

UNITED STATES DEPARTMENT OF THE INTERIOR
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A Listing and Statistical Summary of Spectrographic
Analyses of Heavy-Mineral Concentrates from Stream-sediment
Samples for the Survey Pass quadrangle, Alaska

by

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

Contents

	Page
INTRODUCTION-----	1
METHODS-----	2
Sampling and sample preparation-----	2
Method of analysis-----	3
Statistical methods-----	5
EXPLANATION FOR TABLE 3-----	9
REFERENCES CITED-----	10

Illustrations

Plate 1.--Map showing localities for heavy-mineral concentrates
from stream sediments, Survey Pass quadrangle,
Alaska.

Tables

Table 1.--Statistical summary of the analytical results for heavy-mineral concentrate samples-----	6
2.--Correlation coefficients of element concentration in 623 heavy-mineral-concentrate samples-----	8
3.--Analytical results for 629 heavy-mineral-concentrate samples-----	11

INTRODUCTION

A geochemical reconnaissance study was undertaken in the Survey Pass, quadrangle, Alaska, during the summers of 1977 and 1978 to aid in the evaluation of the mineral-resource potential of the quadrangle. For this study, 629 heavy-mineral concentrates from stream sediments, 638 stream-sediment, and 1,585 rock samples were collected. Sample localities, analytical results, and statistical data for the heavy-mineral concentrates from stream sediments are presented in this report. Sample localities for heavy-mineral concentrates are shown on plate 1. Statistical data derived from the analytical results for heavy-mineral concentrates from stream sediments are shown in tables 1 and 2. Analytical results for this sample medium are shown in table 3. Data for stream-sediment samples are reported in Open-File Report 79-837-A (Cathrall and others, 1979).

METHODS

Sampling and Sample Preparation

Heavy-mineral concentrates from stream sediment were collected from the active parts of streams wherever possible; where this was not possible, samples were collected from the stream sediments directly adjacent to the present channel of the stream. Stream-sediment samples consisted of several scoops of coarse to fine-grained sediment which were wet-sieved through a 2-mm stainless steel screen at the sample site. This sieved fraction was panned at the sample site to reduce the percentage of light minerals in the sample. The panned heavy-mineral concentrates from stream sediments were placed in metal-free paper envelopes. The samples were then air-dried and further prepared by shaking through 20-mesh stainless steel sieve, the minus-20-mesh fraction was retained. In the laboratory, the minus-20-mesh fraction was separated with bromoform into two fractions: a light-mineral fraction having a specific gravity of 2.86 or less and a heavy-mineral fraction having a specific gravity greater than 2.86. The light-mineral fraction was discarded. Magnetite and other magnetic minerals, primarily hematite and ilmenite, were removed from the heavy-mineral fraction by use of a hand magnet and a Frantz Isodynamic magnetic separator at a setting of 0.2 amperes. The magnetic fraction was saved, but not analyzed. The remaining heavy-mineral fraction was again run through the Frantz Isodynamic magnetic separator^{1/} at a setting of 0.6 amperes. The fraction that was nonmagnetic at this higher setting contained primarily zircon, apatite, and sulfides; it was labeled C-3 and was retained for spectrographic analysis. The intermediate fraction having magnetic susceptibility between 0.2 and 0.6 amperes was not analyzed.

^{1/}Use of a brand name is for descriptive purposes only and does not necessarily constitute endorsement by the U.S. Geological Survey.

Method of Analysis

The C-3 fraction of the heavy-mineral concentrates from stream sediments was analyzed by a six-step, DC-arc, semiquantitative, emission spectrographic method generally following that described by Grimes and Marranzino (1968) for the analysis of geologic material. Their method was modified in the following way to eliminate the spectral interferences caused by high concentrations of iron. Five milligrams of prepared sample was mixed with 20 mg of pure graphite powder and 5 mg of pure Arkansas quartz; the mixture was packed into a preformed graphite electrode 6.35 mm in diameter, and was burned in a DC-arc for 136 seconds using a 1.5-m Wadsworth mounted grating spectrograph. Spectra were recorded on 35-mm SA-1 film in groups of 23 per film. Spectrographic standards were prepared in the same manner. Thirty elements were determined.

The observed spectra from the samples were compared visually to standard spectra using a 20X comparator. Results were reported as the approximate midpoints of geometric brackets whose boundaries were 1.2, 0.83, 0.56, 0.38, 0.26, 0.18, 0.12, 0.083, and so on. These midpoints are 1, 0.7, 0.5, 0.3, 0.2, 0.15, 0.1, 0.07, and so on.

The precision of a reported value is approximately plus or minus one reporting value at 68 percent confidence and two reporting values at 95 percent confidence. Iron, magnesium, calcium, and titanium are reported in percent; all other elements are reported in ppm. Data qualified (censored) codes, defined below, were used with some reported values. The approximated visual lower limits of determination for 30 elements included in this report are, for those given in percentage: iron, 0.10; magnesium, 0.05; calcium, 0.10, and titanium, 0.005; for those reported in ppm: manganese, 20; silver, 1.0; arsenic, 500; gold, 20; boron, 20; barium, 50; beryllium, 2; bismuth, 20; cadmium, 50; cobalt, 10; chromium, 20; copper, 10; lanthanum, 50; molybdenum, 10; niobium, 50; nickel, 10; lead, 20; antimony, 200; scandium, 10; tin, 20; strontium, 200; tungsten, 100; vanadium, 20; yttrium, 20; zinc, 500; zirconium, 20.

Data qualified (censored) codes are N, L, or G; N = not detected at lower limit of detection; L = detected, but below lower limit of detection; G = greater than upper limit of detection.

The analyses were done by E. F. Cooley and J. T. Hurrell.

Statistical Methods

All data listed in table 3 were entered in the U.S. Geological Survey computer data storage system entitled RASS (Rock Analyses Storage System), retrieved, and analyzed statistically by T. M. Billings, S. K. McDanal, and C. M. McDougal, using the U.S. Geological Survey STATPAC program library (VanTrump and Miesch, 1977).

Graphical analyses of the C-3 fraction of the heavy-mineral concentrate from stream-sediment data are presented in summary form in table 1.

Simple linear correlation coefficients among logarithmic values of element concentrations are shown in table 2, which also shows the number of pairs of values used to compute these coefficients. For cases in which the number of pairs is less than the total number of samples analyzed, the bivariate frequency distribution was censored owing to limitations of the methods of analysis. In the uncensored portion of the bivariate population, if the number of pairs was less than 4, the correlation coefficient was not computed.

Table 1.--Statistical summary of the analytical results for the nonmagnetic heavy-mineral concentrate from stream-sediment samples, Survey Pass quadrangle, Alaska

[Values for Fe, Mg, Ca, and Ti reported in percent; all other values reported in ppm (parts per million). Lower limits of detection: Fe and Ca = 0.01; Mg = 0.05; Ti = 0.005; Ag = 1; Mn, Au, B, Bi, Cr, Pb, Sn, V, Y, and Zr = 20; As and Zn = 500; Ba, Cd, La, and Nb = 50; Be = 2; Cu, Mo, Ni, Co, and Sc = 10; Sb and Sr = 200; W = 100. Upper limits of detection: Fe and Ca = 20; Mg = 10; Ti = 1; Mn, Ag, Ba, Cr, Ni, and Sr = 5,000; As, Sb, V, W, and Zn = 10,000; Au and Cd = 500; B, Be, Bi, Co, Mo, Nb, and Y = 2,000; Cu and Pb = 20,000; La and Zr = 1,000; and Sc and Sn = 100. Unqualified population is one in which the element concentrations fall within the sensitivity limits of the method used. Qualified population is one in which element concentrations are coded with an N, L, or G; N = not detected at lower limit of detection; L = detected, but below lower limit of detection; G = greater than upper limit of detection. n = total number samples analyzed for the particular element present. This number is determined by adding columns headed N, L, G, and Number of values. Leaders (--) = no data or insufficient data. Analyses performed by semiquantitative emission spectrography, by method slightly modified from Grimes and Marranzino, 1968. Analysts: E. F. Cooley and J. T. Hurrell]

Element	Data based on the qualified population			Data based on the unqualified population						Percentile distribution used on n samples analyzed				
	Number of samples			Number of values	Range of values	Geometric mean	Geometric deviation	Arithmetic mean	Standard deviation	25th	50th	75th	90th	
	N	L	G											
Fe	0	0	0	623	1	4.8	1.7	5.5	3.1	3.3	4.5	6.6	10.2	
Mg	0	0	0	623	0.1	0.8	2.4	1.1	1.1	0.4	0.8	1.4	2.4	
Ca	0	0	0	623	.1	1.6	2.7	2.6	2.6	.8	1.7	3.2	6.5	
Ti	0	0	315	308	.1	.8	1.4	0.8	0.2	.9	--	--	--	
Mn	0	0	4	619	300	880	1.8	1,081	873	567	783	1,187	2,211	
Ag	584	9	0	30	1	3.3	2.1	4.3	3.8	--	--	--	--	
As	614	1	0	8	500	773	1.5	825	333	--	--	--	--	
Au	623	0	0	0	--	--	--	--	--	--	--	--	--	
B	0	6	0	617	20	104	2	131	96	61	94	196	271	
Ba	0	1	22	600	50	675	2.2	907	874	436	683	1,093	2,075	
Be	1	147	0	474	2	2.4	1.6	3.3	10.4	1.8	2.1	2.5	3.6	
Bi	614	3	0	6	20	85	3	145	180	--	--	--	--	
Cd	623	0	0	0	--	--	--	--	--	--	--	--	--	
Co	0	17	0	606	10	23	1.8	28	21	15	21	31	52	
Cr	0	2	0	621	20	165	1.8	200	139	109	163	240	402	
Cu	0	6	0	617	10	105	2.8	213	565	45	102	203	400	

Table 1.--Statistical summary of the analytical results for the nonmagnetic heavy-mineral concentrate from stream-sediment samples, Survey Pass quadrangle, Alaska--continued.

Element	Data based on the qualified population			Data based on the unqualified population								Percentile distribution used on n samples analyzed			
	Number of samples			Number of values	Range of values	Geometric mean	Geometric deviation	Arithmetic mean	Standard deviation	25th	50th	75th	90th		
	N	L	G												
La	0	1	25	598	50	170	2.2	240	243	100	174	288	755		
Mo	597	11	0	15	10	17	1.9	22	24	--	--	--	--		
Nb	17	452	0	154	50	58	1.3	60	18	--	--	--	--		
Ni	0	31	0	592	10	40	2.1	51	37	24	37	59	104		
Pb	1	3	0	619	20	66	2.4	120	322	38	52	100	201		
Sb	623	0	0	0	--	--	--	--	--	--	--	--	--		
Sc	0	5	0	618	10	25	1.4	26	10	20	25	33	--		
Sn	511	7	0	82	20	77	2.7	138	188	--	--	--	40		
Sr	0	16	0	607	200	263	1.5	288	161	--	--	340	447		
V	0	0	0	623	20	156	1.5	169	69	123	161	218	272		
W	587	18	0	18	100	189	2.3	303	448	--	--	--	--		
Y	0	1	0	622	20	100	1.8	129	148	64	92	144	229		
Zn	452	121	0	50	500	730	1.9	962	1,039	--	--	--	--		
Zr	0	1	83	539	20	395	1.8	472	277	277	442	862	--		
Th	584	10	0	7	1,000	304	1.9	371	298	--	--	--	--		

Table 2.--Simple linear correlation coefficients between logarithmic values of the element concentrations in 623 heavy-mineral-concentrate samples from stream sediment, Survey Pass quadrangle, Alaska.

[Upper half of table contains correlation coefficients, multiplied by 100; lower half is the number of pairs of values used to compute coefficients. Where number of pairs is less than 623, the bivariate frequency distribution was censored owing to the limitations of the method of analysis. **** Indicates correlation coefficient was not computed. Methods of analysis, indicated in the row and column headings: S = Emission spectroscopy]

	S-FE	S-HC	S-CA	S-TI	S-MN	S-AC	S-AS	S-B	S-BA	S-BE	S-BI	S-CO	S-CR	S-CU	S-LA	S-HO	S-HB	S-NI	S-PB	S-SC	S-SN	S-SR	S-V	S-Y	S-ZN	S-ZR	S-TH
S-FE	XXX	623	623	308	619	30	30	8	617	617	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	
S-HC	XXX	623	623	308	619	30	30	8	617	617	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	
S-CA	XXX	623	623	308	619	30	30	8	617	617	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	
S-TI	XXX	623	623	308	619	30	30	8	617	617	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	
S-MN	XXX	623	623	308	619	30	30	8	617	617	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	
S-AC	XXX	623	623	308	619	30	30	8	617	617	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	
S-AS	XXX	623	623	308	619	30	30	8	617	617	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	
S-B	XXX	623	623	308	619	30	30	8	617	617	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	
S-BA	XXX	623	623	308	619	30	30	8	617	617	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	
S-BE	XXX	623	623	308	619	30	30	8	617	617	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	
S-BI	XXX	623	623	308	619	30	30	8	617	617	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	
S-CO	XXX	623	623	308	619	30	30	8	617	617	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	
S-CR	XXX	623	623	308	619	30	30	8	617	617	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	
S-CU	XXX	623	623	308	619	30	30	8	617	617	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	
S-LA	XXX	623	623	308	619	30	30	8	617	617	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	
S-HO	XXX	623	623	308	619	30	30	8	617	617	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	
S-HB	XXX	623	623	308	619	30	30	8	617	617	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	
S-NI	XXX	623	623	308	619	30	30	8	617	617	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	
S-PB	XXX	623	623	308	619	30	30	8	617	617	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	
S-SC	XXX	623	623	308	619	30	30	8	617	617	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	
S-SN	XXX	623	623	308	619	30	30	8	617	617	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	
S-SR	XXX	623	623	308	619	30	30	8	617	617	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	
S-V	XXX	623	623	308	619	30	30	8	617	617	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	
S-Y	XXX	623	623	308	619	30	30	8	617	617	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	
S-ZN	XXX	623	623	308	619	30	30	8	617	617	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	
S-ZR	XXX	623	623	308	619	30	30	8	617	617	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	
S-TH	XXX	623	623	308	619	30	30	8	617	617	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	606	

EXPLANATION FOR TABLE 3

The data listed in table 3 include analytical results of the C-3 fraction of the stream-sediment heavy-mineral concentrates collected in Survey Pass quadrangle, Alaska. For the sample set the data are arranged so that column 1 contains the U.S. Geological Survey assigned sample number. These sample numbers are shown on plate 1 without the prefix 77 or 78 and the suffix C3 (example, 77101C3 becomes 101). Latitude and longitude (degrees, minutes, and seconds) are given in columns 2 and 3. The element headings (denoted in capital letters) in columns 4-33 are preceded by an S, indicating that these columns contain emission spectrographic data. Element concentrations are given in parts per million, except for Fe, Mg, Ca, and Ti, which are recorded in percent, as indicated in these column headings.

Row codes used are N and --, where: N = not detected at lower limit of detection; and -- = no data available, or sample not analyzed for this element.

Analytical results begin on page 11 and end on page 52.

REFERENCES CITED

- Cathrall, J. B., Cooley, E. F., O'Leary, R. M., Billings, T. M., and McDaniel, S. K., 1979, A listing and statistical summary of spectrographic and chemical analyses of stream-sediment samples from the Survey Pass quadrangle, Alaska: U.S. Geological Survey Open-File Report 79-837-A, 61 p.
- Grimes, D. J., and Marranzino, A. P., 1968, Direct-current arc and alternating-current spark emission spectrographic field methods for the semiquantitative analyses of geologic materials: U.S. Geological Survey Circular 591, 6 p.
- VanTrump, George, Jr., and Miesch, A. T., 1977, The U.S. Geological Survey RASS-STATPAC system for management and statistical reduction of geochemical data: Computers and Geosciences, vol. 3, p. 475-488.

TABLE 3.--Analytical results for 629 heavy-mineral concentrates from stream-sediment samples from the Survey Pass quadrangle, Alaska.

[See page 9 for explanation. Table pages run from 11 to 52.]

sample	LATITUDE	LONGITUDE	S-FEX	S-WG%	S-CAZ	S-TIX	S-MN	S-AG	S-AS	S-AU	S-R	S-BA
770010	67 5 52	153 48 31	2.0	.70	1.50	>1.0	700	N	N	N	70	500
770020	67 6 10	153 46 27	3.0	.50	1.00	1.0	500	N	N	N	70	1,000
770030	67 5 47	153 41 10	3.0	.70	.50	1.0	700	N	N	N	70	700
770040	67 5 53	153 40 26	3.0	.70	.70	1.0	700	N	N	N	100	700
770050	67 7 12	153 28 11	5.0	.70	.50	.7	700	N	N	N	100	700
770060	67 9 13	153 32 5	5.0	.50	2.00	>1.0	700	N	N	N	70	200
770070	67 9 35	153 38 26	3.0	.50	5.00	>1.0	1,000	N	N	N	70	200
770080	67 9 39	153 38 38	2.0	.30	5.00	>1.0	1,000	N	N	N	50	200
770090	67 11 0	153 35 37	2.0	.70	5.00	>1.0	700	N	N	N	50	200
770100	67 12 2	153 31 55	10.0	2.00	1.50	>1.0	3,000	N	N	N	100	150
770110	67 40 54	155 25 47	15.0	.50	2.00	.5	200	N	N	N	30	2,000
770120	67 42 15	155 26 24	20.0	.20	1.50	1.0	200	2.0	N	N	20	300
770130	67 43 43	155 21 46	3.0	.70	1.50	1.0	700	N	N	N	70	700
770140	67 43 5	155 20 13	5.0	1.00	.70	.7	500	<1.0	N	N	70	700
770150	67 44 25	155 19 18	3.0	1.00	1.50	.7	700	N	N	N	70	700
770160	67 44 22	155 19 6	3.0	.50	5.00	1.0	1,000	N	N	N	70	700
770170	67 43 18	155 13 24	5.0	1.00	1.00	1.0	1,000	N	N	N	100	700
770180	67 43 16	155 13 12	5.0	.70	2.00	1.0	700	2.0	N	N	100	700
770190	67 42 17	155 12 42	10.0	2.00	.15	.7	700	N	N	N	50	700
770200	67 41 36	155 13 52	5.0	1.00	.50	1.0	500	N	N	N	70	700
770210	67 41 56	155 7 2	7.0	1.00	.50	1.0	500	N	N	N	70	700
770220	67 41 52	155 6 59	10.0	.70	1.50	1.0	500	N	N	N	70	1,000
770230	67 40 8	155 7 56	10.0	2.00	5.00	>1.0	700	N	N	N	70	2,000
770240	67 40 5	155 8 0	5.0	1.50	2.00	1.0	500	N	N	N	100	700
770250	67 39 27	155 11 48	5.0	1.50	3.00	>1.0	500	N	N	N	70	1,500
770260	67 40 2	155 18 42	7.0	1.50	2.00	1.0	500	<1.0	N	N	100	1,500
770270	67 41 41	155 31 24	5.0	.70	2.00	1.0	500	N	N	N	50	1,000
770280	67 43 30	155 37 46	5.0	1.00	1.00	>1.0	1,000	N	N	N	70	500
770290	67 44 38	155 35 12	7.0	.70	2.00	>1.0	1,000	N	N	N	50	500
770300	67 46 2	155 36 44	10.0	.20	1.00	1.0	2,000	N	N	N	50	500
770310	67 46 38	155 34 21	7.0	.15	.50	.7	2,000	N	N	N	50	200
770320	67 48 7	155 36 6	10.0	.20	.70	1.0	1,500	N	N	N	50	300
770330	67 48 10	155 35 51	15.0	.20	.70	1.0	2,000	N	N	N	70	300
770340	67 51 48	155 37 37	10.0	.20	1.00	1.0	2,000	N	N	N	50	300
770350	67 52 34	155 34 21	5.0	.30	1.00	1.0	3,000	N	N	N	100	500
770360	67 54 28	155 34 12	10.0	.20	1.00	>1.0	2,000	N	N	N	70	500
770370	67 55 15	155 37 34	10.0	.20	1.00	>1.0	2,000	N	N	N	70	300
770380	67 56 58	155 41 58	15.0	.20	.50	1.0	1,500	N	N	N	70	5,000
770400	67 58 52	155 37 23	10.0	.30	.50	1.0	3,000	N	N	N	70	500
770410	67 59 45	155 42 27	15.0	.30	.50	.7	3,000	N	N	N	50	200
770420	67 58 0	155 51 52	7.0	1.50	5.00	1.0	1,000	N	N	N	70	500
770430	67 43 1	155 47 25	15.0	.20	.50	.5	3,000	N	N	N	50	200
770440	67 43 14	155 53 33	5.0	1.00	3.00	>1.0	700	N	N	N	70	1,000
770460	67 46 58	155 51 51	7.0	.50	.50	1.0	1,500	3.0	N	N	70	500
770470	67 45 53	155 45 30	3.0	1.00	7.00	>1.0	1,000	N	N	N	50	1,000

