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Surface-water-quality assessment of the Kentucky River basin in Kentucky: Chemical analyses of major, minor, and trace elements in fine-grained streambed sediments

by

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CONTENTS

ILLUSTRATIONS

TABLES

ABSTRACT

In 1986, the U.S. Geological Survey implemented a pilot program to test and refine concepts for a National Water Quality Assessment (NAWQA) program. The Kentucky River basin was one of four surface water basins chosen for this study.

Analytical results are presented for 471 streambed-sediment samples collected from the Kentucky River basin in the fall of 1987. The samples were collected randomly from high- and low-order streambeds and analyzed for 47 constituents. This report presents tables of analytical methods used, data tables cataloged by map number and locale, stream names and sample site locations.

INTRODUCTION

Background

The Kentucky River basin was one of four surface water basins chosen as part of an initial study conducted under the National Water Quality Assessment (NAWQA) program established by Congress in 1986 (White and others 1987). The long term goals of NAWQA are to: (1) provide a nationally consistent description of current water-quality conditions for a large part of the nation's water resources; (2) define the trends (or lack of trends) in water quality that have occurred over recent decades and provide a baseline for evaluating future trends in water-quality; and (3) identify and describe the relationships of the status and trends in water quality to relevant natural factors and the history of land use and waste management practices (Hirsh and others 1988).

With the exception of map figures (plate 1 and figure #1), U.S. Geological Survey Open-File Report 93-326-B is a digital version of this report. In the digital version, the textual part of the report and tables 1, 2a, 2b, and 5 are in standard ASCII format. The analytical data in tables 3, 4 and 6 are contained in USGS STATPAC formatted files, accessible by executing the USGS conversion program STP2DAT (Grundy and Miesch, 1987).

Purpose and Scope

This report includes descriptions of the sampling design, analytical methodologies, summary statistics and analytical results for the Kentucky River basin NAWQA study. The purpose of this report is to provide accessibility to the data, which is cataloged by map number, location, and stream name.

Description of the Study Area

The Kentucky River flows through east-central Kentucky, draining an area of about 11,200 square km. It originates in the uplands of southeast Kentucky and flows northwest through the central part of the state to its confluence with the Ohio River at Carrollton in north-central Kentucky.

The Kentucky River basin crosses several physiographic regions: the Bluegrass (Inner and Outer), the Knobs, and the Eastern Coal Field. The Inner and Outer Bluegrass regions are in the northern half of the basin, the Knobs region is located in the center of the basin, and the Eastern Coal Field region is in the southern half of the basin (figure 1).

The Outer Bluegrass region encompasses gently rolling uplands, except near streams where it is dissected and rugged. The Kentucky River is deeply entrenched through this region. Normal river altitudes range from 120 meters at Carrollton to about 160 meters near Richmond, whereas surface altitudes range from 240 to 300 meters. Eagle Creek and the Dix River are the major tributaries in the Outer Bluegrass region and land use is both agricultural and forested.

The Inner Bluegrass region is situated in the center of the Outer Bluegrass region. Its topography is gently rolling uplands, and the two major population areas in the basin, Frankfort and Lexington, are located within this region. The rest of the region is primarily agricultural except along the southwestern boundary, which is forested along the Kentucky River palisades. Altitudes range from 240 to 300 meters and Elkhorn Creek is the only major tributary in this region.

The Knobs region, which is named for its characteristic conical and flat-topped hillsides, is situated in the center of the basin separating the Outer Bluegrass region from the Eastern Coal Field. This region has a small amount of agricultural usage on the west; the eastern side is primarily an oil and gas producing region, and the remaining area is forested. No major urban areas are located here, and the Red River drains a major portion of the region.

The Eastern Coal Field region covers the southeastern half of the basin. It is a very rugged, dissected area consisting of narrow valleys and narrow steep-sided ridges. Surface and underground mining of bituminous coal is a significant activity here as is the production of oil and gas. The altitude ranges from about 300 to 1000 meters and the major tributaries draining this region are the North, South and Middle Forks of the Kentucky River.

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METHODS

Survey Design

Streambed sediments were collected from 105 high-order stream sites, sampled at 8 to 16-km intervals on mainstems of rivers to assess downstream river reaches. Samples were collected from 366 low-order stream sites on first- and second-order streams for use in establishing background distributions. These latter sites were selected randomly from a grid (10 km on a side) placed over the basin map so that summary statistics would be unbiased by emphasis on "enriched" or easily accessible areas.

Low-order streams are defined here as first- or second-order tributaries. First-order tributaries are the smallest, unbranched, mapped (1:24,000 inch map scale) tributaries; second-order tributaries are streams receiving only first-order tributaries. High-order streams are defined as those having third-order or larger tributaries; streams which receive only first- and second-order tributaries are third order (Langbein and Iseri, 1960).

A one-way nested analysis of variance (ANOVA) sample design was built into the sampling scheme to evaluate sources of variation on low-order streams. The design included four levels with 30 samples collected at each level to show: variation between sites in different grid elements (D1); variation between subbasins within a grid element (D2); variation associated with resampling a site adjacent to but upstream of the original site (D3); and variation associated with split samples (D4).

Sampling Methods and Sample Preparation

Samples were collected during October 1987. Sampling methods at low- and high-order streams were similar in using composite, surficial-sediment collections but differed in sieving techniques. Wet sieving was performed on high-order streams and dry sieving on low-order streams.

Samples were collected from the streambeds for high-order streams using stainless steel Ekman and ponar dredges at deep sites, and hand-held or pole mounted plastic scoops at shallow sites. Three to five subsamples from a

cross-channel transect were composited in a plastic tub, then wet sieved using a stainless-steel 63-micron sieve. The less than 63-micron fraction was used for analysis and represents the silt and clay sized sediment, also called the fine-fraction sediment. The sieved sediment/water slurry was poured into plastic settling jars and allowed to stand overnight. After settling, water was siphoned off and the settled fines placed in Kraft paper bags. These bags retain the fines but keep the sample aerobic by allowing air drying of the sample as water drips out and evaporates.

Samples from low-order streams were collected from the active stream channel using a stainless-steel scoop. Five to seven representative sub-samples were collected at each site. Care was taken to sample the oxidized portion of the bottom material (top 1-2 cm) and to restrict the loss of fine material while retaining as little water as possible. The sub-samples were placed on a 2-mm stainless-steel screen, which was placed over a stainless-steel pan. The sample was worked through the screen by hand and then transferred to a 6x10-inch Hubco aerobic sample bag. The samples were air dried in the bags before submittal to the laboratory. In cases where the sampled material appeared to be only fines, direct transfer was made to the Hubco bag withoug sieving. Both procedures resulted in bulk samples ranging from 0.5 to 1.5 kg dry weight.

Sample Submittal and Sample Preparation

Samples were submitted to the laboratories of the U.S. Geological Survey, Branch of Geochemistry in Denver, Colorado. The high-order stream samples, which had been wet sieved to less than 63 microns, were processed through a jaw crusher to break up the large aggregates of material that formed during drying. About 25 percent of the material was split off and archived. The remainder of the sample was processed using a ceramic plate pulverizer to disaggregate and homogenize the sample prior to submittal for analysis.

Samples from low-order streams were also first broken down by using the jaw crusher. The samples were then placed in a ceramic "juicer" (Mechanical Nasco-Asplin Soil Grinder) for further disaggregation with minimal particle disintegration. About 25 percent of the sample was split off and archived. The remainder of the sample was dry sieved through a 63-micron stainless-steel sieve and the less than 63-micron fraction was submitted for analysis.

Chemical Analysis

Samples were analyzed for 47 constituents. Table 1 lists the analytical and sample decomposition methods and the minimum reporting level for each constituent determined. The majority of elements were determined by inductively coupled plasma-atomic emission spectrometry (ICP-AES). Additional methods were employed for environmentally important elements when more sensitivity was required. Decomposition of the sediment used for elements measured by ICP-AES and atomic absorption are total digestions. Total sulfur and total carbon were determined by combustion techniques. The decompostions used for boron, uranium, and inorganic carbon are partial techniques. Organic carbon was calculated by determining the difference between total carbon and inorganic carbon. Quality assurance was observed by distributing standard reference materials, random sample splits, and analytical splits among the samples. The quality assessment program and results are published in Sanzolone and Ryder (1989). Protocols for sample handling and preparation procedures, analytical methods, use of instrumentation, laboratory procedures, and quality control are described by Arbogast, ed. (1990).

SUMMARY STATISTICS AND DATA

Table 2a lists the percentiles and minimum and maximum values for each element analyzed for the 366 low-order samples and table 2b lists corresponding information for the 105 high-order streambed-sediment samples analyzed.

Concentrations for the 21 constituents targeted by the NAWQA program are listed in table 3 for 411 streambed-sediment samples and 12 replicates. Each sample has an identification number preceded by a one or two. A low-order stream has a designation of 1, and a high-order stream has a designation of 2. The samples are identified by map number which can be found on plate 1. Concentrations for the remaining 22 constituents can be found in table 4. No values were observed at or above the reported detection limits for holmium or tantalum in any of the samples, and gold and bismuth were detected in one sample each. Map number 338 contained 15 μg/g gold, and ANOVA sample KYD1-3347 contained 10 μg/g bismuth. These four elements are not included in tables 3 and 4. Table 5 is a list of the stream names and map numbers for the streambed-sediment sites. Table 6 lists the 120 ANOVA samples and data for 43 constituents.

Values for arsenic by AAS and elements reported as percent by ICP-AES should contain 2 significant figures. The software used to generate tables 3, 4 and 6 does not recognize significant figures and some of the values listed in these columns may carry a nonsignificant digit to the right of the significant digits.

Further interpretation of the data presented here and on other studies conducted in the Kentucky River basin can be found in S.D. Porter's Open File Report (Porter and others, in press).

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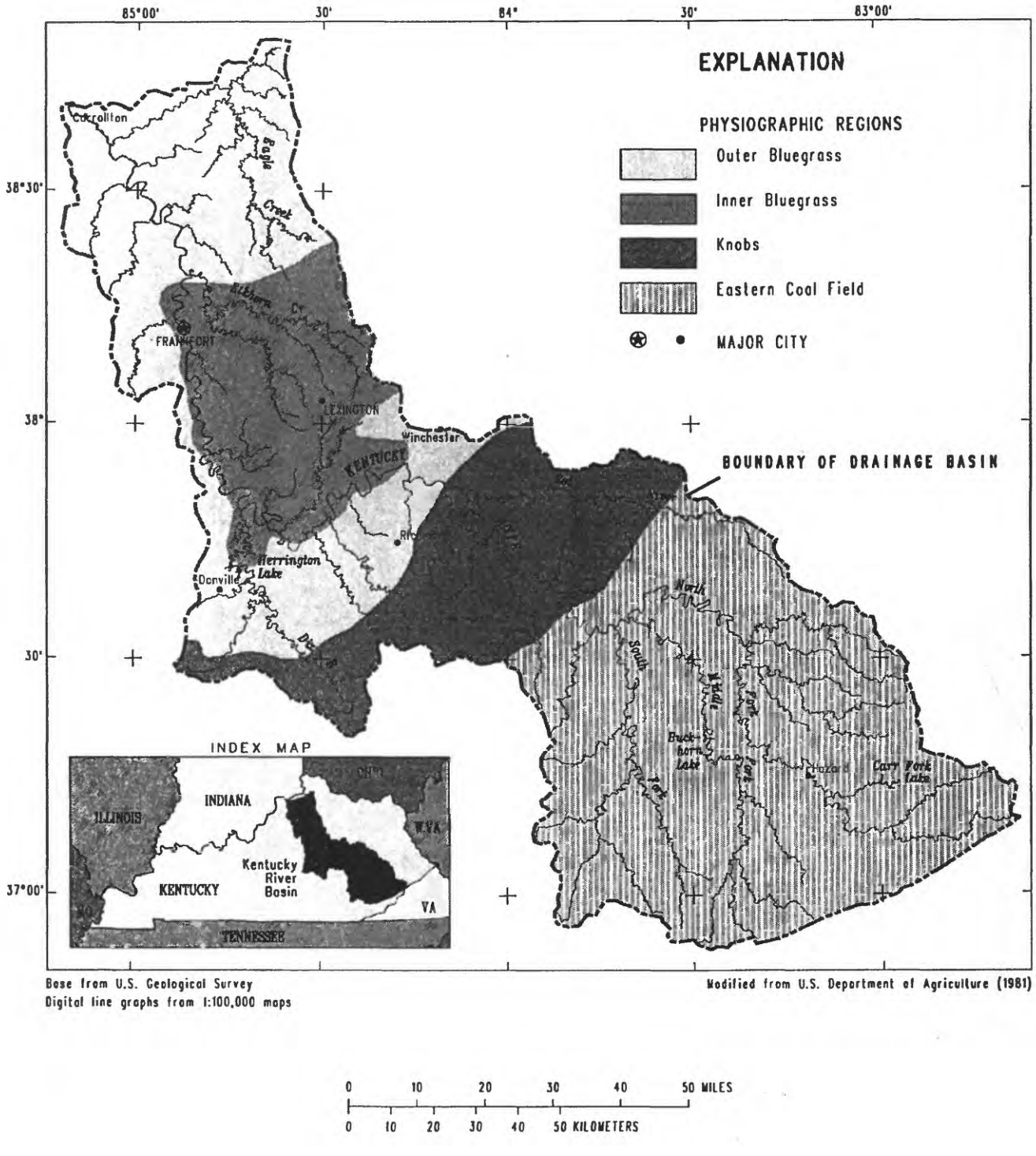

Figure 1. Kentucky River Basin.

Table 1. Analytical methods and minimum reporting levels used for the streambed survey in the Kentucky River basin 1987. (All concentrations are in micrograms per gram unless otherwise noted.)

Element	Minimum reporting level	Analytical method	Decomposition method
Ag	2	ICP-AES	(HCl, HNO3, HClO4, HF)
Al	.05%	ICP-AES	(HCl, HNO3, HClO4, HF)
As	.1	Hydride-AAS	(HCl, HNO3, HClO4)
Au	8	ICP-AES	(HCl, HNO3, HClO4, HF)
B	.4	Hot water soluble	(HCl, HNO3, HClO4, HF)
Ba	1	ICP-AES	(HCl, HNO3, HClO4, HF)
Be	1	ICP-AES	(HCl, HNO3, HClO4, HF)
Bi	10	ICP-AES	(HCl, HNO3, HClO4, HF)
C inorganic	.01%	Titration	(HClO4)
C organic	.01%	By difference	-------
C total	.01%	Infrared	(Combustion)
Ca	.05%	ICP-AES	(HCl, HNO3, HClO4, HF)
Cd	2	ICP-AES	(HCl, HNO3, HClO4, HF)
Ce	4	ICP-AES	(HCl, HNO3, HClO4, HF)
Co	1	ICP-AES	(HCl, HNO3, HClO4, HF)
Cr	1	ICP-AES	(HCl, HNO3, HClO4, HF)
Cu	1	ICP-AES	(HCl, HNO3, HClO4, HF)
Eu	2	ICP-AES	(HCl, HNO3, HClO4, HF)
Fe	.05%	ICP-AES	(HCl, HNO3, HClO4, HF)
Ga	4	ICP-AES	(HCl, HNO3, HClO4, HF)
Hg	.02	Cold vapor-AAS	(HNO3/Na2Cr2O7)
Ho	4	ICP-AES	(HCl, HNO3, HClO4, HF)
K	.05%	ICP-AES	(HCl, HNO3, HClO4, HF)
La	2	ICP-AES	(HCl, HNO3, HClO4, HF)
Li	2	ICP-AES	(HCl, HNO3, HClO4, HF)
Mg	.005%	ICP-AES	(HCl, HNO3, HClO4, HF)
Mn	4	ICP-AES	(HCl, HNO3, HClO4, HF)
Mo	2	ICP-AES	(HCl, HNO3, HClO4, HF)
Na	.005%	ICP-AES	(HCl, HNO3, HClO4, HF)
Nb	4	ICP-AES	(HCl, HNO3, HClO4, HF)
Nd	4	ICP-AES	(HCl, HNO3, HClO4, HF)
Ni	2	ICP-AES	(HCl, HNO3, HClO4, HF)
P	.005%	ICP-AES	(HCl, HNO3, HClO4, HF)
Pb	4	ICP-AES	(HCl, HNO3, HClO4, HF)
S total	.01%	Infrared	(Combustion)
Sb	.1	Hydride-AAS	(HCl, HNO3, HClO4)
Sc	2	ICP-AES	(HCl, HNO3, HClO4, HF)
Sn	10	ICP-AES	(HCl, HNO3, HClO4, HF)
Sr	2	ICP-AES	(HCl, HNO3, HClO4, HF)
Ta	40	ICP-AES	(HCl, HNO3, HClO4, HF)
Th	4	ICP-AES	(HCl, HNO3, HClO4, HF)
Ti	.005%	ICP-AES	(HCl, HNO3, HClO4, HF)
U	.05	Fluorimetry	(Partial HNO3)
V	2	ICP-AES	(HCl, HNO3, HClO4, HF)
Y	2	ICP-AES	(HCl, HNO3, HClO4, HF)
Yb	1	ICP-AES	(HCl, HNO3, HClO4, HF)
Zn	4	ICP-AES	(HCl, HNO3, HClO4, HF)

ICP-AES = Inductively Coupled Plasma-Atomic Emission Spectrometry
AAS = Atomic Absorption Spectrometry

Table 2a. Percentile distribution of element concentrations in fine-grained streambed-sediment samples from low-order streams in the Kentucky River basin. All values are in micrograms per gram unless noted otherwise. N = Number of observations.

ELEMENT	N=	MINIMUM	10 %	25 %	50 %	75 %	90 %	95 %	MAXIMUM
Ag	366	<2	<2	<2	<2	<2	<2	<2	11
Al %	366	2.7	4.3	5.0	6.2	7.5	8.3	8.6	9.7
As	366	1.7	4.7	5.5	6.7	9	13	21	110
Au	366	<8	<8	<8	<8	<8	<8	<8	15
B	364	0.4	0.4	0.6	0.9	1.4	2.2	3.4	8.2
Ba	366	180	370	415	470	540	590	620	830
Be	366	1	1	2	2	3	3	3	4
Bi	366	<10	<10	<10	<10	<10	<10	<10	<10
C% INORG	366	<.01	0.01	0.03	0.21	0.71	1.8	2.8	7.3
C% ORGNC	366	<.01	1.0	1.4	1.8	2.4	3.1	3.7	12
C% TOTAL	366	0.34	1.2	1.6	2.3	3.1	4.4	5.6	12
Ca %	366	0.07	0.19	0.28	1.1	3.0	6.3	8.9	23
Cd	366	<2	<2	<2	<2	<2	<2	<2	3
Ce	366	31	68	77	88	100	110	120	130
Co	366	6	13	17	20	24	32	41	84
Cr	366	25	42	50	62	75	86	92	120
Cu	366	7	12	15	20	26	32	45	320
Eu	366	<2	<2	<2	<2	<2	<2	<2	2
Fe %	366	1.2	2.5	2.9	3.5	4.1	4.7	5.6	9.6
Ga	366	<4	11	14	16	20	22	23	32
Hg	366	<.02	<.02	0.02	0.04	0.04	0.06	0.08	0.38
Ho	366	<4	<4	<4	<4	<4	<4	<4	<4
K %	366	0.93	1.5	1.8	2.2	2.5	2.7	2.9	3.9
La	366	22	36	39	44	52	56	58	63
Li	366	16	28	33	42	53	62	68	110
Mg %	366	0.23	0.38	0.48	0.62	0.73	0.92	1.1	5.1
Mn	366	160	680	870	1300	2200	3400	4500	29000
Mo	366	<2	<2	<2	<2	<2	<2	11	120
Na %	366	0.11	0.19	0.26	0.36	0.48	0.62	0.69	1.0
Nb	366	<4	<4	<4	7	9	11	12	18
Nd	366	21	32	36	40	48	52	55	61
Ni	366	9	18	22	30	38	49	69	180
P %	366	0.02	0.04	0.06	0.08	0.18	0.38	0.51	1.2
Pb	366	11	19	22	27	33	42	51	930
S% TOTAL	366	<.01	0.02	0.03	0.04	0.07	0.12	0.16	0.43
Sb	366	0.2	0.3	0.4	0.5	0.6	1.0	1.6	6.1
Sc	366	4	7	8	11	13	14	15	16
Sn	366	<10	<10	<10	<10	<10	<10	<10	20
Sr	366	47	66	78	93	110	140	160	300
Ta	366	<40	<40	<40	<40	<40	<40	<40	<40
Th	366	<4	9	10	12	14	16	16	23
Ti %	366	0.08	0.20	0.29	0.34	0.38	0.41	0.42	0.58
U	366	0.35	0.60	0.75	1.1	1.5	1.9	3.0	31
V	366	29	51	62	79	95	110	130	330
Y	366	10	19	21	23	26	30	32	47
Yb	366	1	3	3	3	3	3	3	4
Zn	366	31	56	70	91	120	150	190	400

Table 2b. Percentile distribution of element concentrations in fine-grained streambed-sediment samples from high-order streams in the Kentucky River basin. All values are in micrograms per gram unless noted otherwise. N = Number of observations.

ELEMENT	N =	MINIMUM	10 %	25 %	50 %	75 %	90 %	95 %	MAXIMUM
Ag	105	<2	<2	<2	<2	<2	<2	<2	28
Al %	105	3.6	4.8	5.4	6.7	8.8	10	10	11
As	105	4.2	5.2	6	7.3	8.2	12	15	29
Au	105	<8	<8	<8	<8	<8	<8	<8	<8
B	103	0.4	0.4	0.6	0.8	1.5	2.1	2.9	20
Ba	105	80	390	430	490	570	630	660	790
Be	105	1	2	2	2	3	3	3	4
Bi	105	<10	<10	<10	<10	<10	<10	<10	<10
C % INORG	105	0.01	0.03	0.09	0.23	0.52	1.4	2.0	5.7
C % ORGNC	105	0.66	1.5	1.8	2.3	2.8	3.5	4.0	8.6
C % TOTAL	105	0.69	1.7	2.1	2.5	3.5	4.6	5.4	8.7
Ca %	105	0.19	0.26	0.48	1.1	2.3	4.4	6.6	17
Cd	105	<2	<2	<2	<2	<2	<2	2	30
Ce	105	49	73	80	89	100	110	110	120
Co	105	10	13	17	21	24	29	31	76
Cr	105	34	54	60	76	89	99	100	2000
Cu	105	11	16	19	25	30	38	43	410
Eu	105	<2	<2	<2	<2	<2	<2	<2	2
Fe %	105	2	2.8	3.3	3.7	4	4.4	5	6.5
Ga	105	10	13	14	18	24	26	28	30
Hg	105	0.02	0.04	0.04	0.06	0.10	0.17	0.35	1.8
Ho	105	<4	<4	<4	<4	<4	<4	<4	<4
K %	105	1.1	1.4	1.8	2.2	2.5	2.7	2.8	3
La	105	26	36	40	46	54	58	58	63
Li	105	28	33	38	53	67	76	81	97
Mg %	105	0.34	0.53	0.60	0.72	0.82	0.90	1.1	2.5
Mn	105	480	780	990	1300	1700	2300	3000	7300
Mo	105	<2	<2	<2	<2	<2	<2	4	27
Na %	105	0.15	0.22	0.26	0.31	0.37	0.43	0.46	0.54
Nb	105	<4	<4	6	9	11	13	14	19
Nd	105	25	34	37	42	49	52	54	58
Ni	105	18	23	27	37	45	57	73	460
P %	105	0.03	0.06	0.07	0.10	0.25	0.53	0.63	1.1
Pb	105	14	23	27	31	42	62	87	340
S % TOTAL	105	0.02	0.03	0.06	0.08	0.11	0.18	0.24	1.1
Sb	105	0.4	0.4	0.5	0.6	0.7	0.9	1.5	3.2
Sc	105	6	8	9	12	15	16	17	18
Sn	105	<10	<10	<10	<10	<10	<10	<10	90
Sr	105	58	72	89	110	140	170	188	330
Ta	105	<40	<40	<40	<40	<40	<40	<40	<40
Th	105	7	9	10	12	14	15	16	17
Ti %	105	0.08	0.22	0.32	0.39	0.43	0.46	0.47	0.51
U	105	0.30	0.60	0.80	1.1	1.5	1.9	2.7	14
V	105	47	58	70	98	110	130	140	230
Y	105	13	21	23	25	28	33	35	42
Yb	105	2	3	3	3	3	3	4	4
Zn	105	63	76	98	120	150	190	250	650

Table 3. Analytical results for 21 constituents in fine-grained streambed sediments from the Kentucky River basin. All values are in micrograms per gram unless otherwise noted.

MAP #	LATITUDE	LONGITUDE	Ag	Al%	As	B	BA	Be	TOTAL C%	Cd	Cr	Cu
1-5	384533	843834	<2	7.6	4.7	0.9	400	2	1.20	<2	75	22
1-6	384627	844138	11	7.0	6.0	0.7	440	2	1.90	<2	73	24
1-7	384316	844756	<2	6.7	7.1	1.2	420	2	2.20	<2	71	26
1-18	383943	850927	<2	5.2	8.8	1.4	410	2	1.80	<2	49	18
1-19	384022	850241	<2	5.0	8.6	0.6	530	2	2.90	<2	52	15
1-21	384218	845353	<2	5.9	9.7	1.4	470	2	2.10	<2	65	23
1-22	383940	844715	<2	6.9	5.5	0.7	450	2	2.60	<2	69	22
1-23	384008	844138	<2	6.5	5.2	1.1	420	2	2.40	<2	61	22
1-24	384023	843553	<2	5.9	5.3	1.9	460	2	2.10	<2	61	18
1-25	383857	843506	<2	6.0	4.0	1.2	380	2	2.60	<2	58	19
1-26	383514	843506	<2	8.1	4.2	1.7	430	2	1.78	<2	84	25
1-27	383646	843823	<2	6.0	5.3	1.1	450	2	1.62	<2	65	24
1-28	383813	844217	<2	5.6	3.9	0.9	420	2	1.61	<2	43	19
1-30	383549	845359	<2	5.9	4.1	0.6	400	2	1.90	<2	53	20
1-31	383819	845954	<2	4.6	4.7	1.0	350	1	3.00	<2	42	15
1-32	383553	850122	<2	7.1	4.5	0.7	400	2	1.98	<2	69	28
1-33	383537	850919	<2	5.7	6.2	2.6	360	2	3.60	<2	55	22
1-40	383406	850829	<2	4.8	6.2	0.7	380	2	5.80	<2	42	15
1-41	383418	850433	<2	4.5	5.4	1.4	310	1	5.20	<2	42	18
1-42	383340	845818	<2	5.8	5.9	0.5	440	2	3.00	<2	54	24
1-43	383420	845459	<2	6.0	4.4	0.9	380	2	3.00	<2	56	21
1-45	383409	844221	<2	5.7	19.0	1.3	750	2	3.38	<2	63	23
1-46	383437	843843	<2	6.3	6.7	0.9	410	2	2.50	<2	60	22
1-47	383053	843452	<2	6.1	4.5	1.0	380	2	2.50	<2	58	21
1-48	382834	843404	<2	5.5	4.6	0.9	410	2	2.00	<2	50	20
1-49	382757	843804	<2	5.7	10.0	1.6	600	2	2.68	<2	56	23
1-50	382837	844205	<2	5.8	6.0	<0.4	440	2	2.50	<2	54	17
1-51	382813	845004	<2	6.3	4.8	1.8	400	2	3.10	<2	67	21
1-52	382745	845139	<2	6.0	6.3	0.9	440	2	2.50	<2	59	18
1-53	382828	845836	<2	5.2	5.1	1.2	600	2	4.40	<2	45	17

Table 3. Continued

MAP #	Fe %	Hg	Mn	Mo	Ni	Pb	Sb	Sn	Th	V	Zn
1-5	4.1	0.04	1100	<2	33	14	0.4	<10	12	100	78
1-6	3.9	0.02	2200	<2	31	22	0.4	<10	13	88	72
1-7	4.3	0.10	2400	<2	36	51	1.0	<10	11	90	100
1-18	3.1	0.10	3400	<2	25	22	0.4	<10	11	66	70
1-19	3.3	0.08	4400	<2	26	37	0.6	<10	10	65	60
1-21	4.0	0.02	2900	<2	28	30	0.6	<10	13	82	70
1-22	4.3	0.04	1600	<2	32	17	0.3	<10	13	90	89
1-23	3.7	0.04	1000	<2	29	16	0.3	<10	12	77	83
1-24	3.4	0.04	2000	<2	27	26	0.4	<10	11	75	79
1-25	3.4	0.08	1200	<2	26	22	0.4	<10	11	79	79
1-26	4.5	<0.02	1100	<2	34	15	0.4	<10	13	100	85
1-27	3.5	0.02	2000	<2	29	20	0.4	<10	11	77	73
1-28	3.0	<0.02	810	<2	24	18	0.2	<10	11	66	64
1-30	3.2	<0.02	1300	<2	26	24	0.4	<10	11	74	77
1-31	2.8	<0.02	1700	<2	23	14	0.3	<10	8	51	49
1-32	3.8	0.02	850	<2	32	13	0.2	<10	11	94	76
1-33	3.4	0.06	1600	<2	27	21	0.6	<10	10	69	74
1-40	2.9	0.08	2300	<2	21	41	0.7	<10	5	57	58
1-41	3.0	0.02	2300	<2	22	16	0.4	<10	9	54	57
1-42	3.9	0.02	2600	<2	31	23	0.4	<10	11	74	69
1-43	3.4	0.02	1700	<2	28	17	0.5	<10	10	74	70
1-45	6.1	<0.02	6200	<2	33	34	0.7	<10	13	82	79
1-46	4.2	0.02	2100	<2	29	24	0.5	<10	11	80	85
1-47	3.5	0.02	1100	<2	27	24	0.4	<10	10	74	83
1-48	3.0	<0.02	1200	<2	24	18	0.7	<10	10	66	68
1-49	5.4	0.02	5100	<2	31	27	0.4	<10	12	84	72
1-50	3.6	0.04	2000	<2	26	20	0.3	<10	12	66	66
1-51	3.8	0.02	1600	<2	30	18	0.4	<10	11	80	71
1-52	3.7	<0.02	3000	<2	30	23	0.4	<10	11	75	66
1-53	2.9	0.04	1700	<2	24	97	0.5	<10	9	59	79

