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THE DISTRIBUTION OF SELECTED TRACE ELEMENTS IN SOILS, EUREKA MINING DISTRICT AND PINTO SUMMIT QUADRANGLE, NEVADA

By Maurice A. Chaffee

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The distribution of selected trace elements in soils, Eureka mining district and Pinto Summit quadrangle, Nevada

By Maurice A. Chaffee

The accompanying two maps show soil-sample sites in the Eureka mining district and the Pinto Summit quadrangle, Nevada, respectively. Tables 1 and 2 are tabulations of analytical data for 14 elements. Site numbers in the tables correspond to the site numbers on the two maps.

Sampling was done during June and July of 1971. The samples were collected below any obvious organic layer (A horizon) and as near as possible to visibly unaltered bedrock. Samples were sieved using stainless-steel screening in aluminum frames. A series of sized fractions was obtained from each soil sample. Each fraction was analyzed separately. The analytical values given here for arsenic, bismuth, molybdenum, and tungsten are those of the 1-2-mm fraction. Analytical values for the other elements are those of the minus 62.5-micron fraction. The 1-2-mm fraction was pulverized before analysis.

The values for barium, bismuth, manganese, molybdenum, tin, and tungsten were obtained using a six-step semiquantitative spectrographic method of analysis. Arsenic and antimony were analyzed colorimetrically. Values for the other elements were obtained using atomic absorption methods of analysis. Analysis was done partly in the field and partly in the U.S. Geological laboratories in Denver.

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Table 1.--Tabulation of selected analytical data for sample sites in the Eureka Mining District, Nevada (all values in parts per million)

Site No.	Ag	As	Au	Ba	Bi	Cu	Hg	Mn	Mo	Pb	Sb	Sn	W	Zn
2	L(0.2)	10	L(0.02)	1000	N(10)	20	0.13	1000	N(5)	170	10	N(10)	N(50)	90
8	0.4	10	L(0.02)	1500	N(10)	20	0.14	1000	N(5)	100	4	N(10)	N(50)	85
15	4.0	60	0.08	1000	N(10)	35	0.40	1500	N(5)	1200	20	20	N(50)	230
17	0.4	L(10)	L(0.02)	1000	N(10)	25	0.12	1000	N(5)	90	4	N(10)	N(50)	80
19	0.4	L(10)	L(0.02)	1500	N(10)	20	0.12	1000	N(5)	160	5	N(10)	N(50)	90
27	1.5	20	L(0.02)	1500	10	30	0.18	1500	30	150	20	N(10)	N(50)	190
33	3.0	60	L(0.02)	1500	10	35	0.16	2000	20	110	20	N(10)	N(50)	220
39	1.0	30	L(0.02)	700	70	30	1.1	1500	20	40	10	N(10)	N(50)	260
47	0.8	10	L(0.02)	500	N(10)	80	0.60	1000	20	65	10	N(10)	N(50)	4800
49	4.5	100	L(0.02)	700	70	160	0.80	3000	100	280	60	N(10)	100	1700
51	0.6	10	L(0.02)	700	N(10)	250	0.12	1500	10	80	15	N(10)	100	200
58	0.2	80	0.15	1000	N(10)	55	0.09	1000	10	40	15	N(10)	50	160
60	0.6	20	0.06	1500	N(10)	25	0.07	1000	20	50	8	N(10)	50	95
63	1.5	10	L(0.02)	N(20)	N(10)	450	0.04	2000	30	25	3	N(10)	N(50)	30
67	4.0	20	0.20	700	N(10)	55	1.1	2000	N(5)	1800	90	50	N(50)	800
73	3.5	10	0.10	1500	N(10)	55	0.70	2000	N(5)	1600	70	20	N(50)	800
89	2.0	20	L(0.02)	1000	N(10)	45	0.12	1000	30	45	15	N(10)	70	500

