0.070	50.00	1.00	200.00N	10.00N	50.00	70.00
98	1.50	0.10	10.00	0.050	5000.00G	2.00	200.00L	10.00N	20.00	100.00
99	10.00	1.50	3.00	0.100	5000.00	20.00	200.00L	10.00N	20.00	200.00
100	15.00	0.10	20.00	0.003	500.00	100.00	200.00N	10.00N	30.00	2000.00
101	5.00	2.00	7.00	1.000	2000.00	0.50	0.00N	10.00N	15.00	5000.00
102	10.00	1.50	0.10	0.015	1000.00	3.00	200.00N	10.00N	30.00	50.00
103	10.00	2.00	20.00G	0.050	5000.00G	5.00	200.00N	10.00N	20.00	1000.00
104	5.00	2.00	3.00	0.100	2000.00	20.00	200.00N	10.00N	50.00	700.00
105	0.20	10.00G	20.00G	0.020	5000.00	0.50N	200.00N	10.00N	10.00N	20.00
106	15.00	5.00	5.00	1.000	1000.00	0.50N	200.00N	10.00N	50.00	2000.00
107	10.00	2.00	20.00	1.000	2000.00	0.50N	200.00N	10.00N	20.00	5000.00
108	0.10	10.00	20.00	0.010	700.00	0.50N	200.00N	10.00N	10.00N	20.00L
109	0.30	10.00	20.00	0.015	5000.00	0.50N	200.00L	10.00N	10.00	200.00
110	10.00	1.50	20.00G	0.015	5000.00G	10.00	200.00N	10.00N	10.00N	5000.00
111	0.70	0.50	2.00	0.070	1000.00	2.00	200.00N	10.00N	50.00	100.00
112	0.50	2.00	20.00G	0.005	5000.00G	3.00	200.00N	10.00N	20.00	3000.00
113	10.00G	0.50	0.10	0.002	50.00	70.00	7000.00	10.00N	10.00	70.00
114	10.00	0.10	0.10	0.020	200.00	20.00	200.00N	10.00N	10.00	1000.00
115	0.20	7.00	20.00	0.015	1000.00	0.50N	200.00N	10.00N	20.00	20.00N
116	0.50	10.00	20.00G	0.015	2000.00	1.00	200.00N	10.00N	10.00N	70.00
117	7.00	1.50	10.00	0.700	700.00	0.50N	200.00N	10.00N	20.00	5000.00
118	0.10	7.00	20.00G	0.020	1000.00	0.50N	200.00N	10.00N	10.00	50.00
119	0.50	0.50	5.00	0.100	50.00	1.00	200.00N	10.00N	50.00	200.00
120	0.07	0.20	0.50	0.020	50.00	0.50N	200.00N	10.00N	50.00	70.00
121	10.00	2.00	0.20	0.200	1000.00	3.00	200.00N	10.00N	30.00	200.00
122	2.00	1.50	0.50	0.050	1000.00	0.50N	200.00N	10.00N	30.00	1000.00
123	0.50	0.50	0.50	0.050	200.00	0.50N	200.00N	10.00N	30.00	150.00
124	0.07	0.10	7.00	0.015	200.00	2.00	200.00N	10.00N	70.00	100.00
125	0.20	7.00	20.00G	0.015	5000.00	1.00	200.00N	10.00N	10.00N	150.00
126	5.00	10.00	20.00G	0.030	5000.00G	70.00	200.00N	10.00N	10.00L	70.00
127	1.00	0.50	2.00	0.070	300.00	2.00	200.00N	10.00N	50.00	200.00
128	0.50	0.20	2.00	0.030	150.00	0.70	200.00N	10.00N	30.00	70.00
129	0.05L	0.10	20.00	0.005	70.00	0.50N	200.00N	10.00N	10.00N	20.00N
130	0.30	0.20	3.00	0.050	150.00	2.00	200.00N	10.00N	30.00	500.00
131	0.10	10.00G	20.00G	0.015	700.00	0.50N	200.00N	10.00N	10.00N	20.00N
132	7.00	5.00	0.20	0.200	1000.00	70.00	200.00N	10.00N	20.00	20.00
133	0.20	10.00G	20.00G	0.005	1000.00	0.50N	200.00N	10.00N	10.00N	20.00
134	0.10	10.00	20.00G	0.020	500.00	0.50N	200.00N	10.00N	10.00	700.00
135	0.50	1.00	2.00	0.020	150.00	1.50	200.00N	10.00N	10.00	200.00

Table 2.--Cont.