sample	S-RE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB
77031C	2.0	N	N	15	150	30	70	N	50	20	30
77032C	2.0	N	N	15	150	30	150	N	<50	30	30
77033C	2.0	N	N	15	150	20	50	N	<50	30	30
77034C	2.0	N	N	15	150	100	50	N	<50	30	30
77035C	2.0	N	N	15	150	30	50	N	<50	30	30
77036C	<2.0	N	N	50	100	70	50	N	50	30	30
77037C	<2.0	N	N	20	100	50	50	N	100	20	30
77038C	<2.0	N	N	30	100	100	50	N	100	20	30
77039C	<2.0	N	N	15	100	70	100	N	100	10	30
77040C	<2.0	N	N	15	100	150	200	N	<50	30	30
77041C	<2.0	N	N	150	100	200	150	N	<50	150	30
77042C	<2.0	N	N	150	150	2,000	150	N	<50	200	700
77043C	2.0	N	N	15	200	3,000	150	N	<50	30	200
77044C	2.0	N	N	20	200	200	700	N	<50	50	500
77045C	2.0	N	N	15	200	200	100	N	<50	30	20
77046C	2.0	N	N	15	200	1,500	150	N	<50	20	50
77047C	2.0	N	N	15	200	1,000	200	N	<50	30	30
77048C	2.0	N	N	20	200	1,000	200	N	<50	30	700
77049C	2.0	N	N	20	200	50	150	N	<50	50	30
77050C	2.0	N	N	15	200	50	150	N	<50	20	30
77051C	2.0	N	N	20	200	300	1,000	N	<50	30	30
77052C	2.0	N	N	20	200	100	200	N	<50	30	50
77053C	2.0	N	N	20	200	700	300	N	<50	30	150
77054C	2.0	N	N	20	200	200	70	N	<50	20	100
77055C	2.0	N	N	30	100	200	70	N	<50	20	50
77056C	2.0	N	N	20	200	700	300	N	<50	30	70
77057C	2.0	N	N	10	150	200	700	N	50	20	30
77058C	2.0	N	N	10	200	30	300	N	<50	20	30
77059C	2.0	N	N	15	150	100	150	N	100	30	200
77060C	2.0	N	N	20	150	50	150	N	<50	30	30
77061C	2.0	N	N	15	100	30	100	N	<50	20	50
77062C	2.0	N	N	20	150	500	200	N	<50	30	50
77063C	2.0	N	N	20	150	30	150	N	<50	30	100
77064C	2.0	N	N	20	200	70	150	N	<50	50	50
77065C	2.0	N	N	50	150	50	200	N	<50	50	70
77066C	2.0	N	N	20	500	50	200	N	<50	30	50
77067C	2.0	N	N	20	300	70	300	N	<50	30	50
77068C	2.0	N	N	20	500	30	200	N	<50	30	50
77069C	2.0	N	N	20	200	100	100	N	<50	50	50
77070C	2.0	N	N	20	150	50	150	N	<50	50	500
77071C	2.0	N	N	20	100	50	70	N	<50	50	50
77072C	2.0	N	N	15	150	50	70	N	<50	30	70
77073C	<2.0	N	N	20	100	50	50	N	<50	50	70
77074C	2.0	N	N	15	150	50	50	N	<50	30	70
77075C	2.0	N	N	20	200	70	500	N	<50	50	70
77076C	2.0	N	N	15	150	50	70	N	50	30	70
77077C	<2.0	N	N	20	100	50	50	N	<50	50	70
77078C	2.0	N	N	15	200	70	500	N	<50	20	70
77079C	2.0	N	N	20	200	30	150	N	<50	30	700
77080C	2.0	N	N	10	150	200	150	N	<50	15	20

sample	S-SR	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
77011C	N	20	N	200	150	N	70	N	200	N
77012C	N	20	N	200	150	N	150	N	300	N
77013C	N	20	N	200	150	N	50	N	200	N
77014C	N	20	N	200	150	N	70	N	200	N
77015C	N	20	N	200	200	N	50	N	200	N
77016C	N	20	N	200	100	N	150	N	500	N
77017C	N	20	N	200	100	N	300	N	200	N
77018C	N	20	N	200	70	N	150	N	200	N
77019C	N	30	N	500	150	N	100	N	200	N
77020C	N	30	N	200	150	N	70	N	300	N
77011C	N	10	N	200	70	N	20	N	150	N
77012C	N	15	30	200	70	N	100	N	1,000	N
77013C	N	20	N	200	200	N	70	N	300	N
77014C	N	20	N	200	200	N	100	N	300	N
77015C	N	20	N	200	200	N	70	N	200	N
77016C	N	20	N	500	200	N	150	N	500	N
77017C	N	20	N	200	200	N	70	N	500	N
77018C	N	20	N	300	150	N	100	N	500	N
77019C	N	20	N	200	200	N	50	N	300	N
77020C	N	20	N	200	200	N	70	N	500	N
77021C	N	20	N	200	200	N	100	N	300	N
77022C	N	20	N	200	200	N	100	N	300	N
77023C	N	30	70	200	200	N	100	N	500	N
77024C	N	20	N	200	100	N	50	N	300	N
77025C	N	20	N	200	150	N	70	N	500	N
77026C	N	30	N	200	200	N	100	N	500	N
77027C	N	30	50	200	150	N	300	N	500	N
77028C	N	20	100	200	150	N	70	N	300	N
77029C	N	20	50	200	200	N	300	N	1,000	N
77030C	N	20	20	200	150	N	150	<500	700	N
77031C	N	10	N	200	70	N	50	<500	200	N
77032C	N	20	N	200	100	N	100	N	>1,000	N
77033C	N	30	N	200	150	N	100	<500	700	N
77034C	N	20	N	300	100	N	100	<500	1,000	N
77035C	N	20	N	300	150	N	100	N	1,000	N
77036C	N	20	N	300	150	N	100	N	>1,000	N
77037C	N	20	N	300	150	N	100	N	>1,000	N
77038C	N	20	N	200	200	N	100	500	1,000	N
77039C	N	20	N	200	150	N	100	1,000	>1,000	N
77040C	N	20	N	200	100	N	50	2,000	700	N
77041C	N	20	N	200	100	N	100	<500	500	N
77042C	N	20	50	200	200	N	100	<500	500	N
77043C	N	20	700	200	100	N	30	500	200	N
77044C	N	30	N	200	200	N	500	<500	>1,000	N
77045C	N	20	N	200	150	N	100	N	300	N
77046C	N	20	50	200	300	N	500	N	300	N

sample	LATITUDE	LONGITUDE	S-FE% S-MG% S-CAZ	S-TIX	S-MN	S-AG	S-AS	S-AU	S-B	S-BA
77048C	67 47 17	155 54 9	10.0 .20	1.0	1,500	N	N	N	50	500
77049C	67 48 43	155 58 48	5.0 .15	1.0	1,000	N	N	N	70	500
77050C	67 50 7	155 49 38	10.0 .30	1.0	3,000	N	N	N	70	500
77051C	67 50 24	155 48 32	10.0 .15	.7	1,500	N	N	N	50	200
77052C	67 51 56	155 52 49	7.0 .15	>1.0	2,000	N	N	N	70	500
77053C	67 51 43	155 49 43	10.0 .15	1.0	1,500	N	N	N	50	200
77054C	67 58 0	155 55 8	10.0 .15	.3	2,000	N	N	N	30	200
77055C	67 57 6	155 45 32	10.0 .15	.7	3,000	N	N	N	50	500
77056C	67 47 20	155 21 20	7.0 .50	1.0	1,500	N	N	N	70	700
77057C	67 51 19	155 28 52	10.0 .30	1.0	2,000	N	N	N	70	300
77058C	67 51 6	155 26 25	5.0 .30	>1.0	3,000	<1.0	N	N	70	300
77059C	67 47 35	155 21 37	5.0 .20	1.0	2,000	N	N	N	50	300
77060C	67 48 29	155 16 23	7.0 .50	>1.0	3,000	N	N	N	70	700
77061C	67 50 9	155 16 9	7.0 .30	>1.0	2,000	N	N	N	100	300
77062C	67 51 13	155 18 54	10.0 .15	1.0	2,000	3.0	N	N	50	200
77063C	67 50 47	155 16 12	10.0 .20	.7	5,000	N	N	N	50	300
77064C	67 52 51	155 4 24	5.0 .50	>1.0	1,500	N	N	N	100	500
77065C	67 51 31	155 8 12	10.0 .20	1.0	1,500	N	N	N	70	200
77066C	67 53 16	155 15 0	10.0 .30	>1.0	3,000	N	N	N	70	500
77067C	67 55 30	155 11 3	10.0 .30	>1.0	3,000	N	N	N	70	700
77068C	67 53 19	155 15 52	5.0 .15	1.0	1,500	N	N	N	70	300
77069C	67 56 27	155 19 15	15.0 .15	1.0	3,000	N	N	N	70	500
77070C	67 54 46	155 9 14	7.0 .30	>1.0	3,000	N	N	N	100	300
77071C	67 56 42	155 15 48	15.0 .15	1.0	3,000	N	N	N	70	700
77072C	67 56 50	155 9 51	10.0 .20	1.0	1,500	N	N	N	70	700
77073C	67 55 48	155 25 12	10.0 .10	>1.0	2,000	N	N	N	100	700
77074C	67 59 51	155 18 39	15.0 .20	.5	1,500	N	N	N	50	200
77075C	67 59 36	155 24 20	15.0 .30	1.0	2,000	N	N	N	100	700
77076C	68 0 14	155 15 6	15.0 .30	.5	1,500	N	N	N	50	200
77077C	67 59 19	154 56 21	10.0 .20	.3	1,500	N	N	N	20	200
77078C	67 53 27	155 4 56	7.0 .50	>1.0	3,000	N	N	N	100	500
77079C	67 58 48	155 8 34	15.0 .30	1.0	3,000	N	N	N	50	500
77080C	67 57 25	154 50 4	15.0 .30	1.0	2,000	N	N	N	50	300
77081C	67 59 53	154 40 35	10.0 .50	1.0	2,000	N	N	N	50	700
77082C	67 58 21	154 34 21	15.0 .20	.5	1,500	N	N	N	50	200
77083C	67 56 57	154 38 30	7.0 .20	.5	1,500	N	N	N	50	700
77084C	67 56 22	154 43 8	7.0 .10	.7	1,500	N	N	N	50	300
77085C	67 56 6	154 42 3	5.0 .20	.3	1,500	N	N	N	30	>5,000
77086C	67 52 16	154 37 46	10.0 .20	>1.0	3,000	N	N	N	70	1,500
77087C	67 51 52	154 37 54	10.0 .50	>1.0	5,000	N	N	N	70	1,000
77088C	67 52 46	154 40 16	10.0 .30	>1.0	5,000	N	N	N	70	1,000
77089C	67 48 23	154 39 19	7.0 .70	>1.0	5,000	N	N	N	100	700
77090C	67 46 12	154 36 32	5.0 1.50	>1.0	1,000	N	N	N	70	1,000
77091C	67 46 8	154 36 50	5.0 .70	>1.0	1,500	N	N	N	70	1,000
77092C	67 47 55	154 40 21	5.0 .70	>1.0	1,500	N	N	N	70	1,000

sample	S-BE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB
77048C	2.0	N	N	15	200	150	200	N	<50	30	30
77049C	<2.0	N	N	20	150	70	150	N	<50	20	200
77050C	<2.0	N	N	20	150	50	200	N	<50	30	70
77052C	<2.0	N	N	20	100	150	100	N	<50	30	700
77053C	2.0	N	N	20	300	50	150	N	<50	30	50
77054C	<2.0	N	N	20	150	150	150	N	<50	30	20
77055C	<2.0	N	N	20	100	50	50	N	<50	50	50
77056C	2.0	N	N	20	150	50	70	N	<50	50	50
77057C	2.0	N	N	20	200	300	700	N	<50	30	300
77058C	2.0	N	N	20	150	50	150	N	<50	30	50
77059C	2.0	N	N	20	200	200	300	N	50	20	700
77060C	<2.0	N	N	20	150	50	200	N	<50	20	150
77061C	2.0	N	N	20	200	200	200	N	<50	30	50
77062C	2.0	N	N	20	200	50	200	N	<50	30	50
77063C	2.0	N	N	20	200	30	200	N	<50	30	1,000
77064C	2.0	N	N	20	150	300	200	N	<50	30	200
77065C	2.0	N	N	20	500	150	300	N	50	30	150
77066C	2.0	N	N	20	200	50	200	N	<50	20	70
77068C	2.0	N	N	20	300	50	300	N	<50	30	150
77069C	2.0	N	N	20	300	150	200	N	<50	50	50
77070C	2.0	N	N	20	200	50	200	N	<50	30	50
77071C	2.0	N	N	20	200	50	150	N	<50	50	50
77072C	2.0	N	N	20	500	50	300	N	50	30	100
77073C	2.0	N	N	20	150	30	70	N	<50	50	50
77074C	2.0	N	N	20	200	50	150	N	<50	50	200
77075C	2.0	N	N	20	150	50	200	N	<50	30	50
77076C	2.0	N	N	20	150	50	50	N	<50	50	50
77077C	3.0	N	N	30	200	70	100	N	<50	100	70
77078C	2.0	N	N	20	150	50	50	N	<50	70	50
77079C	2.0	N	N	20	150	50	50	N	<50	50	50
77080C	2.0	N	N	20	500	50	200	N	50	30	500
77081C	2.0	N	N	20	200	50	100	N	N	70	50
77082C	2.0	N	N	20	150	70	100	N	N	70	50
77083C	2.0	N	N	30	200	100	100	N	N	100	50
77084C	2.0	N	N	20	100	50	70	N	N	50	50
77085C	2.0	N	N	20	500	50	200	N	50	30	500
77086C	2.0	N	N	20	200	50	100	N	N	70	50
77087C	2.0	N	N	15	300	30	300	N	N	30	30
77088C	2.0	N	N	20	200	50	200	N	N	50	50
77089C	2.0	N	N	100	300	500	200	N	N	50	200
77090C	2.0	N	N	30	300	100	300	N	N	30	200
77091C	2.0	N	N	30	300	200	200	N	N	30	70
77092C	2.0	N	N	20	500	50	200	N	N	30	30
77093C	2.0	N	N	20	200	50	1,000	N	N	30	50
77094C	2.0	N	N	20	300	100	300	N	N	30	150

sample	S-SR	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
77048C	N	20	N	200	150	N	70	N	500	N
77049C	N	20	500	200	150	N	70	N	>1,000	N
77050C	N	20	N	200	150	N	70	N	1,000	N
77052C	N	15	N	200	100	N	50	N	1,000	N
77053C	N	30	N	200	200	N	100	N	1,000	N
77054C	N	20	N	200	100	N	50	N	700	N
77055C	N	20	N	200	100	N	30	500	200	N
77056C	N	20	N	200	100	N	70	<500	500	N
77057C	N	20	N	200	150	N	100	N	>1,000	N
77058C	N	20	N	200	150	N	100	N	1,000	N
77059C	N	20	N	300	150	N	200	N	>1,000	N
77060C	N	15	N	200	100	N	70	N	500	N
77061C	N	20	N	200	150	N	100	N	1,000	N
77062C	N	20	N	200	150	N	100	N	1,000	N
77063C	N	20	N	200	100	N	70	5,000	500	N
77064C	N	20	N	200	100	N	50	<500	500	N
77065C	N	20	N	300	150	N	200	700	>1,000	N
77066C	N	20	N	200	100	N	100	N	>1,000	N
77068C	N	20	N	200	100	N	70	N	>1,000	N
77069C	N	20	N	300	150	N	100	N	>1,000	N
77070C	N	20	N	200	100	N	50	N	1,000	N
77071C	N	20	N	200	150	N	70	N	1,000	N
77072C	N	20	N	300	150	N	100	<500	>1,000	N
77073C	N	20	N	200	150	N	50	N	500	N
77074C	N	20	N	200	150	N	150	1,000	1,000	N
77075C	N	20	N	200	150	N	100	<500	>1,000	N
77076C	N	20	N	200	100	N	50	<500	500	N
77077C	N	30	N	300	200	N	70	<500	1,000	N
77078C	N	20	N	200	100	N	30	500	300	N
77079C	N	20	N	200	100	N	30	<500	150	N
77080C	N	30	N	200	200	N	150	<500	>1,000	N
77081C	N	20	N	200	150	N	70	<500	1,000	N
77082C	N	20	N	200	150	N	70	<500	1,000	N
77083C	N	20	N	200	200	N	70	<500	1,000	N
77084C	N	20	N	200	100	N	50	<500	500	N
77085C	N	20	N	300	100	N	100	<500	500	N
77086C	N	20	N	200	150	N	50	<500	>1,000	N
77087C	N	20	N	2,000	150	N	1,500	<500	200	N
77088C	N	20	N	200	150	N	100	<500	>1,000	N
77089C	N	30	N	200	200	N	100	N	>1,000	N
77090C	N	30	N	200	150	N	200	N	>1,000	N
77091C	N	30	N	200	200	N	150	<500	>1,000	N
77092C	N	30	N	200	200	N	100	N	1,000	N
77093C	N	20	N	200	150	N	100	N	1,000	N
77094C	N	30	N	200	200	N	100	N	1,000	N

sample	LATITUDE	LONGITUDE	S-FEX	S-MGZ	S-CAZ	S-TIX	S-MN	S-AG	S-AS	S-AU	S-B	S-BA
77095C	67 48 55	154 43 27	3.0	.30	.70	1.0	1,000	N	N	N	70	500
77096C	67 51 6	154 46 12	2.0	.30	1.00	1.0	700	N	N	N	50	200
77097C	67 53 13	154 45 23	15.0	.30	.70	1.0	5,000	N	N	N	70	300
77098C	67 53 2	154 50 12	3.0	.50	.70	>1.0	1,500	N	N	N	70	500
77099C	67 55 15	154 51 14	15.0	.20	.50	.5	2,000	N	N	N	70	500
77100C	67 54 10	154 54 47	5.0	.30	1.00	1.0	1,500	N	N	N	50	500
77101C	67 49 55	155 11 18	5.0	.50	2.00	1.0	1,000	5.0	N	N	70	500
77102C	67 48 17	155 4 9	5.0	.50	2.00	1.0	700	N	N	N	70	500
77103C	67 47 35	155 6 36	3.0	.50	.70	1.0	1,500	N	N	N	70	500
77104C	67 46 16	155 52 59	3.0	.50	1.00	1.0	700	N	N	N	70	2,000
77105C	67 45 38	155 4 24	5.0	.50	1.00	.7	500	2.0	N	N	70	500
77106C	67 53 22	154 8 3	5.0	.30	1.50	>1.0	2,000	N	N	N	100	300
77107C	67 52 59	154 12 51	10.0	.10	.50	.5	2,000	N	N	N	50	300
77108C	67 52 5	154 11 42	5.0	.10	1.00	.7	1,500	N	N	N	50	300
77109C	67 50 53	154 15 9	10.0	.20	1.00	1.0	2,000	N	N	N	100	300
77110C	67 49 37	154 13 58	5.0	.30	1.00	1.0	2,000	5.0	N	N	100	500
77111C	67 49 4	154 16 3	5.0	.20	1.00	1.0	5,000	<1.0	N	N	100	300
77112C	67 47 37	154 13 34	2.0	.30	1.00	.7	700	N	N	N	20	200
77113C	67 46 25	154 16 54	5.0	.70	1.50	1.0	1,000	N	N	N	70	500
77114C	67 46 3	154 18 28	2.0	.50	.70	1.0	700	N	N	N	70	500
77115C	67 47 11	154 25 1	3.0	.50	.70	1.0	1,000	N	N	N	70	500
77116C	67 47 9	154 25 50	1.0	.10	.50	.2	200	N	N	N	20	100
77117C	67 48 0	154 26 23	5.0	.50	.20	1.0	5,000	N	N	N	70	500
77118C	67 49 1	154 24 48	5.0	.30	.70	1.0	3,000	N	N	N	100	500
77119C	67 49 51	154 29 26	5.0	.30	.30	1.0	3,000	N	N	N	50	300
77120C	67 49 36	154 29 26	5.0	.30	1.50	>1.0	3,000	N	N	N	100	500
77121C	67 50 53	154 21 39	5.0	.30	2.00	1.0	3,000	N	N	N	70	300
77122C	67 51 37	154 22 39	7.0	.10	1.00	1.0	1,500	N	N	N	100	700
77123C	67 53 27	154 21 12	10.0	.30	.30	1.0	2,000	N	N	N	100	500
77124C	67 54 3	154 18 5	15.0	.20	.10	.2	5,000	N	N	N	50	300
77125C	67 55 23	154 28 14	10.0	.20	.70	1.0	1,500	N	N	N	100	1,000
77126C	67 55 27	154 29 11	7.0	.10	2.00	.3	1,500	N	N	N	50	>5,000
77127C	67 58 54	154 23 3	7.0	.10	.50	.5	1,500	N	N	N	50	500
77128C	67 57 32	154 16 11	7.0	.20	1.00	1.0	1,500	N	N	N	50	500
77129C	67 55 52	154 5 42	7.0	.20	.50	.7	2,000	N	N	N	50	500
77130C	67 56 20	154 2 49	7.0	.30	1.00	.7	2,000	N	N	N	50	500
77131C	67 57 27	153 59 35	5.0	.50	5.00	.5	1,000	N	N	N	30	300
77132C	67 58 1	153 59 33	7.0	.20	1.00	1.0	1,500	N	N	N	70	1,500
77133C	67 58 35	153 56 10	7.0	.50	2.00	1.0	1,000	N	N	N	50	500
77134C	67 59 37	153 51 58	3.0	.30	1.50	1.0	1,000	N	N	N	20	1,000
77135C	67 58 35	153 42 48	2.0	.30	1.50	.7	1,000	N	N	N	20	1,500
77136C	67 55 59	153 40 22	10.0	1.50	.50	.5	5,000	N	N	N	50	700
77137C	67 55 56	153 38 59	5.0	.50	1.00	1.0	700	N	N	N	50	200
77138C	67 55 45	153 46 48	3.0	.50	2.00	1.0	1,500	N	N	N	30	500
77139C	67 55 15	153 52 9	5.0	.50	3.00	1.0	1,500	N	N	N	30	300