Table 3. Continued

MAP #	LATITUDE	LONGITUDE	Ag	Al%	As	B	BA	Be	TOTAL C%	Cd	Cr	Cu
1-54	382756	850344	<2	4.7	7.3	1.3	560	2	3.18	<2	49	15
1-55	382743	850810	<2	4.2	7.4	0.6	530	1	1.80	<2	41	14
1-61	382530	851015	<2	4.9	6.7	0.7	520	2	2.60	<2	52	13
1-62	382531	850322	<2	5.2	6.4	0.8	440	2	1.60	<2	52	17
1-63	382419	845739	<2	4.5	5.5	0.7	380	1	2.60	<2	46	16
1-64	382601	845225	<2	6.3	5.6	2.5	350	2	2.70	<2	59	24
1-65	382601	844821	<2	5.7	5.1	0.7	380	2	3.00	<2	50	17
1-66	382543	844119	<2	6.6	7.1	0.5	600	2	2.01	<2	65	21
1-67	382339	843808	<2	5.2	4.8	1.1	350	2	3.60	<2	45	15
1-68	382507	843416	<2	5.1	4.0	1.4	350	1	3.70	<2	45	15
1-70	381842	842705	<2	5.6	4.4	1.0	440	2	2.14	<2	52	19
1-71	381900	843138	<2	8.4	5.6	2.8	470	3	2.40	<2	81	23
1-72	381947	843756	<2	5.2	5.1	0.9	470	2	3.00	<2	47	15
1-73	382035	844243	<2	5.9	6.9	0.7	470	2	3.00	<2	58	18
1-75	382209	845324	<2	5.5	5.4	3.6	330	2	4.90	<2	54	18
1-76	381918	845658	<2	7.5	4.4	1.0	400	2	2.30	<2	65	23
1-77	381939	850330	<2	5.7	8.7	1.6	710	2	2.60	<2	63	20
1-78	382140	850840	<2	4.6	6.7	1.0	430	1	2.20	<2	42	300
1-80	381714	850451	<2	4.4	7.3	1.0	720	2	4.92	<2	42	13
1-81	381721	845746	<2	5.4	5.5	0.7	400	2	2.10	<2	50	19
1-82	381601	845512	<2	5.7	7.1	0.9	370	2	4.01	<2	61	23
1-83	381648	844953	<2	3.9	4.1	2.0	340	1	5.40	<2	40	11
1-84	381737	844324	<2	4.7	6.1	1.2	450	2	3.50	<2	47	16
1-85	381648	843922	<2	4.9	6.0	1.4	440	2	2.50	<2	44	11
1-86	381822	843539	<2	6.1	5.3	0.7	430	2	3.70	<2	58	19
1-87	381611	842933	<2	4.5	10.0	0.8	530	2	2.60	<2	48	13
1-89	381150	842335	<2	4.5	7.6	5.3	570	2	2.30	<2	53	11
1-90	381312	842748	<2	4.9	5.4	0.7	450	2	2.38	<2	47	9
1-92	381223	843819	<2	4.5	6.0	1.0	450	2	3.10	<2	43	14
1-93	381403	844158	<2	5.2	4.9	0.9	400	2	3.50	<2	48	15
1-94	381341	844734	<2	4.7	9.4	0.5	570	2	3.10	<2	52	14

Table 3. Continued

MAP #	Fe %	Hg	Mn	Mo	Ni	Pb	Sb	Sn	Th	V	Zn
1-54	3.3	0.04	4700	<2	21	34	0.4	<10	11	62	76
1-55	2.7	0.04	2600	<2	17	26	0.4	<10	11	57	81
1-61	3.1	0.02	4300	<2	21	28	0.5	<10	11	61	54
1-62	3.1	0.04	3200	<2	23	22	0.8	<10	11	70	59
1-63	2.5	0.08	1100	<2	20	25	0.6	<10	9	57	52
1-64	3.6	0.02	1100	<2	29	22	0.4	<10	10	75	73
1-65	3.2	<0.02	1100	<2	24	15	0.4	<10	5	67	57
1-66	4.5	<0.02	4600	<2	38	24	0.4	<10	13	88	77
1-67	3.0	<0.02	1300	<2	21	18	0.3	<10	8	60	58
1-68	2.6	<0.02	1100	<2	20	16	0.3	<10	8	58	57
1-70	3.1	0.02	1100	<2	24	23	0.3	<10	10	66	74
1-71	4.4	0.10	1000	<2	33	25	0.5	<10	14	110	99
1-72	3.1	0.02	2600	<2	22	23	3.6	<10	10	62	66
1-73	4.2	0.04	3300	<2	28	34	0.4	<10	14	76	79
1-75	3.2	0.04	1200	<2	25	25	0.5	<10	8	64	110
1-76	4.1	<0.02	1400	<2	31	13	0.3	<10	12	100	71
1-77	4.3	0.04	10000	<2	30	41	0.5	<10	15	77	76
1-78	2.5	0.08	1500	<2	16	23	0.5	<10	9	58	61
1-80	3.5	0.04	7800	<2	24	31	0.3	<10	10	61	56
1-81	3.4	0.02	1800	<2	22	22	0.4	<10	9	68	59
1-82	4.0	0.02	1500	<2	27	31	0.4	<10	10	73	82
1-83	2.2	0.04	2200	<2	17	20	0.3	<10	8	45	51
1-84	2.8	0.02	2500	<2	19	23	0.5	<10	10	57	63
1-85	3.2	0.04	2200	<2	20	26	0.5	<10	11	60	79
1-86	3.5	0.08	1100	<2	26	30	0.4	<10	9	73	120
1-87	3.5	0.02	2600	<2	20	27	0.5	<10	10	60	65
1-89	3.8	0.04	4800	<2	21	35	0.4	<10	12	62	51
1-90	2.7	0.02	1900	<2	19	29	0.3	<10	10	58	55
1-92	2.5	0.04	2100	<2	18	51	0.5	<10	11	51	58
1-93	3.0	0.04	2200	<2	21	25	0.3	<10	9	60	64
1-94	4.5	0.04	5500	<2	24	42	0.5	<10	10	65	76

Table 3. Continued

MAP #	LATITUDE	LONGITUDE	Ag	Al%	As	B	BA	Be	TOTAL C%	Cd	Cr	Cu
1-96	381225	850112	<2	6.1	9.3	<0.4	570	2	1.30	<2	66	22
1-98	380858	850212	<2	6.3	5.2	2.0	460	2	2.30	<2	67	19
1-99	380850	850128	<2	7.0	5.5	0.9	450	2	2.40	<2	72	20
1-100	380656	845446	<2	4.8	10.0	0.7	700	2	2.10	<2	51	13
1-101	380758	844811	<2	4.3	3.9	0.9	420	1	1.30	<2	49	9
1-102	380940	844234	<2	5.0	7.6	0.6	650	2	2.70	<2	57	17
1-103	380840	844045	<2	4.6	8.5	<0.4	730	2	2.50	<2	57	13
1-104	380929	843427	<2	4.5	5.7	0.6	740	1	4.20	<2	41	14
1-105	380929	842805	<2	4.2	5.0	0.8	580	2	4.80	<2	48	9
1-106	380802	842356	<2	4.8	5.6	0.4	450	2	2.25	<2	48	13
1-107	380345	841959	<2	4.1	5.4	1.9	350	1	3.90	<2	40	15
1-108	380506	842403	<2	3.8	3.5	1.2	370	1	1.70	<2	36	10
1-109	380258	842627	<2	5.0	7.5	1.6	440	2	3.40	<2	64	20
1-111	380609	843827	<2	4.6	8.5	0.7	600	2	4.00	<2	53	16
1-112	380343	844621	<2	4.6	5.8	1.3	470	2	2.70	<2	50	13
1-113	380428	844831	<2	4.3	4.9	<0.4	430	1	2.80	<2	41	14
1-114	380558	845509	<2	4.5	7.2	3.7	420	2	2.40	<2	46	11
1-115	380439	850051	<2	5.4	4.3	0.6	420	2	1.30	<2	48	19
1-116	380503	850229	<2	5.8	4.5	1.0	430	2	1.91	<2	55	18
1-118	380205	845151	<2	4.5	4.9	1.8	370	2	3.70	<2	43	17
1-119	380108	844852	<2	5.1	5.8	2.3	290	2	5.70	<2	52	14
1-120	380117	844552	<2	4.4	4.9	0.7	440	2	2.75	<2	44	13
1-121	380131	844003	<2	4.4	4.1	0.7	420	2	2.60	<2	42	12
1-122	380138	843611	<2	4.5	4.7	1.7	550	2	2.10	<2	44	19
1-123	375848	842730	<2	4.9	7.2	0.9	430	2	2.30	<2	51	10
1-124	380122	842448	<2	4.7	7.7	1.9	480	2	2.50	<2	51	12
1-125	380026	841819	<2	3.8	4.3	1.7	390	1	4.30	<2	42	11
1-127	375814	840801	<2	4.3	4.8	0.8	430	1	3.10	<2	38	12
1-129	375850	835914	<2	4.8	5.3	1.6	390	1	1.70	<2	42	12
1-130	375821	835607	<2	5.9	5.2	0.6	310	2	5.60	<2	53	15
1-131	375355	833056	<2	6.8	6.7	0.5	470	2	1.40	<2	77	30

Table 3. Continued

MAP #	Fe %	Hg	Mn	Mo	Ni	Pb	Sb	Sn	Th	V	Zn
1-96	5.1	0.04	4900	<2	39	26	0.4	<10	15	83	70
1-98	4.1	0.04	2100	<2	32	21	0.3	<10	13	80	75
1-99	4.4	<0.02	1500	<2	33	19	0.3	<10	12	93	79
1-100	4.3	0.08	4100	<2	22	34	0.4	<10	12	68	68
1-101	2.1	0.04	820	<2	15	19	0.4	<10	10	48	37
1-102	3.2	0.06	6500	<2	24	60	0.5	<10	12	61	130
1-103	3.5	0.06	7500	<2	21	42	0.3	<10	13	52	120
1-104	2.5	0.04	3300	<2	16	40	0.5	<10	7	48	81
1-105	3.1	0.06	2600	<2	17	35	0.3	<10	9	48	380
1-106	2.8	<0.02	2600	<2	19	38	0.3	<10	12	59	86
1-107	2.5	0.08	1800	<2	15	37	0.4	<10	10	47	88
1-108	2.0	0.02	1400	<2	15	19	0.3	<10	8	43	41
1-109	3.8	0.08	3300	<2	29	190	0.6	<10	12	62	200
1-111	4.5	0.08	5500	<2	21	42	0.4	<10	12	57	68
1-112	2.8	0.04	2700	<2	21	25	0.4	<10	11	57	62
1-113	2.4	0.02	2400	<2	18	26	0.7	<10	10	51	60
1-114	3.3	0.04	3900	<2	20	29	1.2	<10	10	61	100
1-115	2.8	0.02	1400	<2	21	14	0.3	<10	11	60	57
1-116	3.3	0.02	3100	<2	26	19	0.2	<10	11	73	68
1-118	2.5	0.02	1600	<2	19	88	0.6	<10	10	53	59
1-119	2.8	0.04	1100	<2	25	20	0.3	<10	8	60	75
1-120	2.4	0.02	1500	<2	18	27	0.3	<10	10	51	69
1-121	2.5	0.04	1800	<2	17	31	0.5	<10	12	51	66
1-122	2.7	0.06	3500	<2	20	39	0.6	<10	13	55	83
1-123	3.7	0.04	3900	<2	21	40	0.6	<10	11	65	57
1-124	3.4	0.04	2700	<2	20	28	0.4	<10	12	65	63
1-125	2.2	0.02	1500	<2	16	35	0.4	<10	9	45	67
1-127	2.7	<0.02	1500	<2	18	33	0.3	<10	11	49	56
1-129	2.9	0.04	2100	<2	20	36	0.5	<10	8	55	60
1-130	3.6	<0.02	1600	<2	19	18	0.4	<10	7	69	35
1-131	3.4	0.04	1900	<2	33	27	0.5	<10	14	87	90

Table 3. Continued

MAP #	LATITUDE	LONGITUDE	Ag	Al%	As	B	BA	Be	TOTAL C%	Cd	Cr	Cu
1-132	375359	833305	<2	6.4	6.8	0.5	430	2	1.40	<2	76	20
1-133	375534	834015	<2	4.9	8.5	<0.4	360	2	2.10	<2	61	12
1-134	375349	834606	<2	6.0	12.0	0.9	410	2	0.99	<2	80	11
1-135	375339	834801	<2	7.3	10.0	0.8	440	2	0.59	<2	80	13
1-136	375436	835653	<2	7.1	37.0	<0.4	540	3	2.10	<2	78	26
1-137	375424	835802	<2	6.4	29.0	1.0	450	2	2.10	<2	75	30
1-138	375428	840247	<2	4.3	5.7	1.0	290	1	5.90	<2	38	18
1-139	375609	840924	<2	4.5	9.1	1.5	830	2	5.40	<2	43	13
1-140	375438	841214	<2	4.0	5.1	1.3	400	1	4.20	<2	33	8
1-141	375531	841742	<2	4.9	7.2	1.1	570	2	4.60	<2	43	13
1-142	375542	842556	<2	7.4	7.2	0.7	500	3	1.90	<2	62	30
1-143	375644	842833	<2	5.2	5.9	0.8	490	2	2.24	<2	53	14
1-144	375737	843323	<2	4.1	5.9	1.2	510	1	3.20	<2	37	12
1-145	375658	843836	<2	4.0	6.1	1.1	410	1	2.40	<2	42	12
1-146	375605	844605	<2	4.5	6.7	1.7	370	1	3.10	<2	46	10
1-147	375825	844930	<2	4.5	5.6	0.9	340	2	5.80	<2	40	12
1-150	375348	844335	<2	4.5	6.7	0.9	400	2	2.10	<2	43	11
1-151	375336	844108	<2	4.5	7.8	0.6	550	2	1.90	<2	46	12
1-152	375328	843148	<2	4.6	6.5	1.0	410	2	2.70	<2	48	11
1-153	375111	842647	<2	3.5	6.9	1.1	460	1	7.20	<2	37	20
1-154	375345	842552	<2	8.4	6.1	<0.4	570	3	1.80	<2	67	22
1-155	375312	841615	<2	5.7	5.8	0.8	410	1	3.50	<2	41	16
1-156	375309	841348	<2	6.6	5.7	1.0	450	2	2.10	<2	59	19
1-157	375252	840954	<2	3.5	4.7	4.7	350	<1	1.20	<2	36	9
1-159	375157	835813	<2	6.3	110.0	0.7	410	2	4.04	<2	110	110
1-160	374957	835511	<2	6.6	42.0	7.2	450	2	3.04	<2	100	41
1-161	375106	834825	<2	7.0	15.0	0.9	450	2	1.10	<2	82	16
1-162	375144	834431	<2	5.2	11.0	0.5	350	2	0.45	<2	60	9
1-163	375034	833943	<2	5.1	8.8	2.8	340	2	0.76	<2	70	12
1-164	375138	833222	<2	7.5	24.0	0.5	540	3	0.91	<2	100	24
1-165	375017	833132	<2	6.6	12.0	0.7	480	3	1.80	<2	76	20

Table 3. Continued

MAP #	Fe %	Hg	Mn	Mo	Ni	Pb	Sb	Sn	Th	V	Zn
1-132	3.2	0.04	1300	<2	32	27	0.4	<10	13	84	81
1-133	2.7	0.02	500	<2	31	18	0.8	<10	11	82	81
1-134	3.1	<0.02	620	<2	33	23	0.6	<10	12	110	95
1-135	3.3	0.04	510	<2	42	28	0.5	<10	13	130	110
1-136	5.2	0.04	1400	19	67	25	1.6	<10	7	210	170
1-137	5.0	0.06	240	27	33	28	1.5	<10	13	190	110
1-138	2.7	0.02	1300	<2	19	17	0.3	<10	7	52	49
1-139	3.7	0.02	6300	<2	25	45	0.6	<10	9	58	67
1-140	2.0	0.04	1400	<2	13	17	0.6	<10	10	42	33
1-141	2.8	0.04	4400	<2	21	31	0.6	<10	9	53	74
1-142	3.5	0.02	850	<2	29	27	0.9	<10	14	80	130
1-143	3.4	0.04	4500	<2	21	36	0.3	<10	12	69	66
1-144	2.5	0.04	3300	<2	15	26	0.5	<10	13	47	56
1-145	2.5	0.04	2400	<2	18	25	0.4	<10	10	50	51
1-146	2.7	0.04	1500	<2	18	27	0.4	<10	10	53	39
1-147	2.4	0.02	910	<2	20	41	0.5	<10	11	48	52
1-150	2.5	0.04	1800	<2	19	25	0.5	<10	10	51	49
1-151	2.9	<0.02	2500	<2	16	31	0.5	<10	10	54	46
1-152	2.6	0.02	2300	<2	19	25	0.4	<10	11	52	47
1-153	1.9	0.12	1100	<2	18	76	0.6	<10	7	40	120
1-154	3.8	0.06	1200	<2	33	26	0.4	<10	15	97	110
1-155	2.6	0.02	1100	<2	20	22	0.4	<10	16	57	52
1-156	3.4	0.04	1100	<2	29	26	0.5	<10	14	81	87
1-157	1.7	0.04	1100	<2	15	19	0.6	<10	11	46	41
1-159	9.2	0.06	230	120	62	44	5.8	<10	12	330	170
1-160	5.0	0.04	380	41	27	36	2.5	<10	12	290	93
1-161	4.7	0.02	720	<2	46	75	1.7	<10	13	140	110
1-162	3.1	0.02	440	<2	31	18	0.6	<10	13	94	76
1-163	3.1	0.04	770	<2	37	18	0.4	<10	11	76	72
1-164	8.9	0.04	2100	<2	47	40	0.8	<10	16	100	110
1-165	4.8	0.02	2200	<2	39	29	0.4	<10	14	87	110

Table 3. Continued

MAP #	LATITUDE	LONGITUDE	Ag	Al%	As	B	BA	Be	TOTAL C%	Cd	Cr	Cu
1-166	374621	832104	<2	6.5	6.7	0.8	470	3	2.00	<2	57	22
1-167	374835	832550	<2	8.7	13.0	1.6	560	3	1.20	<2	92	29
1-168	374819	832857	<2	7.2	26.0	<0.4	620	4	1.00	<2	87	26
1-169	374620	833357	<2	5.6	6.1	8.2	420	2	6.70	<2	73	9
1-170	374908	834003	<2	5.1	7.8	1.9	360	2	1.56	<2	74	10
1-171	374552	834313	<2	6.2	10.0	0.5	390	2	1.50	<2	79	16
1-172	374634	835147	<2	7.3	12.0	1.0	470	2	1.50	<2	88	16
1-173	374738	835359	<2	5.7	21.0	0.7	440	2	1.60	<2	71	25
1-174	374746	840034	<2	6.4	51.0	0.3	460	3	2.71	<2	75	87
1-176	374703	840847	<2	4.8	13.0	1.4	370	2	6.20	<2	49	19
1-177	374711	841309	<2	4.8	8.5	0.6	340	2	2.70	<2	45	14
1-178	374813	841814	<2	3.9	5.1	1.3	320	1	5.60	<2	34	14
1-179	374650	842520	<2	5.6	5.1	0.6	390	2	2.30	<2	52	19
1-180	374902	842802	<2	6.3	5.9	1.0	420	2	3.00	<2	56	17
1-181	374829	843301	<2	4.6	3.7	1.5	320	1	7.30	<2	41	18
1-182	374848	843759	<2	2.8	2.5	1.2	250	1	8.60	<2	25	10
1-183	374811	844542	<2	4.0	6.0	1.4	500	2	3.23	<2	42	13
1-184	374918	844807	<2	4.1	6.6	0.8	540	2	4.20	<2	42	12
1-185	374224	844747	<2	4.2	6.8	0.9	450	2	2.75	<2	47	10
1-186	374509	844542	<2	4.1	7.3	1.1	560	2	6.20	<2	57	60
1-187	374315	844006	<2	4.7	5.9	0.7	430	1	1.40	<2	39	19
1-188	374354	843409	<2	5.9	4.4	1.9	410	2	3.60	<2	50	16
1-190	374326	842447	<2	7.3	4.7	0.9	390	2	2.50	<2	65	16
1-192	374502	841456	<2	4.0	5.9	0.9	370	1	3.90	<2	35	14
1-193	374256	840931	<2	4.7	19.0	1.0	500	2	3.28	<2	67	95
1-195	374401	835743	<2	5.4	18.0	0.8	420	2	2.20	<2	78	37
1-196	374241	835417	<2	5.5	11.0	1.5	420	2	0.98	<2	69	10
1-197	374227	834830	<2	6.3	12.0	1.0	580	2	1.20	<2	79	13
1-198	374526	834307	<2	5.3	7.5	0.7	660	2	1.30	<2	67	17
1-199	374246	834002	<2	8.9	11.0	<0.4	500	3	1.50	<2	110	30
1-200	374336	833403	<2	7.0	12.0	0.6	510	2	2.70	<2	77	27

Table 3. Continued

MAP #	Fe %	Hg	Mn	Mo	Ni	Pb	Sb	Sn	Th	V	Zn
1-166	3.7	0.04	1100	<2	28	30	0.5	<10	13	71	96
1-167	5.9	0.02	1600	<2	40	33	0.5	<10	16	110	110
1-168	9.6	0.02	4700	<2	70	37	0.6	<10	17	94	130
1-169	3.2	0.14	1700	<2	25	29	0.4	<10	15	60	64
1-170	3.3	0.04	740	<2	38	18	0.3	<10	12	75	85
1-171	3.4	0.02	1300	<2	44	25	0.6	<10	12	93	100
1-172	3.8	0.04	750	<2	49	24	0.5	<10	14	130	110
1-173	4.1	0.04	960	12	48	26	1.1	<10	13	160	130
1-174	4.7	0.04	680	56	120	30	3.4	<10	11	220	250
1-176	4.2	<0.02	2500	<2	24	32	0.5	<10	10	63	61
1-177	3.0	<0.02	1300	<2	18	25	0.6	<10	8	60	50
1-178	2.5	0.02	3600	<2	17	25	0.6	<10	8	45	41
1-179	3.3	0.02	1900	<2	24	33	0.5	<10	10	67	74
1-180	3.4	0.04	1400	<2	27	29	0.4	<10	12	74	73
1-181	2.4	0.12	1100	<2	19	23	0.5	<10	7	51	120
1-182	1.2	0.02	1000	<2	11	17	0.4	<10	9	31	50
1-183	2.6	0.04	4300	<2	18	29	0.4	<10	10	49	59
1-184	2.8	0.04	2800	<2	19	31	0.5	<10	11	48	59
1-185	2.9	0.02	1400	<2	17	31	0.4	<10	10	56	55
1-186	3.0	0.04	3100	<2	23	220	0.9	<10	10	51	230
1-187	2.3	0.06	1800	<2	18	32	0.8	<10	11	54	78
1-188	2.9	0.02	860	<2	24	20	0.4	<10	12	67	69
1-190	3.9	<0.02	1200	<2	30	21	0.2	<10	11	82	72
1-192	2.5	0.02	1800	<2	16	29	0.5	<10	8	47	54
1-193	3.6	0.04	2800	14	76	26	1.1	<10	12	110	160
1-195	4.2	0.08	670	12	49	50	1.9	20	12	230	200
1-196	2.9	<0.02	830	<2	31	21	0.5	<10	14	100	79
1-197	3.4	0.02	760	<2	39	22	0.4	<10	13	110	110
1-198	2.8	0.04	700	<2	34	21	0.4	<10	13	78	79
1-199	4.7	0.06	1600	<2	70	130	0.6	10	15	110	130
1-200	4.7	0.08	4200	<2	48	42	0.6	<10	14	93	140

Table 3. Continued

MAP #	LATITUDE	LONGITUDE	Ag	Al%	As	B	BA	Be	TOTAL C%	Cd	Cr	Cu
1-201	374325	832927	<2	7.7	7.2	0.7	530	3	2.20	<2	69	26
1-202	374347	832408	<2	7.4	11.0	<0.4	520	3	2.10	<2	68	26
1-203	374339	831824	<2	6.7	6.4	3.9	450	2	3.10	<2	55	17
1-205	373954	831555	<2	6.9	5.3	2.2	480	2	1.80	<2	60	15
1-206	373927	831820	<2	8.3	6.8	4.6	550	3	1.30	<2	79	25
1-207	373938	832405	<2	8.3	7.2	1.5	570	3	2.70	<2	80	32
1-208	374041	832935	<2	8.0	16.0	4.0	520	3	3.70	<2	75	36
1-210	373846	833908	<2	6.4	6.6	<0.4	400	2	1.40	<2	91	14
1-211	373842	834631	<2	5.1	9.9	5.9	340	2	1.80	<2	81	14
1-212	373914	834813	<2	4.5	6.1	0.8	370	1	1.60	<2	51	13
1-213	373949	835403	<2	7.2	7.2	0.6	540	3	1.76	<2	76	22
1-214	373942	835859	<2	6.2	11.0	1.0	410	2	2.80	<2	78	17
1-215	373937	840550	<2	6.0	23.0	1.6	420	2	2.91	<2	67	51
1-216	374026	841034	<2	6.6	16.0	<0.4	450	2	1.50	<2	80	55
1-217	373918	841520	<2	3.9	5.0	0.6	420	2	2.40	<2	43	14
1-218	374124	841852	<2	4.5	4.5	1.7	430	2	3.50	<2	41	12
1-220	374043	842854	<2	5.7	5.7	0.8	400	2	2.30	<2	54	16
1-221	373933	843218	<2	5.0	5.6	1.7	410	2	3.10	<2	46	14
1-222	373937	843816	<2	3.8	5.2	<0.4	400	1	5.10	<2	38	12
1-223	373958	844351	<2	5.5	4.8	1.6	430	1	6.10	<2	53	19
1-224	374055	844856	<2	4.3	5.1	1.5	520	1	2.80	<2	40	17
1-225	373730	844836	<2	4.5	6.3	0.5	550	2	2.90	<2	43	12
1-227	373504	843944	<2	4.2	9.2	0.9	450	2	2.00	<2	49	22
1-229	373418	842710	<2	3.8	4.6	0.5	360	1	2.10	<2	34	12
1-230	373628	842533	<2	4.7	2.8	0.7	330	1	4.40	<2	41	10
1-231	373503	841958	<2	7.6	12.0	1.7	480	3	1.20	<2	92	32
1-233	373538	840643	<2	6.0	15.0	2.9	420	3	1.90	<2	69	36
1-235	373620	840126	<2	7.4	8.0	0.6	480	2	1.10	<2	82	15
1-236	373606	835513	<2	7.0	12.0	<0.4	460	2	1.30	<2	84	12
1-237	373619	834824	<2	7.4	10.0	<0.4	480	2	2.60	<2	94	20
1-238	373347	834348	<2	7.9	12.0	4.3	420	3	2.22	<2	120	25

Table 3. Continued

MAP #	Fe %	Hg	Mn	Mo	Ni	Pb	Sb	Sn	Th	V	Zn
1-201	4.7	0.04	1800	<2	34	26	0.4	<10	15	94	110
1-202	4.9	0.04	980	<2	38	29	0.4	<10	14	86	110
1-203	3.3	0.04	780	<2	22	24	0.8	<10	16	72	80
1-205	3.5	0.04	770	<2	26	22	0.3	<10	17	71	77
1-206	4.1	0.04	840	<2	34	24	0.4	<10	16	95	110
1-207	4.5	0.10	910	<2	39	32	0.5	<10	17	96	130
1-208	4.8	0.06	2900	<2	48	33	1.2	<10	15	99	150
1-210	2.8	0.04	890	<2	44	22	0.5	<10	12	78	80
1-211	3.5	0.04	1300	<2	53	51	0.7	<10	10	66	90
1-212	2.1	<0.02	310	<2	24	23	0.6	<10	14	72	77
1-213	3.8	0.06	760	<2	35	24	0.3	<10	14	100	110
1-214	3.4	0.04	570	2	36	22	0.5	<10	13	120	110
1-215	4.1	0.04	700	14	73	24	1.2	<10	12	130	170
1-216	3.8	0.04	830	3	36	26	0.7	<10	18	110	70
1-217	2.7	0.02	2500	<2	17	37	0.4	<10	9	51	61
1-218	2.8	0.04	4100	<2	19	38	0.5	<10	12	58	60
1-220	3.8	0.02	1800	<2	28	22	0.4	<10	11	67	67
1-221	3.1	0.02	2800	<2	22	51	0.4	<10	11	62	68
1-222	2.1	<0.02	1100	<2	17	24	0.3	<10	10	46	58
1-223	2.3	0.04	2600	<2	18	31	0.4	<10	10	50	75
1-224	2.3	0.02	2000	<2	19	26	0.5	<10	9	53	60
1-225	2.9	0.02	2400	<2	20	27	0.3	<10	10	58	59
1-227	3.1	0.04	3400	<2	26	35	0.6	<10	11	63	69
1-229	1.9	<0.02	1000	<2	16	19	0.4	<10	9	46	49
1-230	2.4	<0.02	1200	<2	18	20	0.3	<10	10	55	58
1-231	3.8	0.04	490	3	57	15	0.8	<10	12	160	100
1-233	3.3	0.06	610	8	130	20	1.3	<10	10	160	350
1-235	3.2	<0.02	570	<2	43	17	0.3	<10	15	130	82
1-236	3.6	0.04	640	<2	41	22	0.8	<10	14	130	100
1-237	3.4	0.08	2400	<2	66	25	0.5	<10	11	87	98
1-238	4.2	0.04	1700	<2	54	29	0.5	<10	14	98	120

Table 3. Continued

MAP #	LATITUDE	LONGITUDE	Ag	Al%	As	B	BA	Be	TOTAL C%	Cd	Cr	Cu
1-239	373509	833741	<2	7.6	19.0	<0.4	510	3	0.94	<2	90	23
1-240	373358	833229	<2	7.8	13.0	<0.4	480	3	1.10	<2	77	31
1-242	373622	832152	<2	9.7	6.7	0.6	620	3	1.40	<2	83	30
1-243	373411	831950	<2	8.7	7.1	5.1	570	3	1.30	<2	84	33
1-244	373528	831413	<2	8.0	7.7	3.4	520	3	2.70	<2	75	44
1-248	373248	830359	<2	8.3	6.9	0.6	560	3	2.50	<2	71	27
1-249	373152	830647	<2	8.1	6.6	1.2	630	3	2.14	<2	80	24
1-250	373245	831417	<2	7.0	4.6	0.6	490	2	1.50	<2	59	23
1-251	373137	831854	<2	8.8	10.0	1.8	620	3	1.50	<2	76	58
1-252	373236	832159	<2	9.1	7.6	1.3	590	4	3.80	<2	99	89
1-253	373305	832733	<2	8.2	6.0	1.4	590	3	1.80	<2	75	26
1-254	373137	833455	<2	7.4	8.2	0.6	500	2	1.50	<2	75	24
1-255	373139	834044	<2	8.5	13.0	0.7	550	3	1.20	<2	98	24
1-256	373052	834457	<2	6.5	8.3	0.6	430	2	1.50	<2	80	21
1-259	373041	840111	<2	6.2	9.0	1.2	390	3	1.02	<2	97	14
1-260	373027	840207	<2	5.9	8.9	<0.4	390	2	3.50	<2	82	17
1-261	373204	840922	<2	6.5	10.0	2.0	370	2	1.40	<2	88	15
1-262	373237	841235	<2	5.1	8.7	0.6	390	2	3.00	<2	59	20
1-263	373209	842149	<2	6.9	10.0	1.1	460	3	2.20	<2	79	27
1-264	373107	842457	<2	5.5	11.0	0.6	380	2	1.00	<2	61	10
1-265	373205	843028	<2	3.8	6.3	0.7	290	1	6.70	<2	36	13
1-266	373138	843302	<2	4.1	4.1	0.6	310	1	4.60	<2	35	15
1-267	373151	844026	<2	4.2	8.1	2.0	440	2	3.80	<2	43	32
1-268	373206	844623	<2	4.3	8.1	1.1	460	2	2.30	<2	53	15
1-271	372813	844840	<2	5.1	5.0	1.5	420	2	2.80	<2	52	16
1-272	372911	844540	<2	5.2	7.5	1.3	350	2	2.40	<2	48	16
1-A274	372727	843358	<2	5.7	32.0	1.4	490	3	3.14	2	82	45
1-275A	372633	842813	<2	5.0	50.0	1.4	340	2	5.50	<2	69	35
1-275B	372524	842727	<2	5.6	24.0	0.9	390	2	2.80	<2	73	39
1-276A	372532	842514	<2	6.3	5.4	1.9	440	2	1.60	<2	65	13
1-276B	372336	842341	<2	5.8	8.8	<0.4	390	2	2.40	<2	63	11