Sample #	Be	Bi	Cd	Co	Cr	Cu	La	Mo	Nb	Ni
91	10.00	10.00N	20.00N	30.00	500.00	20000.00	20.00	5.00N	20.00N	200.00
92	5.00	20.00	20.00N	5.00L	15.00	20000.00	20.00L	10.00	20.00N	5.00
93	3.00	10.00L	20.00N	5.00N	20.00	20000.00G	20.00N	5.00	20.00N	5.00L
94	10.00	1000.00G	20.00N	15.00	10.00N	20000.00G	20.00N	20.00	20.00N	5.00L
95	20.00	15.00	20.00L	5.00N	10.00L	500.00	20.00N	5.00L	20.00N	5.00
96	7.00	500.00	50.00	5.00L	10.00	20000.00G	20.00N	20.00	20.00N	5.00L
97	2.00	10.00N	20.00N	5.00N	10.00L	100.00	20.00N	5.00N	20.00N	5.00L
98	2.00	10.00N	500.00	7.00	15.00	50.00	20.00N	5.00	20.00N	5.00
99	1.50	10.00N	20.00N	10.00	50.00	100.00	20.00N	5.00N	20.00N	100.00
100	50.00	10.00L	20.00N	5.00	10.00L	1000.00	20.00N	5.00N	20.00N	20.00
101	1.00L	10.00N	20.00N	15.00	100.00	150.00	100.00	5.00N	20.00N	50.00
102	3.00	10.00N	20.00N	5.00N	10.00L	200.00	20.00N	10.00	20.00N	5.00
103	5.00	10.00N	100.00	5.00N	10.00	150.00	20.00N	20.00	20.00N	5.00
104	2.00	10.00N	20.00N	5.00N	30.00	30.00	20.00N	5.00N	20.00N	30.00
105	1.00N	10.00N	20.00N	5.00N	20.00	10.00	20.00L	5.00N	20.00N	5.00L
106	1.00N	10.00N	20.00N	50.00	1000.00	20.00	50.00	5.00N	20.00N	200.00
107	1.00L	10.00N	20.00N	20.00	100.00	10.00	100.00	5.00N	20.00N	30.00
108	1.00L	10.00L	20.00N	5.00N	10.00L	10.00	20.00N	5.00N	20.00N	5.00L
109	1.00L	10.00L	20.00N	10.00	10.00	50.00	20.00N	5.00N	20.00N	30.00
110	1.00	10.00N	20.00N	15.00	10.00L	15.00	20.00N	70.00	20.00N	15.00
111	1.50	10.00N	20.00N	5.00N	20.00	20.00	20.00N	5.00N	20.00N	5.00
112	50.00	10.00N	20.00	5.00N	10.00L	20.00	20.00N	5.00N	20.00N	5.00L
113	1.50	10.00N	20.00N	5.00L	10.00L	2000.00	20.00N	20.00	20.00N	5.00N
114	2.00	20.00	20.00N	5.00N	20.00	1000.00	20.00N	50.00	20.00N	5.00
115	1.00N	10.00L	20.00N	5.00N	10.00L	10.00	20.00N	5.00N	20.00N	5.00
116	1.00L	10.00N	20.00N	5.00N	10.00L	10.00	20.00N	10.00	20.00N	5.00L
117	1.00	10.00N	20.00N	10.00	50.00	15.00	100.00	5.00N	20.00L	15.00
118	1.00N	10.00N	20.00N	5.00N	10.00L	10.00	20.00N	5.00N	20.00N	5.00L
119	1.00L	10.00N	20.00N	5.00N	30.00	20.00	20.00N	5.00L	20.00N	10.00
120	1.00L	10.00N	20.00N	5.00N	10.00L	5.00L	20.00N	5.00N	20.00N	5.00
121	1.00	10.00N	20.00N	5.00L	30.00	50.00	20.00N	5.00L	20.00N	10.00
122	1.00	10.00N	20.00N	5.00L	10.00L	30.00	20.00N	5.00N	20.00N	10.00
123	1.00	10.00N	20.00N	5.00L	10.00	15.00	20.00N	5.00N	20.00N	7.00
124	1.00L	10.00N	20.00N	5.00N	20.00	5.00	20.00L	5.00N	20.00N	5.00
125	1.00N	10.00N	20.00N	5.00N	10.00N	5.00	20.00N	5.00N	20.00N	5.00L
126	1.50	10.00N	500.00	15.00	10.00L	1500.00	20.00L	70.00	20.00N	20.00
127	1.00L	10.00N	20.00N	5.00N	70.00	10.00	20.00N	5.00N	20.00N	5.00
128	1.00L	10.00N	20.00N	5.00N	50.00	10.00	20.00L	5.00N	20.00N	5.00
129	1.00N	10.00N	20.00N	5.00N	10.00L	5.00N	20.00L	5.00N	20.00N	5.00
130	1.00	10.00N	20.00N	5.00N	50.00	20.00	20.00N	5.00N	20.00N	5.00
131	1.00N	10.00N	20.00N	5.00N	10.00N	5.00N	20.00N	5.00N	20.00N	5.00L
132	1.50	10.00N	50.00	5.00L	100.00	1000.00	20.00N	10.00	20.00N	20.00
133	1.00N	10.00N	20.00N	5.00N	15.00	15.00	20.00N	5.00N	20.00N	5.00N
134	1.00L	10.00N	20.00N	5.00N	10.00L	50.00	20.00L	5.00N	20.00N	5.00L
135	1.00L	10.00N	20.00N	5.00N	10.00	20.00	20.00N	5.00N	20.00N	10.00

Table 2.--Cont.