sample	S-RE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB
77095C	<2.0	N	N	15	200	150	>1,000	N	<50	20	100
77096C	<2.0	N	N	10	150	70	200	N	<50	20	30
77097C	2.0	N	N	20	150	100	200	N	<50	100	50
77098C	<2.0	N	N	20	200	150	>1,000	N	<50	30	50
77099C	2.0	N	N	20	150	50	150	N	<50	70	50
77100C	<2.0	N	N	50	200	50	500	N	<50	50	50
77101C	<2.0	N	N	20	200	3,000	>1,000	N	<50	30	1,000
77102C	<2.0	N	N	20	300	500	>1,000	N	<50	50	100
77103C	2.0	N	N	20	200	100	700	N	<50	30	50
77104C	2.0	N	N	20	200	70	300	N	<50	50	20
77105C	2.0	N	N	30	150	700	500	N	<50	50	700
77106C	2.0	N	N	20	200	50	300	N	<50	30	50
77107C	2.0	N	N	20	100	20	100	N	<50	50	50
77108C	2.0	N	N	20	200	20	100	N	<50	50	50
77109C	2.0	N	N	20	200	700	150	N	<50	50	50
77110C	2.0	N	N	20	300	100	100	N	<50	50	7,000
77111C	2.0	N	N	30	200	100	150	N	<50	30	700
77112C	<2.0	N	N	10	100	20	300	N	<50	20	100
77113C	<2.0	N	N	15	200	300	200	N	<50	30	50
77114C	2.0	N	N	15	200	200	300	N	<50	30	20
77115C	2.0	N	N	15	200	100	200	N	<50	30	70
77116C	<2.0	N	N	<10	50	10	50	N	<50	<10	20
77117C	2.0	N	N	30	200	50	50	N	<50	50	70
77118C	2.0	N	N	50	300	200	150	N	<50	50	500
77119C	2.0	N	N	20	200	30	150	N	<50	50	50
77120C	2.0	N	N	20	300	100	200	N	<50	50	70
77121C	2.0	N	N	20	200	70	200	N	<50	30	70
77122C	2.0	N	N	20	150	50	200	N	<50	50	70
77123C	2.0	N	N	20	200	70	150	N	<50	70	70
77124C	2.0	N	N	20	50	30	50	N	<50	70	50
77125C	2.0	N	N	20	150	70	200	N	<50	70	50
77126C	2.0	N	N	20	150	50	200	N	<50	70	50
77127C	2.0	N	N	20	100	30	70	N	<50	50	50
77128C	2.0	N	N	20	100	100	200	N	<50	70	50
77129C	2.0	N	N	20	100	30	100	N	<50	70	50
77130C	2.0	N	N	20	100	30	100	N	<50	70	50
77131C	2.0	N	N	15	100	20	200	N	<50	50	70
77132C	<2.0	N	N	20	200	30	300	N	<50	50	70
77133C	<2.0	N	N	15	150	50	200	N	<50	50	50
77134C	<2.0	N	N	10	100	20	200	N	<50	30	70
77135C	<2.0	N	N	10	100	20	200	N	<50	30	20
77136C	2.0	N	N	50	150	150	50	N	<50	100	100
77137C	2.0	N	N	20	200	30	100	N	<50	50	50
77138C	2.0	N	N	15	150	30	100	N	<50	50	50
77139C	2.0	N	N	20	300	30	200	N	<50	50	50

sample	S-SR	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
77095C	N	20	N	200	200	N	150	N	>1,000	<200
77096C	N	15	N	200	100	N	70	N	700	N
77097C	N	20	N	200	150	N	70	N	>1,000	N
77098C	N	20	N	200	150	N	200	N	>1,000	<200
77099C	N	20	N	200	150	N	100	<500	500	N
77100C	N	20	N	300	150	N	100	N	1,000	N
77101C	N	20	N	300	150	N	200	N	500	<200
77102C	N	15	N	300	150	N	200	N	1,000	<200
77103C	N	20	N	200	150	N	100	N	700	N
77104C	N	20	N	200	150	N	100	N	500	N
77105C	N	15	N	200	150	N	70	N	200	N
77106C	N	30	N	300	150	N	150	N	>1,000	N
77107C	N	20	N	200	100	N	70	N	500	N
77108C	N	20	N	200	100	N	150	N	500	N
77109C	N	20	N	200	150	N	70	N	>1,000	N
77110C	N	20	N	200	150	N	100	N	>1,000	N
77111C	N	20	N	200	150	N	70	700	1,000	N
77112C	N	10	N	200	100	N	70	N	500	N
77113C	N	20	N	300	150	N	100	N	1,000	N
77114C	N	20	N	200	150	N	100	N	1,000	N
77115C	N	15	N	200	100	N	70	N	500	N
77116C	N	<10	N	<200	50	N	20	N	150	N
77117C	N	30	N	200	200	N	70	N	300	N
77118C	N	20	N	200	200	N	100	700	500	N
77119C	N	20	N	200	150	N	70	N	1,000	N
77120C	N	30	N	300	200	N	200	N	>1,000	N
77121C	N	20	N	300	150	N	200	N	1,000	N
77122C	N	20	N	300	150	N	200	<500	>1,000	N
77123C	N	30	N	300	150	N	70	<500	>1,000	N
77124C	N	20	N	<200	150	N	50	<500	150	N
77125C	N	30	N	200	150	N	100	N	1,000	N
77126C	N	15	N	500	100	N	200	N	300	N
77127C	N	15	N	<200	100	N	50	N	700	N
77128C	N	20	N	200	150	N	100	N	700	N
77129C	N	20	N	200	150	N	70	N	700	N
77130C	N	20	N	200	100	N	100	N	700	N
77131C	N	15	N	300	100	N	200	N	200	N
77132C	N	20	N	300	100	N	150	N	>1,000	N
77133C	N	20	N	300	150	N	100	N	>1,000	N
77134C	N	15	N	300	100	N	100	N	>1,000	N
77135C	N	15	N	300	100	N	100	N	500	N
77136C	N	15	N	200	150	N	50	<500	200	N
77137C	N	15	N	200	150	N	70	N	500	N
77138C	N	15	N	200	100	N	100	N	>1,000	N
77139C	N	20	N	300	150	N	200	N	>1,000	N

18

sample	LATITUDE	LONGITUDE	S-FEX	S-MGX	S-CAX	S-TIX	S-MN	S-AG	S-AS	S-AU	S-B	S-BA
77141C	67 54 34	153 55 40	3.0	.20	.50	1.0	1,000	N	N	N	50	200
77142C	67 53 45	154 2 59	3.0	.50	1.00	1.0	1,000	N	N	N	50	300
77143C	67 50 8	154 6 18	5.0	.20	1.00	1.0	2,000	N	N	N	50	500
77144C	67 48 54	154 3 35	3.0	.50	1.00	1.0	700	N	N	N	70	500
77145C	67 47 55	154 5 51	3.0	.50	2.00	>1.0	700	N	N	N	100	700
77146C	67 46 28	154 4 39	5.0	.20	.50	1.0	1,000	N	N	N	70	500
77147C	67 44 45	154 0 20	7.0	.50	1.00	1.0	700	N	N	N	50	500
77148C	67 43 5	153 58 11	3.0	.70	.50	1.0	700	N	N	N	70	700
77149C	67 42 19	153 54 1	5.0	.30	1.50	1.0	500	N	N	N	70	5,000
77150C	67 40 52	153 55 49	5.0	1.00	2.00	.5	500	N	N	N	70	1,500
77151C	67 39 16	153 55 37	5.0	1.50	2.00	.7	700	3.0	N	N	100	300
77152C	67 39 4	153 59 43	5.0	1.00	2.00	.7	500	N	N	N	70	1,000
77153C	67 38 35	154 6 2	3.0	.50	2.00	.7	500	N	N	N	50	500
77154C	67 41 34	154 4 50	3.0	.50	.70	.7	700	N	N	N	70	700
77155C	67 41 31	154 5 27	3.0	.30	.30	.5	500	N	N	N	70	700
77156C	67 41 20	154 12 57	3.0	.50	.70	.5	500	N	N	N	70	500
77157C	67 43 57	154 11 46	2.0	.30	1.00	1.0	500	N	N	N	70	500
77158C	67 44 0	154 12 29	2.0	.30	.50	1.0	500	N	N	N	70	500
77159C	67 37 19	154 1 1	2.0	.20	.50	1.0	500	N	N	N	100	1,000
77160C	67 37 35	153 47 2	5.0	.70	1.00	1.0	500	N	N	N	100	1,000
77161C	67 38 1	153 48 8	5.0	.50	.30	1.0	500	N	N	N	100	1,000
77162C	67 48 29	153 55 44	3.0	1.00	3.00	.7	500	N	N	N	100	1,500
77163C	67 40 21	153 44 57	3.0	2.00	5.00	.7	700	N	N	N	100	1,500
77164C	67 41 31	153 45 3	5.0	1.00	2.00	.5	500	N	N	N	70	1,500
77165C	67 42 28	153 47 14	5.0	1.00	2.00	.7	500	N	N	N	70	5,000
77166C	67 44 0	153 46 0	5.0	2.00	5.00	.7	500	N	N	N	70	1,500
77167C	67 45 49	153 57 56	5.0	.50	1.50	.7	500	N	N	N	70	>5,000
77168C	67 30 33	154 32 49	5.0	3.00	10.00	>1.0	1,000	N	700	N	50	5,000
77169C	67 48 37	153 57 28	5.0	.30	2.00	1.0	1,500	N	N	N	70	5,000
77170C	0 0 0B	0 0 0B	5.0	.30	2.00	.7	1,000	N	N	N	70	1,500
77171C	67 51 35	153 53 13	5.0	.30	2.00	1.0	1,500	N	N	N	70	700
77172C	67 51 18	153 55 7	5.0	.20	1.50	1.0	1,000	N	N	N	70	500
77173C	67 50 31	153 48 15	2.0	.20	.50	.5	100	N	N	N	20	200
77174C	67 50 57	153 45 54	5.0	.70	1.00	1.0	700	N	N	N	50	700
77175C	67 51 41	153 35 46	5.0	.50	1.00	1.0	700	N	N	N	50	300
77176C	67 50 44	153 34 6	5.0	.20	.70	1.0	700	N	N	N	70	2,000
77177C	67 46 29	153 47 46	5.0	.50	1.00	1.0	700	N	N	N	70	1,000
77178C	67 47 30	153 46 9	5.0	.70	1.50	1.0	700	N	N	N	70	3,000
77179C	67 47 22	153 39 11	3.0	.30	.70	.7	500	N	N	N	70	2,000
77180C	67 46 5	153 38 2	5.0	1.50	3.00	.7	500	N	N	N	70	2,000
77181C	67 52 49	153 8 54	3.0	.30	1.00	1.0	700	N	N	N	50	1,500
77182C	67 52 10	153 10 14	5.0	.30	3.00	1.0	1,000	N	N	N	50	2,000
77183C	67 52 40	153 7 14	3.0	.10	1.00	.5	700	N	N	N	20	200
77184C	67 56 8	153 6 24	3.0	.15	1.50	>1.0	500	N	N	N	20	200
77185C	67 58 29	153 3 54	10.0	.20	.50	1.0	1,000	N	N	N	100	700

sample	S-BE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-N3	S-NI	S-PB
77141C	<2.0	N	N	15	150	30	100	N	<50	50	50
77142C	<2.0	N	N	15	500	30	100	N	<50	50	50
77143C	1.5	N	N	30	200	50	150	N	<50	50	70
77144C	2.0	N	N	15	300	500	200	N	<50	50	30
77145C	2.0	N	N	15	500	70	300	N	<50	30	50
77146C	<2.0	N	N	10	50	20	50	N	<50	20	20
77147C	<2.0	N	N	30	200	70	50	N	<50	50	30
77148C	2.0	N	N	15	200	100	700	N	<50	30	30
77149C	2.0	N	N	15	150	100	>1,000	N	<50	50	20
77150C	<2.0	N	N	20	150	100	1,000	N	<50	70	20
77151C	2.0	N	N	15	150	200	1,000	N	<50	70	700
77152C	2.0	N	N	15	150	100	500	N	<50	50	30
77153C	<2.0	N	N	10	100	30	300	N	<50	30	70
77154C	2.0	N	N	20	200	100	300	N	<50	50	70
77155C	2.0	N	N	15	150	50	100	N	<50	50	30
77156C	2.0	N	N	15	150	30	100	N	<50	50	20
77157C	2.0	N	N	15	200	30	150	N	<50	30	30
77158C	2.0	N	N	15	150	30	300	N	<50	50	20
77159C	<2.0	N	N	10	100	100	150	N	<50	20	50
77160C	2.0	N	N	15	200	100	200	N	<50	50	20
77161C	2.0	N	N	15	200	30	100	N	<50	30	30
77162C	2.0	N	N	15	150	100	500	N	<50	50	20
77163C	2.0	N	N	15	150	100	1,000	N	<50	50	20
77164C	2.0	N	N	20	150	150	1,000	N	<50	50	100
77165C	2.0	N	N	20	150	100	>1,000	N	<50	50	30
77166C	2.0	N	N	20	200	150	>1,000	N	<50	50	70
77167C	2.0	N	N	20	150	200	1,000	N	<50	50	200
77167C	2.0	<20	N	15	50	300	200	N	100	<10	50
77168C	2.0	N	N	20	500	70	200	N	<50	30	50
77169C	<2.0	N	N	20	200	50	200	N	<50	50	50
77170C	2.0	N	N	20	200	30	200	N	<50	30	50
77171C	2.0	N	N	20	200	50	200	N	<50	30	50
77172C	<2.0	N	N	10	70	10	50	N	<50	10	20
77173C	2.0	N	N	20	200	50	300	N	<50	30	50
77174C	2.0	N	N	15	150	30	700	N	<50	30	30
77175C	7.0	N	N	20	100	150	200	N	<50	50	50
77176C	2.0	N	N	20	200	50	500	N	<50	50	50
77177C	2.0	N	N	20	150	50	100	N	<50	50	20
77178C	2.0	N	N	15	100	30	70	N	<50	50	100
77179C	2.0	N	N	15	150	150	700	N	<50	50	50
77180C	2.0	N	N	15	150	200	150	N	<50	30	70
77181C	2.0	N	N	30	200	5,000	150	N	<50	50	70
77182C	<2.0	N	N	10	70	50	150	N	<50	30	30
77183C	<2.0	N	N	10	100	200	200	N	<50	20	500
77184C	2.0	N	N	20	200	70	150	N	<50	100	50

21

sample	S-SR	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
77141C	N	15	N	200	100	N	50	N	500	N
77142C	N	15	N	200	100	N	100	N	500	N
77143C	N	20	N	200	150	N	100	N	1,000	N
77144C	N	30	N	200	200	N	100	N	1,000	N
77145C	N	30	N	300	200	N	150	N	1,000	N
77146C	N	20	N	<200	150	N	50	<500	500	N
77147C	N	20	N	200	150	N	50	<500	200	N
77148C	N	30	N	200	150	N	70	N	200	N
77149C	N	20	N	200	150	N	100	N	500	N
77150C	N	15	N	200	150	N	70	N	200	N
77151C	N	15	N	200	150	N	70	N	500	N
77152C	N	20	N	200	150	N	70	N	200	N
77153C	N	15	N	200	150	N	50	N	150	N
77154C	N	20	N	200	200	N	70	N	200	N
77155C	N	20	N	200	150	N	50	<500	150	N
77156C	N	20	N	200	150	N	50	<500	150	N
77157C	N	20	N	200	150	N	100	N	1,000	N
77158C	N	20	N	200	150	N	70	N	500	N
77159C	N	15	N	200	100	N	50	N	150	N
77160C	N	20	N	200	150	N	70	N	200	N
77161C	N	30	N	200	150	N	70	N	200	N
77162C	N	20	N	200	150	N	50	N	150	N
77163C	N	15	N	200	100	N	100	N	20	N
77164C	N	10	N	200	70	N	70	N	700	N
77165C	N	10	N	300	150	N	150	N	500	N
77166C	N	20	N	200	150	N	70	N	200	N
77167C	N	20	N	500	150	N	70	N	200	N
77167C	N	30	500	200	100	100	500	<500	1,000	N
77168C	N	20	N	500	100	N	70	N	100	N
77169C	N	20	N	300	100	N	70	N	700	N
77170C	N	20	N	300	150	N	100	N	1,000	N
77171C	N	20	N	200	150	N	100	N	700	N
77172C	N	<10	N	<200	50	N	70	N	500	N
77173C	N	30	N	300	150	N	100	N	700	N
77174C	N	20	N	200	100	N	70	N	500	N
77175C	N	20	N	200	150	N	70	N	500	N
77176C	N	20	N	200	150	N	100	N	500	N
77177C	N	20	N	300	150	N	70	N	200	N
77178C	N	20	N	200	100	N	50	<500	200	N
77179C	N	15	N	200	100	N	70	N	500	N
77180C	N	15	N	200	100	N	70	N	500	N
77181C	N	20	N	300	100	N	100	N	300	N
77182C	N	15	N	<200	50	N	50	N	300	N
77183C	N	20	N	200	70	N	70	1,000	700	N
77184C	N	20	N	<200	150	N	70	N	500	N

sample	LATITUDE	LONGITUDE	S-FEX	S-MGZ	S-CAZ	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA
77185C	67 57 33	153 14 1	7.0	.15	.70	1.0	1,000	<1.0	N	N	70	1,000
77186C	67 56 34	153 19 52	7.0	.15	.70	>2.0	1,000	N	N	N	100	500
77187C	67 58 2	153 24 44	7.0	.15	.50	>2.0	1,000	N	N	N	100	500
77188C	67 58 55	153 28 12	7.0	.10	.70	1.0	1,000	N	N	N	50	500
77189C	67 54 32	153 32 46	5.0	.30	3.00	1.0	1,000	N	N	N	50	500
77190C	67 52 6	153 29 50	5.0	.20	1.00	.7	700	N	N	N	50	1,000
77191C	67 50 31	153 23 42	5.0	.30	.70	.7	700	N	N	N	100	500
77192C	67 51 37	153 22 33	7.0	.30	.50	.7	500	N	N	N	50	1,500
77193C	67 53 30	153 21 50	7.0	.15	2.00	.5	700	N	N	N	50	1,000
77194C	67 54 46	153 18 39	5.0	.20	2.00	.5	500	N	N	N	50	500
77195C	67 50 6	153 15 4	5.0	.30	1.00	.5	500	N	N	N	50	>5,000
77196C	67 49 22	153 13 1	7.0	.70	3.00	1.0	1,000	N	N	N	50	700
77197C	67 49 47	153 5 21	3.0	.50	2.00	.7	1,000	N	N	N	70	500
77198C	67 50 2	153 4 59	5.0	2.00	.20	.5	1,000	N	N	N	50	500
77199C	67 48 51	153 1 32	7.0	.50	2.00	.7	1,000	N	N	N	50	500
77200C	67 46 19	153 10 19	5.0	.50	1.00	.7	500	N	N	N	50	2,000
77201C	67 44 19	153 14 14	3.0	.50	.30	.7	500	N	N	N	100	1,000
77202C	67 43 14	153 16 48	5.0	.50	.70	.7	700	N	N	N	100	>5,000
77203C	67 43 10	153 16 12	3.0	.50	1.00	.5	500	N	N	N	70	>5,000
77205C	67 43 36	153 12 45	5.0	.50	.70	.7	500	N	N	N	100	1,500
77206C	67 45 3	153 5 50	5.0	1.00	2.00	.5	700	N	N	N	100	2,000
77207C	67 45 7	153 3 33	5.0	.70	.20	.7	500	N	N	N	70	700
77208C	67 43 29	153 1 39	5.0	.70	2.00	.5	500	N	N	N	70	>5,000
77209C	67 41 28	153 2 53	5.0	1.00	2.00	1.0	500	N	N	N	100	2,000
77210C	67 39 54	153 8 24	5.0	1.00	3.00	.7	500	N	N	N	100	1,500
77211C	67 38 42	153 7 0	5.0	.70	1.00	1.0	300	N	N	N	100	1,000
77212C	67 37 22	153 9 17	5.0	.70	1.50	1.0	500	N	N	N	100	1,500
77213C	67 36 45	153 12 8	5.0	1.50	3.00	.5	500	1.5	N	N	100	1,500
77214C	67 45 56	153 26 20	5.0	.50	.70	1.0	700	N	N	N	100	5,000
77215C	67 45 48	153 26 14	5.0	.50	.70	.7	700	N	N	N	100	1,500
77216C	67 46 7	153 29 0	5.0	.20	.50	1.0	700	N	N	N	100	3,000
77217C	67 45 46	153 33 25	5.0	1.50	2.00	.5	700	N	N	N	100	2,000
77218C	67 45 16	153 35 6	3.0	1.50	2.00	.7	500	N	N	N	100	1,000
77219C	67 45 8	153 36 8	3.0	1.50	3.00	.5	500	N	N	N	70	5,000
77220C	67 41 34	153 31 3	5.0	1.50	5.00	.7	500	N	N	N	100	3,000
77221C	67 42 8	153 26 1	10.0	1.50	.20	.5	1,000	N	N	N	70	500
77222C	67 42 2	153 25 45	3.0	.30	.70	1.0	500	N	N	N	70	500
77223C	67 40 36	153 30 32	5.0	1.50	5.00	1.0	700	N	N	N	100	5,000
77224C	67 39 12	153 33 33	5.0	1.50	3.00	.5	500	N	N	N	100	2,000
77225C	67 37 38	153 30 55	3.0	1.00	2.00	.7	500	N	N	N	100	1,500
77226C	67 36 48	153 25 0	3.0	1.50	3.00	.7	500	N	N	N	70	2,000
77227C	67 36 41	153 24 34	5.0	2.00	5.00	.5	700	N	N	N	100	2,000
77228C	67 34 43	153 29 13	5.0	1.50	2.00	>1.0	700	N	N	N	100	1,000
77259C	67 33 0	154 40 53	3.0	2.00	7.00	>1.0	1,500	10.0	<500	N	100	1,500
77260C	67 33 15	154 40 57.	5.0	1.50	5.00	>1.0	1,000	N	N	N	100	1,000

