UNITED STATES DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

SPECTROGRAPHIC AND CHEMICAL ANALYSES OF GEOCHEMICAL SAMPLES COLLECTED DURING 1978 FROM THE LAKE CLARK QUADRANGLE, ALASKA

by

W. D. Crim, E. F. Cooley, J. O. Hampton,

S. K. McDanal, and R. M. O'Leary

Open-File Report 79-871

CONTENTS

TABLES

FIGURE

Introduction

A geochemical reconnaissance study was begun in the Lake Clark quadrangle, Alaska, in June 1977 and was completed in August 1978. The study was part of the Alaska Mineral Resource Assessment Program (AMRAP) and was designed to aid in the evaluation of the mineral resource potential of the quadrangle. This report includes analytical data for stream-sediment and heavy-mineral-concentrate samples collected in June and July of 1978. Sample sites were generally located in the southern and eastern sections of the quadrangle (fig. 1) and access to sites was accomplished by helicopter. Data on samples collected in the central and western sections of the Lake Clark quadrangle in 1977 are available in U.S. Geological Survey Open-File Report 78-788 (King and others, 1978).

A total of 276 stream-sediment samples and 275 heavy-mineral-concentrate samples were collected in 1978, one of each type at every site, with the exception of site LC423 where a heavy-mineral-concentrate could not be obtained. Ten each of the stream-sediment and heavy-mineral-concentrate samples were collected in the Bonanza Hills area by personnel from the Division of Geological and Geophysical Surveys of the State of Alaska.

Field Sampling Techniques

Where possible, the samples were collected directly from the channels of active mountain streams draining areas of 5-10 km^2. Areas adjacent to the active channels were sampled when stream depth was prohibitive for mid-channel collection.

A special steel scoop with an extendable handle (Curtin, 1978) was used to obtain the material from the stream channel. A 14-inch steel gold pan was filled with material sieved through a 2-mm stainless steel screen. The stream-sediment sample was collected by removing a representative portion from the steel pan and placing it in a 6x10-inch cloth sack. The remaining sample was panned down to reduce the light-mineral content and placed in a paper envelope designed for stream-sediment material.

Laboratory methods of sample preparation and analysis

The stream-sediment samples were air-dried and sieved through an 80-mesh (0.177-mm) aluminum sieve. The minus-80-mesh fraction was pulverized and analyzed for 31 elements by semiquantitative emission spectrography (Grimes and Marranzino, 1968). This fraction was also analyzed for gold, zinc, and mercury using atomic-absorption spectrometry (Ward and others, 1969) and for arsenic using a confined-spot procedure (Almond, 1953; Ward and others, 1963).

The panned heavy-mineral-concentrate samples were air-dried and sieved through a 20-mesh (0.8-mm) stainless steel screen. The minus-20-mesh fraction was passed through bromoform (specific gravity: 2.86) and the light-mineral fraction was discarded. The heavy-mineral fraction was divided into three groups of varying magnetic susceptibility. First, the strongly magnetic minerals (e.g. magnetite and ilmenite) were removed by the use of a hand magnet and a Frantz Isodynamic Magnetic Separator[1/] at a setting of 0.2 amperes with a slide slope of 10° and a front slope of 5°. The remaining sample was again passed through the Frantz separator at a setting of 0.6 amperes and a nonmagnetic fraction was obtained that is identified in this report as C3.

A representative split of the C3 fraction was taken for mineralogic examination and the remainder was analyzed for 31 elements by emission spectrography (Grimes and Marranzino, 1968) after being pulverized with mortar and pestle.

All analytical data have been entered in the USGS computerized storage system (RASS).

1/ The use of this trade name is for descriptive purposes only and does not constitute endorsement of this product by the U.S. Geological Survey.

References Cited

Almond, Hy, 1953, Field method for the determination of traces of arsenic in soils; confined-spot procedure using a modified Gutzeit apparatus: Analytical Chemistry, v. 25, no. 11, p. 1766.

Curtin, G. C., 1978, A tubular-scoop sampler for stream sediments: Journal of Geochemical Exploration, v. 10, no. 2, p. 193-194.

Grimes, D. J., and Marranzino, A. P., 1968, Direct-current arc and alternating-current spark emission spectrographic field methods for the semiquantitative analysis of geologic materials: U.S. Geological Survey Circular 591, 6 p.

King, H. D., Crim, W. D., Cooley, E. F., McDanal, S. K., O'Leary, R. M., and Cohen, D. K., 1978, Spectrographic and chemical analyses of geochemical samples from the Lake Clark quadrangle, Alaska: U.S. Geological Survey Open-File Report 78-788, 23 p.

Ward, F. N., Lakin, H. W., and Canney, F. C., 1963, Analytical methods used in geochemical exploration by the U.S. Geological Survey: U.S. Geological Survey Bulletin 1152, 100 p.

Ward, F. N., Nakagawa, H. M., Harms, T. F., and Van Sickle, G. H., 1969, Atomic-absorption methods of analysis useful in geochemical exploration: U.S. Geological Survey Bulletin 1289, 45 p.

Table 1.--Semiquantitative spectrographic and chemical analyses of minus-80-mesh fraction of stream-sediment samples from Lake Clark quadrangle, Alaska

[Sample-site numbers corresponding to sample numbers of this table are shown on the sample-site location map without the prefix "LC" or the suffix "S." Thus, "LC358S" is shown on the map as "358." Fe, Mg, Ca, and Ti are reported in percent; all other analyses are reported in parts per million. Symbols used: >, an undetermined amount greater than the amount shown was detected; <, an undetermined amount less than amount shown was detected; N, not detected; --, not analyzed. Spectrographic analyses by E. F. Cooley. Atomic-absorption analyses for gold, mercury, zinc; and confined-spot-procedure analyses for arsenic by R. M. O'Leary. Lower limits of determination for elements are shown in parentheses beneath the chemical-symbol column headings on the first three pages of the table.]