Sample #	Pb	Sb	Sc	Sn	Str	V	W	Y	Zn	Zr
91	200.00	100.00N	20.00	10.00N	100.00N	200.00	50.00N	200.00	700.00	150.00
92	20000.00G	100.00N	5.00	10.00N	100.00N	50.00	100.00	100.00	1000.00	150.00
93	7000.00	100.00N	7.00	10.00N	100.00N	70.00	1500.00	10.00	200.00	20.00
94	10000.00	100.00N	5.00L	10.00N	100.00N	30.00	50.00L	700.00	2000.00	20.00
95	7000.00	100.00N	5.00N	10.00N	100.00N	15.00	2000.00	50.00	2000.00	30.00
96	10000.00	100.00N	5.00L	10.00N	300.00	30.00	50.00L	700.00	300.00	30.00
97	100.00	100.00N	5.00L	10.00N	100.00N	20.00	300.00	100.00	200.00	150.00
98	1000.00	100.00N	5.00N	10.00N	100.00N	20.00	50.00N	10.00	10000.00	50.00
99	500.00	100.00N	5.00L	10.00N	100.00N	150.00	50.00N	70.00	5000.00	200.00
100	1000.00	100.00N	5.00	10.00N	100.00N	10.00	50.00	200.00	2000.00	10.00N
101	100.00	100.00N	30.00	10.00N	1000.00	200.00	50.00N	50.00	200.00L	200.00
102	300.00	100.00N	5.00N	10.00N	100.00N	30.00	100.00	10.00N	500.00	10.00N
103	2000.00	100.00N	5.00L	10.00N	200.00	100.00	50.00N	50.00	1000.00	70.00
104	500.00	100.00N	5.00	10.00N	100.00N	100.00	50.00N	50.00	1000.00	70.00
105	50.00	100.00N	5.00L	10.00N	500.00	50.00	50.00N	30.00	200.00N	30.00
106	100.00	100.00N	50.00	10.00N	500.00	200.00	50.00N	20.00	200.00L	100.00
107	100.00	100.00N	50.00	10.00N	500.00	200.00	50.00N	50.00	200.00N	150.00
108	70.00	100.00N	5.00N	10.00N	100.00N	20.00	50.00N	10.00N	200.00N	10.00N
109	10.00	100.00N	5.00L	10.00N	100.00N	30.00	50.00N	10.00	200.00N	10.00L
110	700.00	100.00N	5.00N	10.00N	500.00	70.00	50.00N	20.00	1000.00	10.00L
111	20.00	100.00N	5.00N	10.00N	100.00N	70.00	50.00N	20.00	200.00	30.00
112	300.00	100.00N	5.00N	10.00N	100.00N	20.00	50.00N	10.00L	2000.00	10.00N
113	1000.00	100.00N	5.00N	10.00N	100.00N	20.00	50.00N	15.00	10000.00	10.00N
114	20000.00G	100.00N	5.00N	10.00N	100.00N	150.00	50.00N	10.00L	3000.00	10.00N
115	50.00	100.00N	5.00N	10.00N	100.00N	20.00	50.00N	10.00L	200.00N	50.00
116	70.00	100.00N	5.00N	10.00N	100.00N	20.00	50.00N	10.00L	200.00L	10.00L
117	70.00	100.00N	20.00	10.00N	1000.00	200.00	50.00N	50.00	200.00N	200.00
118	50.00	100.00N	5.00N	10.00N	100.00	10.00	50.00N	10.00	200.00L	20.00
119	200.00	100.00N	5.00N	10.00N	100.00L	100.00	50.00N	10.00L	200.00L	50.00
120	10.00	100.00N	5.00N	10.00N	100.00N	15.00	50.00N	10.00L	200.00L	30.00
121	2000.00	100.00N	5.00	10.00N	100.00N	70.00	50.00N	10.00	1500.00	200.00
122	70.00	100.00N	5.00N	10.00N	100.00N	50.00	50.00N	10.00	500.00	200.00
123	50.00	100.00N	5.00N	10.00N	100.00N	20.00	50.00N	15.00	200.00N	10.00
124	10.00	100.00N	5.00N	10.00N	100.00N	200.00	50.00N	10.00	200.00	10.00N
125	30.00	100.00N	5.00N	10.00N	100.00	10.00	50.00N	10.00L	200.00N	10.00
126	20000.00G	100.00N	5.00L	10.00N	100.00L	20.00	50.00N	15.00	10000.00G	20.00
127	30.00	150.00	5.00L	10.00N	100.00N	70.00	50.00N	10.00	500.00	30.00
128	20.00	100.00L	5.00N	10.00N	100.00N	30.00	50.00N	15.00	300.00	50.00
129	10.00L	100.00N	5.00L	10.00N	100.00N	15.00	50.00N	10.00	200.00L	10.00
130	20.00	100.00	5.00N	10.00N	100.00N	50.00	50.00N	15.00	200.00L	20.00
131	10.00	100.00N	5.00L	10.00N	100.00	10.00	50.00N	15.00	200.00N	70.00
132	7000.00	100.00N	5.00	10.00N	100.00N	100.00	50.00N	10.00	7000.00	150.00
133	30.00	100.00N	5.00N	10.00N	100.00N	10.00	50.00N	10.00L	200.00N	20.00
134	10.00	100.00N	5.00N	10.00N	100.00L	15.00	50.00N	10.00L	200.00N	30.00
135	100.00N	200.00	5.00N	10.00N	100.00L	20.00	50.00N	10.00L	200.00	15.00

Table 2.--Cont.

Sample #	Th	Au-AA	AS-AA	Cd-AA	Bi-AA	Sb-AA
91	100.00N	0.004	10.00	5.80	1.00N	2.00N
92	100.00N	0.068	10.00	3.50	12.00	4.00
93	100.00N	0.200	20.00	0.50	4.00	2.00N
94	100.00N	61.000	20.00	2.50	1000.00G	2.00
95	100.00N	0.250	20.00	2.80	14.00	2.00N
96	100.00N	0.400	30.00	43.00	100.00	2.00
97	100.00N	0.600	10.00N	0.60	3.00	2.00N
98	100.00N	0.008	20.00	100.00	1.00N	6.00
99	100.00N	0.002	230.00	2.40	1.00N	4.00
100	100.00N	0.200	10.00N	5.80	6.00	2.00N
101	100.00N	0.002N	10.00N	0.30	1.00N	2.00N
102	100.00N	0.004	20.00	0.80	1.00N	2.00N
103	100.00N	0.002L	140.00	43.00	1.00N	6.00
104	100.00N	0.002	10.00N	0.30	1.00N	2.00N
105	100.00N	0.002L	10.00N	0.20	1.00N	2.00N
106	100.00N	0.002N	10.00N	0.40	1.00N	2.00
107	100.00N	0.002L	10.00N	0.30	1.00N	2.00N
108	100.00N	0.002N	10.00N	0.30	1.00N	2.00N
109	100.00N	0.002N	10.00N	0.30	1.00N	2.00N
110	100.00N	0.002L	10.00N	0.20	1.00N	2.00
111	100.00N	0.002N	10.00	8.00	1.00N	2.00N
112	100.00N	0.002N	10.00N	12.00	1.00N	2.00N
113	100.00N	3.000	2000.00G	30.00	7.00	24.00
114	100.00N	0.100	150.00	8.50	19.00	12.00
115	100.00N	0.002L	10.00N	0.20	1.00N	2.00N
116	100.00N	0.002N	10.00N	0.10	1.00N	2.00N
117	100.00N	0.002L	10.00N	0.10	1.00N	2.00N
118	100.00N	0.002L	10.00N	0.10	1.00N	2.00N
119	100.00N	0.002N	10.00	0.10	1.00N	2.00N
120	100.00N	0.002N	10.00N	0.10N	1.00N	2.00N
121	100.00N	0.002L	10.00N	2.80	1.00N	2.00N
122	100.00N	0.002N	10.00N	0.20N	1.00N	2.00N
123	100.00N	0.002N	10.00N	0.20	1.00N	2.00N
124	100.00N	0.002N	10.00N	0.40	1.00N	2.00N
125	100.00N	0.002N	10.00	0.50	1.00N	2.00N
126	100.00N	0.350	10.00	100.00G	1.00N	6.00
127	100.00N	0.002L	10.00N	3.80	1.00N	2.00N
128	100.00N	0.002L	10.00N	2.00	1.00N	2.00N
129	100.00N	0.002N	10.00N	1.80	1.00N	2.00N
130	100.00N	0.002N	10.00N	0.50	1.00N	2.00N
131	100.00N	0.002N	10.00N	0.40	1.00N	2.00N
132	100.00N	0.002L	10.00N	26.00	1.00N	2.00N
133	100.00N	0.002N	10.00N	1.70	1.00N	2.00N
134	100.00N	0.002N	10.00N	0.20	1.00N	2.00N
135	100.00	0.002N	10.00N	0.30	1.00N	2.00N