2.3

sample	S-RE	S-RI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB
77185C	2.0	N	N	20	200	100	150	N	<50	30	20
77186C	10.0	N	N	20	200	200	200	N	<50	30	50
77187C	2.0	N	N	15	150	30	150	N	<50	30	20
77188C	2.0	N	N	15	200	50	150	N	<50	30	100
77189C	2.0	N	N	15	200	20	150	N	<50	20	30
77190C	<2.0	N	N	15	150	200	150	N	<50	30	30
77191C	2.0	N	N	15	100	30	150	N	<50	30	30
77192C	2.0	N	N	20	150	200	1,000	10	<50	50	70
77193C	<2.0	N	N	15	70	100	300	<10	<50	30	30
77194C	<2.0	N	N	15	100	70	>1,000	N	<50	50	50
77195C	2.0	N	N	15	150	1,500	700	N	<50	50	70
77196C	2.0	N	N	15	150	500	300	N	<50	50	100
77197C	2.0	N	N	15	200	50	100	N	<50	20	50
77198C	2.0	N	N	20	100	30	100	N	<50	30	50
77199C	2.0	N	N	20	200	50	50	N	<50	30	200
77200C	2.0	N	N	15	150	500	150	N	<50	30	50
77201C	2.0	N	N	15	150	30	100	N	<50	30	30
77202C	2.0	N	N	15	150	200	200	<10	<50	30	200
77203C	2.0	N	N	15	100	500	1,000	N	<50	30	700
77205C	2.0	N	N	15	150	30	300	N	<50	30	100
77206C	2.0	N	N	20	100	100	150	15	<50	100	150
77207C	2.0	N	N	50	200	50	70	N	<50	50	50
77208C	2.0	N	N	20	50	200	1,000	20	<50	70	30
77209C	2.0	N	N	20	100	200	1,000	N	<50	50	100
77210C	2.0	N	N	20	100	100	1,000	N	<50	50	50
77211C	2.0	N	N	20	100	200	1,000	N	<50	50	150
77212C	2.0	N	N	15	150	200	500	N	<50	30	50
77213C	2.0	N	N	20	100	100	1,000	N	<50	50	50
77214C	2.0	N	N	20	100	300	200	N	<50	50	150
77215C	2.0	N	N	20	100	50	150	N	<50	30	50
77216C	2.0	N	N	15	100	50	200	N	<50	50	70
77217C	2.0	N	N	20	150	50	150	N	<50	70	100
77218C	2.0	N	N	20	100	50	>1,000	N	<50	50	50
77219C	2.0	N	N	15	100	50	700	N	<50	30	150
77220C	2.0	N	N	15	100	100	1,000	10	<50	100	50
77221C	2.0	N	N	20	150	70	200	N	<50	100	50
77222C	2.0	N	N	15	150	20	1,000	N	<50	30	30
77223C	<2.0	N	N	20	150	150	>1,000	15	<50	100	50
77224C	2.0	N	N	20	100	500	700	10	<50	50	100
77225C	2.0	N	N	15	100	100	500	N	<50	30	50
77226C	2.0	N	N	15	100	50	700	N	<50	30	30
77227C	2.0	N	N	20	100	150	700	N	<50	50	70
77228C	2.0	N	N	20	150	100	200	N	<50	50	50
77229C	2.0	20	N	15	100	500	200	N	<50	<10	700
77230C	2.0	N	N	15	150	200	300	N	50	20	150

sample	S-SR	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
77185C	N	20	--	200	150	N	100	<500	>1,000	N
77186C	N	20	--	200	150	N	100	N	>1,000	N
77187C	N	20	--	200	150	N	70	<500	>1,000	N
77188C	N	20	--	200	100	N	70	<500	>1,000	N
77189C	N	20	--	500	100	N	100	500	300	N
77190C	N	20	--	200	100	N	70	<500	200	N
77191C	N	20	--	200	100	N	70	<500	200	N
77192C	N	20	--	200	150	N	100	N	200	N
77193C	N	15	--	200	70	N	70	<500	150	N
77194C	N	15	--	300	100	N	50	N	200	N
77195C	N	20	--	300	150	N	100	N	150	N
77196C	N	20	--	300	150	N	100	N	700	N
77197C	N	20	--	300	150	N	70	N	500	N
77198C	N	20	--	200	100	N	50	N	150	N
77199C	N	20	--	200	100	N	70	N	150	N
77200C	N	20	--	200	150	N	70	N	150	N
77201C	N	20	--	200	150	N	50	N	200	N
77202C	N	20	--	200	200	N	70	<500	300	N
77203C	N	20	--	200	100	N	50	N	150	N
77205C	N	20	--	200	150	N	50	1,000	200	N
77206C	N	20	--	200	150	N	50	500	150	N
77207C	N	20	--	200	150	N	50	<500	150	N
77208C	N	10	--	500	150	N	70	500	150	N
77209C	N	20	N	200	150	N	100	500	300	N
77210C	N	20	N	200	100	N	100	500	300	N
77211C	N	20	N	200	150	N	100	N	300	N
77212C	N	20	N	200	150	N	70	N	300	N
77213C	N	15	N	200	100	N	100	<500	200	N
77214C	N	20	N	200	150	N	70	N	300	N
77215C	N	20	N	200	150	N	70	<500	300	N
77216C	N	20	N	200	150	N	50	<500	300	N
77217C	N	15	N	500	150	N	50	<500	150	N
77218C	N	15	N	200	100	N	70	N	300	N
77219C	N	15	N	200	100	N	50	N	200	N
77220C	N	15	N	300	200	N	100	500	300	N
77221C	N	20	N	200	150	N	50	<500	300	N
77222C	N	20	N	200	150	N	100	<500	150	N
77223C	N	15	N	500	200	N	200	<500	500	N
77224C	N	15	N	200	200	N	70	<500	1,000	<200
77225C	N	20	N	200	150	N	50	N	200	N
77226C	N	15	N	200	100	N	70	N	300	N
77227C	N	20	N	200	200	N	70	<500	150	N
77228C	N	30	N	200	200	N	70	N	150	N
77259C	N	30	30	200	100	200	200	N	>1,000	N
77260C	N	30	20	200	200	N	100	N	1,000	N

25

sample	LATITUDE	LONGITUDE	S-FE%	S-MG%	S-CA%	S-TIX	S-MN	S-AG	S-AS	S-AU	S-B	S-BA
77251C	67 33 46	154 37 22	15.0	2.00	.50	1.0	1,500	N	N	N	100	700
77252C	67 33 27	154 36 38	5.0	3.00	10.00	>1.0	1,000	N	N	N	100	2,000
77253C	67 35 48	154 33 44	5.0	2.00	3.00	>1.0	1,000	N	N	N	200	1,000
77254C	67 35 48	154 34 11	5.0	3.00	5.00	>1.0	1,000	N	N	N	300	7,000
77255C	67 31 45	154 31 7	5.0	1.00	1.00	>1.0	1,000	N	N	N	200	700
77256C	67 30 43	154 33 9	5.0	2.00	10.00	>1.0	1,000	N	1,500	N	70	3,000
77257C	67 32 32	154 31 43	3.0	2.00	7.00	>1.0	1,000	N	N	N	100	700
77258C	67 30 54	154 15 41	5.0	.70	2.00	>1.0	1,000	N	N	N	70	1,500
77259C	67 30 47	154 14 14	5.0	.70	3.00	>1.0	1,000	N	N	N	150	1,500
77260C	67 29 21	154 17 52	3.0	.70	3.00	>1.0	1,000	N	N	N	70	1,000
77272C	67 28 10	154 17 47	3.0	.70	3.00	>1.0	1,000	N	N	N	100	1,500
77273C	67 26 56	154 20 8	3.0	2.00	7.00	>1.0	1,000	N	N	N	50	500
77274C	67 25 55	154 19 58	3.0	1.50	7.00	>1.0	1,500	N	N	N	100	700
77275C	67 24 37	154 23 13	2.0	2.00	7.00	.7	700	N	N	N	20	500
77276C	67 24 5	154 20 45	2.0	1.00	7.00	.7	700	N	N	N	50	300
77277C	67 22 41	154 21 17	3.0	2.00	7.00	1.0	1,000	N	N	N	200	500
77278C	67 22 41	154 22 28	3.0	3.00	5.00	1.0	1,000	N	N	N	100	1,500
77279C	67 28 32	153 59 36	5.0	2.00	10.00	>1.0	1,500	N	N	N	100	300
77280C	67 26 43	154 3 10	2.0	2.00	10.00	.7	700	N	N	N	50	200
77281C	67 25 42	154 5 3	2.0	3.00	10.00	1.0	100	N	N	N	500	150
77282C	67 25 26	154 9 6	3.0	1.50	10.00	1.0	1,000	N	N	N	100	300
77283C	67 28 44	154 7 23	3.0	2.00	7.00	>1.0	700	10.0	1,000	N	100	1,000
77284C	67 24 47	153 57 47	2.0	.15	7.00	>1.0	500	N	N	N	<20	100
77285C	67 24 29	153 55 6	3.0	2.00	10.00	.7	1,000	N	N	N	100	200
77286C	67 24 42	153 52 24	2.0	5.00	10.00	1.0	700	N	N	N	70	1,000
77287C	67 22 23	153 56 4	3.0	.20	7.00	>1.0	500	N	N	N	20	50
77288C	67 22 9	153 56 28	2.0	1.00	10.00	>1.0	700	N	N	N	50	50
77289C	67 21 53	153 56 7	3.0	1.00	5.00	>1.0	700	N	N	N	100	300
77290C	67 24 6	153 48 19	2.0	5.00	10.00	>1.0	500	N	N	N	50	50
77291C	67 33 12	154 24 13	5.0	2.00	2.00	>1.0	1,000	N	N	N	100	1,000
77292C	67 33 19	154 24 19	3.0	.50	.50	.7	700	N	N	N	100	500
77293C	67 33 39	154 23 27	3.0	1.50	1.00	.7	700	N	N	N	100	1,500
77294C	67 35 52	154 5 55	3.0	1.00	2.00	>1.0	500	N	N	N	100	500
77295C	67 36 12	154 6 32	3.0	1.00	.20	1.0	500	N	N	N	70	700
77296C	67 34 1	153 55 54	7.0	1.50	1.00	>1.0	1,000	N	N	N	150	700
77297C	67 35 5	153 53 17	3.0	.70	.70	1.0	500	N	N	N	100	700
77298C	67 36 9	153 49 14	3.0	.50	.70	.7	500	N	N	N	70	500
77299C	67 33 12	153 41 55	5.0	.50	1.00	1.0	700	N	N	N	70	500
77300C	67 34 8	153 40 34	7.0	1.00	.70	1.0	700	N	N	N	70	700
77301C	67 34 8	153 39 54	5.0	1.00	.50	1.0	700	N	N	N	70	1,500
77302C	67 32 36	153 36 56	15.0	1.00	1.50	1.0	700	N	N	N	100	1,000
77303C	67 31 8	153 42 49	5.0	1.00	1.50	1.0	500	N	N	N	100	700
77304C	67 29 29	153 50 11	7.0	1.50	1.00	1.0	700	N	N	N	100	1,000
77305C	67 28 26	153 50 42	5.0	3.00	7.00	>1.0	700	N	N	N	100	700
77306C	67 26 57	153 46 4	3.0	3.00	10.00	>1.0	700	N	N	N	100	500

sample	S-RE	S-RI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-WB	S-NI	S-PB
77261C	2.0	N	N	20	150	100	100	N	<50	100	20
77262C	2.0	N	N	15	100	150	100	N	50	10	50
77263C	2.0	N	N	20	100	100	100	N	50	20	30
77264C	2.0	N	N	15	100	30	100	N	50	20	20
77265C	2.0	N	N	15	150	150	200	N	50	30	700
77266C	2.0	N	N	20	70	100	200	N	70	10	100
77268C	2.0	N	N	15	100	30	200	N	50	10	20
77269C	2.0	N	N	15	150	50	300	N	50	50	150
77270C	2.0	N	N	20	150	300	150	N	50	50	50
77271C	2.0	50	N	10	100	300	150	N	100	<10	50
77272C	2.0	N	N	10	100	150	150	N	50	10	100
77273C	2.0	N	N	10	100	50	100	N	50	10	20
77274C	2.0	N	N	10	100	50	150	N	50	10	700
77275C	<2.0	N	N	20	100	100	70	N	<50	100	150
77276C	<2.0	N	N	15	100	30	70	N	<50	<10	50
77277C	2.0	N	N	10	150	20	100	N	<50	10	50
77278C	2.0	N	N	10	150	200	150	N	<50	10	50
77279C	3.0	N	N	10	150	50	150	N	<50	10	50
77280C	<2.0	N	N	10	150	30	100	N	<50	<10	150
77281C	2.0	N	N	<10	100	10	50	N	<50	<10	20
77282C	15.0	N	N	<10	100	20	200	N	50	<10	70
77283C	2.0	<20	N	<10	150	200	100	N	N	10	1,000
77284C	<2.0	N	N	<10	30	10	200	N	100	<10	70
77285C	2.0	N	N	10	100	<10	70	N	N	10	50
77286C	2.0	N	N	10	100	10	70	N	N	<10	20
77287C	100.0	N	N	<10	<20	<10	1,000	N	100	<10	100
77288C	10.0	N	N	<10	50	<10	700	N	100	<10	70
77289C	10.0	N	N	15	100	70	100	N	50	<10	150
77290C	N	N	N	10	50	20	100	N	<50	10	20
77291C	2.0	N	N	15	150	30	200	N	50	30	20
77292C	2.0	N	N	15	150	50	150	N	<50	30	20
77293C	2.0	N	N	15	150	50	500	N	<50	20	20
77294C	2.0	N	N	15	100	100	500	N	<50	20	<20
77295C	2.0	N	N	15	100	15	150	N	<50	30	20
77296C	2.0	N	N	20	300	150	1,000	N	<50	100	30
77297C	2.0	N	N	15	150	50	2,000	N	<50	30	30
77298C	2.0	N	N	15	200	50	100	N	<50	50	50
77299C	2.0	N	N	20	200	500	200	N	<50	50	50
77300C	2.0	N	N	20	200	100	200	N	<50	50	50
77301C	2.0	N	N	20	300	200	200	N	<50	50	50
77302C	2.0	N	N	50	300	150	300	N	<50	50	70
77303C	2.0	N	N	20	200	50	300	N	<50	50	70
77304C	2.0	N	N	20	300	100	200	N	<50	50	70
77305C	2.0	500	N	15	200	20	200	N	<50	20	100
77306C	2.0	N	N	10	100	500	50	N	<50	15	50

28

sample	S-SA	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
77261C	N	20	N	200	200	N	50	<500	300	N
77262C	N	20	N	200	100	N	100	N	500	N
77263C	N	20	N	200	200	N	100	N	500	N
77264C	N	20	N	200	200	N	70	N	700	N
77265C	N	30	N	200	200	<100	70	<500	700	N
77266C	N	20	50	200	150	500	200	700	700	N
77268C	N	30	N	200	150	N	100	N	1,000	N
77269C	N	30	50	200	200	500	200	700	500	N
77270C	N	30	30	200	200	<100	500	<500	500	N
77271C	N	30	70	200	150	300	300	<500	1,000	N
77272C	N	30	N	200	150	N	100	<500	1,000	N
77273C	N	30	50	200	150	N	150	<500	1,000	N
77274C	N	30	N	500	200	100	100	500	700	N
77275C	N	20	N	200	100	<100	100	N	200	N
77276C	N	20	N	700	100	100	50	N	300	N
77277C	N	30	N	700	150	N	70	N	300	N
77278C	N	30	N	200	150	N	100	N	700	N
77279C	N	20	200	300	150	<100	100	N	500	N
77280C	N	20	50	700	150	100	50	N	200	N
77281C	N	10	<20	700	100	N	30	N	500	N
77282C	N	20	150	300	100	N	1,500	N	>1,000	200
77283C	N	20	700	300	150	2,000	70	<500	500	N
77284C	N	30	70	<200	50	N	1,000	N	>1,000	<200
77285C	N	20	50	300	100	N	70	N	500	N
77286C	N	20	20	200	100	N	50	N	300	N
77287C	N	20	500	<200	20	N	1,500	N	>1,000	1,000
77288C	N	20	500	<200	50	N	700	N	>1,000	200
77289C	N	20	1,000	300	100	100	100	N	700	N
77290C	N	10	N	200	30	N	20	N	150	N
77291C	N	30	20	200	300	N	100	N	700	N
77292C	N	20	N	200	200	N	30	N	300	N
77293C	N	20	N	200	200	N	70	N	300	N
77294C	N	20	N	200	200	N	30	N	500	N
77295C	N	20	N	200	150	N	50	N	200	N
77296C	N	30	N	300	300	N	70	500	200	N
77297C	N	20	N	200	200	N	50	N	200	N
77298C	N	20	N	200	150	N	30	N	200	N
77299C	N	20	N	200	150	N	50	N	300	N
77300C	N	30	N	200	200	N	50	N	300	N
77301C	N	30	N	200	200	N	50	N	500	N
77302C	N	30	N	300	200	N	100	N	500	N
77303C	N	30	N	500	200	N	70	N	500	N
77304C	N	30	N	300	200	N	70	N	500	N
77305C	N	30	N	200	200	N	70	N	200	N
77306C	N	30	N	200	100	N	70	N	200	N