Table 3. Continued

MAP #	Fe %	Hg	Mn	Mo	Ni	Pb	Sb	Sn	Th	V	Zn
1-239	7.7	0.04	2800	<2	48	32	0.7	<10	16	99	110
1-240	5.6	<0.02	970	<2	39	33	0.5	<10	16	90	120
1-242	5.0	0.02	1300	<2	38	39	0.4	<10	16	110	130
1-243	4.4	0.02	760	<2	35	40	0.5	<10	16	99	120
1-244	4.1	0.06	860	<2	32	77	1.3	<10	15	88	210
1-248	3.9	0.06	1000	<2	32	42	0.5	<10	15	95	110
1-249	3.6	0.04	2900	<2	61	28	0.5	<10	16	91	130
1-250	2.9	0.04	770	<2	24	22	0.7	<10	16	74	84
1-251	5.8	0.10	1400	<2	39	72	0.6	<10	18	97	200
1-252	3.8	0.10	1400	<2	46	51	1.8	<10	15	110	400
1-253	4.5	0.04	1200	<2	38	27	0.4	<10	15	89	120
1-254	3.8	0.04	950	<2	37	25	0.8	<10	14	88	92
1-255	6.3	0.08	1800	<2	49	31	0.7	<10	13	100	110
1-256	3.4	0.04	1300	<2	38	32	0.5	<10	11	81	91
1-259	4.2	0.04	1300	<2	66	25	0.4	<10	12	75	150
1-260	3.0	0.04	1600	<2	44	28	0.4	<10	13	71	97
1-261	4.6	<0.02	1000	<2	44	38	0.5	<10	13	98	91
1-262	3.0	0.04	700	6	44	38	1.1	<10	11	120	150
1-263	3.5	0.04	760	10	82	26	0.9	<10	11	180	290
1-264	4.1	0.06	1100	<2	37	20	0.5	<10	11	92	90
1-265	2.9	<0.02	2000	<2	20	31	0.5	<10	10	48	42
1-266	2.3	<0.02	1900	<2	15	30	0.5	<10	7	46	56
1-267	2.7	0.10	2900	<2	37	46	0.6	<10	10	60	130
1-268	3.3	0.04	3400	<2	21	45	0.6	<10	11	65	86
1-271	3.0	0.02	2400	<2	24	28	0.4	<10	11	63	71
1-272	2.8	<0.02	1100	<2	23	76	0.7	<10	9	63	73
1-A274	5.0	0.04	2900	18	120	34	1.8	<10	14	180	330
1-275A	9.6	0.10	160	25	33	42	6.1	<10	10	200	150
1-275B	3.9	0.12	310	21	39	34	1.8	<10	11	200	160
1-276A	2.9	<0.02	430	<2	41	19	0.6	<10	10	100	97
1-276B	3.4	0.04	1200	<2	41	24	0.5	<10	10	100	100

Table 3. Continued

MAP #	LATITUDE	LONGITUDE	Ag	Al%	As	B	BA	Be	TOTAL C%	Cd	Cr	Cu
1-281	372723	835418	<2	8.2	8.8	1.1	430	3	3.49	<2	110	24
1-282	372637	834948	<2	6.0	7.2	0.6	410	2	2.40	<2	80	15
1-283	372848	834354	<2	7.9	12.0	1.1	530	3	1.40	<2	78	22
1-284	372543	833826	<2	8.6	10.0	2.6	540	3	1.60	<2	98	28
1-285	372857	833306	<2	8.8	8.8	1.0	570	3	2.10	<2	90	45
1-286	372700	832832	<2	7.4	5.6	3.4	500	3	3.30	<2	63	21
1-287	372646	832251	<2	8.3	6.1	2.6	560	3	2.70	<2	89	25
1-288	372633	831820	<2	9.2	9.2	0.7	600	3	2.46	<2	83	30
1-289	372725	831145	<2	8.6	7.1	0.9	620	3	1.40	<2	76	23
1-290	372818	830846	<2	4.3	4.8	0.5	390	1	2.10	<2	42	10
1-291	372726	830156	<2	7.9	7.3	2.1	560	3	1.70	<2	60	17
1-292	372736	825736	<2	7.6	5.8	0.9	560	3	0.34	<2	64	23
1-295	372313	825802	<2	8.5	8.7	1.1	580	3	1.54	<2	74	32
1-296	372505	830424	<2	7.9	5.1	0.5	560	3	2.00	<2	65	20
1-299	372457	831638	<2	8.9	6.0	0.5	560	3	2.10	<2	79	27
1-300	372429	832317	<2	8.2	8.4	0.5	570	3	1.40	<2	76	24
1-301	372526	832837	<2	9.2	7.9	3.8	620	3	2.90	<2	94	31
1-302	372304	833117	<2	8.5	8.8	0.6	540	3	1.00	<2	81	32
1-303	372422	833937	<2	8.3	9.3	0.9	560	3	2.00	<2	78	28
1-304	372436	834224	<2	8.3	12.0	0.7	490	3	1.10	<2	87	27
1-306	372418	835311	<2	7.4	9.8	0.7	450	2	2.60	<2	99	23
1-309	371944	834758	<2	8.0	11.0	0.9	470	3	0.92	<2	88	23
1-310	372020	834306	<2	7.8	7.2	3.6	460	2	1.60	<2	93	20
1-312	371923	833141	<2	7.7	9.6	0.5	550	3	1.80	<2	73	24
1-314	371952	832136	<2	9.2	5.9	0.5	600	3	1.20	<2	83	27
1-315	371913	831831	<2	8.5	6.2	0.6	650	3	1.90	<2	77	28
1-316	372131	831330	<2	6.8	10.0	1.6	480	4	4.20	<2	56	32
1-317	372158	830615	<2	5.7	3.8	3.7	410	2	5.00	<2	50	20
1-318	372007	830230	<2	4.5	4.9	2.2	520	1	2.40	<2	44	20
1-319	372045	825836	<2	6.7	5.0	0.8	510	2	1.43	<2	52	18
1-320	372034	825508	<2	7.4	4.7	0.9	530	2	2.90	<2	61	28

Table 3. Continued

MAP #	Fe %	Hg	Mn	Mo	Ni	Pb	Sb	Sn	Th	V	Zn
1-281	4.0	0.04	1500	<2	66	26	0.4	<10	15	100	98
1-282	2.8	0.02	3900	<2	100	22	0.4	<10	14	70	120
1-283	5.6	0.04	2000	<2	37	28	0.3	<10	15	95	120
1-284	4.7	0.04	1000	<2	45	28	0.4	<10	16	100	110
1-285	5.3	0.02	1000	<2	44	130	0.8	<10	17	110	170
1-286	3.3	0.04	680	<2	28	25	0.3	<10	15	83	93
1-287	3.9	0.06	680	<2	38	32	0.5	<10	14	95	110
1-288	4.6	0.04	590	<2	33	26	0.5	<10	15	98	170
1-289	3.9	0.02	1200	<2	37	25	0.4	<10	14	110	130
1-290	2.1	0.04	1400	<2	15	27	0.4	<10	9	48	33
1-291	4.6	0.08	1700	<2	32	25	0.4	<10	15	82	110
1-292	3.6	0.02	670	<2	25	23	0.3	<10	17	86	84
1-295	4.2	0.06	690	<2	30	24	0.4	<10	15	99	110
1-296	3.6	0.10	740	<2	27	24	0.3	<10	20	82	90
1-299	4.0	0.06	1400	<2	34	24	0.4	<10	15	100	110
1-300	4.2	<0.02	1100	<2	34	29	0.4	<10	16	92	120
1-301	4.6	0.06	770	<2	42	27	0.4	<10	14	110	130
1-302	3.9	0.02	2300	<2	39	25	0.5	<10	16	110	120
1-303	4.0	0.06	890	<2	37	28	0.5	<10	16	94	100
1-304	7.0	0.04	1600	<2	43	26	0.4	<10	14	100	120
1-306	4.6	0.04	1600	<2	53	31	0.4	<10	14	96	130
1-309	4.3	0.02	1300	<2	43	23	1.0	<10	14	100	100
1-310	4.0	0.02	930	<2	43	23	0.5	<10	14	93	100
1-312	4.4	0.04	1100	<2	35	27	1.0	<10	15	92	100
1-314	4.0	0.02	4800	<2	37	23	0.5	<10	16	110	110
1-315	4.1	0.06	1100	<2	33	24	0.4	<10	14	100	110
1-316	3.9	0.06	1400	<2	69	25	0.9	<10	14	73	160
1-317	3.0	0.04	1600	<2	42	22	0.8	<10	12	59	140
1-318	2.3	0.02	1900	<2	19	25	0.5	<10	9	55	64
1-319	2.9	0.02	790	<2	21	23	0.5	<10	14	68	110
1-320	3.2	0.08	700	<2	27	34	0.8	<10	14	79	140

Table 3. Continued

MAP #	LATITUDE	LONGITUDE	Ag	Al%	As	B	BA	Be	TOTAL C%	Cd	Cr	Cu
1-322	371541	824451	<2	7.3	4.9	0.6	560	3	0.85	<2	67	25
1-323	371642	824911	<2	8.5	5.3	3.0	560	3	1.84	<2	72	29
1-324	371619	825144	<2	8.7	9.9	<0.4	540	3	1.10	<2	72	29
1-326	371634	830253	<2	7.3	6.9	2.3	530	2	1.50	<2	69	24
1-327	371702	830708	<2	7.4	8.3	0.8	550	2	1.30	<2	66	22
1-329	371625	831916	<2	7.6	5.7	1.1	550	3	1.68	<2	62	20
1-330	371626	832134	<2	8.2	4.9	0.5	580	3	1.27	<2	73	28
1-331	371617	832940	<2	6.2	5.0	0.5	470	2	2.20	<2	53	17
1-332	371726	833225	<2	8.4	8.1	0.9	580	3	2.40	<2	77	19
1-333	371627	833722	<2	8.4	11.0	1.0	510	3	2.10	<2	73	26
1-334	371559	834308	<2	7.0	5.3	0.7	470	2	0.98	<2	67	16
1-335	371622	835046	<2	6.2	8.9	0.5	410	2	1.10	<2	73	16
1-338	370949	834805	<2	8.1	11.0	0.6	540	3	1.70	<2	93	28
1-339	371145	834233	<2	7.4	8.6	2.7	510	3	2.00	<2	73	28
1-340	371106	833755	<2	7.5	6.8	<0.4	590	3	2.40	<2	67	23
1-341	371012	833221	<2	7.1	6.3	1.3	530	3	3.50	<2	61	27
1-342	371244	832747	<2	6.7	5.8	0.6	470	2	1.80	<2	55	17
1-343	371215	832359	<2	7.4	6.1	0.6	600	3	1.89	<2	68	25
1-344	371052	831547	<2	7.5	6.4	2.2	610	3	2.50	<2	67	21
1-345	371030	831322	<2	8.3	5.2	0.7	570	3	1.30	<2	72	25
1-349	371119	825357	<2	6.4	4.4	0.7	460	2	3.90	<2	47	19
1-350	371159	824544	<2	7.5	8.4	0.9	540	3	1.57	<2	71	28
1-351	371152	824148	<2	8.1	22.0	1.4	590	3	10.00	<2	68	43
1-354	370907	824221	<2	7.5	6.5	3.4	500	3	1.90	<2	61	27
1-356	370818	825318	<2	7.8	7.0	0.9	550	3	3.60	<2	63	29
1-357	370913	825902	<2	6.8	5.7	1.4	490	2	2.10	<2	59	19
1-358	370835	830311	<2	7.5	5.2	0.5	530	2	1.70	<2	65	26
1-359	370946	830909	<2	8.2	7.5	0.6	560	3	1.30	<2	68	24
1-360	370905	831214	<2	7.1	5.6	0.8	500	2	1.20	<2	68	19
1-362	370908	832124	<2	5.8	6.2	B	510	2	3.50	<2	52	33
1-363	370827	832612	<2	7.9	5.3	0.7	620	3	1.70	<2	69	25

Table 3. Continued

MAP #	Fe %	Hg	Mn	Mo	Ni	Pb	Sb	Sn	Th	V	Zn
1-322	3.2	<0.02	590	<2	24	21	0.4	<10	14	79	88
1-323	3.3	0.04	1100	<2	31	26	0.4	<10	16	95	110
1-324	5.6	0.04	1200	<2	35	29	0.4	<10	17	99	120
1-326	3.3	0.04	590	<2	29	20	0.4	<10	15	84	91
1-327	4.1	0.04	1400	<2	42	27	0.4	<10	16	92	130
1-329	3.0	0.04	820	<2	23	24	0.3	<10	16	85	89
1-330	3.4	0.02	2600	<2	58	22	0.3	<10	15	94	160
1-331	2.8	0.04	1000	<2	30	29	0.3	<10	13	66	100
1-332	4.9	0.04	450	<2	34	28	0.4	<10	15	100	120
1-333	5.0	0.04	1000	<2	35	27	0.5	<10	13	96	110
1-334	2.9	0.02	850	<2	28	19	0.5	<10	13	83	95
1-335	3.8	0.04	1500	<2	34	22	0.3	<10	15	71	74
1-338	4.1	0.06	29000	2	180	28	0.4	<10	23	98	170
1-339	4.5	0.04	1100	<2	35	39	0.9	<10	14	89	160
1-340	3.5	0.04	830	<2	31	22	0.8	<10	14	87	97
1-341	4.3	0.02	550	<2	28	35	0.6	<10	14	79	120
1-342	3.4	0.04	870	<2	29	27	0.5	<10	14	69	98
1-343	3.7	0.04	1200	<2	30	26	0.4	<10	15	87	110
1-344	3.4	0.04	12000	<2	120	24	0.5	<10	19	86	230
1-345	3.3	0.04	1800	<2	45	20	0.4	<10	15	99	120
1-349	2.8	0.04	700	<2	20	23	0.5	<10	11	64	92
1-350	3.7	0.04	960	<2	28	39	0.5	<10	14	81	110
1-351	4.0	0.16	1200	<2	37	34	0.6	<10	15	95	130
1-354	3.6	<0.02	1000	<2	26	31	0.5	<10	14	79	110
1-356	3.7	0.04	910	<2	29	27	0.4	<10	14	87	120
1-357	3.1	<0.02	700	<2	24	21	0.4	<10	11	71	78
1-358	3.5	0.04	810	<2	32	26	0.4	<10	14	85	98
1-359	3.8	0.04	920	<2	29	34	0.5	<10	16	88	93
1-360	3.1	0.04	1200	<2	32	20	0.4	<10	15	81	95
1-362	2.8	0.08	830	<2	25	40	1.1	<10	14	66	140
1-363	3.1	0.02	1300	<2	36	23	0.4	<10	15	91	110

Table 3. Continued

MAP #	LATITUDE	LONGITUDE	Ag	Al%	As	B	BA	Be	TOTAL C%	Cd	Cr	Cu
1-364	370622	833307	<2	7.9	7.7	B	650	3	2.60	<2	85	27
1-365	370843	833927	<2	8.7	8.2	1.3	660	3	3.01	<2	83	33
1-366	370525	834149	<2	7.1	7.5	0.7	500	3	3.37	<2	70	35
1-367	370816	835008	<2	7.8	11.0	<0.4	460	3	2.20	<2	83	24
1-368	370844	835311	<2	8.2	13.0	<0.4	490	3	1.30	<2	90	26
1-369	370417	835213	<2	8.9	11.0	1.3	590	3	0.88	<2	100	26
1-370	370419	834709	<2	7.5	7.6	1.0	480	3	2.60	<2	72	30
1-371	370402	834428	<2	7.6	8.7	2.9	530	3	1.30	<2	74	22
1-372	370336	833623	<2	6.8	6.7	0.5	520	3	1.20	<2	63	20
1-373	370328	833120	<2	7.1	6.7	1.0	550	3	3.20	<2	60	23
1-374	370251	832946	<2	2.7	4.1	1.0	210	<1	3.10	<2	25	9
1-375	370424	832103	<2	7.7	6.7	<0.4	520	3	2.40	<2	64	23
1-376	370354	831559	<2	7.3	6.2	0.7	510	2	2.20	<2	60	23
1-377	370316	831254	<2	6.0	4.0	2.9	430	2	1.10	<2	53	14
1-379	370326	830133	<2	7.6	4.6	0.9	550	2	2.40	<2	70	21
1-380	370239	825841	<2	7.8	8.9	5.5	530	3	1.90	<2	68	24
1-382	370525	824835	<2	6.2	9.7	<0.4	430	2	4.60	<2	54	22
1-384	370046	825826	<2	7.1	5.0	0.3	530	3	1.82	<2	53	21
1-385	370037	830212	<2	7.5	6.1	0.7	530	3	1.20	<2	65	24
1-386	370127	830518	<2	8.1	6.8	1.2	600	3	2.30	<2	68	25
1-389	370113	832336	<2	8.6	48.0	1.1	580	4	12.00	<2	83	50
1-390	370047	832933	<2	7.1	6.8	1.9	480	3	2.82	<2	65	25
1-391	365906	833342	<2	8.3	7.9	1.1	650	4	3.12	<2	89	48
1-392	365832	833908	<2	5.8	7.3	<0.4	440	2	1.40	<2	51	18
1-393	370059	834306	<2	8.1	7.1	0.7	560	3	2.60	<2	72	29
1-394	365915	834852	<2	8.2	7.8	<0.4	540	3	1.30	<2	73	22
1-395	365831	835102	<2	6.9	6.4	0.7	500	3	1.80	<2	62	19
1-400	365611	832225	<2	6.4	7.2	1.2	450	2	1.10	<2	63	19
1-401	365554	831826	<2	5.0	8.0	0.7	390	2	8.80	<2	36	320
1-402	365629	831243	<2	3.9	5.8	<.4	270	1	4.96	<2	38	15
2-1	383900	845654	<2	10.0	7.2	0.6	650	4	2.42	<2	95	34

Table 3. Continued

MAP #	Fe %	Hg	Mn	Mo	Ni	Pb	Sb	Sn	Th	V	Zn
1-364	4.2	0.06	800	<2	37	28	0.5	<10	15	92	120
1-365	4.6	0.04	880	<2	38	30	0.3	<10	16	110	120
1-366	3.3	0.08	720	<2	30	41	0.7	<10	13	82	170
1-367	4.4	0.04	2100	<2	39	30	0.6	<10	14	94	100
1-368	6.3	0.06	1600	<2	39	41	0.5	<10	17	110	120
1-369	6.0	0.02	1400	<2	41	29	0.5	<10	15	110	140
1-370	4.6	0.02	710	<2	34	43	0.5	<10	12	87	160
1-371	4.3	0.04	2600	<2	43	22	0.4	<10	16	89	130
1-372	3.6	0.04	2000	3	30	49	0.5	<10	19	80	94
1-373	3.4	0.04	640	<2	28	30	0.9	<10	14	80	90
1-374	1.8	<0.02	280	<2	9	18	1.2	<10	10	29	41
1-375	4.9	0.02	6700	<2	30	25	0.4	<10	15	84	110
1-376	3.5	0.06	1600	<2	27	34	0.5	<10	15	79	130
1-377	2.2	0.02	440	<2	21	19	0.3	<10	14	69	65
1-379	3.2	0.04	800	<2	29	22	0.4	<10	14	86	95
1-380	4.4	0.04	800	<2	30	32	0.4	<10	16	85	89
1-382	4.0	0.02	870	<2	24	23	0.5	<10	10	74	97
1-384	2.9	0.02	680	<2	23	29	0.3	<10	16	71	100
1-385	3.6	<0.02	880	<2	26	26	0.5	<10	14	83	99
1-386	4.0	0.04	1100	<2	31	37	0.7	<10	13	86	120
1-389	4.3	0.20	550	<2	53	39	4.1	<10	23	120	270
1-390	4.0	0.02	1000	<2	40	60	0.7	<10	12	75	130
1-391	4.5	0.04	1000	<2	36	59	0.6	<10	16	97	170
1-392	3.0	0.02	1500	<2	20	28	0.4	<10	16	64	77
1-393	4.1	0.02	870	<2	33	42	0.5	<10	12	96	160
1-394	4.7	0.04	910	<2	33	30	0.4	<10	15	98	120
1-395	3.5	0.04	870	<2	27	21	0.4	<10	15	83	96
1-400	2.7	0.02	830	<2	34	19	0.6	<10	12	80	89
1-401	2.2	0.06	360	<2	16	34	2.8	<10	12	48	130
1-402	1.8	<0.02	300	<2	13	13	0.3	<10	11	46	47
2-1	4.2	0.04	1300	<2	44	33	0.8	<10	15	120	150

Table 3. Continued

MAP #	LATITUDE	LONGITUDE	Ag	Al%	As	B	BA	Be	TOTAL C%	Cd	Cr	Cu
2-2	383811	844221	<2	6.8	8.2	1.2	450	2	3.80	<2	68	26
2-3	383754	843730	<2	6.6	6.1	2.9	420	2	2.00	<2	69	24
2-4	381229	845614	<2	5.6	7.8	0.7	390	2	4.50	<2	64	19
2-5	381607	844853	<2	4.9	5.5	2.0	460	2	4.36	<2	57	24
2-6	380548	844802	<2	5.7	4.7	0.8	400	2	1.59	<2	54	20
2-6D	380548	844802	<2	4.7	5.1	3.3	440	2	3.80	<2	58	25
2-7	380827	843843	3	5.0	6.3	1.3	510	2	2.77	3	72	36
2-8D	381212	843052	<2	6.0	6.6	1.8	460	2	2.70	<2	59	28
2-8	381212	843052	<2	6.0	6.8	1.7	460	2	2.90	<2	59	28
2-9	380430	843309	28	4.4	8.2	1.8	280	2	7.60	9	220	170
2-10	375332	843053	<2	5.8	5.3	1.8	450	2	2.63	<2	62	18
2-11	375049	843512	<2	5.2	6.2	6.6	470	2	4.50	<2	2000	410
2-12	375423	841613	<2	10.0	11.0	0.9	660	3	2.73	<2	100	43
2-13	374947	841652	<2	8.5	6.2	0.4	550	3	3.00	<2	74	23
2-14	374646	842312	<2	6.1	4.2	1.8	420	2	3.88	<2	58	19
2-15	375153	835601	<2	7.7	15.0	0.9	590	3	2.08	<2	96	29
2-16	374233	834814	<2	8.2	13.0	1.9	630	3	1.80	<2	96	20
2-17	375000	833936	<2	7.8	7.5	0.5	520	3	1.80	<2	83	19
2-18	373832	843938	<2	5.0	5.1	0.7	450	2	3.33	<2	50	18
2-19	373820	844316	<2	8.7	6.8	B	550	3	3.05	<2	77	32
2-20	373318	843610	<2	5.5	7.2	1.5	390	2	3.00	<2	55	19
2-21	373933	842146	<2	4.0	4.4	0.8	300	1	5.43	<2	38	17
2-22	374430	840921	<2	4.4	5.7	0.5	330	1	6.47	<2	43	23
2-23	375048	840945	<2	11.0	10.0	0.6	680	4	3.20	<2	92	38
2-24	382646	843948	<2	6.0	5.2	0.8	430	2	2.24	<2	60	17
2-25	373246	832221	<2	6.0	12.0	0.9	610	2	2.18	<2	76	16
2-26	372052	832112	<2	5.3	5.6	2.4	450	2	4.00	<2	61	23
2-27	372914	832850	<2	8.5	8.2	3.2	540	3	2.30	<2	76	29
2-28	373534	832523	<2	9.5	7.0	1.5	540	3	2.60	<2	85	31
2-29	374120	835127	<2	4.6	4.9	1.8	450	2	3.66	<2	57	19
2-30	374954	833842	<2	6.3	13.0	0.8	430	2	1.07	<2	71	16

Table 3. Continued

MAP #	Fe %	Hg	Mn	Mo	Ni	Pb	Sb	Sn	Th	V	Zn
2-2	4.6	0.02	5500	<2	32	27	0.4	<10	12	91	90
2-3	3.8	0.04	970	<2	37	25	0.8	<10	10	87	120
2-4	3.5	0.06	2000	<2	27	53	0.5	<10	10	71	80
2-5	2.9	0.16	1800	<2	29	46	0.6	<10	9	58	130
2-6	3.2	0.02	890	<2	23	16	0.5	<10	11	70	65
2-6D	2.8	0.16	1700	<2	22	50	0.5	<10	9	53	100
2-7	2.9	0.46	1100	<2	28	84	0.8	<10	11	56	180
2-8D	3.5	0.06	1700	<2	24	47	0.4	<10	11	71	450
2-8	3.5	0.08	1700	<2	24	47	0.4	<10	11	71	460
2-9	3.1	1.82	1100	5	50	340	3.2	50	7	52	650
2-10	3.5	0.06	1800	<2	35	46	0.5	<10	11	68	110
2-11	3.4	0.48	1800	<2	460	110	1.5	<10	9	55	250
2-12	5.0	0.08	1200	<2	55	32	0.6	<10	16	140	170
2-13	3.5	0.02	1200	<2	31	25	0.6	<10	14	98	110
2-14	3.5	0.06	1600	<2	26	30	0.5	<10	11	72	96
2-15	4.2	0.06	1900	4	54	26	1.0	<10	13	150	150
2-16	4.4	0.12	2000	<2	46	29	0.5	<10	14	140	140
2-17	3.8	0.08	1200	<2	38	93	0.5	<10	14	100	110
2-18	2.8	0.04	850	<2	29	30	0.7	<10	9	77	85
2-19	3.7	0.08	1600	<2	38	33	0.6	<10	16	100	140
2-20	3.2	0.06	890	<2	33	25	0.5	<10	12	83	87
2-21	2.4	0.04	1100	<2	25	23	0.6	<10	7	57	77
2-22	2.7	0.08	1100	<2	21	31	0.6	<10	7	59	66
2-23	4.6	0.14	1600	<2	44	33	0.5	<10	17	130	150
2-24	3.9	0.04	850	<2	26	21	0.5	<10	12	77	73
2-25	3.4	0.08	1400	<2	37	24	0.8	<10	12	100	110
2-26	3.2	0.16	1500	<2	37	49	0.7	<10	11	66	150
2-27	4.3	0.04	630	<2	35	33	0.4	<10	15	100	130
2-28	4.0	0.08	1300	<2	43	31	0.4	<10	15	110	140
2-29	2.7	0.16	1900	<2	21	48	0.8	20	9	53	110
2-30	3.8	0.04	480	<2	38	20	0.6	<10	13	110	110

Table 3. Continued

MAP #	LATITUDE	LONGITUDE	Ag	Al%	As	B	BA	Be	TOTAL C%	Cd	Cr	Cu
2-31	373609	833830	<2	10.0	7.7	0.6	570	3	2.20	<2	99	27
2-31D	373609	833830	<2	9.7	7.9	<0.4	560	3	2.10	<2	100	27
2-32	374155	835832	<2	6.7	7.4	0.6	470	2	2.28	<2	79	22
2-33	375140	840945	<2	7.5	9.3	0.5	480	3	2.50	<2	79	26
2-34	375048	842607	<2	7.8	7.4	0.5	530	3	2.44	<2	76	29
2-35	374604	843650	<2	6.0	8.0	0.6	470	2	2.37	<2	65	22
2-36	374945	844326	<2	6.2	6.0	0.6	500	2	1.38	<2	59	20
2-37	380227	845047	<2	7.8	8.3	1.1	550	3	2.40	<2	79	33
2-38	381206	845254	<2	3.6	6.5	1.0	530	1	7.10	<2	34	28
2-39	381256	843621	<2	5.1	4.5	2.2	410	2	5.40	<2	63	34
2-40	384048	851117	<2	7.0	6.0	0.8	460	2	2.00	<2	71	19
2-41	373331	831104	<2	9.8	5.8	0.5	550	3	2.50	<2	87	24
2-42	381857	845113	<2	6.8	7.7	0.6	480	2	2.40	<2	78	22
2-43	372845	834038	<2	8.9	7.6	0.6	590	3	1.43	<2	89	26
2-44	371623	833850	<2	8.8	8.7	0.8	790	3	2.30	<2	95	26
2-45	372802	831647	<2	10.0	6.2	0.6	580	3	2.61	<2	86	27
2-46	371558	831303	<2	9.9	7.3	0.7	620	3	2.70	<2	95	37
2-47	372030	830707	<2	10.0	6.9	1.4	610	3	2.20	<2	95	33
2-48	370907	834537	<2	8.4	16.0	0.4	540	3	5.07	<2	97	38
2-49	371043	833535	<2	11.0	8.1	0.8	470	3	3.00	<2	99	29
2-50	370954	831829	<2	9.9	6.6	0.9	580	3	1.80	<2	93	26
2-50D	370954	831829	<2	9.7	6.9	0.7	580	3	1.90	<2	89	23
2-51	370813	832217	<2	5.5	7.3	<.4	320	2	2.32	<2	36	12
2-52	370310	832400	<2	9.8	8.3	<0.4	610	3	1.40	<2	90	24
2-53	371209	830513	<2	8.8	8.1	0.4	610	3	3.37	<2	81	30
2-54	370735	830505	<2	8.7	9.5	0.5	540	3	2.60	<2	80	40
2-55	370630	825136	<2	9.2	7.6	1.8	610	3	4.10	<2	81	42
2-56D	370910	825628	<2	4.9	8.9	0.6	320	2	5.20	<2	51	30
2-56	370910	825628	<2	11.0	12.0	0.6	700	4	3.10	<2	96	37
2-57	373211	832055	<2	5.8	6.8	0.6	530	3	2.16	<2	86	33
2-58	373318	833538	<2	8.4	9.2	0.3	570	3	1.70	<2	84	27