Table 2.---Cont.

Sample #	Fe%	Mg%	Ca%	Ti%	Mn	Ag	As	Au	B	Ba
136	0.50	10.00	20.00G	0.005	1500.00	1.00	200.00N	10.00N	10.00N	50.00
137	15.00	10.00	3.00	0.010	5000.00	10.00	200.00N	10.00N	10.00	20.00L
138	7.00	7.00	20.00	0.500	1500.00	0.70	200.00N	10.00N	10.00	2000.00
139	1.00	0.70	1.00	0.050	500.00	3.00	200.00N	10.00N	30.00	150.00
140	10.00	7.00	1.00	1.000	2000.00	0.50N	200.00N	10.00N	10.00	1500.00
141	7.00	10.00G	0.10	0.015	2000.00	0.50	200.00N	10.00N	10.00	20.00L
142	15.00	10.00	0.50	0.700	5000.00	0.50N	200.00N	10.00N	10.00	2000.00
143	5.00	2.00	1.00	0.100	2000.00	0.50N	200.00N	10.00N	20.00	50.00
144	0.15	10.00	20.00G	0.015	1000.00	0.50N	200.00N	10.00N	10.00	20.00N
145	3.00	1.50	0.20	0.100	1000.00	0.70	200.00N	10.00N	20.00	150.00
146	0.30	2.00	20.00G	0.070	500.00	2.00	200.00N	10.00N	10.00L	200.00
147	0.50	10.00G	20.00G	0.020	3000.00	0.50L	200.00N	10.00N	10.00N	50.00
148	0.15	1.00	20.00G	0.007	3000.00	2.00L	200.00N	10.00N	10.00N	5000.00G
149	10.00	10.00	0.30	0.030	2000.00	0.50N	200.00N	10.00N	10.00	150.00
150	0.15	1.00	20.00G	0.030	700.00	2.00	200.00N	10.00N	10.00N	700.00
151	1.50	0.50	2.00	0.015	1500.00	0.50L	200.00N	10.00N	20.00	100.00
152	0.20	10.00G	20.00G	0.010	500.00	0.50N	200.00N	10.00N	10.00N	50.00
153	0.50	0.30	20.00G	0.070	700.00	0.50L	200.00N	10.00N	30.00	200.00
154	10.00	0.70	20.00G	1.000	5000.00	0.50N	200.00N	10.00N	10.00	5000.00
155	1.00	1.50	20.00G	0.007	5000.00	100.00	200.00N	10.00N	10.00N	150.00
156	7.00	2.00	0.30	0.030	1000.00	0.50N	200.00N	10.00N	20.00	50.00
157	0.07	0.50	20.00G	0.005	300.00	0.50N	200.00N	10.00N	10.00N	20.00L
158	2.00	0.10	20.00G	0.020	20.00	10.00	200.00N	10.00N	10.00L	50.00
159	1.00	5.00	20.00G	0.015	2000.00	3.00	200.00N	10.00N	10.00N	20.00L
160	1.50	3.00	20.00G	0.015	3000.00	0.50N	200.00N	10.00N	10.00N	30.00
161	10.00	3.00	0.50	0.500	3000.00	10.00	200.00N	10.00N	20.00	30.00
162	5.00	10.00	20.00G	0.002	5000.00G	0.50N	200.00N	10.00N	10.00N	50.00
163	7.00	7.00	7.00	1.000	3000.00	0.50N	200.00N	10.00N	10.00L	5000.00
164	0.20	0.70	10.00	0.010	200.00	2.00	200.00N	10.00N	50.00	100.00
165	0.15	0.20	5.00	0.015	200.00	1.50	200.00N	10.00N	30.00	500.00
166	1.00	0.20	20.00G	0.020	3000.00	5.00	200.00N	10.00N	20.00	50.00
167	10.00	2.00	0.50	1.000	2000.00	0.50N	200.00N	10.00N	50.00	2000.00
168	20.00G	2.00	2.00	0.020	5000.00G	0.50N	200.00N	10.00N	10.00L	70.00
169	0.20	0.30	20.00G	0.003	200.00	0.50N	200.00N	10.00N	10.00N	20.00N
170	0.20	3.00	20.00G	0.010	300.00	5.00N	200.00N	10.00N	10.00L	1000.00
171	0.15	10.00	20.00G	0.010	2000.00	0.50N	200.00N	10.00N	10.00L	20.00N
172	0.50	10.00	20.00G	0.100	200.00	0.50L	200.00N	10.00N	10.00L	150.00
173	0.10	7.00	20.00G	0.010	500.00	0.50N	200.00N	10.00N	10.00	20.00L
174	1.00	0.05	1.00	0.010	50.00	0.50N	200.00N	10.00N	15.00	70.00
175	1.00	10.00	20.00G	0.015	5000.00	0.50N	200.00N	10.00N	10.00N	100.00
176	2.00	1.00	2.00	0.030	1000.00	5.00	200.00N	10.00N	20.00	300.00
177	0.20	10.00	20.00G	0.050	3000.00	0.50N	200.00N	10.00N	10.00N	20.00N
178	0.10	10.00	20.00G	0.010	300.00	0.50N	200.00N	10.00N	10.00N	20.00L
179	5.00	5.00	7.00	0.100	5000.00	0.50N	200.00N	10.00N	15.00	5000.00
180	1.50	5.00	20.00G	0.200	2000.00	5.00	200.00N	10.00N	50.00	200.00