sample	LATITUDE	LONGITUD	S-FE% (.05)	S-MG% (.02)	S-CA% (.05)	S-TI% (.002)	S-MN (10)	S-AG (.5)	S-AS (200)	S-AU (10)	S-B (10)	S-BA (20)	S-BE (1)	S-BI (10)
LC358S	60 19 8	154 12 34	10	1.5	1.0	.5	2,000	2.0	N	N	20	1,000	2.0	N
LC359S	60 21 46	154 12 2	10	1.5	1.0	.5	1,500	N	N	N	10	1,000	2.0	N
LC360S	60 24 53	154 11 26	10	1.0	1.0	.7	1,500	N	N	N	10	700	2.0	N
LC361S	60 26 57	154 12 8	7	1.0	1.0	.5	1,500	N	N	N	10	500	2.0	N
LC362S	60 16 59	154 24 24	10	1.5	1.5	.5	1,500	N	N	N	20	1,000	2.0	N
LC363S	60 16 32	154 26 36	10	1.5	1.5	.5	2,000	N	N	N	10	1,000	1.5	N
LC364S	60 25 27	154 25 59	10	1.5	1.5	.5	1,500	N	N	N	20	700	1.5	N
LC365S	60 24 5	154 23 35	7	1.0	1.0	.5	1,500	N	N	N	50	1,500	2.0	N
LC366S	60 22 41	154 21 38	10	2.0	1.5	.5	1,500	N	N	N	20	1,000	2.0	N
LC367S	60 6 47	154 29 17	10	2.0	1.0	.7	1,500	N	N	N	50	1,500	1.5	N
LC368S	60 8 53	154 20 57	10	2.0	1.5	.7	1,500	N	N	N	20	1,000	1.5	N
LC369S	60 8 41	154 16 54	15	2.0	1.5	.7	1,500	N	N	N	20	1,000	1.0	N
LC370S	60 29 48	154 3 25	15	2.0	1.5	.7	1,500	N	N	N	20	1,000	1.5	N
LC371S	60 32 33	154 4 2	15	2.0	1.5	.7	2,000	N	N	N	20	700	1.5	N
LC372S	60 33 41	154 5 30	10	1.5	1.5	.7	1,500	N	N	N	10	700	2.0	N
LC373S	60 32 12	154 5 13	10	1.5	1.5	.7	2,000	N	N	N	10	700	2.0	N
LC374S	60 36 19	154 7 49	10	1.5	1.5	.7	2,000	N	N	N	20	1,000	2.0	N
LC375S	60 38 51	154 6 21	15	2.0	1.5	.7	2,000	N	N	N	20	500	3.0	N
LC376S	60 34 41	154 25 41	10	2.0	1.5	.7	2,000	N	N	N	50	1,500	2.0	N
LC377S	60 23 12	154 6 39	10	2.0	1.5	.7	2,000	N	N	N	20	1,000	2.0	N
LC378S	60 24 29	154 9 6	15	2.0	2.0	.7	2,000	N	N	N	20	1,000	1.5	N
LC379S	60 25 0	154 4 57	15	2.0	1.5	.7	2,000	N	N	N	30	1,000	2.0	N
LC380S	60 26 53	154 1 28	15	2.0	1.5	.7	2,000	N	N	N	30	1,000	1.5	N
LC381S	60 33 30	154 20 57	10	1.0	1.0	.7	1,500	N	N	N	20	1,000	3.0	N
LC382S	60 33 6	154 19 45	10	1.0	1.0	1.0	1,500	N	N	N	20	1,000	2.0	N
LC383S	60 31 40	154 22 27	10	1.0	1.5	.5	1,500	N	N	N	20	1,000	2.0	N
LC384S	60 5 13	153 59 58	10	1.0	1.5	1.0	2,000	N	N	N	10	700	1.0	N
LC385S	60 5 17	154 0 23	15	3.0	5.0	1.0	2,000	N	N	N	15	700	N	N
LC386S	60 4 42	154 0 2	10	1.0	2.0	.7	1,500	N	N	N	10	1,000	1.0	N
LC387S	60 2 23	154 4 24	10	.7	1.0	.7	2,000	N	N	N	10	1,000	2.0	N
LC388S	60 3 20	154 6 29	15	1.0	2.0	.7	1,000	N	N	N	10	500	1.0	N
LC389S	60 3 14	154 7 9	15	2.0	2.0	.7	1,500	N	N	N	10	700	1.0	N
LC390S	60 27 45	153 55 32	15	3.0	1.5	.7	2,000	N	N	N	70	1,000	2.0	N
LC391S	60 27 20	153 55 14	15	3.0	2.0	1.0	2,000	N	N	N	100	1,000	2.0	N
LC392S	60 26 57	153 56 8	15	2.0	1.0	.7	1,500	N	N	N	50	1,000	2.0	N
LC393S	60 27 19	153 57 28	15	1.0	1.0	.7	1,500	N	N	N	20	1,500	2.0	N
LC394S	60 26 43	153 58 22	15	1.5	1.0	.7	1,500	N	N	N	50	1,000	2.0	N
LC395S	60 27 11	154 0 56	10	1.5	1.0	.7	1,500	N	N	N	50	1,500	2.0	N
LC396S	60 4 41	153 19 23	15	2.0	5.0	1.0	1,500	N	N	N	20	500	<1.0	N
LC397S	60 5 9	153 17 53	10	1.5	5.0	.5	2,000	N	N	N	20	300	<1.0	N
LC398S	60 4 37	153 18 14	>20	3.0	5.0	1.0	1,500	N	N	N	150	300	<1.0	N
LC399S	60 4 9	153 18 47	15	3.0	5.0	1.0	1,500	N	N	N	100	300	<1.0	N
LC400S	60 3 38	153 20 39	10	1.0	3.0	.7	1,000	N	N	N	10	700	1.0	N
LC401S	60 0 11	153 21 52	10	1.5	3.0	.5	1,500	N	N	N	10	700	<1.0	N

Lake Clark Sediments

sample	S-CD (20)	S-CO (5)	S-CR (10)	S-CU (5)	S-LA (20)	S-MO (5)	S-NB (20)	S-NI (5)	S-PB (10)	S-SB (100)	S-SC (5)	S-SN (10)	S-SR (100)	S-V (10)
LC358S	N	20	150	100	50	N	<20	100	30	N	30	N	300	300
LC359S	N	20	100	20	50	N	<20	20	20	N	30	N	300	300
LC360S	N	10	200	20	50	N	<20	30	20	N	20	N	200	300
LC361S	N	10	70	20	50	<5	<20	20	20	N	15	N	300	200
LC362S	N	15	150	20	50	N	<20	20	20	N	20	N	500	200
LC363S	N	<5	70	20	50	N	<20	10	20	N	15	N	300	300
LC364S	N	15	100	30	50	N	<20	20	50	N	20	N	300	300
LC365S	N	<5	20	30	70	N	<20	10	100	N	20	N	200	200
LC366S	N	20	100	150	100	N	<20	70	150	N	30	N	300	300
LC367S	N	20	200	100	50	N	<20	150	100	N	30	N	200	500
LC368S	N	20	100	50	50	N	<20	30	20	N	30	N	500	500
LC369S	N	20	100	100	50	N	<20	30	50	N	20	N	300	300
LC370S	N	50	100	50	50	N	<20	30	30	N	30	N	300	500
LC371S	N	50	50	50	50	N	<20	20	20	N	20	N	300	500
LC372S	N	15	50	20	70	N	<20	20	30	N	20	N	300	300
LC373S	N	20	50	30	50	N	<20	20	30	N	20	N	300	300
LC374S	N	10	50	30	70	N	<20	15	50	N	20	N	300	300
LC375S	N	30	50	30	50	N	<20	20	20	N	20	N	300	500
LC376S	N	20	100	50	50	N	<20	30	20	N	20	N	500	300
LC377S	N	30	200	50	50	N	<20	20	30	N	20	N	300	300
LC378S	N	50	200	100	50	N	<20	100	50	N	30	N	500	500
LC379S	N	50	300	50	50	N	<20	50	30	N	30	N	300	300
LC380S	N	20	200	50	50	N	<20	150	30	N	20	N	300	300
LC381S	N	20	50	20	50	<5	<20	20	20	N	20	N	200	200
LC382S	N	20	50	20	50	<5	<20	20	20	N	20	N	200	200
LC383S	N	15	150	30	50	N	<20	20	20	N	20	N	300	200
LC384S	N	20	100	50	50	N	<20	20	20	N	20	N	300	300
LC385S	N	50	150	150	50	N	<20	150	20	N	30	N	200	500
LC386S	N	20	100	30	50	N	<20	15	20	N	10	N	200	300
LC387S	N	<5	20	100	50	150	<20	10	20	N	10	N	200	200
LC388S	N	<5	50	30	50	N	<20	30	10	N	20	N	200	300
LC389S	N	20	150	50	50	N	<20	100	50	N	20	N	300	300
LC390S	N	50	500	150	50	<5	<20	200	50	N	20	N	200	300
LC391S	N	50	500	150	70	N	<20	200	30	N	30	N	200	500
LC392S	N	20	150	150	50	<5	<20	100	50	N	30	N	200	300
LC393S	N	10	150	20	50	N	<20	20	50	N	20	N	200	200
LC394S	N	20	150	50	50	N	<20	100	30	N	20	N	200	300
LC395S	N	20	100	50	50	N	<20	100	30	N	20	N	200	300
LC396S	N	30	100	150	50	N	<20	20	20	N	30	N	1,000	500
LC397S	N	20	20	150	50	N	<20	15	10	N	20	N	700	300
LC398S	N	100	300	300	50	N	<20	100	10	N	50	N	500	1,000
LC399S	N	50	100	150	50	N	<20	50	10	N	30	N	500	300
LC400S	N	10	20	70	50	N	<20	15	<10	N	10	N	700	300
LC401S	N	10	150	100	50	N	<20	50	10	N	10	N	700	500