sample	LATITUDE	LONGITUDE	S-FEX	S-MGX	S-CAZ	S-TIX	S-MN	S-AG	S-AS	S-AU	S-B	S-BA
77307C	67 29 56	153 43 22	3.0	3.00	7.00	>1.0	700	2.0	N	N	100	>5,000
77308C	67 29 57	153 44 33	5.0	1.50	2.00	1.0	700	N	N	N	100	700
77309C	67 26 22	153 39 53	5.0	.70	.70	>1.0	700	N	N	N	100	500
77310C	67 27 7	153 37 13	3.0	5.00	10.00	>1.0	700	N	N	N	50	500
77311C	67 27 44	153 32 28	3.0	1.50	1.00	>1.0	500	N	N	N	100	2,000
77312C	67 56 8	153 30 38	5.0	1.50	2.00	>1.0	500	N	N	N	100	1,000
77313C	67 30 10	153 25 58	7.0	1.50	.50	1.0	500	N	N	N	100	700
77314C	67 31 0	153 25 38	10.0	.50	.70	.7	700	N	N	N	100	700
77315C	67 33 50	153 19 26	5.0	2.00	5.00	1.0	700	N	N	N	150	1,500
77316C	67 33 41	153 16 30	5.0	.50	.50	1.0	500	N	N	N	100	3,000
77317C	67 28 36	153 27 17	3.0	.50	1.00	>1.0	500	N	N	N	100	700
77318C	67 26 14	153 24 33	--	--	--	--	--	--	--	--	--	--
77319C	67 25 19	153 27 54	3.0	.50	.70	>1.0	300	N	N	N	150	1,000
77320C	67 23 31	153 42 18	3.0	.70	5.00	>1.0	500	N	N	N	150	300
77321C	67 24 0	153 39 6	5.0	1.50	2.00	>1.0	700	N	N	N	100	300
77322C	67 22 41	153 33 50	3.0	.50	2.00	>1.0	700	N	N	N	100	1,000
77323C	67 23 44	153 32 55	5.0	.70	2.00	>1.0	700	N	N	N	100	500
77324C	67 24 32	153 29 16	3.0	.70	2.00	>1.0	700	N	N	N	500	5,000
77325C	67 22 35	153 22 45	3.0	.70	2.00	>1.0	700	1.0	N	N	150	500
77326C	67 22 29	153 22 52	5.0	.50	.70	>1.0	700	N	N	N	150	500
77327C	67 21 2	153 24 32	5.0	1.50	3.00	>1.0	700	N	N	N	150	2,000
77328C	67 20 3	153 21 48	5.0	1.50	3.00	>1.0	700	1.0	N	N	100	700
77329C	67 19 57	153 21 47	3.0	.50	3.00	>1.0	700	N	N	N	20	1,000
77330C	67 23 53	153 14 6	3.0	2.00	5.00	>1.0	500	N	N	N	100	1,000
77331C	67 24 15	153 13 49	5.0	1.00	2.00	1.0	500	N	N	N	100	>5,000
77332C	67 23 26	153 9 44	3.0	3.00	7.00	>1.0	500	N	N	N	150	1,500
77333C	67 22 43	153 6 41	3.0	2.00	5.00	>1.0	500	N	N	N	100	2,000
77334C	67 25 45	153 4 30	3.0	.30	.70	>1.0	700	N	N	N	100	700
77335C	67 27 15	153 4 40	3.0	.30	.70	1.0	500	N	N	N	100	700
77336C	67 30 12	153 2 0	3.0	.20	.50	.7	500	N	N	N	100	500
77337C	67 32 40	153 2 24	10.0	.50	2.00	1.0	500	N	N	N	50	500
77338C	67 33 6	153 2 40	5.0	1.00	2.00	>1.0	500	N	N	N	100	1,000
77339C	67 34 13	153 12 0	5.0	1.00	3.00	>1.0	700	N	N	N	100	1,000
77340C	67 30 58	153 11 52	5.0	.50	.50	>1.0	700	N	N	N	100	1,000
77341C	67 30 48	153 11 34	5.0	.20	.20	.5	300	N	N	N	70	500
77342C	67 30 20	153 12 39	7.0	.50	.70	1.0	700	N	N	N	70	500
77343C	67 27 29	153 11 39	5.0	1.00	1.00	>1.0	700	N	N	N	100	700
77344C	67 27 7	153 8 24	2.0	.20	.20	1.0	300	N	N	N	70	500
77345C	67 25 19	153 8 0	3.0	.20	.20	1.0	700	N	N	N	100	500
77346C	67 20 40	153 3 5	3.0	3.00	7.00	1.0	700	N	N	N	100	3,000
77347C	67 20 10	153 3 0	3.0	2.00	7.00	>1.0	700	N	N	N	50	1,000
77348C	67 19 59	153 10 35	2.0	1.50	5.00	>1.0	700	N	N	N	70	1,500
77349C	67 19 54	153 12 59	5.0	2.00	7.00	>1.0	700	N	N	N	50	500
77350C	67 19 29	153 53 48	2.0	1.00	5.00	>1.0	300	N	N	N	100	500
77351C	67 19 26	153 53 38	3.0	3.00	7.00	>1.0	300	N	N	N	50	200

sample	S-AF	S-9I	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-N3	S-NI	S-PB
77307C	2.0	N	N	15	100	50	700	N	<50	20	200
77308C	2.0	N	N	15	200	30	700	N	<50	30	50
77309C	<2.0	N	N	15	100	50	50	N	<50	20	70
77310C	<2.0	N	N	15	100	30	50	N	<50	20	50
77311C	<2.0	N	N	15	100	100	100	N	<50	20	50
77312C	2.0	N	N	20	200	150	200	N	<50	20	70
77313C	2.0	N	N	20	200	50	200	N	<50	30	50
77314C	2.0	N	N	30	300	300	200	N	<50	100	50
77315C	2.0	N	N	20	100	300	300	N	<50	70	70
77316C	2.0	N	N	20	150	100	500	N	<50	70	100
77317C	2.0	N	N	10	100	20	200	N	<50	20	150
77318C	--	--	--	--	--	--	--	--	--	--	--
77319C	3.0	N	N	15	100	100	200	N	<50	20	50
77320C	5.0	N	N	10	100	100	150	N	<50	10	50
77321C	<2.0	N	N	20	100	150	150	N	<50	30	50
77322C	2.0	N	N	10	100	150	150	N	<50	20	50
77323C	2.0	N	N	20	100	70	150	N	<50	20	50
77324C	2.0	N	N	15	100	50	200	N	<50	20	150
77325C	2.0	N	N	20	100	300	200	N	<50	20	150
77326C	2.0	N	N	20	100	50	100	N	<50	30	150
77327C	2.0	N	N	50	100	150	200	N	<50	20	100
77328C	<2.0	N	N	20	100	150	100	N	<50	20	50
77329C	<2.0	N	N	20	50	30	50	N	<50	10	20
77330C	2.0	N	N	20	100	50	100	N	<50	20	30
77331C	2.0	N	N	50	70	150	200	N	<50	30	150
77332C	2.0	N	N	15	100	100	150	N	<50	20	30
77333C	2.0	N	N	15	100	50	200	N	<50	20	30
77334C	2.0	N	N	15	100	50	150	N	<50	20	20
77335C	2.0	N	N	15	150	20	300	N	<50	30	20
77336C	2.0	N	N	20	150	50	300	N	<50	50	20
77337C	2.0	N	N	50	150	100	300	N	<50	100	50
77338C	2.0	N	N	20	100	100	300	N	<50	50	100
77339C	2.0	N	N	20	150	50	150	N	<50	30	50
77340C	2.0	N	N	15	150	30	200	N	<50	30	50
77341C	2.0	N	N	15	200	30	150	N	<50	50	30
77342C	2.0	N	N	20	200	100	200	N	<50	50	50
77343C	2.0	N	N	15	150	100	200	N	<50	30	100
77344C	2.0	N	N	10	100	15	300	N	<50	15	30
77345C	3.0	N	N	10	150	50	150	N	<50	30	30
77346C	2.0	N	N	10	70	50	200	N	<50	15	500
77347C	2.0	N	N	15	70	30	150	N	<50	15	20
77348C	2.0	N	N	10	70	30	100	N	<50	10	150
77349C	<2.0	N	N	50	100	150	50	N	<50	20	20
77350C	2.0	N	N	15	100	150	100	N	<50	10	50
77351C	<2.0	N	N	20	70	300	70	N	<50	15	20

sample	S-SR	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
77307C	N	20	200	300	100	N	100	N	300	N
77308C	N	30	N	300	200	N	100	700	500	N
77309C	N	30	N	200	100	N	50	N	>1,000	N
77310C	N	30	N	100	100	N	50	N	500	N
77311C	N	30	N	200	100	N	50	N	700	N
77312C	N	30	N	200	200	N	200	N	700	N
77313C	N	30	N	200	200	N	50	N	200	N
77314C	N	20	N	200	150	N	50	500	200	N
77315C	N	20	N	200	150	N	100	500	300	--
77316C	N	20	N	200	200	N	70	N	200	--
77317C	N	20	N	200	150	N	50	N	200	--
77318C	--	--	--	--	--	--	--	--	--	--
77319C	N	20	N	200	150	N	50	<500	200	--
77320C	N	20	50	200	100	N	70	<500	500	--
77321C	N	30	N	200	150	N	70	N	200	--
77322C	N	20	20	200	100	N	100	N	500	--
77323C	N	30	N	200	150	N	100	<500	200	--
77324C	N	20	N	300	150	N	70	<500	300	--
77325C	N	20	N	200	100	N	70	500	200	--
77326C	N	20	N	200	100	N	70	N	200	--
77327C	N	20	N	200	150	N	70	N	200	--
77328C	N	30	N	300	200	N	70	N	200	--
77329C	N	20	N	200	300	N	70	N	150	--
77330C	N	20	N	300	100	N	100	N	200	--
77331C	N	10	N	500	100	N	50	700	200	--
77332C	N	15	N	200	100	N	150	<500	200	--
77333C	N	20	N	200	100	N	70	<500	150	--
77334C	N	20	N	200	100	N	100	500	500	--
77335C	N	20	N	200	150	N	100	N	500	--
77336C	N	20	N	200	150	N	50	N	300	--
77337C	N	20	N	200	150	N	100	N	200	N
77338C	N	20	N	200	150	N	100	N	300	N
77339C	N	20	N	200	150	N	100	N	300	N
77340C	N	20	N	200	150	N	70	N	70	N
77341C	N	20	N	200	150	N	50	N	150	N
77342C	N	20	N	200	150	N	50	N	300	N
77343C	N	20	N	200	150	N	70	N	500	N
77344C	N	20	N	200	100	N	100	N	500	N
77345C	N	20	N	200	150	N	70	N	300	N
77346C	N	15	N	200	100	N	100	<500	200	N
77347C	N	20	N	300	100	N	70	N	200	N
77348C	N	20	N	200	100	N	70	N	200	N
77349C	N	20	N	200	150	N	70	<500	150	N
77350C	N	20	150	200	100	<100	150	N	500	N
77351C	N	20	20	200	150	N	150	<500	150	N

sample	LATITUDE	LONGITUDE	S-FEZ	S-MGX	S-CAZ	S-TIX	S-MN	S-AG	S-AS	S-AU	S-B	S-BA
77352C	67 20 12	153 50 26	2.0	3.00	7.00	1.0	500	N	N	N	70	100
77353C	67 21 14	153 47 40	2.0	1.00	2.00	1.0	500	N	N	N	50	700
77354C	67 21 6	153 45 22	3.0	3.00	7.00	>1.0	700	N	N	N	50	500
77355C	67 19 56	153 40 27	2.0	3.00	7.00	>1.0	700	N	N	N	30	500
77356C	67 18 11	153 36 6	5.0	3.00	7.00	>1.0	700	N	N	N	20	500
77357C	67 15 48	153 33 47	2.0	3.00	10.00	1.0	700	N	N	N	50	100
77358C	67 15 41	153 30 46	3.0	3.00	10.00	1.0	700	N	N	N	50	3,000
77359C	67 12 8	153 26 37	2.0	3.00	10.00	1.0	700	N	N	N	50	150
77360C	67 14 4	153 21 39	2.0	5.00	10.00	1.0	500	N	N	N	50	200
77361C	67 10 44	153 19 20	2.0	3.00	7.00	>1.0	700	N	N	N	100	150
77363C	67 4 14	153 33 14	5.0	1.00	.20	1.0	500	N	N	N	100	1,000
77365C	67 3 5	153 27 42	2.0	.50	5.00	>1.0	1,000	N	N	N	100	5,000
77367C	67 0 3	153 25 41	3.0	1.00	7.00	>1.0	1,000	N	N	N	50	1,500
77368C	67 1 28	153 10 26	3.0	1.00	7.00	>1.0	1,000	N	N	N	50	5,000
77369C	67 3 50	153 5 49	2.0	.70	7.00	1.0	700	N	N	N	200	>10,000
77370C	67 7 54	153 3 55	3.0	.70	7.00	>1.0	700	N	N	N	100	1,500
77371C	67 11 15	153 5 22	2.0	.70	3.00	>1.0	700	N	N	N	100	1,000
77372C	67 10 41	153 8 13	3.0	.70	3.00	>1.0	700	N	N	N	100	1,000
77373C	67 13 14	153 11 34	5.0	1.00	2.00	>1.0	700	N	N	N	70	700
77374C	67 14 33	153 3 29	5.0	.70	5.00	>1.0	1,000	N	N	N	100	500
77375C	67 14 51	153 2 30	3.0	1.00	5.00	>1.0	1,000	N	N	N	70	1,000
77376C	67 14 46	153 6 53	3.0	1.00	2.00	>1.0	700	N	N	N	70	1,000
77377C	67 18 49	153 14 27	3.0	1.00	5.00	1.0	500	N	N	N	70	1,000
77378C	67 18 35	153 16 7	2.0	5.00	15.00	>1.0	500	N	N	N	20	300
77379C	67 16 8	153 59 26	3.0	5.00	10.00	>1.0	700	N	N	N	50	100
77380C	67 16 17	153 58 57	3.0	3.00	7.00	>1.0	700	N	N	N	50	300
77381C	67 19 21	154 3 45	5.0	.50	7.00	>1.0	700	N	N	N	30	300
77382C	67 21 19	154 9 37	2.0	.15	7.00	>1.0	700	N	N	N	<20	70
77383C	67 20 19	154 8 10	2.0	.15	3.00	>1.0	500	N	N	N	<20	70
77384C	67 18 5	154 3 10	3.0	.50	7.00	>1.0	700	N	700	N	50	700
77385C	67 16 39	154 14 5	3.0	2.00	7.00	>1.0	700	N	N	N	200	700
77386C	67 17 51	154 13 45	2.0	1.50	7.00	1.0	700	N	N	N	100	100
77387C	67 17 58	154 17 51	3.0	2.00	10.00	>1.0	1,000	N	N	N	100	300
77388C	67 18 16	154 18 38	3.0	.30	5.00	>1.0	1,000	N	N	N	<20	50
77389C	67 18 30	154 29 56	2.0	.30	7.00	>1.0	700	N	N	N	<20	50
77390C	67 14 58	153 49 31	2.0	1.50	5.00	>1.0	700	N	N	N	30	100
77391C	67 14 48	153 50 40	3.0	2.00	7.00	>1.0	700	N	N	N	70	100
77392C	67 14 30	153 50 9	3.0	3.00	5.00	>1.0	1,000	N	N	N	70	500
77393C	67 14 39	153 46 15	3.0	3.00	7.00	>1.0	700	N	N	N	50	200
77394C	67 14 44	153 42 32	3.0	2.00	5.00	>1.0	700	N	N	N	50	200
77395C	67 14 23	153 41 17	3.0	3.00	10.00	>1.0	700	N	N	N	70	200
77396C	67 11 58	153 43 20	3.0	1.00	2.00	>1.0	1,000	N	N	N	70	500
77397C	67 10 27	153 44 42	3.0	2.00	5.00	>1.0	700	N	N	N	150	500
77398C	67 10 17	153 44 6	5.0	1.00	2.00	>1.0	1,000	N	N	N	70	500
77399C	67 1 54	154 8 13	3.0	1.00	7.00	>1.0	1,000	N	N	N	70	>5,000

sample	S-BE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-N9	S-NI	S-PB
77352C	<2.0	N	N	15	50	200	50	N	<50	10	20
77353C	2.0	N	N	10	100	15	150	N	<50	15	50
77354C	<2.0	N	N	20	50	200	70	N	<50	10	50
77355C	<2.0	N	N	15	30	20	70	N	<50	10	20
77356C	<2.0	N	N	20	50	50	70	N	<50	10	20
77357C	<2.0	N	N	10	30	10	100	N	<50	10	20
77358C	<2.0	N	N	15	30	20	150	N	<50	10	30
77359C	<2.0	N	N	10	70	20	70	N	<50	10	20
77360C	<2.0	N	N	15	100	70	100	N	<50	15	<20
77361C	<2.0	N	N	10	100	30	150	N	50	10	30
77363C	2.0	N	N	20	200	30	100	N	<50	50	50
77366C	2.0	N	N	10	150	200	200	N	50	20	30
77367C	2.0	N	N	15	200	50	300	N	50	30	30
77368C	<2.0	N	N	10	150	30	200	N	50	20	30
77369C	<2.0	N	N	10	100	30	150	N	<50	20	30
77370C	2.0	N	N	10	200	20	150	N	50	20	50
77371C	2.0	N	N	15	200	30	150	N	<50	30	50
77372C	2.0	N	N	10	150	30	100	N	50	30	50
77373C	2.0	N	N	20	150	50	100	N	<50	50	30
77374C	2.0	N	N	20	150	50	100	N	50	30	30
77375C	2.0	N	N	10	100	100	100	N	<50	20	20
77376C	2.0	N	N	10	100	20	70	N	<50	15	30
77377C	2.0	N	N	15	100	100	70	N	<50	10	20
77378C	<2.0	N	N	10	100	50	50	N	<50	10	50
77379C	<2.0	N	N	30	100	200	50	N	<50	10	50
77380C	<2.0	N	N	20	100	100	100	N	<50	10	20
77381C	200.0	50	N	<10	100	70	500	50	100	<10	150
77382C	15.0	N	N	<10	50	<10	300	N	100	<10	50
77383C	<2.0	N	N	<10	20	<10	500	N	100	<10	50
77384C	5.0	N	N	20	150	100	150	N	<50	15	50
77385C	<2.0	N	N	15	150	100	150	N	<50	10	70
77386C	2.0	N	N	<10	100	70	100	N	<50	<10	70
77387C	<2.0	N	N	10	100	150	70	N	<50	<10	100
77388C	50.0	100	N	<10	50	20	700	10	70	<10	100
77389C	10.0	N	N	<10	50	20	500	N	70	<10	70
77390C	<2.0	N	N	15	20	100	50	N	<50	10	<20
77391C	<2.0	N	N	30	100	200	70	N	50	15	50
77392C	<2.0	N	N	15	100	100	100	N	50	15	50
77393C	<2.0	N	N	15	50	30	100	N	<50	10	50
77394C	<2.0	N	N	15	50	50	100	N	50	10	30
77395C	<2.0	N	N	10	50	20	70	N	50	10	20
77396C	<2.0	N	N	20	100	100	70	N	70	30	70
77397C	<2.0	N	N	15	100	150	70	N	50	20	50
77398C	<2.0	N	N	20	100	200	70	N	<50	30	30
77399C	<2.0	N	N	<10	100	50	150	N	50	10	30

sample	S-SR	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
77352C	N	10	N	200	100	N	70	N	150	N
77353C	N	20	N	200	100	N	200	N	200	N
77354C	N	20	N	300	100	N	100	N	200	N
77355C	N	20	N	300	100	N	70	N	150	N
77356C	N	20	N	300	100	N	70	N	150	N
77357C	N	10	N	200	50	N	70	N	200	N
77358C	N	10	N	300	50	N	70	N	100	N
77359C	N	10	50	200	50	N	70	<500	200	N
77360C	N	20	N	200	100	N	50	N	150	N
77361C	N	30	70	200	100	N	100	N	500	N
77363C	N	30	N	200	200	N	50	N	200	N
77366C	N	30	<20	200	150	N	150	N	1,000	N
77367C	N	30	<20	200	200	N	150	N	300	N
77368C	N	30	50	200	150	N	150	N	300	N
77369C	N	20	N	300	100	N	70	N	150	N
77370C	N	50	N	300	300	N	100	N	300	N
77371C	N	30	N	200	200	N	70	N	200	N
77372C	N	30	N	200	200	N	100	N	300	N
77373C	N	30	N	200	200	N	150	N	200	N
77374C	N	30	N	200	200	N	200	N	500	N
77375C	N	20	N	200	150	N	50	N	300	N
77376C	N	20	N	200	100	N	70	N	200	N
77377C	N	20	N	200	100	N	200	N	300	N
77378C	N	20	N	500	150	N	20	N	150	N
77379C	N	30	N	200	150	N	100	N	150	N
77380C	N	30	N	300	150	N	100	N	200	N
77381C	N	30	500	<200	100	N	700	N	>1,000	200
77382C	N	50	70	<200	50	100	700	N	>1,000	<200
77383C	N	50	50	<200	30	N	1,000	N	>1,000	300
77384C	N	30	700	200	150	N	150	N	>1,000	N
77385C	N	20	N	200	100	N	100	N	500	N
77386C	N	30	50	300	150	N	70	N	700	N
77387C	N	30	30	500	150	N	70	N	700	N
77388C	N	20	70	<200	50	N	1,500	N	>1,000	500
77389C	N	50	70	200	150	N	700	N	>1,000	200
77390C	N	20	N	200	150	N	70	N	150	N
77391C	N	30	N	200	200	N	100	N	500	N
77392C	N	30	N	200	150	N	50	N	500	N
77393C	N	20	N	200	150	N	70	N	200	N
77394C	N	30	N	300	150	N	70	N	300	N
77395C	N	20	N	200	70	N	70	N	200	N
77396C	N	30	N	200	150	N	70	N	500	N
77397C	N	20	N	200	150	N	100	N	500	N
77398C	N	20	N	200	150	N	70	N	500	N
77399C	N	20	200	300	150	N	150	N	500	N