Table 3. Continued

MAP #	Fe %	Hg	Mn	Mo	Ni	Pb	Sb	Sn	Th	V	Zn
2-31	4.0	0.08	1000	<2	45	30	0.4	<10	14	120	130
2-31D	4.0	0.08	1100	<2	46	33	0.7	<10	15	120	130
2-32	3.4	0.08	570	3	46	65	0.7	<10	12	120	150
2-33	3.7	0.08	1000	<2	43	29	0.7	<10	13	100	130
2-34	3.8	0.06	930	<2	41	27	0.6	<10	13	100	120
2-35	3.6	0.22	1500	<2	36	39	0.6	<10	13	77	110
2-36	3.3	0.04	1000	<2	27	25	0.7	<10	12	80	74
2-37	3.9	0.04	1800	<2	44	32	0.4	<10	13	110	130
2-38	2.0	0.12	700	<2	18	180	1.5	<10	7	47	110
2-39	3.1	0.18	2400	<2	40	61	0.9	<10	9	59	180
2-40	3.7	0.04	1100	<2	34	27	0.5	<10	10	91	93
2-41	3.7	0.04	1700	<2	38	27	0.5	<10	16	110	120
2-42	3.5	0.08	1500	<2	37	35	0.9	<10	11	84	120
2-43	4.0	0.06	1600	<2	45	28	0.6	<10	15	110	120
2-44	4.2	0.14	1200	<2	55	30	0.7	<10	13	110	140
2-45	3.7	0.06	1200	<2	39	22	0.5	<10	15	120	110
2-46	3.9	0.08	860	<2	41	35	0.5	<10	14	120	150
2-47	4.2	0.06	1300	<2	46	28	0.4	<10	16	120	140
2-48	6.5	0.26	6600	<2	66	40	0.7	<10	16	100	240
2-49	4.8	0.36	1100	<2	47	38	0.7	<10	14	130	180
2-50	4.0	0.06	940	<2	37	31	0.5	<10	14	120	140
2-50D	3.9	0.04	720	<2	35	31	0.4	<10	14	110	130
2-51	2.5	0.10	1100	<2	23	14	0.6	<10	8	65	65
2-52	3.6	0.08	800	<2	40	29	0.5	<10	13	120	120
2-53	4.0	0.12	1500	<2	36	27	0.7	<10	14	100	130
2-54	5.3	0.08	920	<2	34	49	0.7	10	14	100	140
2-55	3.9	0.14	1400	<2	48	39	0.4	<10	15	100	200
2-56D	3.3	0.04	950	<2	24	34	0.8	<10	9	65	65
2-56	4.6	0.08	1600	<2	43	30	0.6	<10	16	130	150
2-57	4.1	0.04	1300	3	42	35	0.7	<10	12	100	120
2-58	4.3	0.08	1100	<2	38	31	0.6	<10	15	100	110

Table 3. Continued

MAP #	LATITUDE	LONGITUDE	Ag	Al%	As	B	BA	Be	TOTAL C%	Cd	Cr	Cu
2-59D	373319	834606	<2	8.8	8.4	0.5	550	3	2.50	<2	87	29
2-59	373319	834606	<2	9.3	8.7	0.7	600	3	2.39	<2	90	31
2-60	374844	832750	<2	8.9	6.5	2.4	570	3	1.70	<2	77	24
2-61	375532	844917	<2	7.5	7.4	0.6	500	3	2.30	<2	77	22
2-62	382821	845720	<2	6.8	6.0	0.4	470	2	2.45	<2	66	20
2-63	370231	833249	<2	10.0	7.6	0.3	630	3	2.95	<2	90	27
2-63D	370231	833249	<2	9.8	7.4	3.8	600	3	3.20	<2	86	33
2-64	372045	832807	<2	8.9	7.7	0.5	580	3	2.20	<2	85	25
2-65D	372113	834135	<2	8.1	7.6	2.0	510	3	1.70	<2	88	25
2-65	372113	834135	<2	8.1	7.0	0.6	530	3	1.55	<2	88	22
2-66	373822	834705	<2	9.3	9.4	0.9	700	3	1.75	<2	110	22
2-67	373142	834736	<2	8.6	7.9	0.5	520	3	1.77	<2	110	20
2-68	373715	835734	<2	7.2	18.0	0.4	720	2	1.88	<2	100	20
2-69	373340	835801	<2	6.1	21.0	0.8	460	2	2.66	<2	99	42
2-70	375637	844553	<2	5.3	8.8	0.5	470	2	3.50	<2	54	13
2-72	373516	841608	16	5.5	11.0	3.1	81	2	8.70	3	99	140
2-73	380821	843100	<2	6.2	7.6	<0.4	510	2	0.69	<2	64	12
2-74	381113	844810	<2	5.2	6.3	0.5	370	2	3.50	<2	57	11
2-75	372409	842450	<2	5.3	8.4	1.7	380	2	3.50	<2	63	25
2-76	373848	841807	<2	4.7	5.9	1.8	380	2	3.20	<2	48	21
2-77	371648	834832	<2	8.7	8.0	0.7	470	3	1.90	<2	98	26
2-77D	371648	834832	<2	9.2	7.5	0.6	490	3	1.70	<2	99	23
2-78	371700	831115	<2	9.7	7.5	1.3	590	3	3.20	<2	86	34
2-79	371053	833802	<2	9.4	6.5	0.7	610	3	1.90	<2	85	28
2-80	375030	835746	<2	6.0	21.0	0.9	410	2	3.50	3	72	46
2-81	374853	835504	<2	6.5	29.0	0.9	500	3	3.36	4	87	37
2-82	372926	843046	<2	6.3	12.0	B	440	2	2.20	<2	71	25
2-83	373244	844341	<2	5.2	6.7	0.6	430	2	2.50	<2	54	18
2-84	382839	850550	<2	6.6	6.5	1.5	480	2	3.70	<2	64	21
2-85	382539	850955	<2	4.4	5.6	1.1	350	1	5.80	<2	48	16
2-86	380235	843734	<2	5.0	4.7	0.8	450	2	2.17	<2	53	15

Table 3. Continued

MAP #	Fe %	Hg	Mn	Mo	Ni	Pb	Sb	Sn	Th	V	Zn
2-59D	4.2	0.04	1600	<2	44	32	0.8	<10	14	100	140
2-59	4.5	0.06	1800	<2	47	28	0.6	<10	16	110	150
2-60	3.9	0.02	1200	<2	35	32	0.4	<10	15	100	120
2-61	3.6	0.04	1400	<2	39	31	0.6	<10	12	95	120
2-62	3.6	0.06	1400	<2	33	23	0.5	<10	12	89	95
2-63	4.0	0.16	1700	<2	53	25	0.6	<10	15	120	150
2-63D	4.0	0.18	1300	<2	55	29	0.4	<10	15	120	160
2-64	3.8	0.12	3000	<2	37	32	0.4	<10	16	110	130
2-65D	4.0	0.10	2100	<2	52	24	0.4	<10	14	98	120
2-65	4.0	0.10	1500	<2	50	24	0.6	<10	15	99	120
2-66	4.4	0.06	2000	<2	52	22	0.6	<10	14	130	110
2-67	3.7	0.06	2700	<2	57	33	0.7	<10	14	110	100
2-68	5.5	0.04	4000	<2	51	28	0.8	<10	13	130	120
2-69	3.8	0.08	580	8	57	80	2.3	<10	11	160	210
2-70	3.6	0.02	3000	<2	24	45	0.6	<10	11	64	83
2-72	3.3	1.06	510	25	75	70	2.4	90	7	140	560
2-73	3.4	0.04	1400	<2	23	36	0.5	<10	10	78	99
2-74	3.0	0.04	2000	<2	24	35	0.6	<10	9	62	84
2-75	3.0	0.14	490	<2	33	88	0.6	<10	9	91	190
2-76	2.8	0.04	1900	<2	21	43	0.6	<10	9	59	75
2-77	3.6	0.10	750	<2	64	31	0.7	<10	13	100	190
2-77D	3.7	0.08	810	<2	61	31	0.5	<10	14	110	180
2-78	3.9	0.04	1200	<2	45	49	0.4	<10	15	120	150
2-79	3.8	0.04	1200	<2	33	29	0.4	<10	14	110	110
2-80	3.7	0.14	1200	14	120	31	1.4	<10	11	140	310
2-81	5.5	0.20	1900	27	150	25	1.9	<10	12	230	370
2-82	3.5	0.04	990	4	57	23	0.7	<10	12	130	150
2-83	3.0	0.04	1500	<2	28	32	0.9	<10	11	73	88
2-84	4.0	0.04	2700	<2	30	23	0.5	<10	12	89	87
2-85	2.5	0.08	3100	<2	19	54	0.7	<10	8	54	140
2-86	2.7	0.06	1300	<2	22	29	0.6	<10	12	60	88

Table 3. Continued

MAP #	LATITUDE	LONGITUDE	Ag	Al%	As	B	BA	Be	TOTAL C%	Cd	Cr	Cu
2-87	381254	844755	2	4.6	5.2	2.8	460	2	3.60	<2	62	26
2-88	381512	844508	<2	4.9	5.1	2.3	410	2	5.00	<2	52	17
2-89	380116	843538	<2	4.7	5.1	1.5	430	2	2.10	<2	56	15
2-90	370742	825829	<2	10.0	10.0	0.4	650	3	3.55	<2	89	36
2-91	372957	830529	<2	9.1	6.0	2.0	590	3	2.40	<2	80	28
2-92	384217	844924	<2	6.7	7.6	2.0	440	2	3.20	<2	72	28
2-93	372201	830905	<2	11.0	7.8	0.5	640	4	2.09	<2	100	31
2-94	372815	831919	<2	10.0	6.8	0.9	600	4	2.10	<2	99	34
2-95	373533	831341	<2	8.4	5.6	3.1	530	3	2.40	<2	72	25
2-96	370713	834646	<2	9.2	12.0	0.5	540	3	2.40	<2	100	33
2-97	380520	842140	<2	5.3	5.6	0.8	390	2	2.70	2	56	16
2-98	380433	842447	<2	6.1	6.0	1.0	420	2	2.12	<2	62	18
2-99	374524	832912	<2	8.5	6.9	1.1	550	3	1.90	<2	78	26
2-101D	380400	843315	<2	5.0	6.0	1.2	460	2	3.40	<2	56	25
2-101	380400	843315	<2	5.1	6.7	0.7	470	2	3.50	<2	63	23
2-102	374100	834259	<2	6.2	8.2	0.8	690	2	1.47	<2	85	14
2-103	380152	845044	<2	5.2	6.8	20.0	390	2	4.71	31	66	250
2-104	380437	843618	<2	4.7	7.5	0.9	510	2	3.10	<2	60	14
2-105	382550	850020	<2	5.9	5.2	1.7	430	2	1.10	<2	55	19
2-106	373922	842543	<2	5.7	6.3	0.7	430	2	4.43	<2	56	29
2-107	382756	845522	<2	6.2	5.3	0.7	440	2	1.40	<2	64	16

Table 3. Continued

MAP #	Fe %	Hg	Mn	Mo	Ni	Pb	Sb	Sn	Th	V	Zn
2-87	2.6	0.30	1600	<2	29	61	0.5	<10	10	51	130
2-88	3.1	0.04	1700	<2	24	34	0.4	<10	10	59	74
2-89	2.6	0.06	1200	<2	22	36	0.7	<10	10	52	130
2-90	4.3	0.04	1300	<2	41	30	0.7	<10	16	120	150
2-91	4.0	0.12	830	<2	36	26	0.4	<10	15	110	130
2-92	5.0	0.06	1600	<2	34	28	0.4	<10	12	96	98
2-93	4.3	0.04	1200	<2	48	27	0.6	<10	15	130	140
2-94	4.1	0.04	2200	<2	58	29	0.5	<10	15	120	150
2-95	3.8	0.04	550	<2	32	27	0.4	<10	16	96	110
2-96	5.2	0.08	7300	<2	85	45	0.6	<10	16	110	200
2-97	2.9	0.08	940	<2	22	35	0.7	<10	10	63	90
2-98	3.7	0.06	930	<2	25	56	0.6	<10	13	76	110
2-99	3.9	0.04	970	<2	34	28	0.4	<10	14	100	120
2-101D	2.7	0.16	1400	<2	23	92	0.5	<10	11	58	120
2-101	2.9	0.18	1500	<2	24	120	1.0	<10	10	58	150
2-102	3.5	0.04	1300	<2	33	19	0.5	<10	13	81	76
2-103	3.7	0.42	1400	<2	120	62	1.2	<10	10	67	190
2-104	3.4	0.04	2700	<2	24	45	0.8	<10	10	56	170
2-105	3.5	0.06	1000	<2	26	21	0.4	<10	10	74	63
2-106	3.3	0.08	1400	3	42	30	0.7	<10	10	95	130
2-107	3.3	0.02	940	<2	27	19	0.6	<10	11	77	70

Table 4. Analytical results for 22 additional constituents in fine-grained streambed sediments from the Kentucky River basin. All values are in micrograms per gram unless otherwise noted.

MAP #	INORG C	ORG C%	Ca %	Ce	Co	Eu	Ga	K %	La	Li	Mg %
1-5	0.55	0.65	2.00	72	22	<2	19	3.40	38	52	1.40
1-6	0.46	1.40	1.50	88	29	<2	18	2.80	45	44	0.90
1-7	0.58	1.60	2.40	95	31	<2	18	2.70	45	45	0.90
1-18	0.26	1.50	1.40	72	24	<2	14	1.90	39	32	0.50
1-19	0.74	2.20	3.10	90	30	<2	16	2.00	42	35	0.62
1-21	0.76	1.34	3.00	91	33	<2	17	2.60	37	41	0.78
1-22	0.59	2.00	2.40	81	27	<2	19	3.20	40	51	1.20
1-23	0.49	1.90	2.50	88	22	<2	16	3.20	43	45	0.89
1-24	0.39	1.70	1.80	80	22	<2	15	2.50	39	36	0.68
1-25	0.19	2.40	1.40	76	23	<2	15	2.20	39	39	0.71
1-26	1.18	0.60	4.10	83	21	<2	22	3.90	39	59	1.40
1-27	0.10	1.52	0.79	95	32	<2	16	3.10	35	40	0.73
1-28	0.25	1.36	1.20	81	18	<2	14	2.90	37	37	0.66
1-30	0.68	1.20	2.70	72	22	<2	16	2.90	38	38	0.79
1-31	2.50	0.53	9.80	71	18	<2	11	2.60	38	26	0.61
1-32	0.88	1.10	3.40	79	19	<2	18	3.60	38	50	1.10
1-33	1.80	1.80	6.80	71	18	<2	16	2.50	39	35	0.88
1-40	2.90	2.90	9.10	64	19	<2	12	2.00	34	34	0.94
1-41	4.40	0.80	15.00	72	18	<2	12	2.30	36	28	0.65
1-42	1.60	1.40	6.00	91	26	<2	16	2.80	48	37	0.66
1-43	1.50	1.50	5.20	84	22	<2	16	2.70	43	40	0.80
1-45	1.10	2.28	4.10	130	59	<2	20	2.90	44	39	0.71
1-46	0.02	2.50	1.70	100	30	<2	17	2.80	47	42	0.79
1-47	0.97	1.50	3.70	87	24	<2	16	2.60	43	39	0.77
1-48	0.17	1.80	0.92	80	22	<2	14	3.00	39	34	0.64
1-49	0.60	2.08	2.30	120	49	<2	18	2.90	46	38	0.72
1-50	0.33	2.20	1.80	96	26	<2	15	2.70	46	39	0.63
1-51	0.93	2.20	4.10	86	28	<2	16	3.20	40	42	1.00
1-52	1.10	1.40	4.40	83	28	<2	15	2.90	41	37	0.72
1-53	1.60	2.80	6.00	71	21	<2	11	2.70	37	35	0.68

Table 4. Continued

MAP #	Na %	Nb	Nd	P %	TOTAL S%	Sc	Sr	Ti%	U	Y	Yb
1-5	0.46	4	31	0.11	0.18	14	89	0.49	0.65	23	3
1-6	0.43	8	41	0.11	0.15	11	94	0.41	0.65	25	3
1-7	0.43	7	40	0.15	0.09	12	110	0.41	0.40	28	3
1-18	0.53	5	36	0.19	0.08	9	86	0.31	1.00	24	3
1-19	0.40	7	37	0.28	0.03	9	110	0.32	0.80	25	3
1-21	0.55	9	41	0.20	0.03	10	130	0.40	0.65	27	3
1-22	0.48	9	38	0.14	0.23	13	110	0.43	0.60	24	3
1-23	0.54	4	42	0.09	0.03	12	120	0.42	0.40	25	3
1-24	0.39	<4	36	0.16	0.03	10	85	0.35	1.10	27	3
1-25	0.40	<4	32	0.11	0.07	10	77	0.39	0.55	25	3
1-26	0.43	7	39	0.13	0.17	14	120	0.45	1.20	26	3
1-27	0.53	8	37	0.12	0.07	10	87	0.38	0.55	25	3
1-28	0.50	<4	36	0.09	0.03	9	88	0.40	0.50	25	3
1-30	0.45	7	34	0.13	0.07	10	93	0.36	0.50	23	3
1-31	0.51	<4	40	0.20	0.03	8	230	0.25	0.60	27	3
1-32	0.41	4	38	0.13	0.02	13	100	0.44	0.60	26	3
1-33	0.39	4	35	0.39	0.09	10	130	0.25	0.70	27	3
1-40	0.32	6	27	0.39	0.14	8	170	0.25	0.60	23	3
1-41	0.33	<4	37	0.31	0.01	9	290	0.24	0.65	27	3
1-42	0.41	<4	45	0.26	0.03	11	160	0.35	0.55	32	3
1-43	0.40	6	37	0.14	0.06	11	120	0.33	0.45	26	3
1-45	0.41	9	47	0.20	0.10	10	160	0.32	0.45	31	3
1-46	0.46	5	42	0.10	0.04	11	92	0.39	0.45	27	3
1-47	0.43	5	39	0.10	0.03	10	110	0.36	0.65	25	3
1-48	0.43	<4	35	0.08	0.05	9	75	0.41	0.35	24	3
1-49	0.38	6	45	0.15	0.08	10	100	0.42	0.70	30	3
1-50	0.44	7	43	0.13	0.05	10	88	0.38	0.45	27	4
1-51	0.36	5	37	0.12	0.22	11	120	0.35	0.40	25	3
1-52	0.38	6	39	0.24	0.03	11	110	0.32	0.55	29	3
1-53	0.39	5	35	0.23	0.05	9	140	0.33	0.60	24	3

Table 4. Continued

MAP #	INORG C	ORG C%	Ca %	Ce	Co	Eu	Ga	K %	La	Li	Mg %
1-54	1.32	1.86	4.90	91	24	<2	14	1.90	37	30	0.70
1-55	0.13	1.70	0.97	77	20	<2	11	1.50	38	27	0.38
1-61	0.48	2.10	2.50	86	21	<2	15	1.90	39	30	0.56
1-62	0.24	1.40	1.10	78	23	<2	16	2.30	39	33	0.58
1-63	1.10	1.50	3.30	73	18	<2	11	1.80	38	28	0.52
1-64	0.39	2.30	4.80	82	19	<2	16	3.00	44	40	0.77
1-65	2.60	0.40	8.60	66	15	<2	14	3.20	38	37	1.10
1-66	0.80	1.21	3.10	120	45	<2	20	3.20	47	48	0.86
1-67	1.90	1.70	6.70	76	18	<2	13	2.20	40	34	0.73
1-68	1.30	2.40	6.50	65	19	<2	11	2.10	37	33	0.70
1-70	0.17	1.97	1.10	85	20	<2	13	2.70	40	35	0.57
1-71	0.74	1.70	3.00	79	18	<2	24	3.90	47	61	1.10
1-72	0.57	2.40	2.40	83	25	<2	15	2.30	42	32	0.59
1-73	0.84	2.20	2.90	100	34	<2	16	2.70	49	38	0.85
1-75	1.20	3.70	9.40	73	15	<2	15	2.40	41	35	0.90
1-76	1.90	0.40	4.40	77	23	<2	21	3.90	43	51	2.30
1-77	0.67	1.90	3.30	110	45	<2	19	2.60	44	35	0.77
1-78	0.31	1.90	1.50	60	14	<2	11	1.40	35	27	0.48
1-80	3.10	1.82	10.00	85	32	<2	17	1.80	37	29	0.93
1-81	0.72	1.40	3.00	80	24	<2	15	2.30	39	32	0.61
1-82	2.27	1.74	7.70	86	25	<2	15	2.80	37	39	0.88
1-83	2.20	3.20	9.30	62	13	<2	10	1.40	35	25	0.43
1-84	1.80	1.70	7.20	73	24	<2	13	1.60	41	33	0.60
1-85	0.64	1.90	3.10	86	17	<2	14	1.80	41	34	0.55
1-86	0.78	2.90	2.40	74	21	<2	14	3.10	39	44	1.10
1-87	0.51	2.10	2.10	82	22	<2	12	1.70	39	30	0.48
1-89	0.13	2.20	1.70	110	23	<2	13	1.20	49	29	0.37
1-90	0.20	2.18	1.70	84	12	<2	13	1.60	40	34	0.44
1-92	0.31	2.80	2.20	76	12	<2	12	1.70	41	29	0.42
1-93	0.94	2.60	5.30	76	20	<2	15	2.20	41	34	0.62
1-94	0.45	2.70	5.10	90	28	<2	15	1.50	49	32	0.50

Table 4. Continued

MAP #	Na %	Nb	Nd	P %	TOTAL S%	Sc	Sr	Ti%	U	Y	Yb
1-54	0.38	9	38	0.47	0.04	8	130	0.31	1.00	30	3
1-55	0.38	6	35	0.17	0.06	7	77	0.34	0.80	22	3
1-61	0.35	<4	36	0.26	0.05	8	94	0.15	1.20	26	3
1-62	0.35	5	34	0.16	0.06	9	74	0.38	0.75	24	3
1-63	0.33	<4	31	0.13	0.07	7	94	0.28	0.80	19	2
1-64	0.32	5	37	0.27	0.03	11	130	0.33	0.60	29	3
1-65	0.27	6	30	0.30	0.06	10	150	0.31	0.55	28	3
1-66	0.32	<4	48	0.18	0.02	12	110	0.34	0.65	33	4
1-67	0.30	8	35	0.15	0.06	8	120	0.31	0.50	24	3
1-68	0.36	<4	31	0.10	0.07	8	120	0.31	0.40	20	3
1-70	0.37	<4	38	0.13	0.03	10	71	0.36	0.45	26	3
1-71	0.27	13	42	0.13	0.05	15	92	0.45	0.55	26	4
1-72	0.33	<4	35	0.12	0.06	8	81	0.34	0.50	24	3
1-73	0.31	10	42	0.20	0.12	10	87	0.41	0.55	28	3
1-75	0.27	5	35	0.44	0.07	9	150	0.28	0.80	27	3
1-76	0.18	10	35	0.11	0.43	14	88	0.45	0.50	24	3
1-77	0.34	4	42	0.35	0.08	10	110	0.33	0.85	33	3
1-78	0.37	7	29	0.20	0.07	7	81	0.36	1.10	20	3
1-80	0.30	6	33	0.48	0.07	8	170	0.28	0.60	25	3
1-81	0.37	4	35	0.18	0.06	9	98	0.33	0.75	22	3
1-82	0.27	8	36	0.30	0.04	10	140	0.37	0.80	26	3
1-83	0.26	5	32	0.41	0.09	7	130	0.20	0.90	22	3
1-84	0.28	<4	35	0.18	0.05	8	140	0.32	0.55	24	3
1-85	0.27	8	35	0.43	0.04	8	94	0.25	0.75	27	3
1-86	0.29	6	32	0.12	0.22	11	82	0.39	0.50	23	3
1-87	0.28	<4	35	0.22	0.06	8	85	0.31	0.85	26	3
1-89	0.25	<4	46	0.45	0.03	8	94	0.15	1.40	35	3
1-90	0.28	<4	39	0.31	0.04	8	93	0.15	1.00	29	3
1-92	0.32	<4	37	0.43	0.02	7	110	0.16	1.10	29	3
1-93	0.27	<4	34	0.19	0.06	8	100	0.18	0.60	25	3
1-94	0.26	5	42	0.96	0.07	8	130	0.26	1.70	38	4

Table 4. Continued

MAP #	INORG C	ORG C%	Ca %	Ce	Co	Eu	Ga	K %	La	Li	Mg %
1-96	0.27	1.00	1.50	120	47	2	17	3.20	53	40	0.67
1-98	0.36	1.90	1.30	95	31	<2	16	3.10	42	40	0.91
1-99	0.02	2.40	2.80	98	27	<2	19	3.60	42	49	1.20
1-100	0.10	2.00	0.75	100	35	<2	15	1.80	45	32	0.42
1-101	0.02	1.30	1.10	80	6	<2	10	1.50	42	27	0.32
1-102	0.88	1.80	5.50	93	18	<2	16	1.40	48	33	0.54
1-103	0.30	2.20	3.70	85	16	<2	16	1.30	47	31	0.42
1-104	0.98	3.20	4.20	70	11	<2	10	1.40	41	31	0.55
1-105	1.60	3.20	6.30	77	11	<2	12	1.20	38	29	0.39
1-106	0.19	2.06	2.00	91	14	<2	13	1.40	42	33	0.44
1-107	1.20	2.70	4.80	68	13	<2	11	1.40	40	29	0.87
1-108	0.15	1.60	0.91	61	14	<2	9	1.80	30	23	0.31
1-109	1.50	1.90	6.10	91	21	<2	14	1.70	49	34	0.99
1-111	0.12	3.90	3.00	94	17	<2	15	1.30	44	31	0.37
1-112	0.44	2.30	2.60	84	17	<2	12	1.50	45	30	0.36
1-113	0.48	2.30	3.10	73	15	<2	12	1.50	40	28	0.39
1-114	0.18	2.20	1.70	83	18	<2	14	1.30	44	30	0.34
1-115	0.02	1.30	0.43	84	17	<2	14	2.70	43	36	0.56
1-116	0.41	1.50	1.50	75	25	<2	16	2.80	35	39	0.92
1-118	2.00	1.70	6.20	79	13	<2	13	1.60	40	31	0.66
1-119	4.00	1.70	17.00	56	10	<2	13	1.50	36	38	0.75
1-120	0.57	2.18	2.50	78	10	<2	11	1.60	39	28	0.77
1-121	0.28	2.30	2.30	85	11	<2	12	1.50	40	32	0.36
1-122	0.27	1.80	1.50	93	14	<2	14	1.60	44	32	0.40
1-123	0.91	1.40	3.90	110	22	<2	16	1.50	48	36	0.68
1-124	0.29	2.20	1.40	81	22	<2	13	1.50	41	33	0.47
1-125	0.06	4.20	1.10	75	11	<2	10	1.30	38	25	0.32
1-127	1.10	2.00	3.80	72	22	<2	12	2.10	36	27	0.75
1-129	0.25	1.50	1.20	70	19	<2	12	2.70	33	26	0.56
1-130	5.60	<.01	10.00	52	13	<2	17	2.70	31	27	4.90
1-131	0.03	1.40	0.24	92	25	<2	18	1.90	49	56	0.37

Table 4. Continued

MAP #	Na %	Nb	Nd	P %	TOTAL S%	Sc	Sr	Ti%	U	Y	Yb
1-96	0.40	10	48	0.15	0.03	11	80	0.44	0.65	31	4
1-98	0.42	<4	42	0.12	0.02	11	83	0.39	0.60	29	4
1-99	0.42	8	41	0.12	0.14	13	90	0.41	0.70	25	3
1-100	0.34	6	44	0.33	0.14	9	89	0.34	1.40	29	3
1-101	0.39	<4	37	0.30	0.01	7	88	0.18	0.90	31	3
1-102	0.26	<4	40	1.20	0.05	8	220	0.17	2.80	40	3
1-103	0.30	<4	41	1.20	0.04	8	240	0.14	1.30	43	4
1-104	0.33	<4	34	0.83	0.07	7	180	0.14	1.50	30	3
1-105	0.24	4	34	0.60	0.10	7	150	0.19	0.90	32	3
1-106	0.29	<4	43	0.46	0.04	9	100	0.18	1.90	33	3
1-107	0.23	<4	34	0.31	0.04	7	110	0.13	1.10	26	3
1-108	0.33	6	27	0.19	0.03	6	64	0.24	0.70	21	3
1-109	0.24	<4	43	0.72	0.05	9	160	0.13	1.80	36	3
1-111	0.22	<4	41	1.10	0.07	8	150	0.08	1.50	47	4
1-112	0.29	4	37	0.38	0.05	8	97	0.20	0.90	30	3
1-113	0.33	5	34	0.54	0.18	7	120	0.26	0.85	30	3
1-114	0.28	<4	37	0.40	0.06	8	84	0.24	1.40	28	3
1-115	0.51	<4	41	0.09	0.02	9	68	0.40	0.85	26	3
1-116	0.46	<4	35	0.13	0.06	10	77	0.36	0.55	25	3
1-118	0.29	6	37	0.41	0.04	8	140	0.22	0.75	27	3
1-119	0.19	<4	33	0.81	0.05	9	300	0.16	0.90	29	3
1-120	0.31	<4	36	0.38	0.04	7	120	0.12	1.10	30	3
1-121	0.27	5	38	0.52	0.06	8	110	0.19	1.20	31	3
1-122	0.29	9	40	0.41	0.03	8	140	0.28	1.70	34	3
1-123	0.21	8	43	0.54	0.05	9	120	0.26	1.30	34	3
1-124	0.24	7	36	0.23	0.09	9	80	0.34	0.85	26	3
1-125	0.25	<4	33	0.32	0.05	7	79	0.17	1.70	26	3
1-127	0.29	5	34	0.16	0.08	7	92	0.32	0.50	23	3
1-129	0.32	5	29	0.16	0.04	7	55	0.35	0.75	25	3
1-130	0.14	<4	25	0.09	0.02	10	77	0.27	0.55	15	2
1-131	0.23	9	42	0.06	0.02	12	68	0.40	1.30	19	3