sample	S-W (50)	S-Y (10)	S-ZN (200)	S-ZR (100)	S-TH (100)	AA-AU-P (.05)	INST-HG (.02)	AA-CU-P	AA-PB-P	AA-ZN-P (5)	CM-AS (10)
LC358S	N	70	<200	300	N	N	.02	--	--	140	20
LC359S	N	100	<200	300	N	N	.04	--	--	70	20
LC360S	N	70	N	300	N	N	.04	--	--	75	10
LC361S	N	70	N	200	N	N	.28	--	--	140	40
LC362S	N	50	N	300	N	N	.02	--	--	50	<10
LC363S	N	50	N	300	N	N	.02	--	--	55	10
LC364S	N	70	200	300	N	N	.02	--	--	130	20
LC365S	N	70	N	300	N	N	.02	--	--	160	30
LC366S	N	100	<200	200	N	N	.16	--	--	90	20
LC367S	N	50	N	200	N	N	.02	--	--	120	20
LC368S	N	50	N	300	N	N	.02	--	--	55	N
LC369S	N	70	<200	200	N	N	.02	--	--	100	20
LC370S	N	70	<200	300	N	N	.02	--	--	75	10
LC371S	N	50	N	200	N	N	.02	--	--	60	N
LC372S	N	70	N	300	N	N	.06	--	--	90	10
LC373S	N	50	<200	300	N	N	.02	--	--	75	N
LC374S	N	100	<200	300	N	N	.02	--	--	120	10
LC375S	N	100	<200	300	N	N	.04	--	--	80	10
LC376S	N	50	<200	200	N	N	.06	--	--	90	30
LC377S	N	70	N	300	N	N	.06	--	--	85	10
LC378S	N	70	N	300	N	N	.06	--	--	65	10
LC379S	N	70	N	300	N	N	.08	--	--	85	20
LC380S	N	70	N	300	N	N	.02	--	--	75	20
LC381S	N	100	<200	300	N	N	.10	--	--	100	60
LC382S	N	100	<200	300	N	N	.10	--	--	75	10
LC383S	N	70	<200	200	N	N	.10	--	--	90	30
LC384S	N	70	<200	100	N	N	.04	--	--	40	10
LC385S	N	70	N	300	N	N	<.02	--	--	40	<10
LC386S	N	70	<200	200	N	N	.02	--	--	45	N
LC387S	N	100	N	500	N	N	<.02	--	--	55	<10
LC388S	N	50	<200	200	N	.76	.02	--	--	40	<10
LC389S	N	70	<200	200	N	N	.06	--	--	50	<10
LC390S	N	70	<200	200	N	N	.04	--	--	90	40
LC391S	N	70	N	500	N	N	<.02	--	--	65	10
LC392S	N	70	N	300	N	N	.02	--	--	80	10
LC393S	N	70	<200	300	N	N	.02	--	--	95	10
LC394S	N	50	N	200	N	N	.04	--	--	75	10
LC395S	N	70	N	200	N	N	.02	--	--	70	20
LC396S	N	50	N	300	N	N	.04	--	--	25	<10
LC397S	N	50	N	100	N	N	.02	--	--	20	N
LC398S	N	50	N	200	N	N	.16	--	--	30	10
LC399S	N	50	N	100	N	N	.04	--	--	25	10
LC400S	N	50	N	200	N	N	.02	--	--	25	N
LC401S	N	20	N	300	N	N	<.02	--	--	35	N

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE	S-BI
LC402S	60 0 28	153 20 5	20	2.0	3.0	.7	1,500	N	N	N	20	500	<1.0	N
LC403S	60 9 47	153 14 8	20	2.0	5.0	.7	1,500	N	N	N	50	500	<1.0	N
LC404S	60 9 51	153 13 35	15	2.0	5.0	.7	1,500	N	N	N	50	500	<1.0	N
LC405S	**60 11 39**	**153 19 55**	**10**	**1.5**	**2.0**	**.7**	**1,000**	**N**	**N**	**N**	**20**	**500**	**<1.0**	**N**
LC406S	60 12 38	153 15 51	15	2.0	3.0	.7	1,500	N	N	N	500	1,000	<1.0	N
LC407S	60 13 40	153 18 30	15	1.0	2.0	.7	1,500	N	N	N	20	700	1.0	N
LC408S	60 13 51	153 17 32	15	1.0	2.0	.7	1,500	N	N	N	20	1,000	1.0	N
LC409S	60 13 26	153 15 12	15	2.0	2.0	.7	1,500	N	N	N	20	1,000	<1.0	N
LC410S	60 18 10	153 0 24	15	3.0	2.0	1.0	2,000	N	N	N	150	700	<1.0	N
LC411S	60 17 58	153 2 58	15	2.0	5.0	.7	1,500	N	N	N	70	700	<1.0	N
LC412S	60 15 39	153 12 24	15	3.0	5.0	.7	1,500	N	N	N	100	700	<1.0	N
LC413S	60 20 26	153 13 27	15	2.0	3.0	.7	1,500	N	N	N	20	700	<1.0	N
LC414S	60 20 30	153 16 33	7	1.0	2.0	.5	1,000	N	N	N	20	1,000	1.0	N
LC415S	60 36 47	154 8 11	15	2.0	2.0	.7	2,000	N	N	N	20	700	2.0	N
LC416S	60 36 53	154 6 47	10	1.5	1.0	.7	2,000	N	N	N	20	700	7.0	N
LC417S	60 36 24	154 3 55	15	1.5	1.5	.7	2,000	N	N	N	20	700	2.0	N
LC418S	60 35 6	154 1 28	10	1.5	1.5	.7	2,000	N	N	N	10	700	2.0	N
LC419S	60 34 50	153 59 7	10	1.0	1.0	.7	1,000	N	N	N	10	700	1.0	N
LC420S	60 34 14	153 55 18	7	1.0	1.0	.7	1,000	N	N	N	10	700	1.0	N
LC421S	60 35 48	153 50 0	7	1.0	1.0	.5	1,500	30.0	N	N	10	700	2.0	N
LC422S	60 35 17	153 45 0	7	1.0	1.5	.7	1,000	5.0	N	N	10	700	2.0	N
LC423S	60 36 25	153 41 48	5	1.0	1.0	.5	1,000	5.0	N	N	20	700	2.0	N
LC424S	60 37 28	153 37 49	10	1.0	2.0	1.0	1,500	N	N	N	10	700	1.0	N
LC425S	60 35 54	153 35 11	7	.5	.7	.5	1,000	N	N	N	10	700	1.0	N
LC426S	60 34 53	153 34 42	10	1.0	1.0	.7	1,500	N	N	N	10	700	1.0	N
LC427S	60 26 26	153 35 57	7	1.0	2.0	.5	1,000	N	N	N	15	700	1.0	N
LC428S	60 23 35	153 27 33	5	.7	1.5	.5	700	2.0	N	N	10	700	1.0	N
LC429S	60 23 40	153 28 9	10	.7	1.5	.5	1,000	N	N	N	10	700	<1.0	N
LC430S	60 25 33	153 29 26	7	1.0	2.0	.5	1,000	N	N	N	10	500	<1.0	N
LC431S	60 26 40	153 23 29	10	1.0	2.0	.5	1,000	N	N	N	10	500	<1.0	N
LC432S	60 27 2	153 24 30	15	1.0	2.0	.7	1,000	N	N	N	10	500	<1.0	N
LC433S	60 27 33	153 23 53	15	1.5	2.0	.7	1,000	N	N	N	10	500	<1.0	N
LC434S	60 30 51	153 23 48	15	1.0	1.0	.5	1,000	N	N	N	10	700	<1.0	N
LC435S	60 31 22	153 14 38	15	2.0	2.0	.7	1,500	N	N	N	20	200	<1.0	N
LC436S	60 31 21	153 17 42	7	1.0	2.0	.7	1,000	N	N	N	10	700	<1.0	N
LC437S	60 34 15	153 18 11	10	1.5	2.0	.7	1,500	N	N	N	10	500	<1.0	N
LC438S	60 36 2	153 16 6	15	1.5	2.0	.7	1,500	N	N	N	20	300	<1.0	N
LC439S	60 4 40	154 49 6	10	1.0	1.0	.7	1,500	N	N	N	20	1,000	1.0	N
LC440S	60 4 45	154 50 16	15	1.5	2.0	1.0	1,500	N	N	N	20	1,000	1.0	N
LC441S	60 4 58	154 54 6	10	1.0	1.5	.7	1,000	N	N	N	20	1,000	1.0	N
LC442S	60 4 31	154 57 51	5	.7	1.5	.5	1,000	N	N	N	20	1,000	1.5	N
LC443S	60 3 47	155 2 4	10	.7	1.5	1.0	1,000	N	N	N	20	1,000	1.5	N
LC444S	60 3 35	155 2 45	10	.7	1.5	1.0	1,500	N	N	N	100	1,000	1.5	N
LC445S	60 2 58	155 5 20	10	1.0	1.5	1.0	1,500	N	N	N	50	1,000	1.5	N
LC446S	60 3 14	155 10 8	10	1.0	1.0	.7	1,500	N	N	N	70	1,000	1.5	N