Table 1 continued

Site No.	Ag	As	Au	Ba	Bi	Cu	Hg	Mn	Mo	Pb	Sb	Sn	W	Zn
91	0.6	150	L(0.02)	500	10	25	0.06	500	N(5)	35	15	N(10)	70	60
93	1.0	L(10)	L(0.02)	700	N(10)	25	0.20	1500	N(5)	90	15	N(10)	N(50)	220
101	0.4	10	L(0.02)	300	N(10)	50	0.07	2000	15	40	6	N(10)	300	95
109	0.6	10	L(0.02)	500	N(10)	45	0.09	1500	N(5)	60	10	N(10)	N(50)	160
111	1.0	10	L(0.02)	700	N(10)	40	0.60	700	N(5)	80	10	N(10)	N(50)	520
119	1.5	10	L(0.02)	1000	N(10)	35	0.10	700	N(5)	50	6	N(10)	N(50)	350
121	6.5	150	0.02	1500	N(10)	50	0.20	1500	N(5)	150	80	N(10)	50	450
123	0.8	150	0.02	700	N(10)	30	0.12	1500	N(5)	60	25	N(10)	N(50)	110
125	1.0	200	0.02	700	N(10)	25	0.09	1000	N(5)	55	20	N(10)	N(50)	85
127	14.	20	L(0.02)	700	N(10)	30	0.30	2000	N(5)	390	150	N(10)	N(50)	400
129	1.0	L(10)	0.02	1000	N(10)	30	1.0	1500	N(5)	220	40	N(10)	N(50)	400
131	3.0	30	0.06	700	N(10)	40	2.2	2000	N(5)	400	150	N(10)	N(50)	1000
133	0.6	20	L(0.02)	500	N(10)	50	0.50	700	30	80	15	N(10)	N(50)	210
135	0.6	20	L(0.02)	700	N(10)	40	0.20	1500	20	90	15	N(10)	N(50)	250
137	0.4	10	L(0.02)	700	N(10)	35	0.07	1000	5	60	15	N(10)	N(50)	140
139	0.6	10	L(0.02)	1000	N(10)	25	0.16	1500	N(5)	110	20	N(10)	N(50)	150
141	3.5	20	L(0.02)	500	N(10)	40	0.50	2000	N(5)	300	60	N(10)	N(50)	1400
143	1.0	100	L(0.02)	1000	N(10)	50	0.18	1500	N(5)	150	25	N(10)	N(50)	290
145	0.4	20	L(0.02)	200	N(10)	15	0.20	500	N(5)	20	3	N(10)	N(50)	40

Table 1 continued

Site No.	Ag	As	Au	Ba	Bi	Cu	Hg	Mn	Mo	Pb	Sb	Sn	W	Zn
148	N(0.2)	20	L(0.02)	500	N(10)	20	0.30	1000	N(5)	30	4	N(10)	N(50)	60
150	L(0.2)	100	L(0.02)	500	N(10)	25	0.20	1000	N(5)	40	6	N(10)	N(50)	90
152	L(0.2)	250	L(0.02)	300	N(10)	20	0.20	1500	N(5)	95	15	N(10)	N(50)	110
154	0.4	40	0.02	1500	N(10)	20	0.20	1000	N(5)	40	15	N(10)	N(50)	60
156	N(0.2)	10	L(0.02)	700	N(10)	20	0.08	700	N(5)	55	8	N(10)	N(50)	55
158	L(0.2)	30	L(0.02)	500	N(10)	20	0.20	2000	N(5)	50	8	N(10)	N(50)	130
160	0.2	80	L(0.02)	500	N(10)	20	0.30	1500	10	140	15	N(10)	N(50)	140
162	0.4	100	L(0.02)	500	N(10)	15	0.40	1000	N(5)	45	6	N(10)	N(50)	80
170	L(0.2)	20	L(0.02)	500	N(10)	15	0.16	700	N(5)	110	10	N(10)	N(50)	100
177	0.4	140	L(0.02)	300	N(10)	35	0.20	700	N(5)	70	5	N(10)	N(50)	130
178	0.2	120	0.55	500	N(10)	20	7.0	1000	N(5)	50	25	N(10)	N(50)	110
180	L(0.2)	200	0.10	500	N(10)	15	0.80	1500	N(5)	100	10	N(10)	N(50)	160
182	0.4	20	0.06	300	N(10)	15	1.6	2000	N(5)	330	15	N(10)	N(50)	340
184	L(0.2)	30	L(0.02)	500	N(10)	15	0.20	700	15	45	5	N(10)	N(50)	90
186	0.8	20	L(0.02)	700	N(10)	20	0.12	1000	N(5)	130	15	N(10)	N(50)	170
188	4.0	40	L(0.02)	300	N(10)	35	0.40	2000	N(5)	960	25	30	N(50)	1200
190	3.5	30	0.02	500	L(10)	40	0.20	1500	N(5)	800	35	50	N(50)	1200
192	2.5	20	0.02	700	N(10)	35	0.40	2000	N(5)	450	15	20	N(50)	700
194	3.0	20	L(0.02)	700	N(10)	40	0.16	2000	N(5)	450	15	20	N(50)	680