Table 4. Continued

MAP #	INORG C	ORG C%	Ca %	Ce	Co	Eu	Ga	K %	La	Li	Mg %
1-132	0.01	1.39	0.25	92	28	<2	16	1.80	42	58	0.41
1-133	0.32	1.80	1.40	74	14	<2	12	1.60	41	42	0.48
1-134	<0.01	0.99	0.22	85	17	<2	15	2.10	37	64	0.58
1-135	0.02	0.57	0.20	88	20	<2	18	2.40	45	99	0.73
1-136	0.14	2.00	0.64	67	29	<2	13	2.60	37	85	0.67
1-137	0.01	2.10	0.11	79	13	<2	16	2.20	43	64	0.46
1-138	4.70	1.20	9.90	56	13	<2	12	1.90	33	26	4.00
1-139	1.10	4.30	5.00	100	34	<2	14	1.60	50	28	0.52
1-140	0.20	4.00	2.00	65	9	<2	4	1.60	38	31	0.37
1-141	1.00	3.60	5.00	74	16	<2	14	1.80	41	36	0.50
1-142	0.46	1.40	1.70	96	18	<2	20	2.20	54	47	0.67
1-143	0.50	1.74	2.60	86	25	<2	16	1.70	40	37	0.53
1-144	0.21	3.00	1.30	55	12	<2	<4	1.30	35	30	0.41
1-145	0.40	2.00	2.10	74	16	<2	11	1.30	37	24	0.33
1-146	0.12	3.00	1.20	82	11	<2	12	1.30	40	27	0.34
1-147	2.70	3.10	9.50	68	13	<2	12	1.90	38	30	0.89
1-150	0.08	2.00	0.89	84	13	<2	10	1.50	43	25	0.32
1-151	0.05	1.90	1.10	91	11	<2	13	1.50	46	26	0.35
1-152	0.18	2.50	1.50	85	11	<2	12	1.40	43	27	0.37
1-153	2.50	4.70	8.80	59	11	<2	10	1.30	34	21	1.60
1-154	0.12	1.70	0.57	100	21	<2	22	2.40	57	56	0.68
1-155	1.10	2.40	3.50	48	13	<2	10	3.40	30	40	0.80
1-156	0.28	1.80	1.30	92	17	<2	17	2.50	44	48	0.62
1-157	0.01	1.20	0.72	89	15	<2	9	1.20	39	21	0.30
1-159	0.10	3.94	0.37	71	14	<2	17	2.20	34	30	0.52
1-160	0.02	3.02	0.07	72	13	<2	17	2.40	35	53	0.50
1-161	0.37	0.73	1.40	86	22	<2	17	2.40	41	100	0.69
1-162	0.01	0.44	0.19	80	14	<2	13	1.60	42	49	0.43
1-163	0.03	0.73	0.25	80	15	<2	13	1.50	39	46	0.38
1-164	0.01	0.90	0.12	97	34	<2	21	2.10	49	62	0.46
1-165	0.01	1.80	0.22	98	27	<2	19	1.80	52	54	0.38

Table 4. Continued

MAP #	Na %	Nb	Nd	P %	TOTAL S%	Sc	Sr	Ti%	U	Y	Yb
1-132	0.19	6	41	0.05	0.02	11	65	0.38	0.85	18	3
1-133	0.45	<4	33	0.03	0.03	8	56	0.29	0.55	18	3
1-134	0.58	6	37	0.03	0.02	10	56	0.36	0.75	16	3
1-135	0.51	7	36	0.02	0.03	13	58	0.39	1.10	16	3
1-136	0.45	7	27	0.05	0.20	13	77	0.36	4.90	18	3
1-137	0.22	10	40	0.06	0.10	12	61	0.36	11.00	21	3
1-138	0.20	<4	30	0.12	0.07	7	85	0.22	0.75	20	2
1-139	0.23	<4	40	0.52	0.07	8	120	0.21	1.00	32	3
1-140	0.32	<4	39	0.42	0.07	6	130	0.13	1.00	31	4
1-141	0.24	5	34	0.58	0.07	8	130	0.21	1.30	32	3
1-142	0.59	7	46	0.06	0.04	12	120	0.33	1.00	21	3
1-143	0.22	7	38	0.46	0.05	9	92	0.36	1.30	29	3
1-144	0.27	<4	35	0.27	0.06	6	120	0.17	1.10	26	3
1-145	0.27	5	33	0.29	0.04	7	92	0.22	1.00	27	3
1-146	0.23	<4	36	0.25	0.02	8	82	0.19	1.10	28	3
1-147	0.26	6	35	0.36	0.06	8	160	0.23	0.65	26	3
1-150	0.23	<4	38	0.21	0.03	7	85	0.17	1.50	32	3
1-151	0.29	5	36	0.38	0.04	7	84	0.19	1.50	29	3
1-152	0.24	<4	40	0.28	0.04	8	97	0.15	1.10	33	3
1-153	0.19	<4	31	0.58	0.11	6	150	0.17	1.10	23	2
1-154	0.45	10	48	0.06	0.04	14	110	0.40	1.10	21	3
1-155	0.44	<4	39	0.17	0.07	8	94	0.30	0.60	23	3
1-156	0.43	8	43	0.12	0.02	12	78	0.35	1.10	25	3
1-157	0.23	<4	38	0.06	0.02	5	54	0.29	1.00	20	3
1-159	0.15	10	39	0.13	0.17	13	68	0.35	31.00	28	3
1-160	0.22	8	35	0.07	0.16	13	63	0.33	11.00	20	3
1-161	0.51	5	37	0.04	0.03	13	67	0.29	0.80	16	2
1-162	0.54	<4	36	0.02	0.02	9	47	0.31	0.85	17	3
1-163	0.40	<4	36	0.04	0.02	9	49	0.28	0.85	18	3
1-164	0.31	9	41	0.09	0.01	13	76	0.31	1.70	19	3
1-165	0.24	10	45	0.07	0.02	11	69	0.36	1.10	22	3

Table 4. Continued

MAP #	INORG C	ORG C%	Ca %	Ce	Co	Eu	Ga	K %	La	Li	Mg %
1-166	0.03	2.00	0.23	110	22	<2	16	1.80	56	38	0.42
1-167	0.04	1.20	0.25	110	28	<2	22	2.50	51	70	0.67
1-168	0.02	1.00	0.14	110	52	<2	20	1.90	51	57	0.44
1-169	0.03	6.70	0.17	100	32	<2	15	1.60	56	28	0.23
1-170	0.01	1.55	0.22	80	14	<2	12	1.60	37	49	0.40
1-171	0.18	1.30	0.94	87	19	<2	15	1.60	44	59	0.63
1-172	0.10	1.40	0.58	90	25	<2	18	2.40	43	96	0.69
1-173	0.14	1.46	0.70	79	26	<2	14	2.00	37	56	0.52
1-174	0.19	2.52	0.80	74	44	<2	15	2.10	37	34	0.47
1-176	3.10	3.10	9.20	68	19	<2	15	2.10	33	34	3.70
1-177	1.00	1.70	5.40	77	15	<2	13	1.90	39	30	3.10
1-178	4.00	1.60	9.10	67	20	<2	14	1.80	33	29	3.40
1-179	0.44	1.90	3.70	76	26	<2	15	2.60	38	34	0.73
1-180	1.10	1.90	4.00	79	19	<2	16	2.70	45	41	0.72
1-181	3.00	4.30	11.00	60	12	<2	12	1.90	31	30	0.56
1-182	4.90	3.70	17.00	59	9	<2	9	0.93	31	23	0.56
1-183	0.33	2.90	2.40	77	16	<2	11	1.40	37	27	0.34
1-184	1.10	3.10	5.00	85	15	<2	13	1.50	41	26	0.37
1-185	0.28	2.47	1.60	81	19	<2	11	1.40	37	26	0.37
1-186	2.20	4.00	7.10	69	15	<2	13	1.20	37	26	1.00
1-187	0.09	1.30	0.91	69	11	<2	12	1.70	37	31	0.42
1-188	0.49	3.10	2.20	75	15	<2	15	2.50	37	41	0.61
1-190	1.40	1.10	5.70	70	18	<2	19	2.80	41	47	1.10
1-192	1.30	2.60	4.20	80	14	<2	11	1.70	37	29	0.86
1-193	0.07	3.21	0.50	84	49	<2	14	1.70	39	27	0.42
1-195	0.24	2.00	1.10	71	21	<2	13	1.90	39	36	0.42
1-196	<0.01	0.98	0.27	93	20	<2	14	1.80	40	66	0.44
1-197	0.18	1.00	0.80	82	19	<2	17	1.80	43	78	0.58
1-198	0.08	1.20	1.00	77	15	<2	13	1.70	41	53	0.47
1-199	0.02	1.50	0.18	95	23	<2	22	2.20	51	110	0.62
1-200	0.45	2.30	1.80	92	43	<2	20	1.80	52	59	0.44

Table 4. Continued

MAP #	Na %	Nb	Nd	P %	TOTAL S%	Sc	Sr	Ti%	U	Y	Yb
1-166	0.43	5	49	0.08	0.04	10	66	0.32	1.50	22	3
1-167	0.39	9	48	0.09	0.02	15	86	0.36	1.60	24	3
1-168	0.42	8	50	0.09	0.01	13	75	0.32	1.80	22	3
1-169	0.21	6	48	0.06	0.07	7	62	0.27	1.00	21	3
1-170	0.36	6	38	0.05	<0.01	8	53	0.32	1.20	18	3
1-171	0.28	5	37	0.04	0.01	11	55	0.33	1.60	24	3
1-172	0.42	7	38	0.04	<0.01	13	65	0.33	0.55	18	3
1-173	0.47	7	36	0.05	0.12	11	60	0.32	4.00	20	3
1-174	0.13	8	39	0.08	0.09	12	68	0.32	22.00	31	3
1-176	0.16	<4	33	0.18	0.10	8	94	0.20	0.70	23	3
1-177	0.19	<4	31	0.07	0.05	8	64	0.31	0.80	20	3
1-178	0.25	<4	29	0.21	0.10	6	120	0.22	0.60	21	2
1-179	0.32	<4	33	0.15	0.06	9	93	0.36	0.70	26	3
1-180	0.32	8	39	0.23	0.07	10	110	0.42	0.65	27	4
1-181	0.22	5	28	0.29	0.14	8	140	0.21	0.40	21	2
1-182	0.16	<4	29	0.31	0.09	5	160	0.16	0.60	22	2
1-183	0.26	4	35	0.53	0.06	7	130	0.17	0.70	32	3
1-184	0.25	7	38	0.60	0.08	7	140	0.21	0.65	32	3
1-185	0.26	7	36	0.31	0.09	7	80	0.35	1.50	27	3
1-186	0.22	5	34	0.60	0.21	7	160	0.24	0.85	31	3
1-187	0.27	10	31	0.18	0.03	7	97	0.31	1.20	25	3
1-188	0.46	5	36	0.14	0.04	10	92	0.29	0.90	24	3
1-190	0.40	11	35	0.26	0.06	13	160	0.41	0.90	28	4
1-192	0.25	5	33	0.11	0.05	7	80	0.22	0.55	21	3
1-193	0.18	5	39	0.10	0.09	9	58	0.31	6.70	26	3
1-195	0.29	6	34	0.08	0.12	10	66	0.31	4.60	20	3
1-196	0.44	5	43	0.03	0.01	10	57	0.33	0.80	18	3
1-197	0.49	6	36	0.03	0.03	11	100	0.34	0.70	18	3
1-198	0.41	6	36	0.03	0.04	10	91	0.32	0.70	18	3
1-199	0.17	9	44	0.07	0.01	15	81	0.42	1.40	24	3
1-200	0.29	11	44	0.10	0.08	12	130	0.33	1.50	24	3

Table 4. Continued

MAP #	INORG C	ORG C%	Ca %	Ce	Co	Eu	Ga	K %	La	Li	Mg %
1-201	0.04	2.20	0.30	100	25	<2	22	2.10	55	58	0.49
1-202	0.01	2.10	0.16	120	29	<2	18	2.00	62	49	0.47
1-203	0.07	3.00	0.81	110	15	<2	18	2.10	59	47	0.39
1-205	0.01	1.80	0.17	120	16	<2	17	2.00	59	37	0.43
1-206	0.03	1.30	0.30	110	17	<2	21	2.40	55	56	0.66
1-207	0.01	2.70	0.24	120	24	<2	21	2.30	58	55	0.65
1-208	0.05	3.70	0.42	97	40	<2	23	2.30	53	66	0.55
1-210	0.28	1.10	1.20	88	19	<2	17	1.90	48	66	0.42
1-211	0.42	1.40	1.10	77	18	<2	11	1.50	43	50	0.71
1-212	0.01	1.60	0.28	65	12	<2	10	1.60	34	45	0.39
1-213	<0.01	1.76	0.23	95	19	<2	20	2.40	45	65	0.60
1-214	0.03	2.80	0.51	79	17	<2	15	1.90	42	53	0.50
1-215	0.84	2.07	2.20	84	29	<2	16	2.60	39	41	1.10
1-216	0.05	1.50	0.39	110	18	<2	17	2.50	59	46	0.59
1-217	0.22	2.18	1.20	75	17	<2	11	1.50	32	31	0.38
1-218	0.49	3.00	2.10	92	23	<2	15	1.80	38	38	0.50
1-220	0.86	1.40	3.30	73	22	<2	14	2.70	38	36	0.68
1-221	1.10	2.00	4.10	80	25	<2	14	2.20	34	35	0.58
1-222	1.50	3.60	5.90	68	12	<2	10	1.10	38	25	0.34
1-223	1.50	4.60	6.10	67	13	<2	13	1.40	40	29	0.44
1-224	0.56	2.20	2.30	72	12	<2	11	1.20	39	27	0.32
1-225	0.82	2.10	3.70	82	17	<2	14	1.20	45	29	0.38
1-227	0.22	1.80	1.00	84	25	<2	13	1.60	38	28	0.43
1-229	0.28	1.80	1.20	62	12	<2	9	1.50	33	29	0.37
1-230	2.40	2.00	7.10	54	13	<2	13	2.20	29	42	1.30
1-231	0.08	1.10	0.46	86	18	<2	19	3.00	43	59	0.99
1-233	0.05	1.90	0.36	69	35	<2	14	1.80	39	46	0.57
1-235	0.16	0.94	0.80	89	19	<2	20	2.50	46	99	0.74
1-236	0.16	1.10	0.74	87	19	<2	17	2.20	47	83	0.63
1-237	0.42	2.20	1.70	81	27	<2	18	1.90	44	84	0.39
1-238	<0.01	2.22	0.10	95	31	2	20	2.00	44	70	0.49

Table 4. Continued

MAP #	Na %	Nb	Nd	P %	TOTAL S%	Sc	Sr	Ti%	U	Y	Yb
1-201	0.44	14	49	0.09	0.07	13	77	0.35	1.10	23	3
1-202	0.35	13	58	0.07	0.02	13	73	0.39	2.10	26	3
1-203	0.39	6	51	0.05	0.04	10	69	0.32	0.80	21	3
1-205	0.49	6	57	0.05	0.02	11	70	0.33	1.20	24	3
1-206	0.53	10	52	0.07	0.02	14	84	0.36	1.40	24	3
1-207	0.61	8	56	0.10	0.06	14	87	0.35	1.70	27	3
1-208	0.46	9	48	0.07	0.07	14	82	0.34	1.50	23	3
1-210	0.19	<4	41	0.03	0.02	11	100	0.40	0.75	23	3
1-211	0.20	<4	36	0.04	0.02	9	57	0.27	1.20	22	3
1-212	0.40	<4	34	0.05	0.04	8	49	0.30	0.75	14	2
1-213	0.43	16	48	0.07	0.03	14	81	0.50	0.90	21	3
1-214	0.36	6	36	0.05	0.09	11	62	0.36	1.60	20	3
1-215	0.19	<4	40	0.06	0.04	11	82	0.33	4.50	27	3
1-216	0.17	16	54	0.05	0.09	13	82	0.58	2.30	25	3
1-217	0.21	7	31	0.17	0.04	7	59	0.35	0.75	26	3
1-218	0.25	7	37	0.15	0.06	7	73	0.26	1.60	26	3
1-220	0.46	<4	34	0.17	0.04	9	110	0.31	0.55	25	3
1-221	0.38	6	32	0.16	0.05	8	86	0.32	0.80	23	3
1-222	0.19	6	33	0.26	0.12	6	110	0.30	0.85	25	3
1-223	0.21	4	33	0.41	0.19	7	120	0.22	0.80	25	3
1-224	0.26	8	30	0.22	0.07	7	83	0.33	0.85	25	3
1-225	0.23	8	36	0.28	0.10	7	120	0.32	1.00	28	3
1-227	0.26	<4	35	0.15	0.04	7	62	0.31	0.75	26	3
1-229	0.24	<4	29	0.09	0.03	6	56	0.35	0.60	22	3
1-230	0.27	6	28	0.15	0.12	8	110	0.28	0.65	20	3
1-231	0.41	8	38	0.04	0.03	15	75	0.35	1.90	19	3
1-233	0.39	<4	36	0.04	0.05	11	64	0.38	6.10	26	3
1-235	0.43	10	41	0.03	0.03	14	75	0.40	0.70	18	3
1-236	0.41	10	38	0.03	0.02	13	67	0.45	0.65	19	3
1-237	0.13	8	37	0.05	0.03	12	90	0.37	1.30	21	3
1-238	0.19	13	49	0.06	0.04	13	72	0.42	2.00	27	3

Table 4. Continued

MAP #	INORG C	ORG C%	Ca %	Ce	Co	Eu	Ga	K %	La	Li	Mg %
1-239	0.01	0.93	0.14	100	38	<2	20	2.10	54	51	0.46
1-240	0.01	1.10	0.17	110	24	<2	21	2.20	61	51	0.59
1-242	0.05	1.40	0.22	120	21	<2	24	2.80	56	72	0.83
1-243	0.03	1.30	0.28	110	18	<2	23	2.60	54	60	0.76
1-244	0.06	2.60	0.51	110	19	<2	22	2.40	57	48	0.59
1-248	0.03	2.50	0.26	110	17	<2	21	2.40	59	46	0.55
1-249	0.03	2.11	0.21	120	46	2	22	2.50	53	45	0.54
1-250	0.08	1.40	0.18	120	16	<2	18	2.40	63	36	0.48
1-251	0.02	1.50	0.24	120	21	<2	24	2.50	58	51	0.68
1-252	0.03	3.80	0.52	100	24	<2	24	2.30	57	94	0.74
1-253	0.05	1.80	0.23	110	25	<2	20	2.20	57	45	0.62
1-254	0.01	1.50	0.18	100	24	<2	20	2.30	54	54	0.60
1-255	0.02	1.20	0.17	95	28	<2	21	2.40	51	66	0.67
1-256	0.07	1.40	0.44	87	20	<2	15	1.70	44	49	0.40
1-259	0.02	1.00	0.26	84	21	<2	15	1.90	40	42	0.55
1-260	1.30	2.20	0.55	82	20	<2	15	1.50	43	58	0.37
1-261	0.31	1.10	1.20	86	24	<2	16	1.90	47	55	0.60
1-262	0.54	2.50	2.10	68	20	<2	13	1.70	33	42	0.56
1-263	0.38	1.80	1.20	73	28	<2	17	2.50	37	59	0.86
1-264	0.21	0.80	0.69	78	36	<2	13	1.80	37	51	0.67
1-265	5.10	1.60	11.00	80	20	<2	12	1.70	33	28	3.90
1-266	2.20	2.40	7.70	62	18	<2	11	1.40	34	33	0.91
1-267	0.23	3.60	0.59	79	20	<2	11	1.40	41	29	0.42
1-268	0.22	2.08	1.00	86	26	<2	13	1.70	36	31	0.42
1-271	0.40	2.40	1.80	78	19	<2	14	2.00	39	32	0.62
1-272	1.20	1.20	3.70	75	14	<2	13	2.20	41	32	1.50
1-A274	0.42	2.72	1.20	97	46	<2	17	2.40	42	37	0.94
1-275A	0.02	5.50	0.16	61	12	<2	12	1.70	33	30	0.36
1-275B	0.01	2.80	0.24	75	18	<2	14	2.00	41	36	0.43
1-276A	0.23	1.40	1.00	79	18	<2	17	2.20	43	59	0.67
1-276B	1.00	1.40	3.80	80	21	<2	15	1.90	44	50	0.74

Table 4. Continued

MAP #	Na %	Nb	Nd	P %	TOTAL S%	Sc	Sr	Ti%	U	Y	Yb
1-239	0.35	9	49	0.09	<0.01	13	72	0.35	1.50	25	3
1-240	0.68	13	58	0.08	0.01	14	84	0.37	2.10	24	3
1-242	0.78	10	53	0.07	0.03	16	99	0.35	1.40	21	3
1-243	0.65	10	51	0.08	0.03	14	92	0.34	1.20	23	3
1-244	0.51	13	50	0.06	0.04	12	84	0.38	1.20	23	3
1-248	0.43	10	51	0.07	0.10	13	95	0.38	1.30	22	3
1-249	0.44	7	56	0.05	0.04	13	96	0.36	1.90	25	3
1-250	0.48	7	59	0.05	0.03	11	79	0.37	0.90	23	3
1-251	0.76	10	57	0.08	0.05	14	94	0.35	1.80	22	3
1-252	0.52	12	52	0.11	0.05	16	150	0.43	1.30	26	3
1-253	0.79	9	54	0.08	0.04	13	87	0.32	1.70	23	3
1-254	0.57	8	48	0.06	0.02	13	82	0.37	0.90	24	3
1-255	0.42	11	44	0.08	0.01	15	87	0.35	1.10	21	3
1-256	0.19	7	35	0.05	0.01	11	72	0.37	1.90	19	3
1-259	0.14	8	39	0.05	0.01	10	60	0.33	0.90	19	3
1-260	0.14	7	39	0.05	0.03	10	70	0.41	1.30	21	3
1-261	0.34	7	40	0.04	0.02	11	66	0.36	0.80	22	3
1-262	0.50	6	31	0.04	0.08	9	70	0.25	3.00	17	2
1-263	0.48	8	34	0.05	0.09	13	81	0.30	6.00	24	3
1-264	0.52	<4	34	0.02	0.01	10	61	0.33	0.50	14	2
1-265	0.23	<4	32	0.15	0.07	7	94	0.18	0.45	22	2
1-266	0.25	<4	30	0.15	0.07	6	92	0.26	0.70	23	3
1-267	0.23	8	37	0.17	0.06	7	53	0.25	1.30	29	3
1-268	0.24	9	36	0.18	0.05	7	65	0.36	1.00	25	3
1-271	0.34	<4	35	0.20	0.04	9	72	0.34	0.60	28	3
1-272	0.44	5	34	0.16	0.07	9	78	0.37	0.70	25	3
1-A274	0.24	10	46	0.11	0.07	11	69	0.37	5.80	30	3
1-275A	0.16	6	31	0.13	0.28	9	53	0.24	14.00	19	2
1-275B	0.26	6	36	0.07	0.11	10	64	0.38	15.00	22	3
1-276A	0.55	<4	36	0.05	0.01	12	76	0.41	1.10	16	2
1-276B	0.48	<4	36	0.04	0.05	10	77	0.32	0.50	20	3

Table 4. Continued

MAP #	INORG C	ORG C%	Ca %	Ce	Co	Eu	Ga	K %	La	Li	Mg %
1-281	0.02	3.47	0.25	94	25	<2	20	2.00	44	68	0.57
1-282	0.04	2.40	0.19	88	38	<2	18	1.70	47	50	0.42
1-283	0.01	1.40	0.15	100	28	<2	20	2.10	55	50	0.49
1-284	0.01	1.60	0.19	100	22	<2	22	2.50	51	63	0.74
1-285	0.27	1.80	0.21	110	22	<2	24	2.60	54	65	0.78
1-286	0.01	3.30	0.21	110	18	<2	19	2.10	59	46	0.53
1-287	0.03	2.70	0.30	100	19	<2	21	2.40	54	53	0.64
1-288	0.02	2.44	0.33	120	18	2	23	2.70	51	54	0.75
1-289	0.01	1.40	0.19	100	19	<2	23	2.70	55	57	0.69
1-290	0.12	2.00	1.40	81	9	<2	11	1.30	44	26	0.33
1-291	0.03	1.70	0.19	120	23	<2	20	2.30	56	42	0.53
1-292	0.02	0.32	0.19	120	18	<2	19	2.50	55	44	0.64
1-295	0.34	1.20	1.10	110	19	<2	21	2.60	53	63	0.87
1-296	0.01	2.00	0.28	110	17	<2	20	2.40	60	47	0.61
1-299	0.03	2.10	0.37	96	21	<2	22	2.50	54	58	0.64
1-300	0.03	1.40	0.20	110	21	<2	22	2.50	59	59	0.61
1-301	0.02	2.90	0.28	100	19	<2	23	2.80	55	65	0.83
1-302	0.02	0.98	0.21	110	24	<2	23	2.50	53	70	0.66
1-303	0.02	2.00	0.20	95	18	<2	21	2.50	53	66	0.69
1-304	0.02	1.10	0.18	90	25	<2	21	2.20	51	53	0.64
1-306	0.04	2.60	0.27	94	25	<2	19	2.00	51	62	0.51
1-309	0.07	0.85	0.32	97	20	<2	21	2.40	52	61	0.70
1-310	0.02	1.60	0.34	96	19	<2	20	2.20	51	55	0.60
1-312	0.04	1.80	0.23	100	20	<2	21	2.30	56	45	0.50
1-314	0.05	1.20	0.37	100	23	<2	26	2.60	59	77	0.80
1-315	0.02	1.90	0.33	100	23	<2	24	2.70	55	56	0.77
1-316	0.02	4.20	0.31	100	43	2	18	1.90	54	60	0.46
1-317	2.30	2.70	7.80	79	18	<2	15	1.80	42	35	0.55
1-318	0.26	2.10	2.20	76	13	<2	11	1.20	41	28	0.34
1-319	0.19	1.24	0.66	110	16	<2	17	2.10	49	39	0.54
1-320	0.21	2.70	0.86	100	16	<2	19	2.30	56	46	0.59

Table 4. Continued

MAP #	Na %	Nb	Nd	P %	TOTAL S%	Sc	Sr	Ti%	U	Y	Yb
1-281	0.15	11	44	0.06	0.06	14	90	0.39	2.10	22	3
1-282	0.14	7	45	0.05	0.02	11	65	0.35	1.10	24	3
1-283	0.42	12	48	0.08	0.02	13	87	0.40	1.60	23	3
1-284	0.54	11	48	0.09	0.02	15	98	0.36	1.00	23	3
1-285	0.64	11	53	0.09	0.01	16	110	0.38	1.70	22	3
1-286	0.57	6	55	0.07	0.03	12	87	0.40	1.00	24	3
1-287	0.58	12	50	0.08	0.01	14	94	0.40	1.40	23	3
1-288	0.82	12	54	0.11	0.05	13	110	0.39	1.90	21	3
1-289	0.44	12	48	0.06	0.03	14	95	0.41	1.20	23	3
1-290	0.25	<4	36	0.22	0.04	7	99	0.14	1.30	29	3
1-291	0.64	9	53	0.07	<0.01	12	89	0.33	1.10	20	3
1-292	0.66	10	56	0.05	0.01	12	90	0.40	1.30	20	3
1-295	0.72	11	52	0.07	0.08	14	110	0.39	1.60	22	3
1-296	0.62	11	61	0.06	0.02	12	99	0.39	1.70	22	3
1-299	0.28	14	51	0.06	0.03	15	100	0.43	1.10	23	3
1-300	0.51	14	56	0.06	0.05	14	98	0.45	1.90	23	3
1-301	0.51	12	51	0.10	0.06	16	120	0.34	1.30	25	3
1-302	0.26	11	54	0.06	0.01	15	96	0.41	1.10	23	3
1-303	0.59	9	52	0.08	0.01	14	110	0.35	1.40	21	3
1-304	0.56	10	47	0.09	<0.01	14	90	0.41	1.30	22	3
1-306	0.15	12	44	0.06	0.03	13	77	0.38	2.10	24	3
1-309	0.38	11	46	0.06	0.03	14	93	0.41	1.30	24	3
1-310	0.47	11	46	0.07	0.03	13	86	0.39	1.00	22	3
1-312	0.31	12	49	0.06	0.03	12	87	0.36	1.50	21	3
1-314	0.37	12	53	0.06	0.03	16	120	0.42	1.30	24	3
1-315	0.55	13	50	0.07	0.03	15	99	0.39	1.10	23	3
1-316	0.35	7	52	0.08	0.08	11	130	0.31	1.40	27	3
1-317	0.39	5	40	0.05	0.07	9	150	0.23	1.10	19	2
1-318	0.26	7	33	0.21	0.06	7	84	0.35	0.90	25	3
1-319	0.93	11	51	0.05	0.02	10	99	0.39	1.50	20	3
1-320	0.61	5	49	0.10	0.06	11	92	0.35	0.70	21	3

Table 4. Continued

MAP #	INORG C	ORG C%	Ca %	Ce	Co	Eu	Ga	K %	La	Li	Mg %
1-322	0.06	0.79	0.28	110	16	<2	19	2.30	52	42	0.66
1-323	0.02	1.82	0.23	110	20	<2	21	2.50	54	63	0.61
1-324	0.11	0.99	0.45	100	25	<2	22	2.50	58	48	0.69
1-326	0.70	0.80	0.73	96	16	<2	19	2.30	51	53	0.66
1-327	0.13	1.20	0.60	99	25	<2	20	2.20	55	45	0.56
1-329	0.01	1.67	0.21	110	16	<2	19	2.30	53	40	0.43
1-330	0.04	1.23	0.26	120	48	2	22	2.50	55	60	0.65
1-331	0.83	1.40	2.50	95	15	<2	17	1.90	52	34	0.65
1-332	0.01	2.40	0.10	120	18	<2	21	2.40	55	53	0.56
1-333	0.01	2.10	0.19	99	22	<2	20	2.30	55	54	0.64
1-334	0.01	0.97	0.15	95	16	<2	17	2.00	50	46	0.48
1-335	0.01	1.10	0.10	92	23	<2	16	1.80	48	44	0.41
1-338	0.14	1.60	0.45	98	69	<2	32	2.10	55	62	0.69
1-339	0.01	2.00	0.25	97	21	<2	20	2.20	52	48	0.59
1-340	0.01	2.40	0.22	100	19	<2	20	2.20	55	49	0.61
1-341	<0.01	3.50	0.21	98	17	<2	17	2.00	55	47	0.52
1-342	0.03	1.80	0.28	110	18	<2	17	1.90	57	34	0.47
1-343	0.09	1.80	0.45	110	21	<2	19	2.30	54	48	0.67
1-344	0.35	2.20	1.70	96	84	<2	28	2.30	48	49	0.73
1-345	0.01	1.30	0.16	100	31	<2	22	2.60	58	57	0.62
1-349	1.50	2.40	4.80	74	14	<2	16	1.50	45	43	0.83
1-350	0.12	1.45	0.53	100	17	<2	19	2.30	47	47	0.63
1-351	0.08	9.90	1.50	83	23	<2	22	2.40	42	50	0.69
1-354	0.17	1.70	0.78	110	17	<2	18	2.10	60	45	0.64
1-356	0.54	3.10	1.80	97	18	<2	20	2.20	54	49	0.76
1-357	0.32	1.80	1.20	90	14	<2	17	2.10	47	41	0.60
1-358	0.08	1.60	0.46	100	20	<2	20	2.20	56	48	0.59
1-359	0.22	1.10	0.81	100	19	<2	22	2.60	56	54	0.72
1-360	0.17	1.00	0.66	97	20	<2	18	2.30	52	44	0.63
1-362	0.01	3.50	0.24	100	17	<2	16	2.00	53	34	0.39
1-363	0.01	1.70	0.23	110	25	<2	20	2.20	59	60	0.63