sample	LATITUDE		LONGITUDE		S-FEX	S-MGX	S-CAZ	S-TIX	S-MN	S-AG	S-AS	S-AU	S-B	S-BA
77400C	67	1 29	154	0 52	3.0	1.00	7.00	>1.0	1,000	N	N	N	100	500
77401C	67	2 7	153	54 28	3.0	.70	5.00	>1.0	700	N	N	N	100	500
77402C	67	19 54	153	29 55	3.0	2.00	7.00	>1.0	700	N	N	N	20	100
77403C	67	17 44	153	21 57	3.0	1.50	5.00	>1.0	700	N	N	N	70	200
77404C	67	14 6	153	36 53	5.0	5.00	10.00	>1.0	1,000	N	N	N	100	150
77405C	67	13 8	153	39 2	3.0	1.00	2.00	>1.0	700	N	N	N	50	150
77406C	67	4 36	155	1 25	2.0	.70	1.50	>1.0	300	<1.0	N	N	100	>5,000
77407C	67	4 33	155	1 15	3.0	.70	2.00	>1.0	1,000	3.0	N	N	150	1,500
77408C	67	4 27	155	1 40	3.0	.70	1.00	>1.0	1,000	N	N	N	150	1,500
77409C	67	4 4	155	1 49	3.0	.70	1.50	>1.0	500	N	N	N	100	1,000
77410C	67	3 35	155	2 22	3.0	1.00	1.00	>1.0	700	N	N	N	150	1,000
77411C	67	3 40	155	2 19	3.0	1.00	1.50	>1.0	1,000	N	N	N	100	1,500
77412C	67	3 31	155	3 11	3.0	1.00	1.00	>1.0	500	N	N	N	150	1,500
77413C	67	3 35	155	2 51	3.0	1.00	2.00	>1.0	1,000	N	N	N	100	2,000
77414C	67	3 10	155	3 13	3.0	1.00	1.00	>1.0	500	N	N	N	150	1,500
77415C	67	3 17	155	3 10	3.0	1.00	2.00	>1.0	700	N	N	N	100	1,500
77416C	67	3 7	155	2 45	5.0	1.00	1.00	>1.0	500	N	N	N	100	1,000
77417C	67	2 50	155	3 9	3.0	1.00	1.50	>1.0	700	N	N	N	100	1,000
77418C	67	2 42	155	2 54	5.0	1.00	3.00	>1.0	700	N	N	N	70	1,000
77419C	67	2 38	155	3 32	3.0	.70	2.00	>1.0	700	N	N	N	100	700
77420C	67	1 42	155	3 44	3.0	1.00	2.00	>1.0	700	N	N	N	100	1,000
77421C	67	39 24	155	39 6	3.0	.50	2.00	1.0	700	N	N	N	100	1,500
77422C	67	40 1	155	45 42	3.0	.20	1.50	1.0	500	N	N	N	100	1,000
77423C	67	40 24	155	57 46	3.0	.70	.50	>1.0	500	N	N	N	100	1,000
77424C	67	38 33	155	50 50	7.0	.30	.30	>1.0	700	N	N	N	100	1,500
77425C	67	35 32	155	52 36	10.0	2.00	7.00	.5	500	2.0	N	N	50	>5,000
77427C	67	34 44	155	56 21	7.0	1.00	3.00	1.0	700	N	N	N	100	1,500
77428C	67	33 7	155	53 48	3.0	3.00	7.00	.3	500	N	N	N	50	5,000
77429C	67	31 53	155	54 34	3.0	3.00	10.00	.7	700	1.0	N	N	50	>5,000
77430C	67	32 34	155	57 24	10.0	2.00	10.00	.7	700	N	N	N	100	5,000
78431C	67	11 28	154	16 18	5.0	2.00	2.00	>1.0	500	N	N	N	500	500
78432C	67	11 24	154	16 6	10.0	2.00	3.00	>1.0	700	N	N	N	500	700
78433C	67	11 27	154	16 33	7.0	1.00	2.00	>1.0	2,000	N	N	N	300	700
78434C	67	10 36	154	16 36	2.0	1.50	2.00	>1.0	1,000	N	N	N	300	500
78435C	67	10 18	154	16 36	3.0	1.00	1.00	>1.0	700	N	N	N	200	700
78436C	67	10 0	154	16 12	5.0	1.00	2.00	>1.0	1,000	N	N	N	200	500
78438C	67	9 0	154	16 10	5.0	1.00	1.50	>1.0	1,000	N	N	N	200	700
78439C	67	8 6	154	14 36	3.0	.50	2.00	>1.0	700	N	N	N	200	300
78440C	67	13 0	154	34 6	5.0	1.00	1.00	>1.0	700	N	N	N	200	1,000
78441C	67	12 54	154	34 18	3.0	.70	2.00	>1.0	700	N	N	N	300	700
78442C	67	12 30	154	34 12	5.0	.70	1.50	>1.0	1,000	N	N	N	300	700
78443C	67	12 0	154	33 30	5.0	.70	1.00	>1.0	700	N	N	N	500	700
78444C	67	11 45	154	32 54	3.0	.50	1.50	>1.0	700	N	N	N	300	500
78445C	67	11 3	154	31 24	3.0	.70	2.00	>1.0	500	N	N	N	300	300
78446C	67	10 51	154	12 6	3.0	5.00	5.00	>1.0	700	N	N	N	100	200

sample	S-RF	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-VI	S-PB
77400C	<2.0	N	N	<10	150	30	70	N	50	10	20
77401C	<2.0	N	N	<10	150	30	200	N	50	10	20
77402C	<2.0	N	N	15	50	70	50	N	<50	10	20
77403C	<2.0	N	N	<10	70	20	50	N	<50	10	20
77404C	<2.0	N	N	15	150	150	70	N	<50	10	50
77405C	<2.0	N	N	15	70	100	200	N	70	10	30
77406C	2.0	N	N	15	100	200	100	N	<50	20	200
77407C	2.0	N	N	100	150	200	200	N	50	150	200
77408C	2.0	N	N	50	150	150	100	N	<50	100	100
77409C	2.0	N	N	15	150	30	50	N	<50	30	30
77410C	2.0	N	N	15	200	30	150	N	<50	30	50
77411C	2.0	N	N	50	150	500	100	N	<50	100	100
77412C	2.0	N	N	15	300	50	100	N	<50	30	50
77413C	2.0	N	N	30	200	150	100	N	50	50	70
77414C	2.0	N	N	15	200	30	100	N	50	30	50
77415C	2.0	N	N	20	200	150	150	N	50	50	50
77416C	2.0	N	N	15	200	50	150	N	50	30	50
77417C	2.0	N	N	20	200	30	100	N	50	30	50
77418C	2.0	N	N	20	300	100	200	N	50	30	50
77419C	2.0	N	N	15	200	20	150	N	<50	20	50
77420C	2.0	N	N	20	200	50	100	N	<50	50	50
77421C	2.0	N	N	20	150	200	300	N	<50	50	100
77422C	3.0	N	N	20	200	50	150	N	<50	50	150
77423C	2.0	N	N	10	150	50	150	N	<50	15	20
77424C	2.0	N	N	20	200	70	150	N	<50	50	70
77426C	<2.0	N	N	50	70	500	300	<10	<50	150	50
77427C	2.0	N	N	30	100	200	300	N	<50	100	200
77428C	<2.0	N	N	20	70	100	300	N	<50	30	50
77429C	<2.0	N	N	20	70	150	200	<10	<50	30	50
77430C	<2.0	N	N	50	70	300	700	N	<50	150	200
78431C	<2.0	N	N	20	150	200	150	N	50	20	100
78432C	<2.0	N	N	100	150	300	150	N	50	50	100
78433C	<2.0	N	N	100	100	200	200	N	<50	200	100
78434C	<2.0	N	N	70	100	300	150	N	50	100	50
78435C	<2.0	N	N	50	200	200	100	N	50	100	100
78436C	<2.0	N	N	70	200	200	100	N	50	150	100
78438C	<2.0	N	N	50	200	200	100	N	50	100	100
78439C	<2.0	N	N	50	150	150	50	N	50	100	50
78440C	<2.0	N	N	20	150	150	100	N	<50	50	70
78441C	<2.0	N	N	20	150	150	200	N	70	20	1,000
78442C	<2.0	N	N	15	150	200	300	N	70	20	100
78443C	<2.0	N	N	15	150	200	200	N	50	10	100
78444C	<2.0	N	N	20	150	200	200	N	100	10	100
78445C	<2.0	N	N	10	100	150	200	N	100	10	100
78446C	<2.0	N	N	10	70	50	50	N	50	10	50

sample	S-SP	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
77400C	N	20	150	200	150	N	100	N	1,000	N
77401C	N	20	150	200	150	N	200	N	>1,000	N
77402C	N	20	N	300	200	N	70	N	700	N
77403C	N	20	N	200	150	N	70	N	500	N
77404C	N	20	N	300	150	N	100	N	300	N
77405C	N	30	N	200	150	N	100	N	500	N
77406C	N	20	N	200	150	N	70	500	500	N
77407C	N	20	N	200	200	N	200	1,000	300	N
77408C	N	20	N	200	200	N	100	<500	300	N
77409C	N	20	N	200	200	N	70	<500	300	N
77410C	N	20	N	200	200	N	70	<500	300	N
77411C	N	20	N	200	200	N	100	<500	300	N
77412C	N	30	N	200	200	N	100	<500	300	N
77413C	N	30	N	200	200	N	100	<500	300	N
77414C	N	30	N	200	200	N	100	<500	300	N
77415C	N	30	N	200	200	N	150	<500	300	N
77416C	N	30	N	200	200	N	200	<500	500	N
77417C	N	30	N	200	200	N	70	<500	500	N
77418C	N	30	N	200	200	N	300	N	500	N
77419C	N	30	N	200	200	N	100	N	300	N
77420C	N	30	N	200	200	N	100	N	300	N
77421C	N	20	N	200	150	N	70	N	500	N
77422C	N	30	N	200	200	N	70	N	>1,000	N
77423C	N	30	N	<200	150	N	70	N	1,000	N
77424C	N	30	N	200	300	N	70	<500	1,000	N
77426C	N	<10	N	500	100	N	50	1,000	200	N
77427C	N	20	N	200	200	N	50	500	>1,000	N
77428C	N	<10	N	200	100	N	30	<500	150	N
77429C	N	15	N	500	200	N	50	500	200	N
77430C	N	15	N	300	100	N	100	500	>1,000	N
78431C	N	30	<20	300	100	N	150	N	500	N
78432C	N	30	30	500	100	<100	150	N	500	N
78433C	N	30	N	500	100	N	200	N	300	N
78434C	N	30	N	300	70	150	100	N	500	N
78435C	N	50	N	500	200	N	100	N	300	N
78436C	N	30	N	500	200	N	200	N	500	N
78438C	N	50	N	500	200	N	100	N	500	N
78439C	N	30	N	300	150	N	150	N	700	N
78440C	N	30	N	200	150	N	100	N	500	N
78441C	N	50	30	300	150	N	150	N	1,000	N
78442C	N	50	N	500	100	N	150	N	500	N
78443C	N	30	N	300	150	N	100	N	1,000	N
78444C	N	50	50	300	100	<100	300	<500	1,000	N
78445C	N	30	50	300	100	<100	200	N	>1,000	N
78446C	N	30	N	500	100	N	100	N	500	N

sample	LATITUDE	LONGITUD	S-FEX	S-MGZ	S-CAZ	S-TIX	S-MN	S-AG	S-AS	S-AJ	S-9	S-BA
78447C	67 10 54	154 12 24	2.0	.70	3.00	>1.0	500	N	N	N	500	500
78448C	67 10 30	154 12 29	7.0	1.00	2.00	>1.0	2,000	N	N	N	300	700
78449C	67 10 3	154 12 18	7.0	1.00	5.00	>1.0	1,000	N	N	N	200	300
78450C	67 10 9	154 12 4	3.0	2.00	5.00	>1.0	700	N	N	N	300	300
78451C	67 9 51	154 11 40	7.0	1.50	5.00	>1.0	1,500	N	500	N	300	500
78452C	67 9 21	154 11 48	7.0	1.50	7.00	>1.0	2,000	N	N	N	200	700
78453C	67 8 52	154 12 1	7.0	.50	2.00	>1.0	1,500	N	N	N	200	300
78454C	67 8 56	154 12 12	5.0	1.00	5.00	>1.0	2,000	N	N	N	300	500
78455C	67 8 43	154 12 20	5.0	.50	1.00	1.0	1,000	N	N	N	100	500
78456C	67 11 56	154 31 6	3.0	1.00	2.00	>1.0	500	N	N	N	500	500
78457C	67 11 48	154 30 24	3.0	1.00	2.00	>1.0	500	N	N	N	200	500
78458C	67 11 12	154 29 24	3.0	1.00	2.00	1.0	700	N	N	N	200	1,000
78459C	67 11 0	154 28 48	5.0	1.50	2.00	>1.0	1,000	N	N	N	500	1,000
78460C	67 9 22	153 43 12	3.0	1.00	3.00	>1.0	1,000	N	N	N	200	700
78461C	67 9 26	153 43 4	3.0	.70	2.00	1.0	1,000	N	N	N	200	700
78462C	67 9 21	153 48 50	5.0	2.00	3.00	>1.0	1,000	N	N	N	200	1,000
78463C	67 9 20	153 49 4	5.0	1.00	2.00	>1.0	500	N	N	N	200	700
78464C	67 9 51	153 48 2	3.0	1.00	2.00	>1.0	500	N	N	N	200	500
78465C	67 9 56	153 47 58	3.0	1.00	2.00	>1.0	500	N	N	N	200	500
78466C	67 10 10	153 46 46	3.0	5.00	5.00	>1.0	700	N	N	N	200	500
78467C	67 10 8	153 45 40	10.0	1.50	1.00	>1.0	1,000	N	N	N	200	500
78468C	67 10 33	153 43 38	5.0	1.50	2.00	>1.0	700	N	N	N	200	300
78469C	67 6 22	154 33 48	5.0	.70	1.00	>1.0	700	N	N	N	200	700
78470C	67 6 15	154 33 54	3.0	.70	1.00	>1.0	700	N	N	N	200	700
78471C	67 6 12	154 32 46	3.0	.70	1.50	>1.0	700	N	N	N	200	700
78472C	67 6 0	154 32 48	5.0	.70	.20	>1.0	500	N	N	N	200	1,000
78473C	67 5 42	154 32 0	3.0	.50	1.50	>1.0	500	N	N	N	200	700
78474C	67 5 42	154 31 42	5.0	.70	.70	>1.0	500	N	N	N	200	1,000
78475C	67 8 12	154 34 12	10.0	1.00	1.00	>1.0	1,500	N	N	N	200	1,000
78476C	67 8 12	154 33 48	5.0	2.00	1.50	1.0	500	N	N	N	200	1,000
78478C	67 8 24	154 35 36	5.0	1.00	2.00	>1.0	1,500	N	N	N	300	700
78479C	67 8 27	154 36 12	10.0	1.00	1.00	>1.0	1,500	N	N	N	500	1,000
78480C	67 8 30	154 36 48	3.0	.70	2.00	>1.0	700	N	N	N	200	700
78481C	67 8 34	154 36 48	3.0	1.50	2.00	>1.0	1,000	N	N	N	200	500
78482C	67 3 49	154 30 6	5.0	1.00	2.00	>1.0	700	N	N	N	200	500
78483C	67 3 35	154 29 36	5.0	1.00	.50	1.0	700	N	N	N	200	700
78484C	67 50 12	155 15 12	--	--	--	--	--	--	--	--	--	--
78485C	67 50 12	155 15 12	10.0	.30	2.00	1.0	5,000	N	N	N	100	1,500
78486C	67 3 38	154 29 4	5.0	1.50	1.00	>1.0	700	N	N	N	200	700
78487C	67 52 12	155 8 36	15.0	.30	1.00	1.0	5,000	N	N	N	150	500
78488C	67 52 5	155 8 6	--	--	--	--	--	--	--	--	--	--
78489C	67 52 12	155 18 36	2.0	.10	1.50	>1.0	1,000	N	N	N	100	500
78490C	67 52 35	155 18 24	3.0	.10	1.50	>1.0	1,000	N	N	N	200	300
78491C	67 52 20	155 8 26	--	--	--	--	--	--	--	--	--	--
78492C	67 51 47	155 6 46	--	--	--	--	--	--	--	--	--	--

sample	S-BE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB
78447C	<2.0	N	N	20	150	150	50	N	100	10	50
78448C	<2.0	N	N	20	200	200	100	N	<50	100	100
78449C	<2.0	N	V	10	200	200	50	N	70	20	100
78450C	<2.0	N	N	10	150	200	100	N	70	20	70
78451C	<2.0	N	N	100	150	200	100	N	50	100	200
78452C	<2.0	N	N	50	300	700	150	N	50	100	50
78453C	<2.0	N	N	70	150	200	200	N	50	100	50
78454C	<2.0	N	N	100	150	200	100	N	50	100	50
78455C	2.0	N	V	50	100	200	50	N	<50	100	50
78456C	2.0	N	N	20	100	500	100	N	50	<10	100
78457C	<2.0	N	V	15	150	100	100	N	50	<10	50
78458C	2.0	V	N	10	150	20	50	N	<50	30	100
78459C	--	N	N	20	200	100	70	N	<50	70	100
78460C	2.0	N	N	50	150	150	70	N	50	50	100
78461C	2.0	N	N	50	150	150	50	N	<50	30	50
78462C	2.0	N	N	70	150	300	100	N	50	100	50
78463C	2.0	N	N	20	150	50	50	N	<50	50	70
78464C	<2.0	N	N	20	150	200	50	N	50	50	70
78465C	<2.0	N	N	20	150	100	50	N	50	30	30
78466C	<2.0	N	N	50	100	150	50	N	50	20	50
78467C	2.0	N	N	50	150	100	70	N	50	70	70
78468C	<2.0	N	N	10	100	100	100	N	50	20	50
78469C	<2.0	N	N	20	200	200	50	N	<50	50	100
78470C	<2.0	N	N	20	200	150	50	N	50	50	100
78471C	<2.0	N	N	20	200	200	50	N	50	50	100
78472C	2.0	N	N	20	200	200	50	N	50	70	150
78473C	<2.0	N	N	20	200	150	50	N	50	50	50
78474C	<2.0	N	N	20	200	200	50	N	50	50	100
78475C	<2.0	N	N	20	200	200	150	N	50	50	100
78476C	<2.0	N	N	30	150	100	50	N	<50	100	50
78478C	<2.0	N	N	70	100	150	150	N	50	150	50
78479C	2.0	N	N	50	200	200	50	N	50	150	100
78480C	<2.0	N	V	20	200	200	50	N	50	50	50
78481C	<2.0	N	V	20	150	100	50	N	<50	70	50
78482C	<2.0	N	N	20	200	70	300	N	<50	70	50
78483C	3.0	N	N	50	300	200	300	N	<50	100	50
78484C	--	--	--	--	--	--	--	--	--	--	--
78484C	3.0	N	N	50	150	100	150	N	<50	100	700
78485C	2.0	N	N	30	300	150	50	N	<50	100	50
78486C	2.0	N	V	50	200	200	150	N	<50	150	200
78487C	--	--	--	--	--	--	--	--	--	--	--
78487C	3.0	N	N	20	150	200	150	N	<50	20	50
78488C	2.0	N	N	20	700	70	300	N	<50	20	100
78489C	--	--	--	--	--	--	--	--	--	--	--
78490C	--	--	--	--	--	--	--	--	--	--	--