Site No.	Ag	As	Au	Ba	Bi	Cu	Hg	Mn	Mo	Pb	Sb	Sn	W	Zn
196	0.8	N(10)	L(0.02)	700	N(10)	20	0.12	1000	N(5)	110	15	N(10)	N(50)	140
198	1.0	10	L(0.02)	700	N(10)	20	0.12	1000	N(5)	110	15	N(10)	N(50)	180
200	6.0	300	0.35	500	30	95	1.5	1500	N(5)	4800	200	100	N(50)	3000
202	L(0.2)	20	L(0.02)	500	N(10)	25	0.13	700	N(5)	65	8	N(10)	N(50)	110
204	L(0.2)	10	L(0.02)	500	N(10)	25	0.14	700	N(5)	50	8	N(10)	N(50)	100
206	0.4	10	0.06	500	N(10)	20	0.50	1500	N(5)	140	40	N(10)	N(50)	160
209	1.5	10	L(0.02)	500	N(10)	35	0.70	1500	N(5)	650	45	N(10)	N(50)	500
211	1.0	10	0.02	500	N(10)	30	0.20	1500	N(5)	270	25	N(10)	N(50)	200
213	0.6	100	L(0.02)	700	N(10)	20	0.20	1000	N(5)	160	15	N(10)	N(50)	200
215	L(0.2)	100	L(0.02)	700	N(10)	20	0.17	1000	N(5)	110	10	N(10)	N(50)	260
217	L(0.2)	100	L(0.02)	500	N(10)	15	0.20	700	N(5)	90	15	N(10)	N(50)	100
220	1.5	150	0.04	200	N(10)	20	0.80	1000	N(5)	100	10	N(10)	N(50)	60
228	4.0	150	0.10	1000	N(10)	35	0.50	1500	N(5)	1400	50	50	N(50)	350
236	6.0	100	L(0.02)	1000	N(10)	30	0.60	>5000	N(5)	470	50	N(10)	N(50)	360
238	26.	40	0.04	1000	N(10)	55	1.1	>5000	10	730	150	N(10)	N(50)	1000
240	3.5	20	0.08	500	N(10)	20	0.60	>5000	N(5)	200	70	N(10)	N(50)	160
242	11.	100	0.15	200	N(10)	15	0.60	>5000	N(5)	490	150	N(10)	N(50)	100
244	0.4	300	0.02	500	N(10)	15	0.18	1000	N(5)	60	15	N(10)	N(50)	100
246	0.2	20	L(0.02)	700	N(10)	15	0.14	1000	N(5)	45	8	N(10)	N(50)	80

Table 1 continued

Site No.	Ag	As	Au	Ba	Bi	Cu	Hg	Mn	Mo	Pb	Sb	Sn	W	Zn
247	0.4	20	L(0.02)	500	N(10)	20	10.	1000	N(5)	35	6	N(10)	N(50)	80
249	0.4	10	0.02	500	N(10)	20	0.20	1000	N(5)	50	5	N(10)	N(50)	90
251	1.0	10	0.06	300	N(10)	15	6.5	1500	N(5)	80	3	N(10)	N(50)	2000
253	0.4	20	L(0.02)	2000	N(10)	15	0.18	2000	N(5)	70	35	N(10)	N(50)	120
255	1.0	10	0.04	>5000	N(10)	15	6.0	1500	N(5)	490	100	N(10)	N(50)	500
257	0.4	150	L(0.02)	1000	N(10)	40	1.2	1000	20	55	40	N(10)	N(50)	160
260	L(0.2)	60	L(0.02)	500	N(10)	30	0.18	700	10	35	6	N(10)	N(50)	80
370	0.2	30	L(0.02)	500	N(10)	25	0.14	700	N(5)	60	10	N(10)	N(50)	110
372	N(0.2)	10	L(0.02)	700	N(10)	20	0.10	700	N(5)	35	4	N(10)	N(50)	80
374	N(0.2)	10	L(0.02)	500	N(10)	20	0.11	1000	N(5)	40	4	N(10)	N(50)	75
376	N(0.2)	150	L(0.02)	700	N(10)	20	0.13	1500	N(5)	25	2	N(10)	N(50)	60
378	L(0.2)	30	L(0.02)	700	N(10)	25	0.30	1500	N(5)	150	20	N(10)	N(50)	140
380	0.2	40	L(0.02)	700	N(10)	20	0.16	1500	N(5)	70	15	N(10)	N(50)	80
382	N(0.2)	L(10)	L(0.02)	500	N(10)	15	0.09	1000	N(5)	30	6	N(10)	N(50)	85
384	0.6	100	L(0.02)	700	N(10)	20	0.50	1000	N(5)	30	90	N(10)	N(50)	90
386	0.2	10	L(0.02)	200	N(10)	15	1.3	500	N(5)	35	10	N(10)	N(50)	140
388	0.4	10	L(0.02)	70	N(10)	15	4.0	300	N(5)	40	25	N(10)	N(50)	120
390	N(0.2)	150	0.08	500	N(10)	10	0.40	500	N(5)	25	6	N(10)	N(50)	65
392	0.2	10	L(0.02)	150	N(10)	15	2.2	500	N(5)	45	45	N(10)	N(50)	100
395	0.2	L(10)	L(0.02)	500	N(10)	20	0.20	1000	N(5)	170	45	N(10)	N(50)	650