Table 4. Continued

MAP #	Na %	Nb	Nd	P %	TOTAL S%	Sc	Sr	Ti%	U	Y	Yb
1-322	0.85	7	55	0.05	0.02	11	97	0.36	1.40	23	3
1-323	0.47	10	55	0.06	0.02	14	100	0.39	1.30	22	3
1-324	0.76	11	51	0.08	0.03	14	110	0.41	1.50	22	3
1-326	0.28	8	48	0.07	0.08	13	99	0.30	1.70	23	3
1-327	0.33	8	49	0.07	0.12	12	110	0.35	0.80	23	3
1-329	0.29	10	53	0.05	0.02	12	86	0.39	1.50	19	3
1-330	0.41	12	57	0.05	0.04	14	94	0.43	1.30	29	3
1-331	0.31	4	43	0.04	0.02	9	97	0.33	1.00	20	3
1-332	0.35	11	52	0.07	0.04	14	87	0.35	1.60	20	3
1-333	0.69	11	50	0.08	0.03	13	110	0.43	2.00	23	3
1-334	0.37	8	42	0.04	0.02	12	75	0.38	0.65	18	3
1-335	0.38	7	46	0.05	0.03	11	65	0.32	1.00	20	3
1-338	0.30	13	49	0.06	0.04	14	130	0.40	1.20	28	3
1-339	0.61	5	46	0.07	0.03	12	99	0.37	0.80	21	3
1-340	0.60	8	48	0.07	0.03	12	100	0.37	1.10	22	3
1-341	0.62	10	50	0.07	0.05	11	94	0.36	1.30	22	3
1-342	0.55	5	48	0.06	0.03	10	76	0.33	1.50	20	3
1-343	0.51	14	53	0.07	0.03	12	100	0.44	1.70	21	3
1-344	0.43	9	44	0.07	0.06	13	120	0.35	1.40	23	3
1-345	0.26	12	54	0.05	0.02	14	99	0.39	1.30	27	3
1-349	0.72	7	38	0.05	0.06	9	150	0.30	0.75	18	3
1-350	0.82	6	51	0.06	0.05	12	150	0.34	1.20	21	3
1-351	0.59	10	38	0.05	0.31	13	180	0.31	1.50	18	2
1-354	0.83	9	51	0.07	0.03	11	170	0.38	0.90	22	3
1-356	0.69	12	46	0.05	0.05	12	130	0.37	1.40	23	3
1-357	0.63	<4	43	0.05	0.04	11	99	0.31	1.20	19	3
1-358	0.52	7	47	0.05	0.05	12	97	0.38	1.10	20	3
1-359	0.50	13	54	0.06	0.02	13	100	0.38	0.85	20	3
1-360	0.33	6	48	0.05	0.07	12	94	0.31	1.10	21	3
1-362	0.43	6	48	0.07	0.05	9	89	0.32	0.90	21	3
1-363	0.46	11	54	0.04	0.03	13	98	0.42	1.90	24	3

Table 4. Continued

MAP #	INORG C	ORG C%	Ca %	Ce	Co	Eu	Ga	K %	La	Li	Mg %
1-364	0.17	2.40	0.27	100	18	<2	20	2.30	52	52	0.69
1-365	0.02	2.99	0.27	120	24	2	23	2.60	54	65	0.84
1-366	0.40	2.97	1.50	93	17	<2	18	2.00	45	49	0.66
1-367	0.38	1.80	1.30	83	24	<2	19	2.00	48	60	0.66
1-368	0.01	1.30	0.16	96	28	<2	20	2.20	52	49	0.54
1-369	<0.01	0.88	0.20	110	24	<2	23	2.60	48	61	0.74
1-370	0.24	2.40	1.20	99	18	<2	20	2.00	52	47	0.77
1-371	0.01	1.30	0.22	100	25	<2	20	2.10	55	49	0.61
1-372	0.10	1.10	0.46	110	25	2	28	2.10	52	54	0.52
1-373	0.01	3.20	0.25	100	16	<2	18	2.20	55	47	0.50
1-374	3.00	0.10	8.70	88	8	<2	7	0.96	50	16	0.62
1-375	0.40	2.00	1.10	100	23	<2	22	2.20	54	48	0.66
1-376	0.12	2.10	0.61	95	19	<2	18	2.10	52	46	0.51
1-377	0.02	1.10	0.14	100	13	<2	15	1.90	55	34	0.38
1-379	0.10	2.30	0.70	97	18	<2	20	2.30	51	51	0.62
1-380	0.24	1.70	0.91	100	20	<2	20	2.30	53	43	0.70
1-382	3.10	1.50	10.00	62	20	<2	16	1.80	39	45	1.00
1-384	0.08	1.74	0.46	120	17	<2	18	2.20	56	39	0.55
1-385	0.06	1.10	0.34	110	18	<2	19	2.20	56	43	0.64
1-386	0.11	2.20	0.54	100	19	<2	21	2.50	54	55	0.66
1-389	0.06	12.00	0.41	110	31	<2	23	2.40	56	81	0.71
1-390	0.49	2.33	1.80	88	26	<2	18	2.10	41	43	0.64
1-391	0.02	3.10	0.29	120	23	2	21	2.40	53	53	0.61
1-392	0.02	1.40	0.21	100	17	<2	15	1.80	57	34	0.35
1-393	0.01	2.60	0.27	100	21	<2	20	2.20	53	53	0.60
1-394	0.01	1.30	0.21	110	20	<2	22	2.30	58	52	0.66
1-395	0.01	1.80	0.20	130	17	<2	18	1.90	62	48	0.48
1-400	0.55	0.55	0.86	80	19	<2	16	1.80	38	44	0.46
1-401	3.20	5.60	8.80	61	11	<2	11	1.70	37	40	0.98
1-402	3.81	1.15	12.00	80	10	<2	10	1.20	41	28	0.99
2-1	0.11	2.31	0.58	120	25	2	29	2.90	54	75	0.84

Table 4. Continued

MAP #	Na %	Nb	Nd	P %	TOTAL S%	Sc	Sr	Ti%	U	Y	Yb
1-364	0.59	8	50	0.08	0.03	13	100	0.34	1.30	23	3
1-365	0.62	12	56	0.09	0.10	15	120	0.47	1.20	25	3
1-366	0.53	9	46	0.07	0.04	12	120	0.35	1.10	20	3
1-367	0.33	10	43	0.07	0.03	13	120	0.37	1.10	21	3
1-368	0.41	10	43	0.08	0.04	14	84	0.37	1.60	20	3
1-369	0.69	12	50	0.09	0.01	14	110	0.39	1.50	21	3
1-370	0.64	6	44	0.08	0.03	12	100	0.35	1.30	22	3
1-371	0.62	12	50	0.07	0.03	12	110	0.34	1.40	24	3
1-372	0.22	11	52	0.05	0.03	12	95	0.34	1.10	20	3
1-373	0.43	6	50	0.06	0.04	11	90	0.36	1.00	22	3
1-374	0.40	<4	45	0.02	0.02	4	190	0.17	0.70	18	3
1-375	0.27	9	46	0.05	0.03	12	100	0.36	1.50	21	3
1-376	0.15	8	44	0.08	0.06	11	93	0.34	1.10	19	3
1-377	0.15	6	49	0.03	0.02	10	70	0.37	1.00	22	3
1-379	0.43	10	47	0.05	0.05	13	100	0.34	1.30	20	3
1-380	0.82	6	50	0.05	0.02	12	100	0.33	1.70	22	3
1-382	0.45	<4	34	0.06	0.05	10	220	0.24	1.30	16	2
1-384	1.00	<4	56	0.06	0.03	10	98	0.36	1.30	21	3
1-385	0.65	9	47	0.06	0.01	12	97	0.38	1.00	21	3
1-386	0.63	12	46	0.07	0.06	13	110	0.36	0.85	19	3
1-389	0.22	10	53	0.07	0.29	15	140	0.36	2.90	30	3
1-390	0.53	7	42	0.08	0.08	10	200	0.31	1.70	20	3
1-391	0.43	10	55	0.11	0.04	13	160	0.37	1.00	26	3
1-392	0.28	<4	51	0.03	0.02	9	74	0.32	1.50	21	3
1-393	0.34	11	44	0.08	0.04	13	94	0.39	1.10	22	3
1-394	0.67	8	50	0.07	0.03	13	100	0.37	0.90	20	3
1-395	0.49	9	57	0.06	0.02	12	88	0.36	1.00	23	3
1-400	0.11	8	35	0.04	0.12	12	90	0.36	1.20	20	3
1-401	0.26	5	38	0.04	0.16	7	260	0.21	1.40	15	2
1-402	0.14	<4	37	0.03	0.07	7	270	0.23	1.40	18	2
2-1	0.35	12	57	0.08	0.08	17	140	0.43	1.30	24	3

Table 4. Continued

MAP #	INORG C	ORG C%	Ca %	Ce	Co	Eu	Ga	K %	La	Li	Mg %
2-2	0.45	3.40	2.20	93	29	<2	22	2.60	45	45	0.82
2-3	0.19	1.80	1.20	87	24	<2	16	2.70	43	44	0.85
2-4	1.60	2.90	6.60	77	20	<2	15	2.00	44	37	0.78
2-5	0.55	3.81	3.00	75	14	<2	13	1.60	36	35	0.53
2-6	0.44	1.15	1.80	80	18	<2	15	2.60	37	38	0.72
2-6D	0.44	3.40	2.80	81	13	<2	13	1.40	45	31	0.45
2-7	0.32	2.45	2.10	85	12	<2	13	1.50	41	35	0.54
2-8D	0.16	2.50	1.50	86	15	<2	17	1.70	47	41	0.52
2-8	0.20	2.70	1.60	85	15	<2	17	1.80	47	41	0.52
2-9	2.10	5.50	8.20	73	13	<2	11	1.10	42	32	1.20
2-10	0.37	2.26	2.30	87	15	<2	17	2.00	41	40	0.76
2-11	0.38	4.10	2.90	87	15	<2	14	1.40	48	34	0.61
2-12	0.11	2.62	0.52	110	27	<2	26	2.80	51	83	0.88
2-13	0.85	2.15	2.90	100	19	<2	23	2.40	50	59	0.75
2-14	0.82	3.06	2.90	73	20	<2	17	2.60	34	46	1.10
2-15	0.05	2.03	0.33	92	24	<2	21	2.20	42	84	0.67
2-16	0.18	1.60	0.80	84	20	<2	22	2.50	45	81	0.82
2-17	<0.01	1.80	0.19	99	22	<2	20	2.00	47	69	0.47
2-18	0.78	2.55	2.40	71	16	<2	12	1.80	35	39	0.98
2-19	0.50	2.55	1.80	110	23	<2	25	2.40	53	62	0.71
2-20	0.88	2.10	2.10	80	19	<2	15	2.00	41	40	1.30
2-21	2.84	2.59	8.50	59	16	<2	10	1.60	29	30	0.89
2-22	3.96	2.51	10.00	64	13	<2	13	1.80	31	30	2.10
2-23	0.24	3.00	1.00	110	25	<2	30	3.00	58	77	0.89
2-24	0.21	2.03	1.10	89	21	<2	16	2.70	40	39	0.71
2-25	0.30	1.88	1.20	85	20	<2	16	1.90	39	73	0.60
2-26	0.45	3.55	2.40	82	16	<2	14	1.60	39	37	0.55
2-27	0.03	2.30	0.23	100	21	<2	23	2.40	54	60	0.64
2-28	0.23	2.40	0.99	110	23	<2	25	2.30	59	65	0.69
2-29	0.36	3.30	2.60	79	13	<2	13	1.40	38	33	0.49
2-30	0.02	1.05	0.26	90	20	<2	16	2.00	40	75	0.59

Table 4. Continued

MAP #	Na %	Nb	Nd	P %	TOTAL S%	Sc	Sr	Ti%	U	Y	Yb
2-2	0.34	6	40	0.16	0.12	12	95	0.40	0.30	28	3
2-3	0.42	10	36	0.22	0.08	11	82	0.43	0.80	25	3
2-4	0.27	8	36	0.36	0.13	9	140	0.33	0.75	25	3
2-5	0.31	6	36	0.53	0.11	8	140	0.27	0.70	29	3
2-6	0.51	11	38	0.12	0.04	10	100	0.42	0.70	25	3
2-6D	0.29	<4	36	0.59	0.09	8	130	0.18	0.80	33	3
2-7	0.30	4	41	0.61	0.10	8	190	0.21	1.30	36	4
2-8D	0.24	<4	39	0.28	0.08	10	91	0.25	1.10	30	3
2-8	0.24	5	38	0.28	0.09	10	92	0.24	0.80	30	3
2-9	0.22	<4	33	1.10	0.51	7	310	0.19	2.00	34	3
2-10	0.27	6	40	0.61	0.05	10	150	0.24	1.80	33	3
2-11	0.29	<4	40	0.98	0.18	8	220	0.08	1.60	37	3
2-12	0.29	14	52	0.11	0.13	17	120	0.51	2.00	30	4
2-13	0.38	12	51	0.06	0.05	14	110	0.39	0.90	24	3
2-14	0.33	7	35	0.37	0.21	10	140	0.33	0.55	26	3
2-15	0.36	10	42	0.09	0.04	14	89	0.39	1.90	21	3
2-16	0.37	10	38	0.07	0.03	15	130	0.44	0.75	20	3
2-17	0.29	9	48	0.07	0.03	13	77	0.41	1.50	24	3
2-18	0.31	8	34	0.14	0.15	8	74	0.34	0.85	24	3
2-19	0.41	11	54	0.09	0.06	14	130	0.38	1.00	24	3
2-20	0.31	<4	37	0.11	0.07	9	63	0.32	1.20	25	3
2-21	0.29	5	28	0.14	0.15	7	120	0.22	0.55	20	2
2-22	0.15	<4	31	0.10	0.25	8	93	0.22	0.35	18	2
2-23	0.35	15	50	0.07	0.10	18	170	0.51	1.30	26	3
2-24	0.35	11	41	0.17	0.08	11	76	0.39	0.60	29	3
2-25	0.46	7	41	0.04	0.04	11	100	0.32	0.65	21	3
2-26	0.27	7	38	0.50	0.17	10	110	0.37	0.90	29	3
2-27	0.46	11	49	0.07	0.09	14	92	0.43	1.30	24	3
2-28	0.37	11	51	0.07	0.07	15	120	0.43	1.10	25	3
2-29	0.32	5	38	0.67	0.10	7	140	0.21	1.30	32	3
2-30	0.51	9	41	0.04	0.03	12	58	0.36	0.50	19	3

Table 4. Continued

MAP #	INORG C	ORG C%	Ca %	Ce	Co	Eu	Ga	K %	La	Li	Mg %
2-31	0.13	2.10	0.64	110	22	<2	25	2.50	59	75	0.74
2-31D	0.12	2.00	0.58	110	22	<2	24	2.50	58	76	0.72
2-32	0.04	2.24	0.33	88	20	<2	17	2.00	41	55	0.60
2-33	0.29	2.20	0.78	99	21	<2	18	2.10	54	58	0.86
2-34	0.18	2.26	0.69	97	21	<2	20	2.30	46	60	0.78
2-35	0.53	1.84	1.50	95	21	<2	17	2.10	43	42	0.86
2-36	0.16	1.22	0.71	88	17	<2	16	2.30	40	41	0.65
2-37	0.20	2.20	0.84	89	22	<2	21	2.40	48	60	0.76
2-38	5.65	1.45	17.00	49	10	<2	10	1.20	27	28	1.10
2-39	1.37	4.03	4.20	73	17	<2	15	2.00	34	40	1.40
2-40	0.33	1.70	1.50	83	20	<2	18	2.60	46	48	0.87
2-41	0.09	2.40	0.48	120	21	<2	25	2.50	63	59	0.67
2-42	0.26	2.10	1.00	95	19	<2	17	2.10	51	48	0.73
2-43	0.02	1.41	0.23	110	23	<2	25	2.40	49	68	0.67
2-44	0.02	2.30	0.25	100	25	<2	21	2.20	56	69	0.65
2-45	0.74	1.87	2.50	110	22	<2	28	2.80	53	65	0.79
2-46	0.22	2.50	0.92	110	21	<2	26	2.70	58	69	0.84
2-47	0.23	2.00	0.92	110	26	<2	28	2.70	57	67	0.78
2-48	0.37	4.70	0.97	120	71	2	27	2.00	53	68	0.66
2-49	0.02	3.00	0.30	110	23	<2	27	2.60	57	82	0.78
2-50	0.10	1.70	0.50	100	20	<2	24	2.60	56	68	0.78
2-50D	0.08	1.80	0.48	100	20	<2	24	2.60	56	65	0.76
2-51	0.11	2.21	0.24	53	12	<2	14	1.30	26	40	0.42
2-52	0.04	1.40	0.31	110	20	<2	25	2.70	58	66	0.75
2-53	0.10	3.27	0.46	110	22	<2	25	2.50	51	59	0.74
2-54	0.04	2.60	0.31	110	22	<2	21	2.30	57	56	0.69
2-55	0.52	3.60	1.80	99	29	<2	25	2.50	55	71	0.83
2-56D	2.70	2.50	6.30	71	15	<2	15	2.00	39	32	2.50
2-56	0.28	2.82	1.10	120	26	<2	31	3.00	54	79	0.96
2-57	0.20	1.96	0.84	84	22	<2	21	2.50	37	58	0.75
2-58	<0.01	1.70	0.20	120	22	2	23	2.30	55	61	0.64

Table 4. Continued

MAP #	Na %	Nb	Nd	P %	TOTAL S%	Sc	Sr	Ti%	U	Y	Yb
2-31	0.28	10	50	0.06	0.06	16	130	0.43	0.90	24	3
2-31D	0.29	12	48	0.07	0.05	16	130	0.49	1.30	25	3
2-32	0.43	9	42	0.05	0.22	12	100	0.39	2.50	23	3
2-33	0.37	8	47	0.07	0.07	13	99	0.38	1.70	25	3
2-34	0.37	11	49	0.10	0.08	13	110	0.42	1.70	27	3
2-35	0.42	9	43	0.17	0.03	10	100	0.35	1.30	28	3
2-36	0.43	10	42	0.13	0.03	10	86	0.42	1.10	27	3
2-37	0.31	7	43	0.12	0.07	13	98	0.39	1.00	25	3
2-38	0.17	<4	25	0.47	0.30	6	300	0.18	0.80	18	2
2-39	0.32	5	34	0.43	0.21	9	170	0.32	0.50	25	3
2-40	0.36	11	38	0.18	0.06	12	110	0.45	0.70	26	3
2-41	0.31	11	52	0.06	0.11	15	100	0.43	1.30	23	3
2-42	0.35	9	44	0.19	0.06	11	97	0.39	0.75	27	3
2-43	0.40	11	51	0.07	0.03	15	120	0.39	1.20	23	3
2-44	0.39	7	47	0.07	0.17	14	170	0.42	1.10	23	3
2-45	0.26	11	52	0.06	0.08	17	140	0.42	2.10	24	3
2-46	0.30	11	49	0.08	0.09	16	140	0.44	1.40	24	3
2-47	0.26	14	50	0.07	0.10	16	140	0.48	1.40	25	3
2-48	0.21	11	58	0.12	0.11	14	150	0.36	1.30	34	4
2-49	0.26	11	48	0.09	0.16	17	140	0.46	1.20	22	3
2-50	0.25	11	45	0.07	0.09	16	120	0.45	1.10	22	3
2-50D	0.25	9	47	0.06	0.08	15	110	0.41	1.10	21	3
2-51	0.16	4	25	0.03	0.07	8	65	0.22	2.70	13	2
2-52	0.22	11	47	0.06	0.05	16	110	0.43	1.50	22	3
2-53	0.43	11	54	0.07	0.08	14	120	0.39	1.40	23	3
2-54	0.54	9	47	0.07	0.11	13	110	0.41	1.70	21	3
2-55	0.46	12	49	0.09	0.12	15	180	0.44	1.20	25	3
2-56D	0.19	<4	33	0.11	0.10	8	76	0.30	0.70	23	3
2-56	0.39	14	56	0.07	0.08	18	180	0.47	0.90	25	3
2-57	0.40	19	43	0.19	0.06	13	98	0.51	0.90	25	3
2-58	0.45	11	57	0.08	0.03	15	99	0.39	1.70	25	3

Table 4. Continued

MAP #	INORG C	ORG C%	Ca %	Ce	Co	Eu	Ga	K %	La	Li	Mg %
2-59D	0.02	2.50	0.32	110	25	<2	23	2.30	57	62	0.70
2-59	0.03	2.36	0.31	120	28	2	25	2.50	55	69	0.75
2-60	0.01	1.70	0.19	100	21	<2	24	2.30	56	65	0.54
2-61	0.27	2.00	0.97	94	21	<2	19	2.20	51	54	0.82
2-62	0.29	2.16	1.30	89	20	<2	18	2.50	42	47	0.74
2-63	0.20	2.75	0.82	110	29	<2	26	2.70	51	80	0.80
2-63D	0.23	3.00	0.83	100	30	<2	26	2.70	56	77	0.77
2-64	0.11	2.10	0.45	100	22	<2	24	2.30	58	62	0.72
2-65D	0.08	1.60	0.19	100	30	<2	22	2.10	56	60	0.54
2-65	0.03	1.52	0.16	110	31	<2	21	2.20	50	61	0.58
2-66	0.30	1.45	1.20	98	23	<2	25	2.50	46	97	0.79
2-67	0.04	1.73	0.24	98	25	<2	23	2.10	46	71	0.55
2-68	0.07	1.81	0.53	91	26	<2	21	1.90	42	71	0.61
2-69	0.10	2.56	0.63	78	21	<2	16	2.10	36	45	0.59
2-70	1.50	2.00	4.80	89	19	<2	15	1.50	49	33	0.72
2-72	0.14	8.60	1.60	53	20	<2	13	1.70	30	43	0.65
2-73	0.03	0.66	2.20	75	10	<2	15	1.40	46	38	0.60
2-74	1.50	2.00	6.60	76	13	<2	13	1.40	45	36	0.58
2-75	0.75	2.80	2.90	72	17	<2	14	1.60	40	50	0.60
2-76	0.62	2.60	2.00	79	16	<2	12	1.70	41	34	0.75
2-77	0.04	1.90	0.27	110	38	2	21	2.10	57	64	0.56
2-77D	0.03	1.70	0.21	110	34	2	22	2.20	59	68	0.56
2-78	0.27	2.90	1.10	110	24	2	26	2.80	59	69	0.76
2-79	0.04	1.90	0.35	110	18	<2	25	2.70	58	76	0.72
2-80	0.49	3.00	1.40	81	55	<2	15	2.00	45	44	0.77
2-81	0.04	3.32	0.30	79	76	<2	18	2.20	38	55	0.53
2-82	0.04	2.20	0.31	84	28	<2	17	2.10	45	54	0.61
2-83	0.23	2.30	1.10	84	17	<2	13	1.90	45	35	0.64
2-84	1.33	2.37	4.50	83	25	<2	20	2.40	38	47	0.91
2-85	2.30	3.50	8.40	59	13	<2	13	1.60	36	28	0.95
2-86	0.36	1.81	2.20	86	11	<2	13	1.50	41	34	0.46

Table 4. Continued

MAP #	Na %	Nb	Nd	P %	TOTAL S%	Sc	Sr	Ti%	U	Y	Yb
2-59D	0.37	10	50	0.07	0.07	15	110	0.41	1.60	25	3
2-59	0.41	12	58	0.08	0.07	16	130	0.46	1.70	28	3
2-60	0.31	12	47	0.08	0.03	15	81	0.46	1.60	24	3
2-61	0.35	9	44	0.12	0.07	12	97	0.44	1.10	26	3
2-62	0.37	14	43	0.16	0.06	12	93	0.46	1.60	29	4
2-63	0.23	13	52	0.07	0.10	16	150	0.47	1.00	27	3
2-63D	0.22	13	50	0.06	0.13	16	140	0.46	1.30	25	3
2-64	0.32	10	49	0.07	0.10	15	110	0.44	1.50	23	3
2-65D	0.32	9	48	0.07	0.04	14	83	0.43	1.10	26	3
2-65	0.37	10	51	0.07	0.04	14	87	0.38	1.30	25	3
2-66	0.38	13	44	0.05	0.03	16	330	0.46	0.75	24	3
2-67	0.20	12	45	0.06	0.04	15	94	0.46	1.30	26	3
2-68	0.32	10	43	0.07	0.04	13	72	0.35	1.20	23	3
2-69	0.38	8	37	0.07	0.08	11	72	0.32	4.40	20	2
2-70	0.21	7	37	0.54	0.06	9	120	0.31	0.85	31	3
2-72	0.27	5	27	0.64	1.13	9	120	0.24	8.50	21	2
2-73	0.41	<4	36	0.74	0.03	9	140	0.22	1.90	30	3
2-74	0.23	4	36	0.58	0.09	8	170	0.26	1.40	28	3
2-75	0.38	<4	31	0.08	0.11	9	91	0.29	0.60	16	2
2-76	0.22	<4	35	0.14	0.05	8	65	0.37	0.80	26	3
2-77	0.25	10	52	0.08	0.17	14	80	0.42	1.70	34	3
2-77D	0.23	10	52	0.07	0.13	15	83	0.46	1.60	33	3
2-78	0.27	12	51	0.07	0.13	16	150	0.46	1.10	26	3
2-79	0.31	13	51	0.06	0.02	16	120	0.47	1.10	23	3
2-80	0.19	5	40	0.08	0.08	11	70	0.36	7.20	30	3
2-81	0.26	9	41	0.08	0.12	12	66	0.36	14.00	31	3
2-82	0.39	<4	39	0.05	0.12	11	65	0.33	2.90	20	3
2-83	0.32	9	37	0.17	0.04	9	66	0.43	1.10	26	3
2-84	0.33	10	37	0.26	0.18	12	120	0.38	0.80	25	3
2-85	0.29	<4	27	0.37	0.23	7	150	0.27	0.60	19	2
2-86	0.27	13	41	0.49	0.06	9	140	0.43	1.30	38	4

Table 4. Continued

MAP #	INORG C	ORG C%	Ca %	Ce	Co	Eu	Ga	K %	La	Li	Mg %
2-87	0.30	3.30	2.30	77	11	<2	13	1.40	43	32	0.45
2-88	0.92	4.10	3.70	76	16	<2	14	1.80	43	32	0.51
2-89	0.11	2.00	1.50	81	12	<2	12	1.40	45	32	0.41
2-90	0.56	2.99	2.10	110	25	<2	30	2.80	52	76	0.97
2-91	0.03	2.40	0.26	100	20	<2	24	2.50	56	56	0.62
2-92	0.21	3.00	1.20	97	31	<2	19	2.70	47	45	0.80
2-93	0.26	1.83	1.10	120	26	<2	29	3.00	54	72	0.88
2-94	0.07	2.00	0.53	110	31	2	27	2.70	60	77	0.82
2-95	0.02	2.40	0.20	110	19	<2	23	2.30	58	52	0.58
2-96	0.12	2.30	0.46	96	48	<2	25	2.40	53	74	0.78
2-97	0.42	2.30	2.10	78	14	<2	14	1.70	43	37	0.54
2-98	0.52	1.60	2.40	87	14	<2	16	2.00	43	43	0.76
2-99	0.10	1.80	0.56	100	20	<2	23	2.30	55	65	0.54
2-101D	0.80	2.60	3.60	82	11	<2	14	1.40	47	33	0.55
2-101	0.79	2.70	3.70	84	12	<2	14	1.40	48	33	0.62
2-102	0.25	1.22	0.91	80	20	<2	15	1.50	39	81	0.34
2-103	1.56	3.15	5.90	84	25	<2	14	1.70	39	35	0.79
2-104	0.27	2.80	2.30	95	17	<2	13	1.40	51	30	0.39
2-105	0.10	1.00	0.75	81	24	<2	16	2.70	39	35	0.62
2-106	0.76	3.67	2.70	71	24	<2	14	2.10	35	41	0.84
2-107	0.13	1.30	0.94	80	19	<2	15	2.60	43	40	0.71

Table 4. Continued

MAP #	Na %	Nb	Nd	P %	TOTAL S%	Sc	Sr	Ti%	U	Y	Yb
2-87	0.30	<4	36	0.53	0.09	7	150	0.17	0.90	32	3
2-88	0.27	4	36	0.35	0.08	8	110	0.20	0.60	28	3
2-89	0.26	<4	38	0.39	0.09	7	130	0.17	1.00	35	3
2-90	0.41	11	55	0.07	0.09	17	180	0.41	1.70	25	3
2-91	0.35	15	51	0.07	0.09	15	95	0.44	1.30	23	3
2-92	0.35	7	43	0.18	0.11	12	84	0.42	0.50	30	3
2-93	0.26	12	54	0.07	0.10	18	150	0.44	1.50	25	3
2-94	0.25	12	50	0.06	0.09	17	130	0.45	0.90	25	3
2-95	0.37	10	52	0.06	0.04	14	81	0.40	0.90	24	3
2-96	0.28	10	45	0.09	0.08	15	120	0.39	0.75	25	3
2-97	0.24	10	35	0.28	0.07	9	89	0.42	0.90	26	3
2-98	0.23	14	45	0.41	0.06	11	99	0.43	1.10	34	4
2-99	0.33	14	47	0.08	0.05	14	82	0.46	1.20	24	3
2-101D	0.25	<4	38	0.49	0.07	8	180	0.18	1.50	37	3
2-101	0.25	<4	39	0.51	0.11	8	180	0.13	1.70	38	3
2-102	0.17	9	37	0.04	0.06	11	190	0.39	1.10	22	3
2-103	0.47	6	38	0.51	0.30	10	130	0.28	0.90	31	3
2-104	0.26	<4	39	0.64	0.06	7	170	0.17	1.70	42	4
2-105	0.37	7	34	0.14	0.03	10	67	0.39	0.80	26	3
2-106	0.29	9	33	0.15	0.24	10	79	0.36	1.90	25	3
2-107	0.40	8	37	0.16	0.09	10	90	0.39	0.70	26	3

Table 5. Stream Name and map numbers for 440 streambed sediment sites.