sample	S-SB	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
78447C	N	50	N	300	100	N	100	N	1,000	N
78448C	N	50	N	300	200	N	100	N	300	N
78449C	N	30	N	500	200	N	200	<500	300	N
78450C	N	30	N	300	100	N	200	<500	500	N
78451C	N	30	N	300	100	N	100	500	300	N
78452C	N	50	N	500	200	N	100	<500	300	N
78453C	N	30	N	200	150	N	150	N	300	N
78454C	N	30	N	300	150	N	100	N	300	N
78455C	N	30	N	200	150	N	70	N	200	N
78456C	N	30	50	500	100	<100	100	N	700	N
78457C	N	30	30	300	150	N	100	N	1,000	N
78458C	N	20	N	500	200	N	50	N	200	N
78459C	N	30	N	500	200	N	70	N	300	N
78460C	N	30	N	300	150	N	200	N	300	N
78461C	N	20	N	300	150	N	70	N	200	N
78462C	N	30	N	300	150	N	150	N	200	N
78463C	N	30	N	300	150	N	70	N	200	N
78464C	N	30	N	300	150	N	100	N	300	N
78465C	N	30	N	500	200	N	70	N	200	N
78466C	N	30	N	500	100	N	200	<500	200	N
78467C	N	30	N	300	150	N	100	N	200	N
78468C	N	30	N	500	150	N	100	N	300	N
78469C	N	30	N	300	150	N	150	N	200	N
78470C	N	30	N	300	200	N	150	N	300	N
78471C	N	30	N	300	200	N	150	N	300	N
78472C	N	30	N	300	200	N	50	N	300	N
78473C	N	30	N	300	200	N	150	<500	300	N
78474C	N	30	N	300	200	N	100	<500	300	N
78475C	N	30	N	300	200	N	100	<500	300	N
78476C	N	30	N	300	200	N	70	<500	300	N
78478C	N	20	N	300	200	N	200	<500	300	N
78479C	N	50	N	300	200	N	100	<500	300	N
78480C	N	50	N	300	200	N	200	N	300	N
78481C	N	30	N	300	200	N	100	N	200	N
78482C	N	30	N	300	200	N	200	N	500	N
78483C	N	30	N	300	200	N	70	N	300	N
78484C	N	30	N	300	150	N	200	3,000	500	N
78485C	N	30	N	300	200	N	150	N	150	N
78486C	N	30	200	300	200	<100	200	500	700	N
78487C	N	30	N	500	150	N	150	N	1,000	N
78488C	N	30	N	300	150	N	150	N	>1,000	N
78489C	N	30	N	300	150	N	150	N	1,000	N
78490C	N	30	N	300	150	N	150	N	>1,000	N

sample	LATITUDE	LONGITUD	S-FEX	S-MGX	S-CAZ	S-TIX	S-WN	S-AG	S-AS	S-AU	S-B	S-BA
78499C	67 51 48	155 16 48	3.0	3.00	.70	>1.0	2,000	N	N	N	100	500
78499C	67 50 28	155 26 36	10.0	.50	1.00	>1.0	2,000	N	N	N	200	500
78499C	67 50 21	155 27 10	7.0	.50	2.00	>1.0	1,500	N	N	N	150	500
78492C	67 52 18	155 27 12	7.0	.50	1.00	>1.0	3,000	N	N	N	200	500
78493C	67 53 21	155 28 5	10.0	.20	.70	1.0	3,000	N	N	N	200	700
78494C	67 54 10	155 24 25	15.0	.20	1.00	1.0	3,000	N	N	N	150	500
78495C	67 54 13	155 24 6	10.0	.20	.70	1.0	1,500	N	N	N	200	1,000
78496C	67 54 10	155 11 8	--	--	--	--	--	--	--	--	--	--
78496C	67 54 10	155 11 8	2.0	.20	.20	>1.0	1,000	N	N	N	150	300
78497C	67 53 48	155 12 33	7.0	.30	1.00	>1.0	5,000	N	N	N	200	500
78498C	67 44 33	155 19 12	10.0	1.00	3.00	>1.0	1,000	N	N	N	200	700
78499C	67 44 32	155 18 47	7.0	1.00	2.00	>1.0	1,500	N	N	N	200	700
78500C	67 44 0	155 20 0	5.0	.50	3.00	1.0	700	N	N	N	200	500
78501C	67 43 15	155 21 18	7.0	1.50	1.50	>1.0	1,500	N	N	N	200	700
78503C	67 43 27	155 21 24	5.0	1.50	.70	1.0	700	N	N	N	300	1,000
78504C	67 42 48	155 23 12	15.0	1.50	1.00	1.0	700	N	N	N	300	1,000
78505C	67 42 30	155 24 6	5.0	1.00	.70	1.0	500	N	N	N	200	700
78506C	67 42 12	155 24 54	10.0	1.00	2.00	1.0	500	N	N	N	200	700
78507C	67 45 48	155 28 30	5.0	.50	2.00	>1.0	1,500	N	N	N	200	500
78508C	67 45 51	155 29 0	5.0	.50	1.00	>1.0	1,500	N	N	N	200	500
78509C	67 45 27	155 29 15	3.0	.50	5.00	>1.0	1,000	<1.0	N	N	200	1,000
78510C	67 45 15	155 28 48	2.0	.30	2.00	>1.0	500	N	N	N	150	500
78511C	67 44 18	155 28 54	5.0	.30	.70	1.0	700	N	N	N	200	500
78512C	67 43 56	155 28 0	7.0	.50	2.00	1.0	1,000	N	N	N	200	1,000
78513C	67 43 42	155 28 24	5.0	.70	2.00	1.0	1,000	N	N	N	200	1,000
78514C	67 43 39	155 27 15	7.0	1.00	3.00	>1.0	1,000	N	N	N	200	1,000
78515C	67 43 28	155 27 36	10.0	1.00	1.00	>1.0	3,000	N	N	N	200	1,000
78516C	67 37 9	154 54 0	5.0	1.50	1.50	>1.0	700	7.0	N	N	300	1,000
78517C	67 37 15	154 54 10	7.0	2.00	1.00	>1.0	1,000	N	N	N	300	1,000
78518C	67 37 24	154 58 24	7.0	2.00	1.50	1.0	1,000	N	N	N	300	1,000
78519C	67 37 20	154 58 52	7.0	1.50	1.50	>1.0	500	20.0	N	N	300	1,500
78520C	67 36 52	154 59 30	7.0	1.50	.50	1.0	500	<1.0	N	N	300	1,000
78521C	67 37 2	154 59 52	7.0	1.50	1.50	>1.0	700	N	N	N	500	1,000
78522C	67 36 34	154 59 56	5.0	1.00	.20	>1.0	500	N	N	N	300	1,000
78523C	67 36 3	155 1 15	5.0	2.00	.70	>1.0	700	N	N	N	300	1,000
78524C	67 36 0	155 0 48	20.0	.50	.70	1.0	500	N	N	N	300	1,500
78525C	67 35 30	155 3 6	7.0	2.00	5.00	>1.0	1,000	2.0	N	N	300	>5,000
78526C	67 35 18	155 4 24	5.0	2.00	3.00	>1.0	1,000	N	N	N	200	2,000
78527C	67 35 12	155 7 6	10.0	2.00	3.00	>1.0	1,000	5.0	N	N	300	5,000
78528C	67 35 36	155 5 7	7.0	1.50	2.00	>1.0	1,000	5.0	N	N	500	1,000
78529C	67 35 4	155 10 48	10.0	2.00	2.00	>1.0	1,000	2.0	N	N	300	1,000
78530C	67 32 21	154 58 24	3.0	1.50	2.00	.7	700	7.0	N	N	150	2,000
78531C	67 31 45	154 53 48	5.0	2.00	2.00	.1	700	N	N	N	150	>5,000
78532C	67 32 24	154 56 18	15.0	2.00	2.00	.7	500	5.0	N	N	150	>5,000
78533C	67 37 38	154 48 30	7.0	2.00	.70	.7	1,500	N	N	N	200	1,000

sample	S-BE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-N3	S-NI	S-PB
78489C	2.0	N	N	50	200	100	200	N	<50	30	50
78490C	2.0	N	N	50	500	200	500	N	50	50	100
78491C	2.0	N	N	30	300	100	200	N	<50	70	50
78492C	2.0	N	N	50	500	200	300	N	<50	70	150
78493C	2.0	N	N	50	150	100	200	N	<50	100	200
78494C	2.0	N	N	100	200	150	200	N	<50	150	700
78495C	2.0	N	N	50	200	100	200	N	<50	70	70
78496C	--	--	--	--	--	--	--	--	--	--	--
78496C	2.0	N	N	20	200	70	200	N	<50	20	30
78497C	2.0	N	N	50	500	150	300	N	<50	70	150
78498C	2.0	N	N	50	300	100	200	N	<50	100	30
78499C	2.0	N	N	50	500	100	200	N	<50	70	30
78500C	2.0	N	N	30	200	1,000	200	N	<50	70	30
78501C	2.0	N	N	50	500	200	>1,000	N	<50	150	50
78503C	5.0	N	N	50	500	100	300	N	<50	150	100
78504C	3.0	N	N	70	500	200	1,000	N	<50	100	100
78505C	2.0	N	N	50	300	100	>1,000	N	<50	100	50
78506C	3.0	N	N	50	500	100	>1,000	N	<50	50	50
78507C	2.0	N	N	50	300	150	1,000	N	<50	50	50
78508C	2.0	N	N	30	300	700	700	N	<50	50	70
78509C	2.0	N	N	20	300	1,000	1,000	N	<50	20	20
78510C	<2.0	N	N	10	200	100	>1,000	N	<50	<10	20
78511C	2.0	N	N	50	200	200	200	N	<50	100	20
78512C	2.0	N	N	50	300	700	100	N	<50	100	100
78513C	2.0	N	N	20	300	300	150	N	<50	100	100
78514C	2.0	N	N	30	500	200	1,000	N	50	100	50
78515C	5.0	N	N	70	500	200	700	N	<50	150	100
78516C	5.0	N	N	50	500	300	200	N	<50	100	1,000
78517C	5.0	N	N	50	200	150	200	N	<50	70	100
78518C	3.0	N	N	50	200	500	200	N	<50	70	50
78519C	5.0	N	N	100	200	1,000	150	N	<50	70	200
78520C	5.0	N	N	70	500	500	200	N	<50	100	150
78521C	5.0	N	N	70	500	700	200	N	<50	100	100
78522C	5.0	N	N	50	300	500	200	N	<50	100	30
78523C	5.0	N	N	20	500	100	150	N	<50	100	30
78524C	3.0	N	N	70	200	200	200	N	<50	100	50
78525C	5.0	N	N	20	200	200	200	N	<50	100	700
78526C	5.0	N	N	10	150	150	100	N	<50	50	100
78527C	5.0	N	N	30	200	700	300	N	<50	100	100
78528C	5.0	N	N	30	500	150	300	N	<50	100	500
78529C	5.0	N	N	30	300	500	500	N	<50	100	500
78530C	5.0	<2.0	N	20	150	500	200	N	<50	50	700
78531C	3.0	N	N	50	100	700	150	N	<50	50	50
78532C	3.0	N	N	100	150	700	150	N	<50	150	500
78533C	5.0	N	N	50	200	70	150	N	<50	70	100

sample	S-SR	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
78489C	N	20	N	200	150	N	100	N	1,000	N
78490C	N	50	150	500	200	<100	200	500	>1,000	N
78491C	N	30	150	500	150	<100	150	<500	500	N
78492C	N	50	N	300	200	N	200	<500	>1,000	N
78493C	N	30	N	300	200	N	150	<500	1,000	N
78494C	N	30	N	300	150	N	150	500	1,000	N
78495C	N	20	N	300	150	N	150	500	500	N
78496C	N	20	N	200	150	N	150	N	---	N
78497C	N	30	N	300	150	N	150	<500	>1,000	N
78498C	N	30	N	500	200	N	150	N	1,000	N
78499C	N	30	N	500	200	N	150	N	500	N
78500C	N	20	N	300	200	N	150	<500	300	N
78501C	N	30	N	300	200	N	200	N	500	N
78502C	N	50	N	300	300	N	100	N	300	N
78503C	N	30	N	300	300	N	100	N	---	N
78504C	N	30	N	300	300	N	100	N	>1,000	N
78505C	N	20	N	300	200	N	100	N	>1,000	N
78506C	N	20	20	300	200	N	200	N	300	N
78507C	N	20	100	300	200	N	200	N	300	N
78508C	N	20	N	300	200	N	150	N	>1,000	N
78509C	N	20	N	1,000	200	N	200	N	>1,000	N
78510C	N	20	70	700	150	N	200	N	>1,000	N
78511C	N	20	N	300	200	N	100	N	500	N
78512C	N	30	N	500	200	N	100	N	>1,000	N
78513C	N	30	N	300	200	N	100	N	>1,000	N
78514C	N	50	<20	500	300	N	200	N	1,000	N
78515C	N	30	N	300	300	N	150	N	500	N
78516C	N	30	N	500	300	N	100	N	700	N
78517C	N	30	N	300	300	N	100	N	500	N
78518C	N	30	N	300	300	N	100	N	300	N
78519C	N	30	N	300	200	N	100	N	700	N
78520C	N	30	N	300	300	N	100	N	500	N
78521C	N	30	N	300	200	N	100	N	500	N
78522C	N	30	N	300	200	N	70	N	500	N
78523C	N	30	N	300	300	N	100	N	500	N
78524C	N	30	N	300	200	N	100	N	700	N
78525C	N	30	100	500	500	N	100	<500	500	N
78526C	N	30	20	200	500	N	100	<500	300	N
78527C	N	50	N	200	500	N	150	500	300	N
78528C	N	50	N	200	300	N	150	<500	700	N
78529C	N	50	N	200	300	N	200	700	500	N
78530C	N	20	70	300	300	<100	70	500	300	N
78531C	N	20	N	200	200	N	100	<500	200	N
78532C	N	20	N	200	200	N	100	<500	300	N
78533C	N	30	N	200	200	N	70	<500	300	N

sample	LATITUDE	LONGITUDE	S-FEX	S-MGX	S-CAZ	S-TIX	S-MN	S-AG	S-AS	S-AU	S-B	S-BA
78534C	67 37 43	154 48 12	10.0	2.00	1.00	1.0	1,500	N	N	N	200	1,000
78535C	67 36 36	154 49 12	5.0	7.00	10.00	1.0	500	N	N	N	100	500
78536C	67 36 30	154 48 36	5.0	1.50	1.00	1.0	300	N	N	N	500	1,000
78537C	67 36 0	154 50 56	10.0	1.00	.70	1.0	1,000	N	N	N	200	1,000
78538C	67 36 18	154 50 30	2.0	10.00	10.00	.3	500	N	N	N	100	500
78539C	67 35 36	154 51 24	10.0	.50	2.00	>1.0	1,000	N	N	N	200	700
78540C	67 35 48	154 51 36	10.0	1.50	1.00	>1.0	500	N	N	N	300	1,000
78541C	67 34 48	154 52 38	5.0	.50	2.00	.7	500	N	N	N	200	700
78542C	67 34 54	154 53 12	10.0	1.00	.70	>1.0	700	N	N	N	300	700
78544C	67 33 33	154 54 12	10.0	1.00	2.00	>1.0	300	7.0	N	N	>0	>5,000
78545C	67 33 48	154 54 30	10.0	.70	3.00	1.0	300	N	N	N	200	>5,000
78546C	67 50 10	155 9 36	7.0	1.00	1.00	>1.0	1,000	N	N	N	200	1,500
78547C	67 50 28	155 6 36	5.0	1.00	1.50	>1.0	1,500	3.0	N	N	200	1,000
78548C	67 47 45	155 23 27	10.0	.70	1.00	>1.0	2,000	N	N	N	200	700
78549C	67 46 33	155 21 46	7.0	1.00	2.00	>1.0	1,000	N	N	N	300	700
78550C	67 47 48	155 23 12	10.0	.70	2.00	>1.0	5,000	N	N	N	200	700
78551C	67 46 33	155 22 6	10.0	.70	2.00	1.0	1,500	N	N	N	200	1,000
78552C	67 47 55	155 19 48	10.0	.70	2.00	>1.0	>5,000	N	N	N	200	1,000
78553C	67 46 51	155 21 24	5.0	1.50	1.00	>1.0	1,500	N	N	N	300	1,500
78554C	67 48 43	155 17 24	10.0	.70	.70	>1.0	5,000	N	N	N	200	1,000
78555C	67 47 42	155 20 6	10.0	.70	.70	>1.0	1,500	N	N	N	200	1,000
78556C	67 49 22	155 15 46	10.0	.70	.70	>1.0	2,000	N	N	N	200	1,000
78557C	67 48 6	155 18 48	7.0	.70	.70	>1.0	700	N	N	N	200	1,000
78558C	67 49 50	155 14 36	7.0	.70	.70	>1.0	2,000	N	N	N	200	1,000
78559C	67 48 37	155 17 16	10.0	.50	1.00	>1.0	2,000	N	N	N	300	1,000
78561C	67 48 54	155 6 12	10.0	1.00	.70	>1.0	1,000	N	N	N	200	1,000
78562C	67 52 28	155 7 24	10.0	1.00	.70	>1.0	>5,000	N	N	N	200	1,000
78563C	67 14 24	154 22 30	10.0	1.50	.50	>1.0	1,500	N	N	N	200	1,500
78564C	67 14 20	154 22 36	5.0	2.00	2.00	>1.0	700	N	N	N	300	1,000
78565C	67 13 35	154 14 10	10.0	2.00	2.00	>1.0	1,000	N	N	N	500	1,000
78566C	67 13 32	154 14 25	10.0	1.50	.70	>1.0	700	N	N	N	300	1,000
78567C	67 13 42	154 10 0	7.0	5.00	10.00	>1.0	1,500	3.0	N	N	300	700
78568C	67 13 36	154 10 0	7.0	2.00	5.00	>1.0	1,000	3.0	N	N	500	700
78569C	67 14 12	154 4 24	5.0	3.00	7.00	>1.0	1,000	N	N	N	300	700
78570C	67 13 33	154 1 36	5.0	3.00	7.00	>1.0	700	N	N	N	200	500
78571C	67 16 15	154 10 6	10.0	2.00	3.00	>1.0	1,500	N	N	N	300	700
78572C	67 14 45	153 59 56	5.0	3.00	5.00	>1.0	1,000	N	N	N	300	700
78573C	67 14 36	154 2 40	5.0	3.00	5.00	>1.0	700	N	N	N	200	500
78574C	67 12 6	153 56 10	5.0	5.00	7.00	>1.0	1,000	N	N	N	200	300
78575C	67 13 0	154 1 36	5.0	5.00	5.00	>1.0	1,000	N	N	N	300	1,000
78576C	67 9 47	153 26 23	10.0	5.00	5.00	>1.0	1,000	N	N	N	300	1,000
78577C	67 9 40	154 1 10	3.0	2.00	3.00	>1.0	700	N	N	N	200	500
78578C	67 12 48	153 59 12	5.0	2.00	3.00	>1.0	1,000	N	N	N	200	500
78579C	67 10 19	154 26 56	5.0	1.50	2.00	1.0	700	N	N	N	200	1,000
78580C	67 9 30	154 23 48	3.0	5.00	7.00	>1.0	1,000	N	N	N	100	500

sample	S-RE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PR
78534C	5.0	N	N	50	200	70	100	N	<50	100	100
78535C	3.0	N	N	10	100	20	100	N	<50	50	50
78536C	5.0	N	N	20	200	20	100	N	<50	20	30
78537C	5.0	N	N	50	500	100	200	N	<50	150	30
78538C	3.0	N	N	10	100	700	150	N	<50	30	20
78539C	3.0	N	N	100	300	500	300	N	<50	200	150
78540C	5.0	N	N	100	500	500	300	N	<50	200	50
78541C	5.0	N	N	20	200	50	150	N	<50	150	50
78542C	5.0	N	N	100	500	500	500	N	<50	150	100
78544C	2.0	150	N	50	100	500	300	N	<50	70	700
78545C	5.0	N	N	30	200	100	300	N	<50	200	200
78546C	3.0	N	N	70	700	100	1,000	N	<50	100	100
78547C	3.0	N	N	50	700	200	1,000	N	<50	70	1,000
78548C	3.0	N	N	70	500	200	500	N	<50	100	100
78549C	3.0	N	N	50	500	150	1,000	N	<50	100	30
78550C	3.0	N	N	70	500	700	500	N	<50	100	100
78551C	5.0	N	N	70	300	500	200	N	<50	100	700
78552C	5.0	N	N	70	700	200	500	N	<50	100	150
78553C	5.0	N	N	50	700	100	700	N	<50	100	100
78554C	3.0	N	N	50	700	150	200	N	<50	70	150
78555C	5.0	N	N	50	500	150	500	N	<50	150	150
78556C	3.0	N	N	50	500	200	500	N	<50	100	100
78557C	3.0	N	N	50	700	150	500	N	<50	100	50
78558C	3.0	N	N	50	500	200	>1,000	N	50	100	50
78559C	3.0	N	N	50	500	200	700	N	50	100	100
78561C	5.0	N	N	50	500	150	700	N	<50	100	50
78562C	3.0	N	N	70	700	700	200	N	<50	150	500
78563C	3.0	N	N	50	500	200	200	N	50	70	150
78564C	5.0	N	N	20	200	150	200	N	50	50	150
78565C	5.0	N	N	50	500	150	200	N	50	50	100
78566C	5.0	N	N	50	300	150	200	N	50	30	100
78567C	2.0	N	N	20	200	100	150	N	50	20	50
78568C	3.0	N	N	50	150	200	150	N	50	20	500
78569C	2.0	N	N	20	150	100	150	N	70	50	100
78570C	<2.0	N	N	50	150	200	200	N	50	30	200
78571C	5.0	N	N	50	150	100	500	N	50	20	100
78572C	2.0	N	N	20	200	200	200	N	70	30	30
78573C	2.0	N	N	30	200	300	300	N	50	30	50
78574C	2.0	N	N	20	50	50	100	N	50	20	50
78575C	2.0	N	N	50	200	300	200	N	70	50	100
78576C	2.0	N	N	100	150	150	100	N	50	100	100
78577C	2.0	N	N	10	100	50	70	N	<50	20	50
78578C	2.0	N	N	10	100	150	50	N	50	50	50
78579C	3.0	N	N	15	200	70	50	N	<50	100	50
78580C	2.0	N	N	15	100	70	70	N	<50	50	50