Table 1 continued

Site No.	Ag	As	Au	Ba	Bi	Cu	Hg	Mn	Mo	Pb	Sb	Sn	W	Zn
397	0.6	10	0.02	500	N(10)	15	1.8	3000	N(5)	290	70	N(10)	N(50)	600
399	0.4	L(10)	L(0.02)	500	N(10)	15	0.30	2000	N(5)	170	45	N(10)	N(50)	320
401	1.0	60	0.04	300	N(10)	15	0.70	2000	N(5)	180	80	N(10)	N(50)	330
403	1.0	30	0.06	700	N(10)	20	0.70	2000	N(5)	400	90	N(10)	N(50)	650
406	0.8	20	0.04	700	N(10)	20	0.30	2000	N(5)	250	90	N(10)	N(50)	340
409	0.8	10	0.02	500	N(10)	15	0.50	2000	N(5)	120	45	N(10)	N(50)	310
411	0.8	40	0.02	300	N(10)	5	1.1	1500	N(5)	130	60	N(10)	N(50)	700
437	1.0	80	0.08	300	L(10)	10	1.3	1000	N(5)	270	10	N(10)	N(50)	190
439	0.4	L(10)	L(0.02)	300	L(10)	10	0.40	500	N(5)	70	4	N(10)	N(50)	95
441	0.6	150	0.04	500	L(10)	15	0.40	1000	N(5)	70	8	N(10)	N(50)	160
443	0.6	300	0.04	100	L(10)	10	1.0	700	N(5)	140	60	N(10)	N(50)	800
446	L(0.2)	20	L(0.02)	700	N(10)	20	0.09	500	5	50	4	N(10)	N(50)	130
448	0.2	30	L(0.02)	700	N(10)	20	0.12	500	N(5)	50	5	N(10)	N(50)	120
450	1.5	L(10)	0.06	700	L(10)	30	0.50	2000	N(5)	600	6	15	N(50)	200
452	1.5	10	0.06	300	N(10)	20	0.60	2000	N(5)	300	5	10	N(50)	100
454	0.2	10	L(0.02)	700	N(10)	15	0.11	1500	N(5)	95	15	N(10)	N(50)	130
456	0.4	L(10)	L(0.02)	300	N(10)	10	0.40	700	N(5)	120	5	N(10)	N(50)	40
458	0.8	10	L(0.02)	500	N(10)	10	0.20	1500	N(5)	130	5	N(10)	N(50)	75
460	0.6	30	0.04	200	N(10)	10	0.40	1000	N(5)	80	4	N(10)	N(50)	35