Table 2.--Cont.

Sample #	Be	Bi	Cd	Co	Cr	Cu	La	Mo	Nb	Ni
136	1.00N	10.00N	30.00	5.00N	10.00N	150.00	20.00N	5.00N	20.00N	5.00
137	5.00	10.00N	150.00	5.00N	20.00	50.00	20.00N	10.00	20.00N	5.00
138	1.00N	10.00N	20.00N	20.00	1000.00	7.00	70.00	5.00N	20.00N	150.00
139	1.00	10.00N	20.00N	5.00N	50.00	30.00	20.00N	5.00N	20.00N	20.00
140	1.00L	10.00N	20.00N	20.00	500.00	5.00L	70.00	5.00N	20.00L	150.00
141	1.00N	10.00N	20.00N	5.00N	10.00	700.00	20.00N	7.00	20.00N	5.00
142	1.00L	10.00N	20.00N	50.00	1500.00	5.00	70.00	5.00N	20.00L	300.00
143	2.00	10.00N	20.00N	5.00N	50.00	30.00	20.00L	15.00	20.00N	30.00
144	1.00N	10.00N	20.00N	5.00N	10.00L	5.00	20.00N	5.00N	20.00N	5.00
145	3.00	10.00N	20.00N	5.00N	20.00	150.00	20.00L	5.00N	20.00N	5.00
146	1.00N	10.00N	20.00N	5.00N	30.00	10.00	20.00L	5.00N	20.00N	5.00
147	1.00N	10.00N	20.00N	5.00N	10.00L	5.00N	20.00N	5.00N	20.00N	5.00L
148	1.00N	10.00N	30.00	5.00N	10.00N	50.00	20.00L	5.00N	20.00N	5.00N
149	1.00L	10.00N	20.00N	5.00N	10.00	500.00	20.00N	50.00	20.00N	5.00
150	1.00N	10.00N	20.00N	5.00N	10.00N	5.00	20.00N	5.00N	20.00N	5.00
151	1.50	10.00N	20.00N	5.00N	30.00	10.00	20.00L	5.00N	20.00N	5.00
152	1.00N	10.00N	20.00N	5.00N	10.00N	5.00N	20.00L	5.00N	20.00N	5.00L
153	1.00N	10.00N	20.00N	5.00N	10.00	5.00	20.00N	5.00N	20.00N	7.00
154	1.00L	10.00N	20.00N	15.00	1000.00	5.00	100.00	5.00N	20.00N	150.00
155	1.00N	10.00N	100.00	5.00N	10.00N	500.00	20.00N	5.00N	20.00N	5.00N
156	1.00	10.00N	20.00N	5.00N	20.00	15.00	20.00L	5.00N	20.00N	5.00
157	1.00N	10.00N	20.00N	5.00N	10.00N	5.00	50.00	5.00N	20.00N	5.00L
158	7.00	10.00L	20.00N	5.00N	10.00N	10.00	100.00	5.00N	20.00N	5.00N
159	1.00N	10.00N	20.00	5.00N	10.00L	5.00L	20.00N	5.00N	20.00N	5.00L
160	1.00N	10.00N	20.00L	5.00N	10.00N	20.00	20.00N	5.00N	20.00N	7.00
161	1.00	10.00N	20.00N	5.00N	100.00	300.00	20.00N	5.00N	20.00N	30.00
162	2.00	10.00N	300.00	5.00N	10.00N	200.00	20.00N	5.00N	20.00N	5.00L
163	1.00L	10.00N	20.00N	30.00	500.00	7.00	100.00	5.00N	20.00N	200.00
164	1.00L	10.00N	20.00N	5.00N	10.00L	10.00	20.00L	5.00N	20.00N	7.00
165	1.00N	10.00N	20.00N	5.00N	10.00	5.00	20.00L	5.00N	20.00N	5.00
166	1.00N	10.00N	20.00L	5.00N	10.00N	10.00	20.00N	5.00N	20.00N	5.00L
167	1.50	10.00N	20.00N	10.00	100.00	30.00	70.00	5.00N	30.00	50.00
168	3.00	10.00N	20.00L	5.00N	10.00N	15.00	20.00N	10.00	20.00N	5.00L
169	1.00N	10.00N	20.00N	5.00N	10.00N	5.00L	20.00N	5.00N	20.00N	5.00N
170	1.00N	10.00N	20.00N	5.00N	10.00N	5.00L	20.00N	5.00N	20.00N	5.00L
171	1.00N	10.00N	20.00N	5.00N	10.00N	5.00N	20.00N	5.00N	20.00N	5.00N
172	1.00N	10.00N	20.00N	5.00N	20.00	5.00N	20.00N	5.00N	20.00N	5.00
173	1.00N	10.00N	20.00N	5.00N	10.00N	5.00N	20.00N	5.00N	20.00N	5.00L
174	1.50	10.00N	20.00N	5.00N	10.00L	15.00	20.00N	5.00N	20.00N	5.00N
175	1.00N	10.00N	20.00N	5.00N	10.00N	5.00N	20.00N	5.00N	20.00N	5.00N
176	10.00	10.00N	20.00N	5.00L	10.00	50.00	20.00N	5.00N	20.00N	10.00
177	1.00N	10.00N	20.00N	5.00N	10.00L	5.00N	20.00L	5.00N	20.00N	5.00L
178	1.00N	10.00N	20.00N	5.00N	10.00N	5.00N	20.00N	5.00N	20.00N	5.00N
179	2.00	10.00N	20.00N	10.00	300.00	10.00	70.00	5.00N	20.00	30.00
180	1.00	10.00N	20.00N	5.00L	1000.00	100.00	700.00	10.00	20.00N	150.00