Lake Clark Sediments--continued

sample	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SB	S-SC	S-SN	S-SR	S-V
LC402S	N	30	100	100	50	N	<20	15	10	N	30	N	500	1,000
LC403S	N	50	100	150	50	N	<20	15	15	N	50	N	500	700
LC404S	N	30	<10	150	50	N	<20	20	10	N	50	N	500	700
LC405S	N	<5	70	50	50	N	<20	20	<10	N	20	N	700	300
LC406S	N	30	20	200	50	N	<20	20	10	N	30	N	700	500
LC407S	N	20	50	150	50	N	<20	15	20	N	20	N	1,000	300
LC408S	N	20	100	70	50	N	<20	15	20	N	20	N	1,000	500
LC409S	N	30	50	200	50	N	<20	30	10	N	30	N	1,000	300
LC410S	N	50	150	200	50	N	<20	50	<10	N	50	N	300	1,500
LC411S	N	30	50	150	50	N	<20	10	10	N	30	N	700	700
LC412S	N	30	30	200	50	N	<20	20	15	N	30	N	1,000	700
LC413S	N	20	50	150	50	N	<20	20	10	N	20	N	1,000	500
LC414S	N	10	20	50	50	N	<20	20	10	N	5	N	1,000	200
LC415S	N	20	70	50	50	N	<20	30	50	N	20	N	200	300
LC416S	N	20	50	30	50	N	<20	20	30	N	20	N	200	300
LC417S	N	30	70	70	50	N	<20	20	100	N	20	N	300	500
LC418S	N	20	70	30	50	N	<20	20	50	N	20	N	300	300
LC419S	N	10	70	50	50	N	<20	15	70	N	20	N	200	300
LC420S	N	10	50	30	50	N	<20	15	70	N	20	N	200	200
LC421S	N	10	20	50	50	<5	<20	15	70	N	20	N	300	200
LC422S	N	20	20	30	50	N	<20	15	50	N	20	N	300	200
LC423S	N	20	20	100	50	<5	<20	20	150	N	15	N	200	200
LC424S	N	20	100	70	50	N	<20	20	20	N	20	N	300	300
LC425S	N	10	20	30	50	N	<20	10	10	N	10	N	200	200
LC426S	N	20	20	30	50	N	<20	15	20	N	20	N	200	300
LC427S	N	10	20	20	50	N	<20	10	15	N	15	N	700	300
LC428S	N	<5	20	20	50	N	<20	10	10	N	10	N	700	200
LC429S	N	10	30	50	50	N	<20	10	15	N	10	N	700	300
LC430S	N	10	100	20	50	N	<20	20	10	N	20	N	700	300
LC431S	N	10	100	70	50	N	<20	20	10	N	20	N	1,000	300
LC432S	N	20	100	100	50	N	<20	20	10	N	20	N	1,000	500
LC433S	N	20	100	100	50	N	<20	30	10	N	20	N	1,000	300
LC434S	N	10	50	30	50	N	<20	20	10	N	10	N	700	300
LC435S	N	50	200	100	50	N	<20	100	10	N	30	N	1,000	700
LC436S	N	20	100	50	50	N	<20	30	10	N	20	N	1,000	300
LC437S	N	20	100	100	50	N	<20	30	10	N	20	N	700	300
LC438S	N	20	100	100	50	N	<20	30	10	N	30	N	700	500
LC439S	N	20	100	20	50	N	<20	30	20	N	20	N	300	300
LC440S	N	20	200	30	50	N	<20	50	20	N	20	N	500	300
LC441S	N	20	100	20	50	N	<20	30	30	N	20	N	300	300
LC442S	N	<5	100	15	50	N	<20	20	20	N	15	N	300	200
LC443S	N	10	150	20	50	N	<20	20	30	N	20	N	300	300
LC444S	N	20	100	100	50	N	<20	30	30	N	30	N	700	300
LC445S	N	15	100	50	50	N	<20	20	20	N	20	N	500	300
LC446S	N	15	150	100	50	N	<20	20	100	N	20	N	500	300

sample	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-AU-P	INST-HG	AA-CU-P	AA-PB-P	AA-ZN-P	CM-AS
LC402S	N	50	N	700	N	N	.02	--	--	30	10
LC403S	N	50	N	700	N	N	.02	--	--	25	<10
LC404S	N	50	N	300	N	N	<.02	--	--	20	<10
LC405S	**N**	**50**	**N**	**200**	**N**	**N**	**.02**	**--**	**--**	**20**	**<10**
LC406S	N	50	N	100	N	<.05	.16	--	--	70	20
LC407S	N	50	N	500	N	N	.06	--	--	35	N
LC408S	N	70	N	500	N	N	5.00	--	--	25	<10
LC409S	N	70	N	300	N	N	.54	--	--	50	<10
LC410S	N	70	<200	300	N	N	.04	--	--	50	<10
LC411S	N	70	N	700	N	N	.10	--	--	40	N
LC412S	N	50	N	700	N	N	.10	--	--	40	<10
LC413S	N	50	N	300	N	N	.02	--	--	25	N
LC414S	N	30	N	100	N	N	.08	--	--	30	N
LC415S	N	70	N	300	N	N	.18	--	--	80	<10
LC416S	N	100	N	300	N	N	.12	--	--	85	<10
LC417S	N	100	<200	300	N	N	.02	--	--	110	<10
LC418S	N	70	<200	200	N	N	.02	--	--	100	N
LC419S	N	50	N	200	N	N	<.02	--	--	75	10
LC420S	N	50	N	200	N	N	<.02	--	--	60	<10
LC421S	N	70	200	200	N	N	.02	--	--	170	10
LC422S	N	50	N	100	N	N	.04	--	--	100	40
LC423S	N	70	N	70	N	N	.04	--	--	130	10
LC424S	N	50	<200	300	N	N	.02	--	--	70	<10
LC425S	N	70	N	300	N	N	.02	--	--	40	N
LC426S	N	70	<200	200	N	N	.04	--	--	85	10
LC427S	N	50	N	300	N	N	.04	--	--	35	N
LC428S	N	30	N	100	N	N	.02	--	--	25	N
LC429S	N	50	N	300	N	N	<.02	--	--	35	<10
LC430S	N	50	N	200	N	N	.02	--	--	20	N
LC431S	N	50	N	150	N	N	.02	--	--	20	<10
LC432S	N	50	N	500	N	.10	<.02	--	--	20	N
LC433S	N	50	N	200	N	N	.02	--	--	35	<10
LC434S	N	50	N	150	N	<.05	<.02	--	--	30	<10
LC435S	N	30	N	100	N	N	.04	--	--	15	<10
LC436S	N	50	N	300	N	N	<.02	--	--	15	N
LC437S	N	50	N	50	N	N	<.02	--	--	30	<10
LC438S	N	50	N	300	N	N	.02	--	--	20	<10
LC439S	N	50	N	300	N	N	.02	--	--	55	10
LC440S	N	50	N	200	N	N	.02	--	--	70	<10
LC441S	N	50	N	200	N	.10	.02	--	--	70	<10
LC442S	N	50	N	300	N	N	.04	--	--	55	<10
LC443S	N	50	N	300	N	N	.30	--	--	55	10
LC444S	N	50	<200	200	N	N	.12	--	--	65	20
LC445S	N	50	N	200	N	N	.06	--	--	75	20
LC446S	N	50	<200	200	N	.10	.06	--	--	280	20