Table 1 continued

Site No.	Ag	As	Au	Ba	Bi	Cu	Hg	Mn	Mo	Pb	Sb	Sn	W	Zn
462	1.5	150	0.04	700	N(10)	15	0.30	1000	L(5)	240	6	10	N(50)	120
464	1.5	40	0.08	700	N(10)	15	0.70	3000	L(5)	320	6	10	N(50)	150
466	1.5	150	0.20	300	N(10)	10	1.0	3000	N(5)	60	5	N(10)	N(50)	75
468	1.0	60	0.04	300	L(10)	15	0.90	3000	N(5)	70	4	N(10)	N(50)	120
470	2.5	80	0.06	500	N(10)	20	2.4	5000	N(5)	180	6	N(10)	N(50)	170
472	4.0	20	0.04	500	N(10)	20	5.0	>5000	N(5)	600	30	15	N(50)	180
474	10.	150	0.08	1500	N(10)	190	9.0	>5000	N(5)	640	90	15	N(50)	600
476	23.	60	0.10	5000	10	170	>10.	>5000	L(5)	600	80	N(10)	N(50)	2700
478	8.0	150	0.08	2000	N(10)	140	3.5	>5000	5	220	90	10	N(50)	820
480	4.0	30	0.04	2000	L(10)	50	1.6	>5000	N(5)	180	60	N(10)	N(50)	540
482	2.5	150	0.06	2000	10	35	1.0	>5000	N(5)	190	50	L(10)	N(50)	430
484	8.0	150	0.10	1500	L(10)	80	1.0	>5000	L(5)	730	60	15	N(50)	620
486	1.0	20	0.06	700	L(10)	15	0.11	>5000	5	200	10	10	N(50)	110
488	0.6	10	0.10	300	N(10)	10	0.18	5000	N(5)	120	8	N(10)	N(50)	50
490	1.0	100	0.08	500	N(10)	15	0.09	2000	N(5)	160	15	N(10)	N(50)	200
492	1.0	150	0.04	700	N(10)	15	0.20	2000	N(5)	190	25	N(10)	N(50)	90
494	2.0	30	0.06	700	N(10)	30	0.16	1000	N(5)	400	15	10	N(50)	200
496	0.6	L(10)	0.04	100	N(10)	10	0.11	2000	N(5)	170	8	N(10)	N(50)	20
498	0.8	10	0.10	20	N(10)	5	0.20	2000	N(5)	240	8	N(10)	N(50)	35

Table 1 continued

Site No.	Ag	As	Au	Ba	Bi	Cu	Hg	Mn	Mo	Pb	Sb	Sn	W	Zn
500	5.0	10	0.40	2000	10	30	0.60	>5000	N(5)	600	100	15	N(50)	170
502	7.5	10	0.20	2000	10	55	1.3	5000	5	3500	150	70	N(50)	600
504	4.0	10	0.15	1000	L(10)	40	0.90	1000	5	2100	45	50	N(50)	550
506	4.0	10	0.20	1000	10	40	0.60	500	N(5)	2000	45	50	N(50)	500
509	1.5	10	0.10	1000	N(10)	25	0.30	2000	7	140	35	L(10)	N(50)	210
511	1.0	300	L(0.02)	700	10	20	0.20	1500	15	100	30	N(10)	N(50)	220
580	0.4	10	L(0.02)	1000	N(10)	20	0.16	1000	N(5)	180	4	N(10)	N(50)	140
582	0.8	10	L(0.02)	1000	N(10)	25	0.17	1500	N(5)	440	6	N(10)	N(50)	150
584	L(0.2)	10	L(0.02)	1000	N(10)	15	0.15	2000	N(5)	320	6	L(10)	N(50)	110
586	0.6	40	L(0.02)	1000	N(10)	15	0.20	700	N(5)	300	15	N(10)	N(50)	140
588	0.4	L(10)	L(0.02)	1000	N(10)	20	0.18	700	N(5)	240	10	L(10)	N(50)	300
590	L(0.2)	20	L(0.02)	700	N(10)	15	0.18	700	5	60	6	N(10)	N(50)	95
592	L(0.2)	L(10)	L(0.02)	500	N(10)	15	0.20	1000	N(5)	120	6	N(10)	N(50)	90
594	0.4	40	L(0.02)	300	N(10)	20	0.50	1000	N(5)	130	10	L(10)	N(50)	110
596	0.8	60	L(0.02)	500	N(10)	25	0.60	1000	L(5)	250	20	N(10)	N(50)	180
598	0.4	30	L(0.02)	1000	N(10)	25	0.30	1000	L(5)	140	10	L(10)	N(50)	140
600	0.6	20	L(0.02)	1500	N(10)	25	0.40	2000	N(5)	150	10	L(10)	N(50)	190

N = Not detected at limit of detection shown.
L = Detected, but below limit of detection shown.
> = Greater than value shown.