Table 2.--Cont.

Sample #	Pb	Sb	Se	Sn	Sr	V	W	Y	Zn	Zr
136	700.00	100.00N	5.00L	10.00N	100.00	15.00	50.00N	10.00N	1500.00	10.00L
137	7000.00	100.00N	5.00N	10.00N	100.00L	30.00	50.00N	15.00	10000.00G	30.00
138	200.00	100.00N	20.00	10.00N	500.00	200.00	50.00N	30.00	200.00	150.00
139	20.00	100.00N	5.00	10.00N	100.00N	30.00	50.00N	10.00L	300.00	30.00
140	20.00	100.00N	20.00	10.00N	150.00	200.00	50.00N	50.00	200.00	200.00
141	2000.00	100.00N	5.00L	10.00N	100.00L	15.00	50.00N	10.00L	5000.00	10.00N
142	100.00	100.00N	20.00	10.00N	100.00	300.00	50.00N	30.00	500.00	300.00
143	1000.00	100.00N	5.00L	10.00N	100.00N	70.00	50.00N	15.00	1500.00	500.00
144	10.00L	10.00N	5.00N	10.00N	100.00	10.00	50.00N	10.00L	200.00N	50.00
145	300.00	100.00N	5.00L	10.00N	100.00L	50.00	50.00N	10.00	2000.00	70.00
146	30.00	100.00N	5.00L	10.00N	500.00	15.00	50.00N	15.00	200.00N	70.00N
147	70.00	100.00N	5.00N	10.00N	150.00	15.00	50.00N	20.00	200.00L	20.00
148	500.00	100.00N	5.00N	10.00N	2000.00	10.00L	50.00N	10.00N	500.00	10.00L
149	15000.00	100.00N	5.00L	10.00N	100.00N	15.00	50.00N	10.00L	10000.00	10.00L
150	70.00	100.00N	5.00N	10.00N	150.00	15.00	50.00N	15.00	200.00	20.00
151	200.00	100.00N	5.00L	10.00N	100.00N	20.00	50.00N	10.00	700.00	15.00
152	15.00	100.00N	5.00N	10.00N	100.00L	10.00	50.00N	10.00L	200.00N	10.00L
153	15.00	100.00N	5.00N	10.00N	100.00L	15.00	50.00N	10.00L	200.00N	200.00
154	100.00	100.00N	50.00	10.00N	500.00	200.00	50.00N	50.00	200.00N	300.00
155	20000.00G	100.00N	5.00N	10.00N	200.00	10.00	50.00N	10.00N	10000.00G	10.00N
156	150.00	100.00N	5.00	10.00N	100.00N	20.00	50.00N	15.00	200.00	100.00
157	150.00	100.00N	5.00	10.00N	200.00	15.00	50.00N	50.00	200.00N	10.00N
158	500.00	100.00N	5.00N	10.00N	100.00L	15.00	50.00N	50.00	200.00N	70.00
159	70.00	100.00N	5.00N	10.00N	1000.00	10.00	50.00N	10.00	500.00	10.00L
160	500.00	100.00N	5.00N	10.00N	1000.00	10.00L	50.00N	10.00L	700.00	20.00
161	7000.00	100.00N	7.00	10.00N	100.00N	100.00	50.00N	15.00	3000.00	500.00
162	15000.00	100.00N	5.00N	10.00N	200.00	10.00L	50.00N	15.00	10000.00G	10.00N
163	50.00	100.00N	30.00	10.00N	500.00	150.00	50.00N	50.00	200.00N	300.00
164	10.00	100.00N	5.00N	10.00N	100.00L	15.00	50.00N	10.00	200.00N	10.00L
165	30.00	150.00	5.00L	10.00N	100.00L	15.00	50.00N	10.00	200.00N	15.00
166	1500.00	100.00N	5.00N	10.00N	100.00	15.00	50.00N	10.00	500.00	10.00L
167	70.00	100.00N	20.00	10.00N	100.00	150.00	50.00N	100.00	200.00L	1000.00
168	300.00	100.00N	5.00N	10.00N	1500.00	150.00	50.00N	20.00	1000.00	10.00L
169	10.00N	100.00N	5.00N	10.00N	150.00	10.00	50.00N	10.00	200.00N	10.00N
170	20.00	100.00N	5.00N	10.00N	3000.00	10.00	50.00N	10.00L	200.00N	10.00L
171	10.00L	100.00N	5.00N	10.00N	100.00	10.00	50.00N	10.00	200.00N	50.00
172	10.00	100.00N	5.00N	10.00N	100.00L	20.00	50.00N	15.00	200.00N	70.00
173	10.00N	100.00N	5.00N	10.00N	100.00L	10.00N	50.00N	10.00L	200.00N	70.00
174	20.00	100.00N	5.00N	10.00N	100.00	10.00	50.00N	10.00L	200.00N	10.00L
175	10.00	100.00N	5.00N	10.00N	200.00	10.00	50.00N	10.00	200.00N	10.00L
176	200.00	100.00N	5.00N	10.00N	100.00L	20.00	50.00N	20.00	700.00	15.00
177	10.00L	100.00N	5.00	10.00N	300.00	15.00	50.00N	15.00	200.00N	50.00
178	10.00L	100.00N	5.00N	10.00N	100.00L	10.00	50.00N	10.00L	200.00N	10.00N
179	200.00	100.00N	20.00	10.00N	500.00	150.00	50.00N	70.00	200.00	700.00
180	150.00	100.00N	7.00	10.00N	700.00	500.00	50.00N	1000.00	300.00	150.00