Stream Name	Map No.	Stream Name	Map No.
Allan Patton Branch	1-245	Brewer Fork	1-305
Anderson Branch	1-313	Brown Branch	1-190
Ax Handle Branch	1-386	Brush Creek	1-136
Bailey Branch	1-394	Brush Creek	1-137
Bailey Run	2-103	Brushy Branch	1-316
Baker Fork	1-376	Buck Creek	1-283
Ballard Branch	1-173	Buck Run	1-32
Balls Branch	1-370	Buckhorn Creek	1-296
Barker Branch	1-198	Bull Creek	1-358
Bean Fork	1-240	Bunches Branch	1-311
Bear Branch	1-289	Buncomb Creek	1-309
Bearpen Branch	1-169	Burger Branch	1-310
Beetree Branch	1-356	Campbell Branch	1-234
Benson Creek	1-115	Cane Branch	1-164
Benson Creek	1-116	Cane Branch	1-344
Benson Creek	1-98	Cane Run	1-110
Benson Creek	1-99	Cane Run	2-73
Benson Creek	2-4	Carpenter Branch	1-243
Big Branch	1-168	Carr Fork	1-323
Big Branch	1-340	Carr Fork	2-53
Big Sinking Creek	2-102	Cat Creek	2-30
Big Sinking Creek	2-66	Cave Creek	2-89
Bill Branch	1-401	Cawood Branch	1-400
Blair Branch	1-355	Cedar Brook	1-118
Bottom Fork	1-351	Cedar Creek	1-74

Table 5. Continued

Stream Name	Map No.	Stream Name	Map No.
Clarks Creek	2-3	Eagle Creek	2-92
Clarks Run	1-225	East Fork Clear Creek	1-145
Clarks Run	2-19	Edward Branch	1-163
Clay Lick Creek	1-24	Elk Creek	1-357
Clear Creek	2-70	Elk Lick	1-256
Clear Fork	1-327	Elkhorn Creek	2-5
Cockrill Fork	1-242	Elklick Fork	1-326
Collins Branch	1-324	Elsome Creek	1-301
Copperas Branch	1-233	Enoch Fork	1-312
Cowbell Creek	1-262	Fitch Branch	1-292
Cutshin Creek	2-50	Forked Mouth Creek	1-329
Davis Branch	1-82	Four Mile Creek	1-139
DeepHole Branch	1-291	Frames Branch	2-81
Dix River	2-18	Fugate Fork	1-299
Dix River	2-20	Furnace Fork	2-29
Dix River	2-82	Gabes Creek	1-402
Dollar Branch	1-388	Georges Branch	1-300
Drennon Creek	2-84	Gigal Branch	1-33
Dry Branch	1-189	Gilbert Creek	1-147
Dry Fork	1-260	Glenns Creek	1-101
Dunwoody Branch	1-162	Glenns Creek	1-112
Dutch Fork	1-96	Glenns Creek	2-6
Eagle Creek	2-1	Goose Creek	1-81
Eagle Creek	2-2	Goose Creek	2-48
Eagle Creek	2-24	Grassy Branch	1-276

Table 5. Continued

Stream Name	Map No.	Stream Name	Map No.
Grassy Creek	1-306	Hurricane Branch	1-253
Grassy Run	1-26	Hurricane Branch	1-373
Grays Branch	1-170	Hurt Fork	1-347
Green Branch	1-395	Indian Creek	1-133
Griers Creek	1-120	Ingol Fork	1-302
Hanging Fork	2-83	Jackson Branch	1-179
Harris Branch	1-140	Joe Lick Fork	1-232
Harris Creek	1-269	Jouett Creek	1-141
Hawkins Branch	1-227	Kentucky River	2-12
Hays Fork	1-217	Kentucky River	2-32
Hays Fork	1-365	Kentucky River	2-33
Hays Fork	2-76	Kentucky River	2-34
Hector Branch	2-79	Kentucky River	2-35
Hell for Certain Creek	1-342	Kentucky River	2-36
Henderson Branch	1-230	Kentucky River	2-37
Hickman Creek	2-10	Kentucky River	2-38
Holcomb Branch	1-384	Kentucky River	2-40
Holland Branch	1-286	Kentucky River	2-42
Hominy Mill Branch	1-328	Kentucky River	2-59
Hooker Branch	1-367	Kentucky River	2-61
Horse Creek	2-96	Kentucky River	2-62
Hubbards Fork	1-392	Lacy Creek	1-202
Hughes Creek	1-248	Landsaw Branch	1-132
Hughes Fork	1-281	Lane Branch	1-288
Hunting Creek	2-95	Laurel Fork	1-372

Table 5. Continued

Stream Name	Map No.	Stream Name	Map No.
Laurel Fork	1-374	Middle Fork Cane Creek	1-134
Leatherwood Creek	2-54	Middle Fork Kentucky River	2-27
Left Fork Millstone Creek	1-350	Middle Fork Kentucky River	2-51
Left Fork Trace Branch	1-330	Middle Fork Kentucky River	2-52
Lick Branch	1-318	Middle Fork Kentucky River	2-58
Lick Creek	1-20	Middle Fork Kentucky River	2-64
Lick Branch	1-389	Middle Fork Quicksand Creek	2-91
Little Beech Creek	1-339	Middle Fork Red River	2-16
Little Benson Creek	1-114	Mikes Branch	1-238
Little Blackwater Creek	1-131	Mile Run	1-68
Little Bullskin Creek	1-333	Mill Creek	1-254
Little Creek	1-398	Mill Creek	1-322
Little Indian Branch	1-67	Mocks Branch	1-185
Little Millseat Branch	1-290	Mocks Branch	1-224
Long Branch	1-40	Muddy Creek	1-157
Long Fork	1-332	Muddy Creek	2-22
Lost Branch	1-21	Muddy Creek	2-23
Lost Creek	2-94	Napier Branch	1-315
Lotts Creek	2-78	Negro Creek	2-75
Lower Cane Creek	1-135	North Branch Lulbegrud Creek	1-129
Lower Wolf Creek	1-303	North Elkhorn Creek	2-39
Lulbegrud Creek	1-130	North Elkhorn Creek	2-8
Lytles Fork	1-86	North Elkhorn Creek	2-88
Marble Creek	1-154	North Elkhorn Creek	2-97
McIntosh Fork	1-285	North Elkhorn Creek	2-98

Table 5. Continued

Stream Name	Map No.	Stream Name	Map No.
North Fork Kentucky River	2-25	Quicksand Creek	2-57
North Fork Kentucky River	2-26	Red Bird River	2-49
North Fork Kentucky River	2-28	Red Bird River	2-63
North Fork Kentucky River	2-31	Red Lick Creek	2-69
North Fork Kentucky River	2-46	Red River	2-15
North Fork Kentucky River	2-55	Red River	2-17
North Fork Kentucky River	2-90	Red River	2-60
North Rays Fork	1-48	Right Fork Otter Creek	1-393
Oakley Cave Branch	1-390	Right Fork Upper Devil Creek	1-209
Old Town Branch	1-218	Road Fork	1-241
Oldhouse Branch	1-314	Roaring Branch	1-317
Otter Creek	1-192	Rockhouse Creek	2-56
Otter Creek	2-13	Rocky Branch	1-366
Oven Fork Branch	1-382	Rogers Gap Creek	1-71
Owens Branch	1-319	Roundhole Branch	1-362
Paint Lick Creek	2-106	Rush Creek	1-62
Paynes Run	1-49	Rush Run	1-50
Pine Branch	1-165	Sand Lick Fork	1-171
Plum Branch	2-80	Sawdridge Creek	1-65
Pot Ripple Creek	1-63	Searcy Branch	1-236
Poundmill Branch	1-359	Sester Branch	1-334
Poundmill Branch	1-364	Severn Creek	2-107
Press Howard Fork	1-250	Sexton Creek	2-65
Puncheoncamp Branch	1-378	Sexton Creek	2-77
Quicksand Creek	2-41	Shannon Run	1-121

Table 5. Continued

Stream Name	Map No.	Stream Name	Map No.
Shawnee Run	1-184	Stillwater Creek	2-99
Shelby Branch	1-142	Sturgeon Creek	2-67
Silver Creek	2-21	Sugar Camp Branch	1-249
Silver Creek	2-72	Swafford Branch	1-371
Six Mile Creek	1-80	Swango Fork	1-201
Six Mile Creek	2-105	Sweet Home Branch	1-77
Sizemore Branch	1-343	Tanyard Branch	1-187
Skaker Creek	1-183	Tate Creek	2-14
Slab Lick Branch	1-22	Ten Mile Creek	1-5
Slickway Branch	2-74	Terry Branch	1-295
Slipfield Branch	1-381	Town Branch South Elkhorn Creek	2-9
Smith Branch	1-251	Town Creek	2-85
Snow Creek	1-159	Town Fork Jessamine Creek	2-11
South Benson Creek	1-100	Trace Fork	1-385
South Elkhorn Creek	1-144	Troublesome Creek	2-45
South Elkhorn Creek	2-7	Troublesome Creek	2-47
South Elkhorn Creek	2-86	Troublesome Creek	2-93
South Elkhorn Creek	2-87	Turkey Creek	1-379
South Fork Kentucky River	2-43	Tuttle Branch	1-369
South Fork Kentucky River	2-44	UT to Back Creek	1-220
St. Asaph Creek	1-267	UT to Baughman Fork	1-125
Stampers Branch	1-349	UT to Big Sinking Creek	1-211
Station Camp Creek	2-68	UT to Big Sinking Creek	1-212
Steeles Run	1-111	UT to Big Twin Creek	1-30
Steeles Run	2-104	UT to Big Twin Creek	1-42

Table 5. Continued

Stream Name	Map No.	Stream Name	Map No.
UT to Big Twin Creek	1-43	UT to East Fork Clear Creek	1-151
UT to Boone Creek	1-222	UT to East Fork Eagle Creek	1-70
UT to Boyd Run	1-90	UT to East Hickman Creek	1-123
UT to Cane Run	1-104	UT to East Hickman Creek	1-143
UT to Caney Creek	1-66	UT to Elkhorn Creek	1-106
UT to Cave Creek	1-122	UT to Elkhorn Creek	1-108
UT to Cedar Creek	1-274	UT to Elkhorn Creek	1-83
UT to Cedar Creek	1-64	UT to Elkhorn Creek	1-93
UT to Cedar Creek	1-84	UT to Fall Lick	1-264
UT to Clarks Creek	1-23	UT to Five Mile Creek	1-54
UT to Clear Creek	1-146	UT to Four Mile Creek	1-127
UT to Clear Creek	1-150	UT to Frozen Creek	1-205
UT to Clear Creek	1-194	UT to Frozen Creek	1-206
UT to Cow Creek	1-196	UT to Frozen Creek	1-207
UT to Cutshin Creek	1-377	UT to Frozen Creek	1-208
UT to Dix River	1-223	UT to Goose Creek	1-89
UT to Dix River	1-266	UT to Grassy Run	1-46
UT to Dix River	1-275	UT to Greenup Creek	1-51
UT to Double Cabin Creek	1-239	UT to Griers Creek	1-119
UT to Drake Creek	1-265	UT to Hanging Fork Creek	1-226
UT to Drennon Creek	1-78	UT to Hanging Fork Creek	1-271
UT to Drowning Creek	1-215	UT to Hanging Fork Creek	1-272
UT to Eagle Creek	1-31	UT to Herrington Lake	1-186
UT to Eagle Creek	1-45	UT to Hickman Creek	1-152
UT to Eagle Creek	1-7	UT to Hickman Creek	1-181

Table 5. Continued

Stream Name	Map No.	Stream Name	Map No.
UT to Robinson Creek	1-335	Watts Fork	1-320
UT to Severn Creek	1-52	Webb Branch	1-354
UT to South Elkhorn Creek	1-102	Wells Fork	1-360
UT to South Fork Station Camp Creek	1-259	Wet Roundstone Branch	1-363
UT to Station Camp Creek	1-214	White Lick Creek	1-229
UT to Sturgeon Creek	1-257	White Oak Creek	1-304
UT to Sturgeon Creek	1-282	Will Lindon Branch	1-203
UT to Sugar Creek	1-221	Williams Branch	1-25
UT to Sugar Creek	1-228	Willow Branch	1-237
UT to Taylor Fork	1-191	Willow Branch	1-76
UT to Ten Mile Creek	1-6	Wilson Branch	1-166
UT to Three Forks Creek	1-47	Wilson Branch	1-391
UT to Town Creek	1-55	Wolf Run	2-101
UT to Town Creek	1-61	Woodward Creek	1-197
UT to Twin Creek	1-174	Wooton Creek	1-345
UT to Upper Howard Creek	1-138		
UT to White Oak Creek	1-195		
UT to Whites Run	1-19		
UT to Woodward Creek	1-175		
Ulysses Creek	1-341		
Ut to Indian Creek	1-284		
Ut to Swift Camp Creek	1-200		
Viny Fork	1-216		
Walker Creek	1-210		
Walnut Meadow Branch	1-231		

Table 6. Raw data for 120 ANOVA samples. KYD1 is between cell variation; KYD2 is within cell variation; KYD3 is on site variation; and KYD4 is analytical variation. All data are in ug/g unless noted

PRIME ID	LATITUDE	LONGITUDE	Ag	Al %	As	B	Ba	Be
KYD1-020	383946	845616	<2	5.6	7.3	1.2	550	2
KYD2-020	384128	845554	<2	6.2	6.1	0.9	430	2
KYD3-020	384130	845554	<2	5.8	11.0	<0.4	480	2
KYD4-020	384130	845554	<2	5.8	7.3	1.8	440	2
KYD1-074	381905	844715	<2	6.1	7.7	<0.4	390	2
KYD2-074	382151	844932	<2	2.7	1.7	1.6	180	<1
KYD3-074	382153	844931	<2	2.6	1.9	2.6	180	<1
KYD4-074	382153	844931	<2	2.6	2.2	1.4	180	<1
KYD1-110	380537	843224	<2	4.1	5.9	0.5	440	1
KYD2-110	380508	843155	<2	4.9	9.1	<0.4	530	2
KYD3-110	380508	843155	<2	4.9	9.1	0.7	580	2
KYD4-110	380508	843155	<2	5.0	8.3	0.5	560	2
KYD1-158	374942	840352	<2	5.0	37.0	<0.4	420	2
KYD2-158	375103	840153	<2	5.5	28.0	0.7	450	2
KYD3-158	375104	840152	<2	5.1	20.0	5.1	370	2
KYD4-158	375104	840152	<2	4.9	19.0	5.6	340	2
KYD1-175	374728	840156	<2	6.0	23.0	1.1	440	3
KYD2-175	374904	840142	<2	5.4	44.0	0.6	390	2
KYD3-175	374904	840143	<2	5.6	70.0	1.0	400	3
KYD4-175	374904	840143	<2	5.8	85.0	3.1	390	3
KYD1-189	374249	842802	<2	5.2	6.2	0.6	430	2
KYD2-189	374252	842719	<2	5.9	6.0	<0.4	450	2
KYD3-189	374253	842719	<2	5.8	4.8	1.1	420	2
KYD4-189	374253	842719	<2	5.4	5.0	0.5	430	2
KYD1-191	374218	841851	<2	4.0	4.8	0.7	380	1
KYD2-191	374331	841850	<2	5.0	5.4	0.6	540	2
KYD3-191	374332	841850	<2	5.1	5.4	1.1	420	2
KYD4-191	374332	841850	<2	5.1	5.2	1.2	400	2
KYD1-194	374250	840525	<2	5.1	11.0	0.5	270	2
KYD2-194	374226	840131	<2	6.1	24.0	1.0	430	3
KYD3-194	374228	840133	<2	6.1	42.0	1.2	450	3
KYD4-194	374228	840133	<2	6.0	36.0	2.5	420	3
KYD1-209	373952	833240	<2	7.6	14.0	1.2	500	3
KYD2-209	373952	833252	<2	5.8	5.8	0.6	420	2
KYD3-209	373954	833252	<2	6.9	7.4	0.7	440	2
KYD4-209	373954	833252	<2	6.9	7.6	1.2	470	2
KYD1-219	374007	842602	<2	4.9	4.6	1.1	390	2
KYD2-219	374037	842258	<2	5.0	6.4	0.6	380	2
KYD3-219	374036	842259	<2	5.3	7.9	2.4	390	2
KYD4-219	374036	842259	<2	5.3	7.3	2.1	390	2

Table 6. Continued

PRIME ID	INORG C%	ORG C %	TOTAL C%	Ca %	Cd	Ce	Co	Cr
KYD1-020	2.30	1.90	4.20	8.10	<2	88	37	56
KYD2-020	0.25	1.30	1.50	1.20	<2	78	25	68
KYD3-020	0.26	1.40	1.70	1.10	<2	79	24	57
KYD4-020	0.26	1.40	1.70	1.20	<2	80	23	64
KYD1-074	0.75	2.70	3.40	4.60	<2	83	17	58
KYD2-074	7.30	3.70	11.00	23.00	<2	31	8	25
KYD3-074	7.20	2.80	10.00	23.00	<2	31	9	23
KYD4-074	0.23	9.80	10.00	24.00	<2	31	8	24
KYD1-110	0.04	2.60	2.60	1.10	<2	79	14	41
KYD2-110	0.60	2.40	3.00	3.40	<2	86	15	76
KYD3-110	0.37	2.30	2.70	2.80	<2	86	13	77
KYD4-110	0.41	2.40	2.80	2.90	<2	90	13	77
KYD1-158	0.27	1.20	3.90	5.70	<2	83	37	61
KYD2-158	2.90	1.90	4.80	5.10	<2	76	21	56
KYD3-158	3.60	1.60	5.20	6.80	<2	75	24	67
KYD4-158	3.30	2.00	5.30	7.00	<2	65	21	57
KYD1-175	0.32	2.20	2.50	1.20	3	79	67	69
KYD2-175	3.20	1.50	4.70	7.40	<2	78	42	67
KYD3-175	3.10	1.00	4.10	5.80	<2	81	47	83
KYD4-175	2.60	1.00	3.60	5.10	<2	85	51	78
KYD1-189	1.90	1.40	3.30	7.00	<2	61	24	42
KYD2-189	0.20	1.50	1.70	1.00	<2	59	22	48
KYD3-189	0.19	1.50	1.70	1.10	<2	66	22	57
KYD4-189	0.10	1.50	1.60	0.71	<2	63	17	46
KYD1-191	0.11	1.80	1.90	4.20	<2	72	18	39
KYD2-191	0.04	1.80	1.80	1.70	<2	96	24	50
KYD3-191	0.51	1.68	2.19	2.00	<2	81	21	57
KYD4-191	0.46	1.80	2.30	2.00	<2	84	21	50
KYD1-194	5.30	0.60	5.90	11.00	<2	53	23	49
KYD2-194	0.04	2.30	2.30	0.38	<2	77	47	71
KYD3-194	0.09	2.54	2.63	0.47	<2	91	49	81
KYD4-194	0.10	2.60	2.70	0.50	<2	77	49	75
KYD1-209	0.01	2.27	2.28	0.14	<2	110	32	90
KYD2-209	0.14	1.40	1.50	0.70	<2	95	22	72
KYD3-209	0.09	1.10	1.20	0.51	<2	83	23	81
KYD4-209	0.10	1.30	1.40	0.53	<2	100	24	97
KYD1-219	0.57	1.60	2.20	2.10	<2	71	18	42
KYD2-219	0.44	3.10	3.50	1.90	<2	64	21	50
KYD3-219	0.45	2.20	2.60	1.70	<2	73	26	60
KYD4-219	0.41	2.00	2.40	1.70	<2	70	26	55

Table 6. Continued

PRIME ID	Cu	Eu	Fe %	Ga	Hg	K %	La	Li	Mg %	Mn
KYD1-020	22	<2	4.2	16	0.04	2.60	44	37	0.85	4400
KYD2-020	21	<2	3.7	16	0.06	2.60	38	42	0.84	1800
KYD3-020	20	<2	3.7	16	0.04	2.30	38	42	0.71	2200
KYD4-020	17	<2	3.4	14	0.04	2.20	39	38	0.69	2000
KYD1-074	21	<2	3.7	16	0.04	2.50	46	39	0.66	1500
KYD2-074	7	<2	1.5	7	0.02	1.20	22	19	0.64	830
KYD3-074	9	<2	1.4	8	0.02	1.30	21	18	0.81	660
KYD4-074	7	<2	1.4	8	<0.02	1.30	23	18	0.81	670
KYD1-110	12	<2	2.4	12	0.06	1.20	42	27	0.29	2500
KYD2-110	34	<2	3.1	15	0.38	1.20	47	34	0.44	3400
KYD3-110	32	<2	3.3	12	0.32	1.30	46	36	0.39	2700
KYD4-110	33	<2	3.3	14	0.48	1.20	48	34	0.39	2600
KYD1-158	63	<2	5.9	17	0.02	2.20	42	37	2.70	2700
KYD2-158	68	<2	4.1	17	0.02	2.70	40	40	3.10	1600
KYD3-158	61	<2	4.3	14	0.04	2.20	39	32	3.60	1600
KYD4-158	59	<2	3.9	13	0.02	1.90	37	31	3.50	1400
KYD1-175	63	<2	3.9	15	0.02	2.40	46	41	0.67	2200
KYD2-175	71	<2	6.0	14	0.04	2.20	41	39	2.30	1800
KYD3-175	96	<2	9.9	17	0.04	2.30	38	34	3.40	2100
KYD4-175	95	<2	9.9	18	0.04	2.30	44	36	2.90	2100
KYD1-189	17	<2	3.5	15	0.02	2.50	35	38	0.73	2800
KYD2-189	16	<2	3.4	12	<0.02	2.80	31	41	0.60	1900
KYD3-189	16	<2	3.3	14	0.02	2.60	33	36	0.58	1700
KYD4-189	14	<2	2.8	10	<0.02	2.20	33	36	0.52	1300
KYD1-191	13	<2	2.6	12	0.02	1.70	36	33	0.52	2600
KYD2-191	20	<2	3.4	16	0.04	2.10	40	42	0.64	3500
KYD3-191	18	<2	3.1	15	0.04	2.20	35	42	0.66	3200
KYD4-191	17	<2	3.1	14	0.06	1.90	42	40	0.67	3200
KYD1-194	22	<2	2.9	13	<0.02	2.60	31	38	5.10	690
KYD2-194	73	<2	4.1	15	0.04	2.30	45	39	0.49	770
KYD3-194	75	<2	5.2	17	0.06	2.40	43	38	0.58	1100
KYD4-194	68	<2	5.1	14	0.04	2.20	43	37	0.54	1100
KYD1-209	24	<2	6.3	20	0.04	2.10	51	62	0.53	2000
KYD2-209	14	<2	2.6	15	0.02	1.70	49	43	0.39	1600
KYD3-209	19	<2	3.2	17	0.02	1.80	47	54	0.45	1800
KYD4-209	19	<2	3.3	18	0.06	2.10	49	53	0.47	1800
KYD1-219	14	<2	2.8	17	0.02	2.20	32	32	0.56	1600
KYD2-219	15	<2	3.8	13	0.02	2.00	34	33	0.65	2300
KYD3-219	15	<2	4.6	13	0.06	2.20	35	33	0.72	2700
KYD4-219	16	<2	4.6	14	0.04	2.10	36	34	0.70	2600

Table 6. Continued

PRIME ID	Mo	Na %	Nb	Nd	Ni	P %	PB	TOTAL S%	Sb	Sc
KYD1-020	<2	0.46	4	44	36	0.25	22	0.21	0.4	11
KYD2-020	<2	0.45	5	34	30	0.10	19	0.07	0.4	11
KYD3-020	<2	0.44	<4	32	26	0.10	27	0.05	0.6	10
KYD4-020	<2	0.42	5	35	26	0.10	23	0.04	0.4	10
KYD1-074	<2	0.28	<4	39	27	0.74	41	0.06	0.8	10
KYD2-074	<2	0.13	<4	21	12	0.18	11	0.20	0.3	5
KYD3-074	<2	0.13	7	20	13	0.14	8	0.22	0.3	4
KYD4-074	<2	0.13	<4	25	12	0.15	9	0.22	0.3	4
KYD1-110	<2	0.29	<4	37	15	0.23	28	0.03	0.5	7
KYD2-110	<2	0.24	<4	41	24	0.61	64	0.07	0.7	9
KYD3-110	<2	0.27	<4	36	23	0.57	65	0.05	0.8	9
KYD4-110	<2	0.26	<4	38	23	0.61	66	0.06	0.9	9
KYD1-158	20	0.19	<4	46	78	0.11	27	0.07	1.9	10
KYD2-158	6	0.22	<4	45	49	0.09	33	0.04	1.4	10
KYD3-158	6	0.17	<4	38	55	0.10	25	0.06	1.3	9
KYD4-158	<2	0.18	<4	35	44	0.09	23	0.05	1.1	9
KYD1-175	15	0.18	<4	44	170	0.06	20	0.02	2.3	11
KYD2-175	26	0.14	<4	36	81	0.09	930	0.05	2.1	10
KYD3-175	44	0.14	<4	41	98	0.11	1500	0.09	4.1	10
KYD4-175	50	0.15	<4	41	97	0.11	1500	0.10	6.0	11
KYD1-189	<2	0.56	<4	30	25	0.14	23	0.05	0.3	9
KYD2-189	<2	0.58	<4	26	25	0.13	25	0.04	0.5	9
KYD3-189	<2	0.51	7	30	27	0.14	20	0.02	0.3	9
KYD4-189	<2	0.53	<4	26	22	0.09	19	0.01	0.5	9
KYD1-191	<2	0.24	<4	33	16	0.13	32	0.04	0.3	7
KYD2-191	<2	0.26	6	41	22	0.15	71	0.07	0.6	9
KYD3-191	<2	0.25	6	35	21	0.17	64	0.04	0.4	8
KYD4-191	<2	0.24	5	36	22	0.16	77	0.04	0.5	8
KYD1-194	<2	0.12	<4	30	44	0.09	17	0.21	0.4	9
KYD2-194	19	0.17	12	44	120	0.06	34	0.05	1.9	12
KYD3-194	36	0.16	<4	45	120	0.06	36	0.05	1.9	12
KYD4-194	29	0.16	8	42	110	0.06	33	0.03	2.4	11
KYD1-209	<2	0.33	11	52	49	0.08	29	0.04	0.5	14
KYD2-209	<2	0.25	<4	40	35	0.03	23	0.05	0.5	10
KYD3-209	<2	0.25	9	42	38	0.04	20	0.01	0.5	12
KYD4-209	<2	0.25	8	45	42	0.05	22	0.02	0.4	12
KYD1-219	<2	0.47	8	34	21	0.12	31	0.05	0.4	8
KYD2-219	<2	0.45	4	31	21	0.21	25	0.06	0.4	8
KYD3-219	<2	0.49	6	34	25	0.24	27	0.04	0.4	9
KYD4-219	<2	0.50	6	33	23	0.23	27	0.06	0.5	9

Table 6. Continued

PRIME ID	Sn	Sr	Th	Ti %	U	V	Y	Yb	Zn
KYD1-020	<10	250	10	0.28	0.70	71	29	3	78
KYD2-020	<10	90	12	0.35	0.75	85	23	3	74
KYD3-020	<10	89	9	0.36	0.85	81	21	3	68
KYD4-020	<10	87	11	0.39	0.80	82	22	3	68
KYD1-074	<10	120	10	0.26	1.00	72	34	3	84
KYD2-074	<10	240	<4	0.14	0.35	31	10	1	31
KYD3-074	<10	240	5	0.13	0.35	28	10	1	31
KYD4-074	<10	250	4	0.16	0.40	30	10	1	28
KYD1-110	<10	89	10	0.18	1.10	52	29	3	52
KYD2-110	<10	160	12	0.14	1.70	57	38	3	130
KYD3-110	<10	140	8	0.13	0.70	56	36	3	130
KYD4-110	<10	130	10	0.15	1.30	59	36	3	130
KYD1-158	<10	74	13	0.24	2.40	100	27	3	140
KYD2-158	<10	72	13	0.23	2.20	91	25	3	100
KYD3-158	<10	68	10	0.21	1.50	91	24	3	120
KYD4-158	<10	68	8	0.23	2.00	85	23	3	100
KYD1-175	<10	68	12	0.34	8.10	140	36	4	370
KYD2-175	<10	110	8	0.27	4.70	120	26	3	130
KYD3-175	<10	70	11	0.21	11.00	150	27	3	170
KYD4-175	<10	69	11	0.26	7.30	160	27	3	180
KYD1-189	<10	180	12	0.29	0.75	58	24	3	56
KYD2-189	<10	74	10	0.36	0.60	67	23	3	61
KYD3-189	<10	71	11	0.37	0.60	69	24	3	66
KYD4-189	<10	72	7	0.43	0.45	61	24	3	57
KYD1-191	<10	85	10	0.31	0.40	48	23	3	52
KYD2-191	<10	87	12	0.28	0.60	64	30	3	120
KYD3-191	<10	89	11	0.34	0.85	63	29	3	91
KYD4-191	<10	84	10	0.35	0.75	61	29	3	91
KYD1-194	<10	86	9	0.25	1.90	65	20	2	99
KYD2-194	<10	66	12	0.36	13.00	140	39	4	280
KYD3-194	<10	66	13	0.35	12.00	160	31	3	270
KYD4-194	<10	65	12	0.36	15.00	150	30	4	250
KYD1-209	<10	80	16	0.36	1.80	97	24	3	110
KYD2-209	<10	64	14	0.35	1.80	71	20	3	80
KYD3-209	<10	72	13	0.42	1.10	86	21	3	89
KYD4-209	<10	72	16	0.38	0.85	86	23	3	89
KYD1-219	<10	78	13	0.32	0.70	58	23	3	66
KYD2-219	<10	76	9	0.36	1.10	66	26	3	70
KYD3-219	<10	75	10	0.28	0.80	74	28	3	66
KYD4-219	<10	78	11	0.37	0.65	73	28	4	67

Table 6. Continued

PRIME ID	LATITUDE	LONGITUDE	Ag	Al %	As	B	Ba	Be
KYD1-226	373457	844240	<2	6.6	4.9	3.8	430	2
KYD2-226	373730	844655	<2	5.0	6.0	0.6	450	2
KYD3-226	373729	844655	<2	5.1	5.4	1.1	440	2
KYD4 226	373729	844655	<2	4.9	5.1	0.6	450	2
KYD1-228	373451	843339	<2	5.1	7.7	0.8	500	2
KYD2-228	373716	843236	<2	4.7	5.3	0.6	380	1
KYD3-228	373715	843239	<2	4.6	4.4	0.8	330	1
KYD4-228	373715	843239	<2	4.5	4.6	1.3	330	1
KYD1-232	373538	841300	<2	5.0	28.0	0.7	530	2
KYD2-232	373458	841312	<2	5.5	21.0	0.5	420	2
KYD3-232	373457	841310	<2	6.3	42.0	0.8	450	3
KYD4-232	373457	841310	<2	6.3	56.0	<0.4	150	3
KYD1-234	373610	840522	<2	6.1	17.0	1.7	440	2
KYD2-234	373541	840450	<2	5.0	9.1	0.9	370	2
KYD3-234	373544	840448	<2	5.3	19.0	1.4	420	2
KYD4-234	373544	840448	<2	5.4	21.0	0.7	420	2
KYD1-241	373504	832816	<2	8.8	6.7	1.0	580	3
KYD2-241	373554	832737	<2	7.5	7.3	3.0	500	2
KYD3-241	373553	832734	<2	8.5	11.0	0.5	570	3
KYD4-241	373553	832734	<2	8.3	8.6	2.3	530	3
KYD1-245	373608	831029	<2	7.8	6.6	<0.4	540	3
KYD2-245	373659	831018	<2	6.6	3.8	3.0	470	2
KYD3-245	373700	831015	<2	7.9	5.6	1.4	550	3
KYD4-245	373700	831015	<2	7.6	4.2	4.5	510	2
KYD1-257	373033	834912	<2	8.5	9.7	1.9	410	3
KYD2-257	373022	834828	<2	8.5	11.0	1.2	420	2
KYD3-257	373024	834830	<2	6.9	10.0	1.3	380	2
KYD4-257	373024	834830	<2	7.0	11.0	0.7	390	2
KYD1-269	373347	845013	<2	6.7	7.4	1.1	450	2
KYD2-269	373145	844954	<2	5.4	14.0	0.9	510	2
KYD3-269	373143	844956	<2	5.4	20.0	1.0	500	2
KYD4-269	373143	844956	<2	5.4	24.0	0.9	540	3
KYD1-305	372459	835003	<2	6.3	18.0	0.5	470	3
KYD2-305	372424	834635	<2	8.1	17.0	0.6	510	3
KYD3-305	372421	834635	<2	8.6	9.0	0.8	540	3
KYD4-305	372421	834635	<2	8.5	7.5	1.2	540	3
KYD1-311	372031	833649	<2	6.6	5.4	2.2	500	2
KYD2-311	371953	833553	<2	9.0	10.0	<0.4	660	3
KYD3-311	371953	833552	<2	8.1	7.2	<0.4	560	3
KYD4-311	371953	833552	<2	8.2	8.1	1.6	590	3