Table 2.--Tabulation of selected analytical data for sample sites in the Pinto Summit quadrangle, Nevada (all values are in parts per million)

Site No.	Ag	As	Au	Ba	Bi	Cu	Hg	Mn	Mo	Pb	Sb	Sn	W	Zn
264	0.2	30	L(0.02)	500	N(10)	20	0.50	1000	N(5)	25	10	N(10)	N(50)	50
266	0.2	20	L(0.02)	500	N(10)	15	0.80	1000	N(5)	50	15	N(10)	N(50)	130
267	0.8	30	L(0.02)	500	N(10)	25	0.16	1000	N(5)	65	15	N(10)	N(50)	160
268	0.8	10	L(0.02)	300	N(10)	20	0.20	700	N(5)	50	15	N(10)	N(50)	120
269	0.4	20	L(0.02)	200	N(10)	25	0.09	300	N(5)	50	15	N(10)	N(50)	70
270	0.6	10	L(0.02)	200	N(10)	20	0.20	500	N(5)	60	20	N(10)	N(50)	130
273	2.0	20	.06	300	N(10)	25	1.4	1500	N(5)	240	80	N(10)	N(50)	550
276	3.0	30	L(0.02)	500	N(10)	20	0.50	1500	N(5)	300	100	N(10)	N(50)	1800
278	3.0	10	L(0.02)	500	N(10)	20	0.80	2000	N(5)	310	90	N(10)	N(50)	2000
280	0.4	10	L(0.02)	1000	N(10)	10	0.10	2000	N(5)	210	3	N(10)	N(50)	50
282	L(0.2)	20	L(0.02)	1500	N(10)	10	0.20	2000	N(5)	50	4	N(10)	N(50)	50
284	L(0.2)	L(10)	L(0.02)	700	N(10)	15	0.14	700	N(5)	30	2	N(10)	N(50)	50
286	L(0.2)	N(10)	L(0.02)	700	N(10)	15	0.03	1000	N(5)	30	2	N(10)	70	60
288	0.4	L(10)	L(0.02)	700	N(10)	15	0.06	1000	N(5)	45	2	N(10)	L(50)	60
290	0.2	L(10)	L(0.02)	300	N(10)	15	0.06	700	N(5)	40	3	N(10)	N(50)	40
293	0.2	N(10)	L(0.02)	1500	N(10)	15	0.12	700	N(5)	30	3	N(10)	L(50)	65

Table 2 continued

Site No.	Ag	As	Au	Ba	Bi	Cu	Hg	Mn	Mo	Pb	Sb	Sn	W	Zn
295	L(0.2)	L(10)	L(0.02)	1000	N(10)	15	0.10	1000	N(5)	35	2	N(10)	N(50)	60
297	0.2	L(10)	L(0.02)	1500	N(10)	15	0.05	1000	N(5)	30	8	N(10)	N(50)	60
299	L(0.2)	L(10)	L(0.02)	1500	N(10)	15	0.05	700	N(5)	30	1	N(10)	N(50)	55
301	0.4	L(10)	L(0.02)	1000	N(10)	15	0.07	1000	N(5)	35	3	N(10)	N(50)	65
303	0.8	20	L(0.02)	3000	N(10)	15	0.60	500	N(5)	65	10	N(10)	N(50)	55
305	0.2	L(10)	L(0.02)	3000	N(10)	15	0.06	700	N(5)	40	3	N(10)	N(50)	110
307	1.5	10	L(0.02)	5000	N(10)	25	0.60	700	15	150	10	N(10)	N(50)	700
309	0.6	L(10)	L(0.02)	3000	N(10)	15	0.20	700	N(5)	50	4	N(10)	N(50)	100
312	0.2	L(10)	L(0.02)	2000	N(10)	10	0.12	500	N(5)	35	2	N(10)	N(50)	100
314	0.6	L(10)	L(0.02)	700	N(10)	20	0.10	1000	N(5)	40	4	N(10)	N(50)	85
316	0.4	L(10)	L(0.02)	1500	N(10)	20	0.14	1000	N(5)	50	3	N(10)	N(50)	75
318	1.0	L(10)	L(0.02)	700	N(10)	30	0.30	700	N(5)	480	10	10	N(50)	180
320	0.4	L(10)	L(0.02)	700	N(10)	30	0.20	700	N(5)	200	10	N(10)	N(50)	120
322	L(0.2)	10	L(0.02)	2000	N(10)	20	0.06	1000	5	65	3	N(10)	N(50)	110
324	3.5	10	L(0.02)	700	N(10)	30	0.08	1000	N(5)	230	15	N(10)	N(50)	240
326	8.0	L(10)	L(0.02)	700	N(10)	40	0.16	1000	N(5)	400	3	50	N(50)	340
328	2.5	10	L(0.02)	700	N(10)	30	0.06	1000	N(5)	300	10	N(10)	N(50)	440
331	2.0	L(10)	L(0.02)	700	N(10)	40	0.20	1500	N(5)	560	15	15	L(50)	800