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE	S-BI
LC447S	60 9 5	155 3 3	10	1.5	1.5	.7	1,500	N	N	N	50	700	1.5	N
LC448S	60 9 11	155 2 11	10	1.5	1.5	.7	1,000	N	N	N	50	700	1.5	N
LC449S	60 9 52	155 8 44	10	1.0	1.0	.7	1,500	2.0	N	N	30	700	1.5	N
LC450S	60 9 47	155 9 48	10	1.0	1.0	.7	1,500	N	N	N	50	700	1.5	N
LC451S	60 10 0	155 14 26	10	1.0	1.0	.7	1,500	N	N	N	50	700	1.5	N
LC452S	60 10 55	155 16 35	10	1.0	1.0	.7	1,000	5.0	N	N	50	1,000	1.5	N
LC453S	60 7 59	154 7 35	10	1.0	1.0	.7	1,000	N	N	N	50	700	1.5	N
LC454S	60 8 40	154 9 21	15	2.0	2.0	.7	1,500	N	N	N	30	300	<1.0	N
LC455S	60 6 28	154 9 50	15	1.5	1.5	.5	1,500	N	N	N	50	1,000	1.0	N
LC456S	60 6 2	154 10 18	15	1.5	1.5	.7	2,000	N	N	N	30	700	1.0	N
LC457S	60 19 47	153 31 12	15	.7	1.5	.7	1,000	N	N	N	20	700	1.0	N
LC458S	60 8 3	154 15 45	15	2.0	2.0	.5	2,000	N	N	N	20	700	1.0	N
LC459S	60 41 29	155 20 40	10	1.0	1.0	.5	2,000	N	N	N	70	1,000	1.0	N
LC460S	60 42 47	155 22 59	10	1.0	1.0	.5	1,500	N	N	N	70	1,000	1.0	N
LC461S	60 40 5	155 33 19	10	1.0	1.0	.7	2,000	N	N	N	100	1,000	1.0	N
LC462S	60 29 27	153 43 53	15	1.5	2.0	.5	1,500	N	N	N	20	1,000	1.0	N
LC463S	60 4 45	153 38 21	5	.5	1.0	.3	1,000	N	N	N	20	1,000	1.0	N
LC464S	60 5 26	153 36 46	20	1.0	1.5	.7	2,000	N	N	N	20	700	<1.0	N
LC465S	60 5 59	153 34 26	20	.5	1.0	.5	3,000	N	N	N	50	700	<1.0	N
LC466S	60 6 47	153 44 0	15	2.0	2.0	.7	1,500	N	N	N	30	500	<1.0	N
LC467S	60 8 27	153 38 43	10	1.5	2.0	.5	1,000	N	N	N	20	700	<1.0	N
LC405S	60 11 39	153 19 55	10	1.5	2.0	.5	1,000	N	N	N	20	500	<1.0	N
LC468S	60 6 38	153 41 40	15	2.0	2.0	.7	1,000	N	N	N	20	700	<1.0	N
LC469S	60 29 20	153 42 54	10	1.5	2.0	.7	1,000	N	N	N	20	700	<1.0	N
LC470S	60 29 30	153 40 41	10	1.5	2.0	.5	700	N	N	N	20	700	<1.0	N
LC471S	60 30 30	153 36 14	10	2.0	2.0	.5	1,000	N	N	N	20	700	<1.0	N
LC472S	60 31 40	153 33 38	10	1.5	2.0	.7	1,000	N	N	N	20	1,000	<1.0	N
LC473S	60 32 30	153 30 56	15	1.5	2.0	.5	1,500	N	N	N	20	700	<1.0	N
LC474S	60 34 26	153 28 6	20	1.5	2.0	.7	1,500	N	N	N	20	500	<1.0	N
LC475S	60 47 26	154 0 21	5	1.5	2.0	.5	1,000	N	N	N	30	700	<1.0	N
LC476S	60 46 31	153 59 14	10	3.0	2.0	.7	1,000	N	N	N	50	700	<1.0	N
LC477S	60 46 18	153 48 54	10	2.0	2.0	.7	1,000	N	500	N	30	1,500	2.0	N
LC478S	60 32 30	153 52 14	10	2.0	1.5	.7	1,500	N	N	N	20	1,500	1.0	N
LC479S	60 10 26	153 36 42	10	1.5	2.0	.5	700	N	N	N	20	1,000	<1.0	N
LC480S	60 9 12	153 34 32	10	.7	1.5	.5	500	N	N	N	10	700	<1.0	N
LC481S	60 9 0	153 33 47	15	1.0	2.0	.5	700	N	N	N	20	1,000	<1.0	N
LC482S	60 8 9	153 35 9	10	.7	1.5	.5	500	N	N	N	20	1,000	<1.0	N
LC483S	60 42 2	153 50 27	10	3.0	2.0	.5	1,500	N	N	N	20	1,000	1.0	N
LC484S	60 42 7	153 50 44	10	3.0	2.0	.5	1,500	N	N	N	20	1,500	1.0	N
LC435S	60 41 49	153 51 34	10	3.0	2.0	.7	1,500	N	N	N	20	1,500	<1.0	N
LC486S	60 40 33	153 51 47	10	3.0	1.5	.5	1,500	N	2,000	N	500	1,500	1.0	N
LC487S	60 40 5	153 54 34	10	3.0	1.0	.7	1,500	N	N	N	200	1,500	1.0	N
LC488S	60 37 1	153 54 47	10	2.0	1.5	.5	1,500	N	N	N	20	1,500	1.0	N
LC489S	60 36 53	153 55 59	10	2.0	1.5	.7	1,500	N	N	N	20	1,000	1.0	N
LC490S	60 37 32	154 1 50	10	2.0	1.5	.5	1,500	N	N	N	20	700	2.0	N