Table 6. Continued

PRIME ID	INORG C%	ORG C %	TOTAL C%	Ca %	Cd	Ce	Co	Cr
KYD1-226	0.77	2.50	3.30	3.50	<2	67	18	70
KYD2-226	0.33	2.30	2.60	2.40	<2	76	15	47
KYD3-226	0.51	1.90	2.40	2.40	<2	74	16	52
KYD4 226	0.51	1.30	1.80	2.30	<2	88	14	47
KYD1-228	0.70	2.10	2.80	2.50	<2	84	26	52
KYD2-228	2.20	2.10	4.30	6.80	<2	69	24	41
KYD3-228	3.40	2.50	5.90	11.00	<2	62	20	40
KYD4-228	3.47	2.41	5.88	11.00	<2	59	19	45
KYD1-232	2.60	2.60	5.20	5.50	<2	79	38	59
KYD2-232	0.34	2.90	3.20	1.30	3	68	40	73
KYD3-232	0.28	2.40	2.70	1.00	<2	66	32	82
KYD4-232	0.22	2.90	3.10	0.86	<2	69	34	88
KYD1-234	0.03	1.21	1.24	0.24	<2	77	30	61
KYD2-234	0.09	0.88	0.97	0.46	<2	70	20	58
KYD3-234	0.06	1.50	1.60	0.24	<2	77	31	70
KYD4-234	0.03	1.40	1.40	0.22	<2	69	34	72
KYD1-241	0.02	1.95	1.97	0.31	<2	110	23	89
KYD2-241	0.72	1.10	1.80	0.16	<2	110	19	77
KYD3-241	0.02	1.80	1.80	0.22	<2	110	31	87
KYD4-241	0.02	1.70	1.70	0.22	<2	110	31	83
KYD1-245	0.02	1.40	1.40	0.25	<2	110	20	71
KYD2-245	0.02	1.60	1.60	0.17	<2	99	15	53
KYD3-245	0.03	1.59	1.62	0.19	<2	110	19	77
KYD4-245	0.03	1.50	1.50	0.20	<2	100	18	68
KYD1-257	0.01	2.00	2.00	0.15	<2	97	36	120
KYD2-257	0.01	3.10	3.10	0.16	<2	82	19	110
KYD3-257	0.04	1.65	1.69	0.19	<2	84	22	99
KYD4-257	0.03	1.70	1.70	0.20	<2	82	21	97
KYD1-269	0.01	0.42	0.43	0.20	<2	90	19	91
KYD2-269	0.18	2.20	2.40	0.64	<2	74	47	65
KYD3-269	0.47	2.30	2.80	1.30	2	78	56	68
KYD4-269	0.46	2.40	2.90	1.30	3	74	53	69
KYD1-305	0.06	1.50	1.60	0.28	<2	87	37	90
KYD2-305	0.06	0.75	0.81	0.31	<2	110	31	90
KYD3-305	0.01	1.47	1.48	0.17	<2	100	23	120
KYD4-305	0.01	1.50	1.50	0.23	<2	110	22	100
KYD1-311	0.02	2.40	2.40	0.20	<2	100	14	58
KYD2-311	0.03	1.30	1.30	0.21	<2	120	21	80
KYD3-311	0.01	2.20	2.20	0.19	<2	110	20	72
KYD4-311	0.02	2.06	2.08	0.19	<2	110	20	84

Table 6. Continued

PRIME ID	Cu	Eu	Fe %	Ga	Hg	K %	La	Li	Mg %	Mn
KYD1-226	18	<2	3.1	18	0.04	2.70	37	45	1.10	2300
KYD2-226	18	<2	2.8	14	0.04	1.80	43	30	0.53	2100
KYD3-226	14	<2	2.8	13	0.04	1.70	41	30	0.58	1500
KYD4 226	14	<2	2.7	13	0.04	1.70	41	31	0.56	1500
KYD1-228	15	<2	3.6	15	0.04	2.10	41	39	0.84	5100
KYD2-228	14	<2	2.9	16	0.04	2.00	36	37	0.86	3700
KYD3-228	12	<2	2.7	14	0.04	2.00	34	37	1.30	3000
KYD4-228	13	<2	2.7	14	<0.02	2.00	28	37	1.30	3000
KYD1-232	53	<2	4.6	16	0.06	2.30	40	31	2.80	2000
KYD2-232	43	<2	3.3	15	0.10	2.00	38	40	0.66	1200
KYD3-232	51	<2	5.5	16	0.08	2.30	38	39	0.66	720
KYD4-232	54	<2	6.4	16	0.08	2.40	40	37	0.64	770
KYD1-234	30	<2	4.0	16	0.04	2.30	37	49	0.62	630
KYD2-234	15	<2	3.0	13	0.02	1.80	32	43	0.48	520
KYD3-234	23	<2	5.5	13	0.04	1.70	36	42	0.55	920
KYD4-234	22	<2	6.4	13	0.04	1.90	35	44	0.54	1000
KYD1-241	32	2	3.9	22	0.04	2.60	52	70	0.74	1300
KYD2-241	22	<2	3.8	19	0.04	2.10	54	52	0.53	780
KYD3-241	25	<2	5.0	22	0.02	2.50	61	66	0.73	1700
KYD4-241	25	2	4.6	22	0.04	2.30	61	61	0.67	1600
KYD1-245	22	<2	3.7	21	0.02	2.30	59	46	0.63	1300
KYD2-245	16	<2	2.9	17	0.02	2.00	53	34	0.42	550
KYD3-245	22	<2	3.7	20	0.02	2.30	50	41	0.54	900
KYD4-245	19	<2	3.4	19	0.04	2.20	54	39	0.52	860
KYD1-257	24	<2	3.8	22	0.02	2.10	47	71	0.54	4400
KYD2-257	26	<2	3.6	20	0.04	2.10	48	68	0.56	790
KYD3-257	17	<2	3.8	19	0.02	1.90	41	59	0.50	3500
KYD4-257	23	<2	3.9	19	0.06	1.80	44	60	0.49	3400
KYD1-269	13	<2	4.0	17	0.02	2.30	40	65	0.79	510
KYD2-269	30	<2	3.5	14	0.04	1.90	39	47	0.65	940
KYD3-269	37	<2	4.2	14	0.06	2.00	42	46	0.82	1700
KYD4-269	36	<2	4.3	15	0.08	2.10	39	50	0.88	1700
KYD1-305	21	<2	6.6	18	0.02	1.60	43	48	0.36	3300
KYD2-305	26	<2	8.1	22	0.02	2.20	51	54	0.63	1800
KYD3-305	26	<2	4.4	22	0.02	2.40	46	65	0.68	880
KYD4-305	22	<2	4.4	22	0.04	2.40	52	66	0.68	890
KYD1-311	17	<2	2.9	17	0.06	2.00	57	41	0.43	690
KYD2-311	31	<2	5.1	24	0.04	2.70	61	68	0.73	1200
KYD3-311	27	<2	4.1	21	0.06	2.30	61	60	0.60	920
KYD4-311	30	<2	4.2	21	0.04	2.40	51	62	0.64	970

Table 6. Continued

PRIME ID	Mo	Na %	Nb	Nd	Ni	P %	PB	TOTAL S%	Sb	Sc
KYD1-226	<2	0.26	8	31	30	0.19	21	0.16	0.3	11
KYD2-226	<2	0.26	<4	37	21	0.22	41	0.06	0.7	8
KYD3-226	<2	0.27	4	35	22	0.25	44	0.03	0.4	9
KYD4 226	<2	0.28	6	38	20	0.23	47	0.06	0.4	9
KYD1-228	<2	0.25	5	37	23	0.19	43	0.03	0.5	8
KYD2-228	<2	0.25	4	31	19	0.17	35	0.14	0.7	8
KYD3-228	<2	0.23	<4	33	19	0.19	31	0.19	0.5	7
KYD4-228	<2	0.23	6	24	18	0.21	30	0.19	0.5	7
KYD1-232	14	0.20	<4	39	63	0.09	37	0.09	1.7	9
KYD2-232	25	0.36	9	38	100	0.07	32	0.15	2.0	11
KYD3-232	39	0.33	7	33	97	0.07	33	0.31	5.3	12
KYD4-232	46	0.32	8	36	99	0.08	35	0.38	6.3	12
KYD1-234	11	0.46	<4	37	73	0.03	23	0.09	1.3	11
KYD2-234	<2	0.55	5	29	40	0.03	21	0.03	0.8	9
KYD3-234	<2	0.47	4	33	63	0.04	34	0.10	1.1	10
KYD4-234	<2	0.49	<4	35	64	0.04	29	0.08	0.9	10
KYD1-241	<2	0.55	11	53	47	0.09	32	0.03	0.4	15
KYD2-241	<2	0.52	8	51	36	0.06	24	0.03	0.4	12
KYD3-241	<2	0.58	12	58	47	0.07	27	0.03	0.4	15
KYD4-241	<2	0.56	13	54	44	0.07	27	0.03	0.4	14
KYD1-245	<2	0.57	13	56	32	0.06	25	0.04	0.3	13
KYD2-245	<2	0.45	8	47	23	0.04	19	0.04	0.3	10
KYD3-245	<2	0.44	11	54	31	0.05	25	0.04	0.4	12
KYD4-245	<2	0.43	11	49	31	0.05	21	0.03	0.4	12
KYD1-257	<2	0.12	10	46	96	0.05	21	0.07	0.4	15
KYD2-257	<2	0.14	11	44	45	0.05	23	0.13	3.2	15
KYD3-257	<2	0.16	5	41	48	0.05	20	0.10	0.4	13
KYD4-257	<2	0.16	10	40	48	0.05	20	0.09	0.4	13
KYD1-269	<2	0.64	10	39	36	0.03	20	0.01	0.4	12
KYD2-269	12	0.41	7	34	78	0.06	30	0.13	1.1	10
KYD3-269	17	0.37	5	37	110	0.09	37	0.17	2.3	10
KYD4-269	21	0.39	7	37	110	0.09	48	0.17	1.5	10
KYD1-305	<2	0.16	8	38	58	0.08	29	0.02	0.6	11
KYD2-305	<2	0.52	<4	50	44	0.09	29	0.01	0.6	15
KYD3-305	<2	0.36	11	47	43	0.07	28	0.05	0.4	15
KYD4-305	<2	0.38	10	48	45	0.07	25	0.04	0.4	16
KYD1-311	<2	0.43	<4	51	27	0.05	22	0.03	0.7	10
KYD2-311	<2	0.65	14	58	36	0.08	31	0.04	0.4	15
KYD3-311	<2	0.53	11	52	32	0.08	31	0.05	0.5	13
KYD4-311	<2	0.54	12	52	32	0.08	31	0.05	0.6	13

Table 6. Continued

PRIME ID	Sn	Sr	Th	Ti %	U	V	Y	Yb	Zn
KYD1-226	< 10	84	11	0.34	0.85	88	22	3	77
KYD2-226	< 10	95	10	0.19	0.90	59	26	3	80
KYD3-226	< 10	90	10	0.25	1.00	62	26	3	85
KYD4 226	< 10	91	12	0.24	1.30	61	26	3	83
KYD1-228	< 10	77	11	0.27	0.70	63	28	3	73
KYD2-228	< 10	92	9	0.31	0.85	57	23	3	67
KYD3-228	< 10	110	9	0.24	0.50	54	20	3	63
KYD4-228	< 10	120	9	0.27	0.75	54	20	3	60
KYD1-232	< 10	71	10	0.23	3.10	110	25	3	110
KYD2-232	< 10	71	13	0.30	8.70	220	24	3	390
KYD3-232	< 10	74	12	0.31	9.10	280	23	3	270
KYD4-232	< 10	71	12	0.30	16.00	310	24	3	280
KYD1-234	< 10	67	13	0.32	3.00	180	20	3	210
KYD2-234	< 10	59	9	0.24	1.90	110	15	2	110
KYD3-234	< 10	57	10	0.28	3.20	120	20	2	200
KYD4-234	< 10	58	11	0.33	2.70	130	19	3	200
KYD1-241	< 10	140	14	0.41	1.90	110	24	3	130
KYD2-241	< 10	76	15	0.32	1.30	86	23	3	93
KYD3-241	< 10	93	20	0.40	1.50	100	23	3	110
KYD4-241	< 10	87	15	0.38	1.70	100	24	3	110
KYD1-245	< 10	92	16	0.40	1.50	86	22	3	110
KYD2-245	< 10	71	15	0.35	1.70	70	21	3	78
KYD3-245	< 10	84	16	0.38	1.80	85	21	3	97
KYD4-245	< 10	77	14	0.32	1.90	81	21	3	89
KYD1-257	< 10	92	16	0.38	1.70	100	30	3	110
KYD2-257	< 10	98	14	0.41	3.00	110	25	3	79
KYD3-257	< 10	95	15	0.36	1.80	88	22	3	82
KYD4-257	< 10	97	15	0.38	1.50	84	22	3	79
KYD1-269	< 10	69	11	0.35	0.70	120	16	2	110
KYD2-269	< 10	66	10	0.32	7.50	150	22	3	240
KYD3-269	< 10	75	10	0.30	6.90	160	23	3	330
KYD4-269	< 10	77	10	0.25	9.20	160	22	3	320
KYD1-305	< 10	64	12	0.32	1.40	86	20	3	120
KYD2-305	< 10	88	16	0.31	1.60	110	21	3	130
KYD3-305	< 10	91	14	0.40	1.20	110	22	3	99
KYD4-305	< 10	89	15	0.39	1.20	110	21	3	100
KYD1-311	< 10	79	14	0.36	1.00	73	21	3	82
KYD2-311	< 10	110	18	0.41	1.70	100	21	3	120
KYD3-311	< 10	94	15	0.45	1.20	96	23	3	120
KYD4-311	< 10	99	15	0.43	2.10	98	22	3	130

Table 6. Continued

PRIME ID	LATITUDE	LONGITUDE	Ag	Al %	As	B	Ba	Be
KYD1-313	372111	832742	<2	7.8	9.2	1.8	580	3
KYD2-313	372034	832646	<2	7.7	6.5	0.7	500	2
KYD3-313	372033	832643	<2	7.8	5.7	1.0	520	2
KYD4-313	372033	832643	<2	8.0	5.5	1.6	550	2
KYD1-328	371630	831358	<2	7.6	5.9	<0.4	530	2
KYD2-328	371702	831136	<2	4.1	5.9	<0.4	450	2
KYD3-328	371705	831136	<2	7.5	4.9	0.5	520	2
KYD4-328	371705	831136	<2	7.3	5.9	0.6	550	3
KYD1-346	371115	830818	<2	7.2	4.4	<0.4	530	3
KYD2-346	371208	830851	<2	7.1	8.8	0.8	600	3
KYD3-346	371210	830854	<2	8.9	5.7	0.9	660	3
KYD4-346	371210	830854	<2	8.9	5.4	1.0	640	3
KYD1-347	371037	830423	<2	8.8	7.3	1.0	600	3
KYD2-347	371154	830149	<2	7.0	5.9	0.8	510	2
KYD3-347	371152	830152	<2	9.3	11.0	0.5	650	3
KYD4-347	371152	830152	<2	9.2	10.0	0.6	590	3
KYD1-355	370802	824731	<2	8.2	9.9	0.6	490	3
KYD2-355	370811	824740	<2	8.3	14.0	0.7	550	3
KYD3-355	370811	824743	<2	7.6	B	B	510	3
KYD4-355	370811	824743	<2	7.7	11.0	0.9	540	3
KYD1-361	370812	831543	<2	8.9	8.4	1.4	610	3
KYD2-361	370739	831811	<2	7.1	6.3	0.7	520	3
KYD3-361	370739	831815	<2	6.9	5.0	<0.4	500	2
KYD4-361	370738	831815	<2	7.0	5.5	0.5	530	2
KYD1-378	370408	830601	<2	7.4	7.5	<0.4	540	3
KYD2-378	370526	830625	<2	6.9	6.6	2.2	500	3
KYD3-378	370524	830628	<2	6.0	6.0	1.2	460	2
KYD4-378	370524	830628	<2	6.0	5.9	3.9	470	2
KYD1-381	370424	825039	<2	8.9	5.7	2.4	630	3
KYD2-381	370548	825102	<2	8.4	7.7	0.6	610	3
KYD3-381	370546	825103	<2	8.5	6.7	0.8	650	3
KYD4-381	370546	825103	<2	8.6	7.1	<0.4	650	3
KYD1-388	365831	831615	<2	6.1	7.8	1.9	430	2
KYD2-388	365921	831718	<2	7.2	6.4	0.6	540	2
KYD3-388	365923	831716	<2	7.0	6.9	<0.4	520	2
KYD4-388	365923	831716	<2	7.0	6.0	1.2	500	2
KYD1-398	365611	833238	<2	6.9	6.0	0.5	510	2
KYD2-398	365547	833148	<2	6.5	5.3	0.4	450	2
KYD3-398	365548	833145	<2	5.0	5.6	<0.4	390	2
KYD4-398	365548	833145	<2	5.2	4.5	0.5	380	2

Table 6. Continued

PRIME ID	INORG C%	ORG C %	TOTAL C%	Ca %	Cd	Ce	Co	Cr
KYD1-313	0.01	2.20	2.20	0.16	<2	120	23	78
KYD2-313	2.00	3.60	5.60	6.30	<2	83	18	67
KYD3-313	0.91	3.30	4.20	4.50	<2	95	18	70
KYD4-313	1.50	2.60	4.10	4.50	<2	94	19	76
KYD1-328	0.09	1.10	1.20	0.43	<2	100	24	67
KYD2-328	0.03	3.20	3.20	1.40	<2	81	15	41
KYD3-328	0.20	2.20	2.40	1.40	<2	97	20	63
KYD4-328	0.38	2.10	2.50	1.40	<2	92	19	63
KYD1-346	0.01	0.69	0.70	0.09	<2	96	13	57
KYD2-346	0.28	2.35	2.63	0.88	<2	110	24	71
KYD3-346	0.14	11.00	11.00	0.45	<2	92	16	77
KYD4-346	0.13	11.00	11.00	0.46	<2	89	17	77
KYD1-347	0.02	1.80	1.80	0.33	<2	120	22	73
KYD2-347	0.37	1.60	2.00	1.40	<2	92	16	59
KYD3-347	0.01	1.40	1.40	0.54	<2	130	26	83
KYD4-347	0.10	1.30	1.40	0.53	<2	110	25	79
KYD1-355	0.78	0.90	1.70	2.60	<2	92	22	60
KYD2-355	0.33	2.10	2.40	1.40	<2	97	20	70
KYD3-355	0.35	2.10	2.40	1.20	<2	90	21	65
KYD4-355	0.32	2.20	2.50	1.20	<2	95	20	64
KYD1-361	0.04	2.13	2.17	0.29	<2	96	26	99
KYD2-361	0.22	1.69	1.91	0.88	<2	110	24	70
KYD3-361	0.31	1.50	1.80	1.10	<2	110	22	57
KYD4-361	0.31	1.60	1.90	1.10	<2	110	22	58
KYD1-378	0.03	1.60	1.60	0.24	<2	94	17	56
KYD2-378	0.73	2.30	3.00	2.60	<2	90	16	62
KYD3-378	0.21	1.90	2.10	0.82	<2	90	14	50
KYD4-378	0.20	1.70	1.90	0.83	<2	95	14	53
KYD1-381	0.41	1.20	1.60	1.30	<2	100	19	70
KYD2-381	0.57	2.10	2.70	2.00	<2	95	20	71
KYD3-381	0.61	1.60	2.20	2.10	<2	100	19	72
KYD4-381	0.59	2.00	2.60	2.10	<2	100	19	72
KYD1-388	1.40	3.10	4.50	5.20	<2	88	15	55
KYD2-388	0.03	1.11	1.14	0.19	<2	100	18	71
KYD3-388	<0.01	1.20	1.20	0.16	<2	99	18	61
KYD4-388	0.02	1.10	1.10	0.17	<2	100	18	65
KYD1-398	0.25	2.60	2.80	0.89	<2	86	21	61
KYD2-398	0.89	2.15	3.04	2.60	<2	91	18	59
KYD3-398	0.81	1.30	2.10	2.50	<2	77	17	48
KYD4-398	0.76	1.20	2.00	2.50	<2	70	17	47

Table 6. Continued

PRIME ID	Cu	Eu	Fe %	Ga	Hg	K %	La	Li	Mg %	Mn
KYD1-313	23	<2	4.3	21	0.06	2.30	58	65	0.57	1100
KYD2-313	26	<2	3.1	22	0.04	2.00	47	59	0.92	1300
KYD3-313	25	<2	3.1	20	0.04	2.10	53	57	0.90	1400
KYD4-313	25	<2	3.3	21	0.02	2.30	49	59	0.90	1500
KYD1-328	26	<2	3.4	20	0.04	2.20	55	47	0.60	640
KYD2-328	15	<2	2.9	11	0.02	1.30	43	27	0.31	2000
KYD3-328	31	<2	3.2	21	0.08	1.80	54	48	0.65	830
KYD4-328	28	<2	3.2	18	0.04	2.30	52	49	0.66	830
KYD1-346	20	<2	3.1	18	0.04	2.20	47	44	0.58	340
KYD2-346	26	<2	3.1	21	0.04	2.20	53	50	0.63	4300
KYD3-346	28	<2	3.3	25	0.12	2.80	52	61	0.85	1100
KYD4-346	30	<2	3.3	24	0.12	2.40	50	61	0.85	1100
KYD1-347	30	<2	4.3	23	0.04	2.40	60	57	0.74	1800
KYD2-347	25	<2	2.9	19	0.06	1.80	51	47	0.54	1200
KYD3-347	34	3	5.0	35	0.04	2.80	64	68	0.80	1300
KYD4-347	32	<2	5.0	24	0.04	2.60	59	60	0.74	1300
KYD1-355	28	<2	5.0	21	0.02	2.30	52	42	0.73	980
KYD2-355	33	<2	5.0	20	<0.02	2.20	52	50	0.75	840
KYD3-355	33	<2	5.2	20	0.12	2.10	51	47	0.63	930
KYD4-355	38	<2	4.7	20	0.04	2.30	53	48	0.65	810
KYD1-361	31	2	4.4	25	0.04	2.80	45	60	0.76	1800
KYD2-361	22	<2	3.2	18	0.04	2.20	48	49	0.59	1000
KYD3-361	20	<2	2.9	17	0.04	2.10	58	46	0.57	1100
KYD4-361	20	<2	2.9	18	0.02	2.10	58	50	0.59	1100
KYD1-378	19	<2	4.0	15	0.02	2.30	51	43	0.58	780
KYD2-378	30	<2	3.8	17	<0.02	2.00	47	41	0.62	810
KYD3-378	28	<2	3.0	17	0.06	1.90	49	36	0.49	810
KYD4-378	25	<2	3.0	15	0.02	1.80	48	36	0.50	780
KYD1-381	30	<2	3.9	24	0.04	2.60	57	56	0.89	780
KYD2-381	31	<2	3.5	23	0.02	2.60	53	56	0.87	600
KYD3-381	29	<2	3.5	23	0.04	2.70	55	61	0.90	760
KYD4-381	31	<2	3.5	22	0.06	2.60	55	62	0.92	800
KYD1-388	20	<2	2.8	16	0.04	1.70	45	39	0.70	470
KYD2-388	22	<2	3.3	19	<0.02	2.30	47	46	0.56	1100
KYD3-388	20	<2	3.4	18	0.02	2.30	54	45	0.55	1100
KYD4-388	18	<2	3.2	18	0.02	2.30	53	42	0.54	1000
KYD1-398	24	<2	3.5	18	0.02	1.60	49	49	0.69	1400
KYD2-398	17	<2	2.9	17	0.04	2.00	46	45	0.71	1100
KYD3-398	15	<2	2.5	12	0.04	1.70	42	36	0.59	860
KYD4-398	14	<2	2.5	13	0.04	1.70	42	36	0.57	820

Table 6. Continued

PRIME ID	Mo	Na %	Nb	Nd	Ni	P %	PB	TOTAL S%	Sb	Sc
KYD1-313	<2	0.29	9	56	30	0.05	24	0.06	0.4	14
KYD2-313	<2	0.32	10	41	30	0.06	28	0.09	1.0	13
KYD3-313	<2	0.37	10	43	31	0.06	37	0.06	0.5	13
KYD4-313	<2	0.38	9	46	32	0.06	33	0.07	0.4	13
KYD1-328	<2	0.29	18	49	30	0.05	21	0.04	0.4	13
KYD2-328	<2	0.24	7	37	19	0.51	32	0.06	0.7	7
KYD3-328	<2	0.52	14	48	30	0.06	28	0.05	0.4	12
KYD4-328	<2	0.54	9	52	30	0.06	26	0.08	0.3	12
KYD1-346	<2	0.92	9	44	25	0.04	18	0.02	0.4	12
KYD2-346	<2	0.57	7	55	68	0.05	31	0.05	0.6	12
KYD3-346	<2	0.34	13	48	35	0.04	22	0.18	0.5	15
KYD4-346	<2	0.35	12	46	35	0.04	21	0.19	0.5	15
KYD1-347	<2	0.64	10	49	32	0.07	31	0.04	0.5	14
KYD2-347	<2	0.51	8	46	24	0.04	27	0.03	0.4	11
KYD3-347	7	0.62	22	57	35	0.06	69	0.03	0.5	17
KYD4-347	<2	0.57	12	52	33	0.06	38	0.02	0.6	15
KYD1-355	<2	0.99	7	45	35	0.06	31	0.03	0.9	11
KYD2-355	<2	0.74	9	44	34	0.08	47	0.12	0.6	13
KYD3-355	<2	0.69	7	44	33	0.08	49	0.06	B	12
KYD4-355	<2	0.77	11	45	33	0.08	62	0.04	1.1	12
KYD1-361	3	0.24	18	50	51	0.08	28	0.10	0.5	16
KYD2-361	<2	0.49	7	51	32	0.05	26	0.04	0.5	11
KYD3-361	<2	0.46	10	51	30	0.04	21	0.05	0.3	11
KYD4-361	<2	0.49	10	57	31	0.04	22	0.03	0.3	11
KYD1-378	<2	0.72	6	44	26	0.06	30	0.01	0.5	11
KYD2-378	<2	0.68	<4	42	27	0.07	38	0.04	0.5	10
KYD3-378	<2	0.73	5	43	24	0.06	33	0.04	1.0	9
KYD4-378	<2	0.75	<4	44	23	0.07	32	0.03	0.5	9
KYD1-381	<2	0.82	10	50	31	0.07	26	0.12	0.5	14
KYD2-381	<2	0.64	12	46	32	0.07	26	0.10	1.1	14
KYD3-381	<2	0.68	13	54	31	0.07	24	0.07	0.4	14
KYD4-381	<2	0.67	13	45	32	0.07	26	0.09	0.5	14
KYD1-388	<2	0.26	9	42	21	0.04	20	0.10	0.6	10
KYD2-388	<2	0.31	10	49	26	0.05	23	0.03	0.4	12
KYD3-388	<2	0.33	11	50	27	0.04	19	0.03	0.4	12
KYD4-388	<2	0.31	8	47	28	0.04	19	<0.01	0.4	12
KYD1-398	<2	0.23	9	45	31	0.06	28	0.06	0.4	11
KYD2-398	<2	0.18	9	44	26	0.05	20	0.05	0.4	11
KYD3-398	<2	0.14	<4	33	22	0.03	18	0.04	0.5	9
KYD4-398	<2	0.14	<4	37	21	0.03	16	0.02	0.4	9

Table 6. Continued

PRIME ID	Sn	Sr	Th	Ti %	U	V	Y	Yb	Zn
KYD1-313	<10	92	17	0.38	1.20	94	25	3	82
KYD2-313	<10	140	11	0.34	1.00	90	20	3	130
KYD3-313	<10	120	12	0.38	1.00	90	21	3	120
KYD4-313	<10	130	15	0.34	0.85	91	21	3	120
KYD1-328	<10	100	14	0.38	1.30	91	23	3	93
KYD2-328	<10	100	9	0.24	1.50	51	34	3	63
KYD3-328	<10	120	15	0.36	1.10	83	22	3	120
KYD4-328	<10	120	19	0.37	1.30	79	20	3	120
KYD1-346	<10	88	15	0.35	1.60	78	20	3	80
KYD2-346	<10	120	16	0.34	1.10	80	26	3	210
KYD3-346	<10	120	14	0.40	1.40	100	23	3	130
KYD4-346	<10	120	14	0.41	1.10	100	24	3	130
KYD1-347	<10	120	14	0.42	1.40	100	23	3	120
KYD2-347	<10	140	14	0.44	1.30	79	24	3	100
KYD3-347	10	150	17	0.39	1.10	110	23	3	130
KYD4-347	<10	140	17	0.43	1.40	110	22	3	130
KYD1-355	<10	120	13	0.32	0.80	83	19	3	140
KYD2-355	<10	120	14	0.37	1.50	92	21	3	180
KYD3-355	<10	110	14	0.33	1.10	87	20	3	160
KYD4-355	<10	120	13	0.34	1.30	85	22	3	170
KYD1-361	<10	120	14	0.49	1.80	120	26	3	140
KYD2-361	<10	100	14	0.33	1.50	79	22	3	110
KYD3-361	<10	100	14	0.36	1.40	76	23	3	100
KYD4-361	<10	110	16	0.38	1.10	72	22	3	99
KYD1-378	<10	95	12	0.31	1.10	75	17	3	94
KYD2-378	<10	120	13	0.33	0.80	72	20	3	150
KYD3-378	<10	100	13	0.32	0.65	64	19	3	140
KYD4-378	<10	100	13	0.29	0.90	62	20	3	130
KYD1-381	<10	110	15	0.38	1.00	98	22	3	120
KYD2-381	<10	120	14	0.41	1.50	97	23	3	140
KYD3-381	<10	130	16	0.39	1.30	92	21	3	120
KYD4-381	<10	130	11	0.39	1.20	94	22	3	120
KYD1-388	<10	180	14	0.30	1.30	70	18	3	69
KYD2-388	<10	86	14	0.39	1.40	84	20	3	82
KYD3-388	<10	82	16	0.38	1.10	78	20	3	80
KYD4-388	<10	77	14	0.33	0.85	79	21	3	77
KYD1-398	<10	110	12	0.34	1.10	80	20	3	120
KYD2-398	<10	110	13	0.36	0.90	75	19	3	95
KYD3-398	<10	96	9	0.31	0.80	59	17	3	69
KYD4-398	<10	97	10	0.30	1.30	60	17	3	70