Table 2.--Cont.

Sample #	Th	Au-AA	AS-AA	Cd-AA	Bi-AA	Sb-AA
136	100.00N	0.020	10.00N	30.00	1.00N	2.00N
137	100.00N	0.012	10.00N	28.00	1.00N	2.00N
138	100.00N	0.002L	150.00	100.00G	1.00N	8.00
139	100.00N	0.002N	10.00N	0.10N	1.00N	2.00N
140	100.00N	0.002L	10.00	0.10N	1.00N	2.00N
141	100.00N	0.150	60.00	1.50	1.00N	6.00
142	100.00N	0.002	10.00N	0.20	1.00N	2.00N
143	100.00N	0.004	80.00	3.90	1.00N	2.00N
144	100.00N	0.002L	10.00N	0.10N	1.00N	2.00N
145	100.00N	0.002N	10.00N	1.20	1.00N	2.00N
146	100.00N	0.002L	10.00N	0.10N	1.00N	2.00N
147	100.00N	0.002N	10.00N	0.40	1.00N	2.00N
148	100.00N	0.002L	10.00N	2.00	1.00N	2.00N
149	100.00N	0.018	70.00	3.90	1.00N	2.00N
150	100.00N	0.002L	10.00	0.60	1.00N	2.00N
151	100.00N	0.002N	10.00N	0.30	1.00N	2.00N
152	100.00N	0.002L	10.00N	0.20	1.00N	2.00N
153	100.00N	0.002L	10.00N	0.30	1.00N	2.00N
154	100.00N	0.002N	10.00N	1.00	1.00N	2.00N
155	100.00N	0.200	20.00	68.00	1.00N	6.00
156	100.00N	0.004	10.00N	0.40	1.00N	2.00N
157	100.00N	0.002L	10.00N	3.40	1.00N	2.00N
158	100.00N	1.600	10.00N	0.10N	5.00	2.00N
159	100.00N	0.002L	10.00N	9.60	1.00N	2.00N
160	100.00N	0.002	10.00N	9.80	1.00N	2.00N
161	100.00N	0.006	30.00	1.80	1.00N	2.00N
162	100.00N	0.012	10.00	100.00G	1.00N	2.00N
163	100.00N	0.002N	10.00N	2.40	1.00N	2.00N
164	100.00N	0.002L	10.00N	0.90	1.00N	2.00N
165	100.00N	0.002N	10.00N	0.30	1.00N	2.00N
166	100.00N	0.004	20.00	9.40	1.00N	2.00N
167	100.00N	0.002	10.00	1.00	1.00N	2.00N
168	100.00N	0.002N	40.00	8.30	1.00N	2.00N
169	100.00N	0.002L	10.00N	1.20	1.00N	2.00N
170	100.00N	0.002N	10.00N	0.20	1.00N	2.00N
171	100.00N	0.002L	10.00N	0.10N	1.00N	2.00N
172	100.00N	0.002N	10.00	0.20	1.00N	2.00N
173	100.00N	0.002N	10.00N	0.10N	1.00N	2.00N
174	100.00N	0.002N	10.00	0.10	1.00N	2.00N
175	100.00N	0.002	10.00	0.10N	1.00N	2.00N
176	100.00N	0.002L	10.00N	0.40	1.00N	2.00N
177	100.00N	0.002L	10.00N	0.10	1.00N	2.00N
178	100.00N	0.002L	10.00N	0.10N	1.00N	2.00N
179	100.00N	0.002	20.00	0.40	1.00N	2.00N
180	100.00N	0.002N	10.00N	2.40	1.00N	2.00N

Table 2.--Cont.

Sample #	Fe%	Mg%	Ca%	Ti%	Mn	Ag	As	Au	B	Ba
181	0.50	2.00	20.00G	0.070	1000.00	5.00	200.00N	10.00N	20.00	150.00
182	0.70	0.10	0.20	0.050	50.00	0.50N	200.00N	10.00N	50.00	1000.00
183	7.00	3.00	1.00	0.200	2000.00	0.70	200.00N	10.00N	10.00	50.00
184	0.15	10.00G	20.00G	0.007	1000.00	0.50N	200.00N	10.00N	10.00N	20.00N
185	1.50	1.00	20.00G	0.100	5000.00G	0.50N	200.00N	10.00N	10.00L	500.00

Table 2.--Cont.

Sample #	Be	Bi	Cd	Co	Cr	Cu	La	Mo	Nb	Ni
181	1.00	10.00N	20.00N	5.00L	700.00	50.00	150.00	5.00N	20.00N	70.00
182	1.00N	10.00N	20.00N	5.00N	10.00L	70.00	20.00N	5.00N	20.00N	5.00L
183	1.00	10.00N	20.00N	5.00N	100.00	1000.00	20.00N	5.00	20.00N	20.00
184	1.00N	10.00N	20.00N	5.00N	10.00N	5.00N	20.00N	5.00N	20.00N	5.00L
185	1.50	10.00N	20.00N	5.00L	70.00	20.00	50.00	5.00N	20.00N	10.00

Table 2.--Cont.