Lake Clark Sediments--continued

sample	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SB	S-SC	S-SN	S-SR	S-V
LC447S	N	20	150	100	50	N	<20	70	50	N	30	N	500	500
LC448S	N	20	200	100	50	N	<20	70	20	N	30	N	500	300
LC449S	N	15	150	50	50	N	<20	50	100	N	20	N	300	300
LC450S	N	20	150	50	50	N	<20	50	30	N	20	N	300	300
LC451S	N	15	150	30	50	N	<20	50	20	N	20	N	300	300
LC452S	N	15	300	30	50	N	<20	50	20	N	20	N	300	300
LC453S	N	15	100	20	50	N	<20	20	15	N	15	N	200	300
LC454S	N	30	200	200	50	N	<20	150	20	N	30	N	300	700
LC455S	N	20	100	30	50	N	<20	30	20	N	20	N	500	500
LC456S	N	20	100	50	50	N	<20	30	30	N	30	N	300	500
LC457S	N	10	30	20	50	N	<20	10	20	N	15	N	1,500	300
LC458S	N	20	100	30	50	N	<20	50	50	N	30	N	500	500
LC459S	N	10	100	15	50	N	<20	50	20	N	20	N	300	300
LC460S	N	10	100	15	50	N	<20	50	20	N	20	N	300	300
LC461S	N	20	100	15	50	N	<20	50	10	N	20	N	300	300
LC462S	N	20	500	100	50	N	<20	50	20	N	20	N	700	500
LC463S	N	<5	20	10	50	N	<20	15	20	N	<5	N	700	100
LC464S	N	20	150	20	50	N	<20	20	10	N	15	N	1,000	700
LC465S	N	<5	100	30	50	N	<20	20	10	N	5	N	700	700
LC466S	N	<5	150	100	50	N	<20	20	10	N	30	N	500	700
LC467S	N	<5	100	70	50	30	<20	20	<10	N	20	N	500	300
LC405S	N	<5	70	50	50	N	<20	20	<10	N	20	N	700	300
LC468S	N	50	200	30	50	N	<20	20	20	N	30	N	700	500
LC469S	N	20	100	30	50	N	<20	15	20	N	20	N	500	500
LC470S	N	20	100	20	50	N	<20	15	15	N	20	N	500	300
LC471S	N	30	70	50	50	N	<20	20	20	N	20	N	700	300
LC472S	N	20	50	30	50	N	<20	15	15	N	15	N	1,000	300
LC473S	N	20	100	100	50	N	<20	15	15	N	20	N	1,000	500
LC474S	N	50	100	150	50	N	<20	15	15	N	20	N	700	500
LC475S	N	10	100	30	50	N	<20	15	20	N	10	N	500	100
LC476S	N	70	700	100	50	N	<20	150	20	N	30	N	700	300
LC477S	N	70	200	100	50	10	<20	70	150	N	20	N	700	300
LC478S	N	20	100	50	50	N	<20	20	50	N	20	N	500	300
LC479S	N	10	100	20	50	N	<20	10	15	N	10	N	700	300
LC480S	N	<5	100	10	50	N	<20	5	10	N	7	N	500	300
LC481S	N	10	150	20	50	N	<20	15	20	N	10	N	500	500
LC482S	N	10	100	30	50	N	<20	5	15	N	5	N	500	300
LC483S	N	50	300	100	50	N	<20	100	200	N	30	N	700	300
LC484S	N	70	700	150	50	N	<20	200	100	N	30	N	700	300
LC485S	N	70	700	100	50	N	<20	100	100	N	30	N	700	500
LC486S	N	50	200	150	50	N	<20	100	200	N	20	N	500	300
LC487S	N	50	500	100	50	N	<20	100	30	N	20	N	500	500
LC488S	N	20	100	100	50	N	<20	20	50	N	20	N	500	500
LC489S	N	20	100	20	50	N	<20	20	30	N	20	N	300	300
LC490S	N	20	100	50	50	N	<20	5	50	N	20	N	300	300

Lake Clark Sediments--continued

sample	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-AU-P	INST-HG	AA-CU-P	AA-PB-P	AA-ZN-P	CM-AS
LC447S	N	50	N	200	N	N	.10	--	--	90	10
LC448S	N	50	N	200	N	N	.04	--	--	65	10
LC449S	N	70	N	200	N	N	.08	--	--	130	<10
LC450S	N	50	N	200	N	N	.08	--	--	75	10
LC451S	N	70	N	200	N	.20	.02	--	--	60	10
LC452S	N	50	N	200	N	N	.06	--	--	65	30
LC453S	N	70	N	200	N	N	.02	--	--	25	<10
LC454S	N	50	N	100	N	N	.28	--	--	60	<10
LC455S	N	50	N	200	N	N	.04	--	--	40	<10
LC456S	N	50	N	200	N	N	.02	--	--	80	<10
LC457S	N	50	N	200	N	N	.02	--	--	20	N
LC458S	N	50	N	100	N	N	.14	--	--	85	30
LC459S	N	50	N	300	N	N	.10	--	--	60	20
LC460S	N	50	N	100	N	N	.04	--	--	55	10
LC461S	N	50	N	200	N	N	.02	--	--	75	20
LC462S	N	50	N	300	N	N	.02	--	--	35	10
LC463S	N	30	N	100	N	N	<.02	--	--	35	<10
LC464S	N	50	N	300	N	N	<.02	--	--	25	N
LC465S	N	70	N	>1,000	N	N	.02	--	--	25	N
LC466S	N	50	N	>1,000	N	N	<.02	--	--	35	N
LC467S	N	50	N	300	N	N	<.02	--	--	20	10
LC405S	N	50	N	200	N	N	.02	--	--	20	<10
LC468S	N	70	N	700	N	N	.02	--	--	10	N
LC469S	N	50	N	200	N	N	.04	--	--	30	<10
LC470S	N	50	N	200	N	N	.02	--	--	25	<10
LC471S	N	50	N	1,000	N	N	.02	--	--	30	<10
LC472S	N	50	N	100	N	N	.04	--	--	25	N
LC473S	N	70	N	500	N	N	.02	--	--	50	N
LC474S	N	70	N	700	N	N	.02	--	--	40	<10
LC475S	N	50	N	100	N	N	.02	--	--	30	10
LC476S	N	50	<200	200	N	N	.04	--	--	55	10
LC477S	N	50	N	150	N	<.05	.06	--	--	55	N
LC478S	N	50	<200	200	N	N	.02	--	--	65	10
LC479S	N	50	N	300	N	N	.02	--	--	10	N
LC480S	N	50	N	500	N	N	.04	--	--	5	<10
LC481S	N	50	N	300	N	N	.02	--	--	10	N
LC482S	N	50	N	300	N	N	.02	--	--	15	N
LC483S	N	50	300	100	N	N	.02	--	--	160	10
LC484S	N	50	<200	100	N	N	<.02	--	--	90	40
LC485S	N	50	<200	100	N	N	.02	--	--	60	30
LC486S	N	50	500	150	N	N	.02	--	--	300	600
LC487S	N	50	<200	100	N	N	.02	--	--	75	10
LC488S	N	70	300	200	N	.10	.02	--	--	90	20
LC489S	N	50	<200	300	N	N	.02	--	--	70	10
LC490S	N	70	<200	500	N	N	.04	--	--	150	10