sample	S-SB	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
78534C	N	50	N	300	200	N	70	<500	500	N
78535C	N	20	N	300	100	N	50	N	300	N
78536C	N	20	N	200	200	N	50	<500	300	N
78537C	N	30	N	300	300	N	70	<500	500	N
78538C	N	10	N	200	100	N	50	<500	200	N
78539C	N	30	N	300	200	N	150	<500	1,000	N
78540C	N	50	N	500	300	N	100	<500	700	N
78541C	N	20	N	300	300	N	50	N	500	N
78542C	N	50	N	300	300	N	100	N	500	N
78544C	N	30	100	200	150	100	100	N	1,000	N
78545C	N	30	N	500	300	N	70	N	1,000	N
78546C	N	30	N	300	300	N	100	N	700	N
78547C	N	50	N	300	300	N	200	<500	>1,000	N
78548C	N	50	N	300	300	N	200	<500	1,000	N
78549C	N	30	N	700	200	N	200	<500	1,000	N
78550C	N	30	N	700	300	N	200	<500	1,000	N
78551C	N	30	N	500	300	N	150	<500	1,000	N
78552C	N	50	N	700	300	N	300	N	>1,000	N
78553C	N	50	N	500	500	N	150	N	1,000	N
78554C	N	50	N	300	300	N	150	N	1,000	N
78555C	N	50	N	300	300	N	150	N	>1,000	N
78556C	N	50	N	300	300	N	150	N	700	N
78557C	N	50	N	300	300	N	150	N	1,000	N
78558C	N	50	N	300	300	N	150	N	1,000	N
78559C	N	50	N	500	300	N	200	N	>1,000	N
78561C	N	50	N	300	300	N	200	N	1,000	N
78562C	N	50	N	300	300	N	200	N	700	N
78563C	N	50	N	300	300	N	150	3,000	700	N
78564C	N	50	N	500	200	<100	150	N	700	N
78565C	N	50	N	500	300	N	150	N	700	N
78566C	N	50	N	300	200	N	150	N	1,000	N
78567C	N	50	N	300	200	N	150	<500	700	N
78568C	N	50	N	500	200	N	200	N	500	N
78569C	N	50	N	500	200	N	150	N	700	N
78570C	N	50	N	500	200	N	150	N	500	N
78571C	N	50	70	500	200	500	200	N	500	N
78572C	N	50	N	1,000	200	<100	200	N	>1,000	N
78573C	N	50	N	700	200	N	200	N	500	N
78574C	N	20	N	500	100	N	150	N	500	N
78575C	N	50	N	500	200	N	200	N	300	N
78576C	N	50	N	500	200	N	200	N	500	N
78577C	N	20	N	500	200	N	200	N	500	N
78578C	N	30	N	300	150	N	100	N	300	N
78579C	N	30	N	300	200	N	70	N	300	N
78580C	N	30	N	300	200	N	70	N	300	N

sample	S-RE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-N3	S-NI	S-PB
78581C	2.0	N	N	20	300	200	200	N	100	70	150
78582C	2.0	N	N	50	300	200	200	N	50	100	100
78583C	2.0	N	N	50	300	200	70	N	50	100	100
78584C	<2.0	N	N	30	500	50	50	N	<50	100	30
78585C	2.0	N	N	20	300	50	50	N	<50	70	20
78586C	<2.0	N	N	20	500	20	70	N	<50	50	20
78587C	3.0	N	N	20	200	100	100	N	<50	100	20
78588C	3.0	N	N	50	300	200	300	15	<50	150	30
78589C	3.0	N	N	70	500	700	1,000	N	50	70	500
78590C	3.0	N	N	20	200	150	500	N	<50	100	20
78591C	5.0	N	N	20	300	100	500	N	<50	100	20
78592C	5.0	N	N	50	200	300	>1,000	20	<50	200	700
78593C	5.0	N	N	20	150	500	>1,000	100	<50	150	100
78594C	5.0	N	N	20	200	100	200	<10	<50	100	50
78595C	3.0	N	N	30	200	500	300	10	<50	150	20
78596C	2.0	N	N	50	700	150	1,000	N	<50	70	150
78597C	5.0	N	N	50	700	500	1,000	N	<50	100	100
78598C	5.0	N	N	70	500	200	500	<10	<50	100	200
78599C	5.0	N	N	50	500	1,000	1,000	N	<50	70	50
78600C	2.0	N	N	70	700	200	200	N	50	50	150
78601C	2.0	N	N	70	300	200	500	N	50	50	150
78602C	2.0	N	N	30	200	70	200	N	<50	30	70
78603C	3.0	N	N	70	500	1,000	>1,000	N	50	100	100
78604C	3.0	N	N	50	300	500	300	N	50	100	1,000
78605C	3.0	N	N	70	500	1,500	>1,000	N	50	100	500
78606C	3.0	N	N	70	500	5,000	1,000	N	50	100	100
78607C	3.0	N	N	50	500	300	1,000	N	50	70	70
78608C	3.0	N	N	50	500	200	500	N	50	50	50
78609C	2.0	N	N	50	30	1,000	150	N	<50	30	20
78610C	2.0	N	N	100	700	500	>1,000	N	50	100	100
78611C	2.0	N	N	70	700	500	>1,000	N	50	100	100
78612C	3.0	N	N	50	700	10,000	500	N	50	100	300
78613C	3.0	N	N	50	500	100	>1,000	N	<50	100	70
78614C	3.0	N	N	100	300	500	300	N	<50	100	500
78615C	3.0	N	N	50	500	3,000	>1,000	N	50	100	70
78616C	3.0	N	N	50	700	2,000	>1,000	N	50	100	100
78617C	3.0	N	N	50	500	700	500	N	<50	100	50
78618C	3.0	N	N	20	500	100	150	N	<50	100	100
78619C	3.0	N	N	50	500	200	150	N	<50	100	70
78620C	3.0	N	N	30	500	100	70	N	<50	100	50
78621C	2.0	N	N	10	100	50	200	N	70	20	50
78622C	2.0	N	N	20	200	150	100	N	70	50	50
78623C	<2.0	N	N	10	70	200	150	N	50	10	50
78624C	<2.0	N	N	20	100	200	150	N	50	30	50
78625C	<2.0	N	N	20	100	150	1,000	N	100	<10	100

sample	S-SB	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
78581C	N	50	50	1,000	200	N	200	N	500	N
78582C	N	50	N	500	200	N	200	N	500	N
78583C	N	50	N	500	200	N	200	N	700	N
78584C	N	50	N	300	300	N	100	N	200	N
78585C	N	50	N	300	300	N	70	N	200	N
78586C	N	50	N	500	300	N	100	N	200	N
78587C	N	30	N	200	300	N	100	N	500	N
78588C	N	30	N	300	300	N	100	<500	500	N
78589C	N	50	N	300	300	N	200	N	>1,000	N
78590C	N	30	N	200	200	N	70	N	300	N
78591C	N	30	N	300	200	N	100	N	500	N
78592C	N	20	N	300	200	N	150	N	500	N
78593C	N	15	N	1,000	300	N	200	500	300	N
78594C	N	30	N	500	200	N	70	<500	500	N
78595C	N	30	N	500	200	N	100	<500	500	N
78596C	N	30	N	200	200	N	200	N	700	<200
78597C	N	50	N	300	300	N	200	<500	1,000	N
78598C	N	50	N	300	300	N	300	N	1,000	N
78599C	N	50	N	300	300	N	300	N	1,000	N
78600C	N	50	N	300	200	N	200	N	>1,000	N
78601C	N	50	N	300	200	N	200	N	>1,000	N
78602C	N	20	N	500	150	N	150	3,000	700	N
78603C	N	30	N	300	300	N	300	N	700	N
78604C	N	30	N	500	200	N	200	N	1,000	N
78605C	N	30	N	500	200	N	300	N	1,000	N
78606C	N	50	N	500	300	N	200	N	1,000	N
78607C	N	50	N	1,000	300	N	300	N	>1,000	N
78608C	N	30	N	500	200	N	200	5,000	1,000	N
78609C	N	30	N	<200	100	N	70	N	1,000	N
78610C	N	50	N	700	200	N	300	N	>1,000	N
78611C	N	20	N	1,500	200	N	500	N	1,000	N
78612C	N	50	N	500	300	N	200	N	1,000	N
78613C	N	50	N	300	300	N	200	N	500	N
78614C	N	30	N	300	300	N	100	N	300	N
78615C	N	50	N	500	300	N	200	N	1,000	N
78616C	N	50	N	500	300	N	300	N	1,000	N
78617C	N	30	N	300	300	N	100	1,000	500	N
78618C	N	50	N	1,000	300	N	100	<500	300	N
78619C	N	50	N	300	500	N	100	<500	300	N
78620C	N	50	N	300	500	N	100	N	300	N
78621C	N	30	N	300	200	100	200	N	700	N
78622C	N	30	N	300	200	N	200	N	300	N
78623C	N	20	20	1,000	200	N	200	N	>1,000	N
78624C	N	20	N	700	200	N	150	N	1,000	N
78625C	N	20	70	300	200	N	300	N	>1,000	<200

sample	LATITUDE	LONGITUD	S-FEX	S-WGX	S-CAZ	S-TIX	S-MN	S-AG	S-AS	S-AU	S-B	S-BA
78626C	67 10 12	154 29 12	3.0	.70	2.00	>1.0	700	N	N	N	500	500
78627C	67 10 21	154 29 36	3.0	.70	2.00	>1.0	700	N	N	N	200	700
78628C	67 10 42	154 30 24	3.0	.70	2.00	>1.0	1,000	N	N	N	500	700
78629C	67 11 8	154 31 33	3.0	.70	3.00	>1.0	1,000	N	N	N	500	500
78630C	67 6 42	154 13 42	3.0	1.00	2.00	>1.0	1,500	N	N	N	200	1,000
78631C	67 8 3	154 8 48	5.0	1.00	2.00	>1.0	1,000	N	N	N	200	700
78632C	67 9 8	154 5 0	5.0	2.00	3.00	>1.0	1,500	N	N	N	200	1,000
78633C	67 11 3	154 4 24	5.0	7.00	10.00	.7	1,000	N	N	N	150	200
78634C	67 8 54	154 2 18	3.0	3.00	5.00	>1.0	700	N	N	N	100	300
78635C	67 7 0	154 6 12	3.0	1.00	3.00	>1.0	700	N	N	N	200	500
78636C	67 6 10	153 55 48	3.0	1.00	5.00	>1.0	700	N	N	N	150	3,000
78637C	67 5 3	153 56 24	3.0	.70	2.00	>1.0	700	N	N	N	200	1,500
78638C	67 37 18	155 13 24	5.0	1.50	3.00	>1.0	700	N	N	N	300	1,000
78639C	67 32 33	155 5 54	3.0	2.00	10.00	>1.0	700	N	N	N	100	>5,000
7SPX229C	67 34 43	154 11 42	3.0	.70	.70	1.0	300	N	N	N	50	500
7SPX230C	67 37 59	154 15 16	3.0	.70	1.00	.7	300	N	N	N	70	700
7SPX231C	67 38 26	154 16 37	3.0	.50	.70	1.0	500	N	N	N	100	700
7SPX232C	67 39 21	154 20 51	5.0	1.00	.70	>2.0	700	N	N	N	100	700
7SPX233C	67 41 0	154 22 49	3.0	.70	1.00	1.0	700	N	N	N	70	700
7SPX234C	67 40 52	154 24 34	3.0	.70	.70	>2.0	700	N	N	N	100	700
7SPX235C	67 38 1	154 24 31	3.0	1.00	5.00	1.0	500	N	N	N	50	700
7SPX236C	67 41 49	154 29 58	3.0	.70	.50	>2.0	500	N	N	N	70	500
7SPX237C	67 42 39	154 34 41	2.0	.50	.50	1.0	500	N	N	N	50	500
7SPX238C	67 42 26	154 37 59	3.0	.70	.30	1.0	500	N	N	N	70	700
7SPX239C	67 43 3	154 46 8	3.0	.70	.30	1.0	500	N	N	N	70	700
7SPX240C	67 43 14	154 49 37	3.0	.70	.50	1.0	500	N	N	N	70	700
7SPX241C	67 44 12	154 56 30	2.0	.50	.70	.7	500	N	N	N	70	700
7SPX242C	67 44 32	155 1 36	3.0	.70	.20	1.0	500	N	N	N	70	700
7SPX243C	67 42 36	154 57 12	10.0	.50	.70	.7	300	N	1,300	N	50	1,000
7SPX244C	67 42 25	154 51 50	5.0	1.00	1.50	1.0	500	N	N	N	50	700
7SPX245C	67 41 51	154 49 54	7.0	1.00	1.50	.7	300	<1.0	700	N	50	500
7SPX246C	67 40 45	154 41 4	10.0	1.00	1.00	1.0	500	N	N	N	50	500
7SPX247C	67 38 18	154 42 57	5.0	1.50	1.50	1.0	500	N	N	N	100	1,000
7SPX248C	67 37 59	154 43 31	3.0	2.00	5.00	>2.0	500	N	N	N	70	500
7SPX249C	67 38 1	154 43 0	1.0	5.00	10.00	.2	200	N	N	N	<20	<50
7SPX250C	67 40 25	154 37 4	7.0	2.00	2.00	1.0	700	N	N	N	100	2,000
7SPX251C	67 40 35	154 31 27	5.0	1.00	1.00	1.0	500	N	N	N	100	500
7SPX252C	67 39 25	154 28 15	15.0	1.00	3.00	.7	200	N	500	N	50	3,000
7SPX253C	67 37 1	154 25 26	5.0	1.50	2.00	1.0	500	N	N	N	100	2,000
7SPX254C	67 35 37	154 25 10	5.0	1.00	1.50	1.0	700	N	N	N	70	1,000
7SPX255C	67 34 50	154 19 3	3.0	.70	3.00	>2.0	500	N	N	N	50	1,000
7SPX256C	67 30 50	154 1 25	2.0	1.00	7.00	>2.0	500	N	N	N	70	300
7SPX257C	67 33 58	154 13 50	2.0	.50	7.00	>2.0	300	N	N	N	50	300
7SPX257C	67 32 2	154 10 21	5.0	.70	3.00	>2.0	700	N	N	N	70	700

sample	S-SB	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZP	S-TH
78626C	N	20	50	300	150	N	300	N	>1,000	N
78627C	N	20	20	300	150	N	200	N	>1,000	N
78628C	N	20	20	300	150	N	200	N	>1,000	N
78629C	N	20	200	300	150	200	300	N	>1,000	N
78630C	N	30	N	300	200	N	150	N	300	N
78631C	N	30	N	300	200	N	100	N	300	N
78632C	N	30	N	300	150	N	70	N	300	N
78633C	N	10	N	500	50	N	70	N	100	N
78634C	N	20	200	300	100	N	100	N	700	N
78635C	N	30	<20	300	150	N	200	N	1,000	N
78636C	N	50	<20	200	150	N	200	N	500	N
78637C	N	30	N	200	150	N	150	N	500	N
78638C	N	30	200	200	200	150	300	<500	>1,000	N
78639C	N	20	300	500	500	N	70	<500	500	N
7SPX229C	N	20	N	200	100	N	50	N	300	N
7SPX230C	N	20	N	200	150	N	50	N	300	N
7SPX231C	N	20	N	200	200	N	50	N	300	N
7SPX232C	N	30	N	300	300	N	70	N	300	N
7SPX233C	N	20	N	200	300	N	70	N	500	N
7SPX234C	N	20	N	200	300	N	100	N	500	N
7SPX235C	N	30	N	200	100	N	50	N	700	N
7SPX236C	N	20	N	200	200	N	50	N	700	N
7SPX237C	N	20	N	200	200	N	50	N	700	N
7SPX238C	N	30	N	200	200	N	50	N	500	N
7SPX239C	N	30	N	200	200	N	50	N	500	N
7SPX240C	N	30	N	200	200	N	70	N	700	N
7SPX241C	N	20	N	200	200	N	70	N	700	N
7SPX242C	N	30	N	200	200	N	70	N	300	N
7SPX243C	N	20	30	200	150	N	50	<500	300	N
7SPX244C	N	30	30	200	150	N	70	N	300	N
7SPX245C	N	15	70	200	70	N	50	N	200	N
7SPX246C	N	30	N	200	200	N	70	N	200	N
7SPX247C	N	30	N	200	150	N	70	N	500	N
7SPX248C	N	30	N	300	150	N	70	N	500	N
7SPX249C	N	<10	N	200	20	N	<20	N	<20	N
7SPX250C	N	30	N	200	150	N	50	N	200	N
7SPX251C	N	30	N	200	200	N	50	N	300	N
7SPX252C	N	15	N	200	100	N	50	N	300	N
7SPX253C	N	20	N	300	200	N	50	N	500	N
7SPX254C	N	20	N	200	200	N	70	N	700	N
7SPX255C	N	20	150	200	150	150	500	N	500	N
7SPX256C	N	20	100	300	100	<100	70	N	700	N
7SPX257C	N	30	50	200	150	<100	70	N	700	N

sample	S-BE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB
78626C	<2.0	N	N	20	70	150	200	N	100	<10	50
78627C	<2.0	N	N	20	70	200	150	N	70	<10	50
78628C	<2.0	N	N	20	70	200	150	N	100	<10	70
78629C	<2.0	N	N	20	70	100	300	N	100	<10	70
78630C	2.0	N	N	70	200	150	100	N	50	100	70
78631C	2.0	N	N	50	150	200	100	N	<50	70	70
78632C	2.0	N	N	50	100	100	100	N	<50	50	70
78633C	<2.0	N	N	50	50	150	70	N	<50	30	100
78634C	2.0	N	N	50	70	100	50	N	<50	20	50
78635C	2.0	N	N	20	100	100	200	N	100	20	100
78636C	<2.0	N	N	30	500	200	100	N	100	100	30
78637C	<2.0	N	N	20	300	100	50	N	50	50	30
78638C	3.0	N	N	30	500	700	200	N	50	50	200
78639C	15.0	N	N	15	100	150	100	N	<50	50	100
7SPX229C	2.0	N	N	10	100	30	70	N	<50	15	20
7SPX230C	2.0	N	N	20	150	100	100	N	<50	50	200
7SPX231C	2.0	N	N	10	200	70	70	N	<50	30	70
7SPX232C	2.0	N	N	15	300	150	100	N	<50	30	50
7SPX233C	2.0	N	N	15	200	50	100	N	<50	30	30
7SPX234C	2.0	N	N	15	300	50	150	N	<50	30	30
7SPX235C	2.0	N	N	15	100	20	50	N	<50	20	20
7SPX236C	2.0	N	N	15	200	30	100	N	<50	30	20
7SPX237C	2.0	N	N	10	150	30	200	N	<50	20	30
7SPX238C	2.0	N	N	15	200	50	150	N	<50	30	30
7SPX239C	2.0	N	N	15	200	30	100	N	<50	30	20
7SPX240C	2.0	N	N	10	200	50	100	N	<50	20	100
7SPX241C	2.0	N	N	10	200	70	150	N	<50	20	200
7SPX242C	2.0	N	N	20	200	70	700	N	<50	50	100
7SPX243C	2.0	N	N	50	150	150	150	N	<50	50	150
7SPX244C	2.0	N	N	20	150	150	100	N	<50	20	70
7SPX245C	2.0	N	N	50	100	150	100	N	<50	30	500
7SPX246C	2.0	N	N	20	150	300	150	N	<50	30	70
7SPX247C	2.0	N	N	20	150	50	100	N	<50	30	50
7SPX248C	2.0	N	N	20	100	30	70	N	<50	20	70
7SPX249C	<2.0	N	N	<10	<20	<10	<50	N	<50	<10	N
7SPX250C	2.0	N	N	20	200	200	100	N	<50	50	30
7SPX251C	2.0	N	N	20	300	150	100	N	<50	50	50
7SPX252C	<2.0	N	N	100	100	300	70	N	<50	50	200
7SPX253C	2.0	N	N	50	150	50	100	N	<50	15	200
7SPX254C	2.0	N	N	15	150	30	150	N	<50	20	20
7SPX255C	<2.0	N	N	15	100	200	200	N	100	15	30
7SPX256C	<2.0	N	N	15	100	50	100	N	<50	<10	150
7SPX257C	2.0	N	N	30	150	200	200	N	100	<10	50
						150	200	N	<50	30	30