Table 2 continued

Site No.	Ag	As	Au	Ba	Bi	Cu	Hg	Mn	Mo	Pb	Sb	Sn	W	Zn
333	5.0	L(10)	L(0.02)	500	N(10)	85	0.20	1000	N(5)	760	15	30	N(50)	880
335	4.5	10	L(0.02)	500	N(10)	70	0.50	1000	N(5)	2200	10	100	N(50)	2200
337	9.0	300	L(0.02)	500	N(10)	210	0.20	1500	N(5)	2400	40	200	N(50)	1700
339	4.0	N(10)	L(0.02)	700	N(10)	90	0.18	200	N(5)	1600	40	70	N(50)	1000
341	4.0	20	L(0.02)	300	N(10)	110	0.40	200	N(5)	890	50	70	N(50)	840
345	1.5	N(10)	L(0.02)	1500	N(10)	35	0.20	200	N(5)	590	8	20	N(50)	620
349	0.8	20	L(0.02)	1000	N(10)	15	0.10	700	N(5)	65	3	N(10)	N(50)	70
351	0.4	10	L(0.02)	2000	N(10)	15	0.18	300	N(5)	50	3	N(10)	N(50)	55
353	1.0	10	L(0.02)	5000	N(10)	20	0.50	500	7	70	3	N(10)	N(50)	90
355	0.6	10	L(0.02)	3000	N(10)	15	0.18	700	N(5)	80	6	N(10)	N(50)	120
357	0.4	10	L(0.02)	5000	N(10)	15	0.10	1000	N(5)	90	6	N(10)	N(50)	95
359	0.4	L(10)	L(0.02)	3000	N(10)	20	0.08	1000	N(5)	95	3	N(10)	N(50)	110
361	1.5	L(10)	L(0.02)	2000	N(10)	30	0.18	700	N(5)	1400	4	20	N(50)	550
363	1.0	10	L(0.02)	1500	N(10)	35	0.14	1000	N(5)	1100	5	70	N(50)	1100
365	1.0	L(10)	L(0.02)	>5000	N(10)	50	0.12	1000	N(5)	1200	4	150	N(50)	1400

Table 2 continued

Site No.	Ag	As	Au	Ba	Bi	Cu	Hg	Mn	Mo	Pb	Sb	Sn	W	Zn
367	2.5	10	L(0.02)	700	N(10)	55	0.30	700	N(5)	1600	6	70	N(50)	1900
413	0.6	100	.04	700	N(10)	20	0.60	700	7	110	60	N(10)	N(50)	160
415	1.5	20	.02	500	N(10)	20	0.60	1500	N(5)	100	80	N(10)	N(50)	180
417	0.8	20	L(0.02)	700	N(10)	20	0.30	1500	N(5)	85	50	N(10)	N(50)	150
419	7.0	20	L(0.02)	150	N(10)	10	0.40	700	N(5)	350	100	10	N(50)	200
421	2.5	30	L(0.02)	100	N(10)	15	0.70	1000	5	240	100	N(10)	N(50)	110
423	18.	30	.02	1000	N(10)	35	0.50	1500	N(5)	480	200	15	N(50)	800
425	28.	150	.06	300	N(10)	40	0.80	2000	N(5)	1000	400	30	N(50)	1900
427	1.5	20	L(0.02)	500	N(10)	20	0.20	1000	N(5)	110	70	N(10)	N(50)	130
429	1.0	10	L(0.02)	500	N(10)	20	0.14	1000	N(5)	100	50	N(10)	N(50)	140
431	0.4	40	.06	300	N(10)	15	0.08	1000	N(5)	180	200	N(10)	N(50)	140
433	0.6	150	L(0.02)	700	N(10)	50	6.0	1000	20	100	40	N(10)	N(50)	140
435	0.6	100	L(0.02)	700	N(10)	30	0.70	1000	15	60	25	N(10)	N(50)	130
516	L(0.2)	10	L(0.02)	2000	N(10)	15	0.08	700	N(5)	40	3	N(10)	N(50)	110
518	0.2	20	L(0.02)	2000	N(10)	15	0.20	500	N(5)	50	0.5	N(10)	N(50)	140
520	L(0.2)	10	L(0.02)	1000	N(10)	15	0.10	700	N(5)	45	1	N(10)	N(50)	110
522	L(0.2)	10	L(0.02)	1000	N(10)	15	0.12	700	L(5)	55	2	N(10)	N(50)	190
524	L(0.2)	L(10)	L(0.02)	1000	N(10)	15	0.20	700	L (5)	30	1	N(10)	N(50)	55