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE	S-BI
LC491S	60 40 26	154 0 34	10	3.0	1.5	.5	1,500	N	N	N	30	1,000	1.0	N
LC645S	60 34 27	153 10 44	10	3.0	5.0	1.0	1,000	N	N	N	20	300	<1.0	N
LC646S	60 35 17	153 13 30	10	3.0	5.0	1.0	1,000	N	N	N	20	500	<1.0	N
LC647S	60 35 44	153 13 28	15	3.0	5.0	1.0	1,500	N	N	N	20	300	<1.0	N
LC648S	60 38 39	153 14 7	10	2.0	5.0	1.0	1,000	N	N	N	20	500	<1.0	N
LC649S	60 39 41	153 11 21	15	3.0	5.0	1.0	1,500	N	N	N	20	1,000	<1.0	N
LC650S	60 37 5	153 7 10	15	3.0	5.0	1.0	1,500	N	N	N	20	300	<1.0	N
LC651S	60 40 0	153 8 21	15	3.0	5.0	1.0	1,500	N	N	N	20	500	<1.0	N
LC652S	60 35 29	153 28 1	10	2.0	2.0	.7	1,000	N	N	N	20	1,000	<1.0	N
LC653S	60 35 43	153 26 51	15	1.5	2.0	.5	1,000	N	N	N	20	1,000	<1.0	N
LC654S	60 36 46	153 26 29	7	1.0	1.0	.5	1,000	N	N	N	20	1,000	<1.0	N
LC655S	60 40 50	153 28 0	7	.7	1.0	.5	700	N	N	N	20	1,000	<1.0	N
LC656S	60 41 13	153 27 42	5	.5	1.0	.5	700	N	N	N	20	1,000	<1.0	N
LC657S	60 40 37	153 25 50	>20	1.0	2.0	1.0	2,000	N	N	N	20	700	<1.0	N
LC658S	60 40 19	153 25 42	15	2.0	2.0	1.0	1,000	N	N	N	20	1,000	<1.0	N
LC659S	60 39 6	153 26 4	10	1.5	2.0	.7	1,500	N	N	N	20	1,000	<1.0	N
LC660S	60 36 51	153 25 13	20	1.5	2.0	.7	1,500	N	N	N	20	700	<1.0	N
LC661S	60 56 34	154 16 15	10	2.0	2.0	.5	1,000	N	N	N	20	1,000	<1.0	N
LC662S	60 38 8	153 19 41	10	3.0	2.0	.7	1,500	N	N	N	20	1,000	<1.0	N
LC663S	60 38 11	153 18 38	20	2.0	2.0	1.0	1,500	N	N	N	20	700	<1.0	N
LC664S	60 37 41	153 18 6	15	2.0	1.5	.7	1,500	N	N	N	20	1,000	<1.0	N
LC665S	60 38 45	153 15 59	20	3.0	5.0	1.0	2,000	N	N	N	20	700	<1.0	N
LC666S	60 39 46	153 12 41	20	2.0	3.0	1.0	1,500	N	N	N	20	1,000	<1.0	N
LC667S	60 39 6	153 3 8	15	3.0	5.0	1.0	1,500	N	N	N	20	500	<1.0	N
LC668S	60 40 56	153 4 33	15	3.0	7.0	1.0	1,500	N	N	N	20	500	1.0	N
LC669S	60 41 44	153 1 2	20	3.0	5.0	1.0	1,500	N	N	N	20	500	1.0	N
LC670S	60 41 43	153 3 24	15	2.0	5.0	1.0	1,000	N	N	N	20	700	1.0	N
LC671S	60 41 17	153 7 54	20	3.0	5.0	1.0	1,500	N	N	N	20	1,000	<1.0	N
LC672S	60 41 42	153 8 22	20	2.0	5.0	1.0	1,500	N	N	N	20	700	<1.0	N
LC673S	60 42 41	153 10 23	15	2.0	5.0	1.0	1,000	N	N	N	20	700	1.0	N
LC674S	60 42 56	153 12 44	15	2.0	5.0	1.0	1,000	N	N	N	20	1,000	<1.0	N
LC675S	60 44 41	153 13 41	15	2.0	5.0	1.0	1,000	N	N	N	20	1,000	<1.0	N
LC676S	60 44 45	153 13 57	10	3.0	5.0	1.0	1,500	N	N	N	20	1,000	1.0	N
LC677S	60 42 38	153 16 23	10	1.0	3.0	1.0	1,000	N	N	N	20	700	1.0	N
LC678S	60 42 20	153 19 49	10	1.5	3.0	1.0	1,500	N	N	N	20	1,000	1.0	N
LC679S	60 43 23	153 21 32	5	1.0	3.0	.3	700	N	N	N	20	1,000	1.0	N
LC680S	60 42 23	153 17 21	10	1.0	2.0	.3	700	N	N	N	20	1,000	1.0	N
LC681S	60 31 41	153 11 47	15	3.0	7.0	1.0	1,500	N	N	N	20	200	<1.0	N
LC682S	60 31 17	153 13 36	15	3.0	7.0	1.0	1,500	N	N	N	20	200	<1.0	N
LC683S	60 28 57	153 16 13	10	2.0	5.0	.7	1,500	N	N	N	20	700	1.0	N
LC684S	60 29 52	153 18 38	10	3.0	5.0	.7	1,500	N	N	N	20	700	<1.0	N
LC685S	60 13 58	154 13 47	15	2.0	3.0	1.0	2,000	N	N	N	50	1,000	1.0	N
LC686S	60 45 51	154 16 36	10	1.0	3.0	.5	2,000	N	N	N	20	1,000	1.0	N
LC687S	60 48 5	154 20 31	15	3.0	2.0	.7	1,500	N	N	N	20	1,500	1.0	N
LC638S	60 43 35	154 25 27	15	3.0	2.0	.7	2,000	N	N	N	20	1,500	1.0	N

Lake Clark Sediments--continued

sample	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SB	S-SC	S-SN	S-SR	S-V
LC491S	N	30	300	150	50	N	N	100	50	N	20	N	500	300
LC645S	N	50	200	150	50	N	<20	100	20	N	30	N	1,000	500
LC646S	N	50	200	100	50	N	<20	100	20	N	30	N	1,000	500
LC647S	N	50	200	300	50	N	<20	100	20	N	30	N	1,000	500
LC648S	N	30	100	100	50	N	<20	20	20	N	30	N	1,000	500
LC649S	N	50	200	150	50	N	<20	50	30	N	30	N	1,500	500
LC650S	N	50	200	100	50	N	<20	100	20	N	30	N	500	500
LC651S	N	50	200	100	50	N	<20	70	20	N	30	N	500	500
LC652S	N	20	100	20	50	N	<20	15	20	N	20	N	1,000	300
LC653S	N	20	50	20	50	N	<20	10	50	N	20	N	1,000	300
LC654S	N	10	20	30	50	N	<20	10	20	N	10	N	200	200
LC655S	N	<5	<10	20	50	N	<20	<5	20	N	10	N	300	200
LC656S	N	<5	<10	30	50	N	<20	<5	20	N	5	N	200	50
LC657S	N	70	150	150	50	N	<20	20	20	N	20	N	500	1,500
LC658S	N	10	50	100	50	N	<20	5	20	N	20	N	1,000	700
LC659S	N	10	<10	50	50	N	<20	5	50	N	20	N	500	200
LC660S	N	20	50	100	50	N	<20	5	30	N	20	N	1,000	1,000
LC661S	N	20	100	20	50	N	<20	30	30	N	20	N	500	200
LC662S	N	20	100	100	50	N	<20	20	20	N	20	N	700	500
LC663S	N	20	200	100	50	N	<20	20	15	N	20	N	500	1,000
LC664S	N	10	20	50	50	N	<20	5	20	N	20	N	1,000	300
LC665S	N	20	100	150	50	N	<20	20	15	N	20	N	1,000	500
LC666S	N	20	100	150	50	N	<20	20	20	N	20	N	1,000	700
LC667S	N	20	100	150	50	N	<20	20	15	N	20	N	1,500	500
LC668S	N	50	150	150	50	N	<20	30	20	N	30	N	1,000	500
LC669S	N	50	150	150	50	N	<20	30	20	N	30	N	700	500
LC670S	N	30	150	150	50	N	<20	20	10	N	20	N	1,000	300
LC671S	N	50	200	100	50	N	<20	30	10	N	50	N	1,000	700
LC672S	N	70	300	150	50	N	<20	30	10	N	50	N	700	1,000
LC673S	N	30	100	100	50	N	<20	10	15	N	30	N	1,000	500
LC674S	N	30	150	100	50	N	<20	50	30	N	30	N	700	500
LC675S	N	20	100	70	50	N	<20	10	20	N	30	N	1,000	500
LC676S	N	20	150	100	50	N	<20	30	20	N	30	N	500	300
LC677S	N	10	100	50	100	N	<20	<5	30	N	20	N	300	300
LC678S	N	10	50	50	50	N	<20	<5	20	N	20	N	700	300
LC679S	N	<5	20	70	50	N	<20	<5	20	N	10	N	500	200
LC680S	N	<5	20	30	50	N	<20	<5	20	N	10	N	500	200
LC681S	N	70	200	100	50	N	<20	100	10	N	30	N	1,000	500
LC682S	N	50	200	100	50	N	<20	100	10	N	30	N	1,000	700
LC683S	N	20	100	150	50	N	<20	50	20	N	30	N	1,000	500
LC684S	N	30	150	100	50	N	<20	50	20	N	30	N	1,500	500
LC685S	N	50	200	50	50	N	<20	100	20	N	30	N	500	500
LC686S	N	20	100	30	50	N	<20	30	20	N	20	N	300	300
LC687S	N	30	200	100	50	N	<20	100	50	N	30	N	500	300
LC688S	N	30	150	30	50	N	<20	50	50	N	30	N	500	300