Sample #	Pb	Sb	Sc	Sn	Sr	V	W	Y	Zn	Zr
181	30.00	100.00N	5.00	10.00N	300.00	150.00	50.00N	200.00	200.00	50.00
182	15.00	100.00N	5.00N	10.00N	100.00N	15.00	50.00N	15.00	200.00N	70.00
183	1500.00	100.00N	5.00	10.00N	100.00L	70.00	50.00N	30.00	2000.00	300.00
184	10.00L	100.00N	5.00	10.00N	150.00	10.00L	50.00N	10.00	200.00N	10.00N
185	10.00	100.00N	7.00	10.00N	500.00	150.00	50.00N	20.00	200.00N	70.00

Table 2.--Cont.

Sample #	Th	Au-AA	AS-AA	Cd-AA	Bi-AA	Sb-AA
181	100.00N	0.002N	10.00N	0.40	1.00N	2.00N
182	100.00N	0.002N	10.00N	0.10	1.00N	2.00N
183	100.00N	0.006	20.00	1.90	3.00	2.00N
184	100.00N	0.002N	10.00N	0.10N	1.00N	2.00N
185	100.00N	0.002	10.00N	0.10N	1.00N	2.00N

Table 3. Brief Rock Descriptions.

Sample #	Sample #	Sample #	Sample #
1	quartz vein	57	quartzite
2	dolomite	58	gossan material
3	silicified limestone	59	silicified limestone
4	silicified limestone	60	silicified limestone
5	jasperoid	61	quartz-fluorite vein
6	silicified limestone	62	silicified limestone
7	quartz-fluorite vein	63	quartz-fluorite vein
8	calcite vein	64	jasperoid
9	jasperoid	65	quartz vein
10	limestone	66	quartzite
11	silicified limestone	67	recrystallized dolomite
12	jasperoid	68	gossan material
13	quartz vein	69	silicified limestone
14	silicified limestone	70	gossan material
15	recrystallized dolomite	71	gossan material
16	silicified limestone	72	silicified limestone
17	silicified limestone	73	gossan material
18	gossan material	74	gossan material
19	quartz vein	75	quartz-hematite vein
20	rhodacite	76	silicified limestone
21	quartz vein	77	silicified limestone
22	silicified limestone	78	calcite vein
23	gossan material	79	gossan material
24	recrystallized limestone	80	fluorite vein
25	silicified limestone	81	limestone
26	silicified limestone	82	silicified limestone
27	gossan material	83	silicified limestone
28	quartzite	84	gossan material
29	silicified limestone	85	gossan material
30	quartz-fluorite vein	86	recrystallized limestone
31	jasperoid	87	jasperoid
32	gossan material	88	quartz-fluorite vein
33	silicified limestone	89	silicified limestone
34	gossan material	90	gossan material
35	quartz-fluorite vein	91	silicified limestone
36	silicified limestone	92	quartzite
37	silicified limestone	93	jasperoid
38	jasperoid	94	quartz vein
39	jasperoid	95	quartz vein breccia
40	silicified limestone	96	quartz-fluorite vein
41	quartz vein	97	quartzite
42	silicified breccia	98	silicified limestone
43	quartz-fluorite vein	99	silicified limestone
44	silicified limestone	100	quartz vein
45	silicified limestone	101	limestone
46	silicified limestone	102	gossan material
47	gossan material	103	silicified breccia
48	quartz vein	104	jasperoid autobreccia
49	silicified limestone	105	bleached limestone
50	massive chalcopryite	106	rhodacite porphyry
51	gossan material	107	rhodacite breccia
52	gossan material	108	limestone
53	gossan material	109	limestone
54	quartz vein	110	recrystallized dolomite
55	disseminated sulfide	111	jasperoid autobreccia
56	quartz vein	112	quartz calcite vein
		113	jasperoid
		114	quartz vein
		115	bleached limestone
		116	recrystallized limestone
		117	rhodacite vent breccia
		118	quartzite
		119	bleached dolomite
		120	quartzite
		121	silicified limestone
		122	quartzite
		123	jasperoid autobreccia
		124	jasperoid autobreccia
		125	jasperoid autobreccia
		126	recrystallized limestone
		127	jasperoid
		128	jasperoid
		129	limestone
		130	jasperoid autobreccia
		131	limestone
		132	silicified limestone
		133	limestone
		134	bleached dolomite
		135	jasperoid
		136	recrystallized limestone
		137	silicified limestone
		138	rhodacite porphyry
		139	jasperoid autobreccia
		140	rhodacite
		141	silicified limestone
		142	rhodacite
		143	silicified limestone
		144	bleached limestone
		145	jasperoid
		146	limestone
		147	dolomite
		148	limestone
		149	silicified limestone
		150	limestone
		151	jasperoid
		152	dolomite
		153	quartzite
		154	rhodacite
		155	limestone
		156	quartz vein
		157	limestone
		158	fluorite vein
		159	limestone
		160	limestone
		161	silicified limestone
		162	silicified limestone
		163	rhodacite
		164	jasperoid
		165	jasperoid autobreccia
		166	jasperoid
		167	silicified limestone
		168	gossan material

Table 3. cont.

 Sample #

169	limestone
170	caliche
171	bleached limestone
172	limestone
173	bleached dolomite
174	jasperoid autobreccia
175	limestone
176	jasperoid autobreccia
177	bleached limestone
178	bleached dolomite
179	silicified limestone
180	carboniferous limestone
181	carboniferous limestone
182	quartzite
183	jasperoid
184	calcite vein breccia
185	jasperoid