Table 2 continued

Site No.	Ag	As	Au	Ba	Bi	Cu	Hg	Mn	Mo	Pb	Sb	Sn	W	Zn
526	0.4	N(10)	L(0.02)	500	N(10)	10	0.11	700	N(5)	35	1	N(10)	N(50)	25
528	0.4	20	L(0.02)	1500	N(10)	20	0.10	1500	5	55	3	N(10)	N(50)	140
530	L(0.2)	L(10)	L(0.02)	2000	N(10)	15	0.14	1500	N(5)	35	1	N(10)	N(50)	100
532	0.2	L(10)	L(0.02)	500	N(10)	15	0.15	500	N(5)	35	3	N(10)	N(50)	70
534	N(0.2)	L(10)	L(0.02)	700	N(10)	5	0.08	700	N(5)	25	3	N(10)	N(50)	80
536	0.2	10	L(0.02)	1000	N(10)	15	0.40	700	N(5)	75	2	N(10)	N(50)	80
538	L(0.2)	10	L(0.02)	1000	N(10)	15	0.30	700	N(5)	35	30	N(10)	N(50)	70
540	L(0.2)	10	L(0.02)	1000	N(10)	15	0.12	1000	5	120	8	N(10)	N(50)	100
542	0.4	L(10)	L(0.02)	500	N(10)	20	0.11	700	N(5)	40	30	N(10)	N(50)	65
544	0.8	10	L(0.02)	500	N(10)	20	0.18	700	N(5)	240	10	10	N(50)	100
546	1.5	60	L(0.02)	1000	N(10)	20	0.20	1000	L(5)	140	0.5	L(10)	N(50)	180
548	0.4	40	L(0.02)	700	N(10)	15	0.14	700	N(5)	55	4	N(10)	N(50)	75
550	0.8	100	L(0.02)	500	N(10)	20	0.50	700	5	100	30	N(10)	N(50)	140
552	0.4	10	L(0.02)	2000	N(10)	30	0.20	700	N(5)	45	6	N(10)	N(50)	100
554	0.2	L(10)	L(0.02)	3000	N(10)	30	0.30	500	N(5)	55	8	N(10)	N(50)	120
556	1.0	L(10)	L(0.02)	1500	N(10)	35	0.30	500	N(5)	55	8	N(10)	N(50)	200
558	L(0.2)	20	L(0.02)	1000	N(10)	20	0.20	700	5	40	4	N(10)	N(50)	140
560	0.6	L(10)	L(0.02)	700	N(10)	15	0.13	500	7	60	10	N(10)	N(50)	80
562	0.2	10	L(0.02)	1000	N(10)	15	0.13	700	N(5)	30	3	N(10)	N(50)	60
564	0.2	L(10)	L(0.02)	700	N(10)	15	0.12	500	L(5)	30	4	N(10)	N(50)	85

Table 2 continued

Site No.	Ag	As	Au	Ba	Bi	Cu	Hg	Mn	Mo	Pb	Sb	Sn	W	Zn
566	L(0.02)	10	L(0.02)	700	N(10)	10	0.12	500	N(5)	30	2	N(10)	N(50)	45
568	L(0.02)	L(10)	L(0.02)	3000	N(10)	10	0.12	500	N(5)	30	3	N(10)	N(50)	40
570	L(0.02)	N(10)	L(0.02)	1000	N(10)	10	0.08	500	N(5)	30	2	N(10)	N(50)	50
572	L(0.02)	L(10)	L(0.02)	2000	N(10)	15	0.10	500	N(5)	35	1	N(10)	N(50)	55
574	0.2	L(10)	L(0.02)	2000	N(10)	15	0.12	700	N(5)	35	2	N(10)	N(50)	60
576	L(0.02)	L(10)	L(0.02)	3000	N(10)	10	0.10	700	N(5)	30	2	N(10)	N(50)	50
578	L(0.02)	L(10)	L(0.02)	1000	N(10)	10	0.18	500	N(5)	30	5	N(10)	N(50)	90

N = Not detected at limit of detection shown.
L = Detected, but below limit of detection shown.
> = Greater than value shown.