Lake Clark Sediments--continued

sample	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-AU-P	INST-HG	AA-CU-P	AA-PB-P	AA-ZN-P	CM-AS
LC491S	N	50	<200	150	N	N	.02	--	--	65	40
LC645S	N	50	N	200	N	N	.06	--	--	10	<10
LC646S	N	50	N	500	N	N	.02	--	--	20	<10
LC647S	N	50	N	300	N	N	.02	--	--	20	N
LC648S	N	50	N	300	N	N	.02	--	--	15	N
LC649S	N	50	N	300	N	N	.02	--	--	25	<10
LC650S	N	50	N	300	N	<.05	.02	--	--	10	N
LC651S	N	50	N	300	N	<.05	.02	--	--	15	<10
LC652S	N	50	N	300	N	N	<.02	--	--	35	10
LC653S	N	50	N	300	N	<.05	<.02	--	--	30	N
LC654S	N	50	N	200	N	N	.02	--	--	40	<10
LC655S	N	50	N	200	N	N	<.02	--	--	30	N
LC656S	N	30	N	200	N	N	<.02	--	--	65	<10
LC657S	N	50	N	>1,000	N	N	<.02	--	--	35	N
LC658S	N	50	N	700	N	N	.02	--	--	25	N
LC659S	N	30	N	200	N	N	<.02	--	--	140	10
LC660S	N	50	N	500	N	N	.04	--	--	25	<10
LC661S	N	30	N	100	N	N	.30	--	--	65	20
LC662S	N	50	N	300	N	N	.04	--	--	40	40
LC663S	N	50	N	1,000	N	.05	.02	--	--	25	<10
LC664S	N	50	N	300	N	N	.02	--	--	25	N
LC665S	N	50	N	300	N	N	<.02	--	--	40	<10
LC666S	N	50	N	500	N	N	.02	--	--	35	N
LC667S	N	50	N	500	N	N	.02	--	--	15	<10
LC668S	N	70	N	700	N	N	.02	--	--	10	10
LC669S	N	70	N	700	N	N	.04	--	--	20	<10
LC670S	N	70	N	200	N	N	.45	--	--	20	N
LC671S	N	70	N	700	N	N	.02	--	--	25	N
LC672S	N	70	N	1,000	N	N	<.02	--	--	15	<10
LC673S	N	70	N	500	N	<.05	.02	--	--	20	<10
LC674S	N	50	N	200	N	N	.02	--	--	20	<10
LC675S	N	70	N	1,000	N	N	<.02	--	--	15	<10
LC676S	N	50	N	200	N	<.05	.04	--	--	30	<10
LC677S	N	70	N	500	N	.10	<.02	--	--	30	<10
LC678S	N	50	N	500	N	N	<.02	--	--	25	N
LC679S	N	50	N	200	N	N	<.02	--	--	20	N
LC680S	N	50	N	200	N	<.05	<.02	--	--	25	N
LC681S	N	30	N	50	N	N	.04	--	--	15	<10
LC682S	N	30	N	50	N	N	.04	--	--	15	<10
LC683S	N	50	N	300	N	N	.02	--	--	15	N
LC684S	N	50	N	200	N	N	.04	--	--	15	<10
LC685S	N	50	N	200	N	N	.02	--	--	45	20
LC686S	N	50	N	150	N	N	.10	--	--	85	30
LC687S	N	50	N	200	N	N	.02	--	--	70	20
LC688S	N	50	N	300	N	<.05	.02	--	--	75	10

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE	S-BI
LC689S	60 43 9	154 24 45	10	3.0	2.0	.7	1,500	N	N	N	20	1,500	1.0	N
LC690S	60 42 11	154 32 21	15	3.0	2.0	.7	1,500	N	N	N	200	1,000	1.0	N
LC691S	60 42 26	154 31 51	7	2.0	2.0	.5	1,500	N	N	N	200	1,000	2.0	N
LC692S	60 39 11	154 31 40	15	2.0	2.0	1.0	1,500	N	N	N	50	1,500	1.5	N
LC693S	60 37 50	154 39 56	7	2.0	2.0	.5	2,000	N	N	N	50	1,000	1.5	N
LC694S	60 34 27	153 3 21	10	2.0	7.0	.5	1,000	N	N	N	20	700	1.0	N
LC695S	60 34 46	153 1 58	3	.5	5.0	.2	500	N	N	N	30	1,000	<1.0	N
LC696S	60 35 17	153 1 40	15	3.0	7.0	1.0	1,500	N	N	N	20	700	<1.0	N
LC697S	60 30 2	153 4 41	10	3.0	7.0	1.0	1,500	N	N	N	20	500	<1.0	N
LC698S	60 28 55	153 5 20	20	5.0	7.0	1.0	1,500	N	N	N	20	700	<1.0	N
LC699S	60 28 18	153 5 0	20	3.0	7.0	1.0	1,500	N	N	N	20	700	<1.0	N
LC700S	60 26 47	153 5 12	20	3.0	5.0	1.0	1,500	N	N	N	20	700	<1.0	N
LC701S	60 27 11	153 2 29	15	3.0	7.0	.7	2,000	N	N	N	20	700	<1.0	N
LC702S	60 25 45	153 3 51	15	3.0	7.0	5.0	1,500	N	N	N	20	1,000	<1.0	N
LC703S	60 23 30	153 0 32	10	3.0	5.0	5.0	1,500	N	N	N	20	700	<1.0	N
LC704S	60 23 35	153 7 18	15	3.0	7.0	.5	1,500	N	N	N	20	700	<1.0	N
LC705S	60 23 57	153 7 5	20	3.0	7.0	1.0	1,500	N	N	N	20	1,000	<1.0	N
LC706S	60 23 44	153 4 51	15	3.0	7.0	.7	1,500	N	N	N	20	700	<1.0	N
LC492S	60 41 5	154 2 27	15	2.0	2.0	1.0	1,000	N	N	N	30	1,000	1.0	N
LC493S	60 58 0	153 50 0	15	2.0	2.0	1.0	1,500	N	N	N	20	1,000	1.0	N
LC494S	60 33 47	153 51 46	10	1.5	2.0	.5	1,500	N	N	N	20	1,500	1.0	N
LC495S	60 35 57	153 38 22	10	2.0	3.0	.5	1,500	N	N	N	20	1,000	1.0	N
LC496S	60 38 47	153 34 1	15	2.0	3.0	1.0	2,000	N	N	N	20	1,500	1.0	N
LC497S	60 38 3	153 34 36	20	3.0	7.0	1.0	2,000	N	N	N	20	700	<1.0	N
LC498S	60 37 41	153 37 36	10	3.0	3.0	.5	1,500	N	N	N	20	700	1.0	N
LC499S	60 36 56	153 38 44	10	2.0	2.0	.5	2,000	N	N	N	20	1,000	2.0	N
LC581S	60 35 6	153 36 27	10	1.5	1.5	.5	2,000	N	N	N	20	1,500	1.5	N
LC582S	60 33 43	153 39 56	15	2.0	2.0	.7	2,000	N	N	N	20	1,500	1.5	N
LC583S	60 33 56	153 39 47	10	2.0	2.0	.5	2,000	N	N	N	20	2,000	2.0	N
LC584S	60 33 50	153 40 46	10	2.0	2.0	.5	1,500	N	N	N	20	2,000	1.0	N
LC585S	60 34 56	153 44 2	15	3.0	2.0	.5	1,500	N	N	N	20	1,500	1.0	N
LC586S	60 34 24	153 45 42	15	3.0	3.0	.5	1,500	N	N	N	20	1,500	1.0	N
LC587S	60 32 17	153 46 45	15	5.0	2.0	.7	1,500	N	N	N	20	1,500	1.0	N
LC588S	60 32 12	153 45 47	10	3.0	2.0	.5	1,500	N	N	N	20	1,500	1.0	N
LC589S	60 55 50	153 53 57	10	2.0	2.0	.7	1,500	N	N	N	20	1,500	1.0	N
LC590S	60 54 15	153 47 17	15	2.0	2.0	1.0	1,500	N	N	N	20	1,000	1.0	N
LC591S	60 51 33	153 42 33	7	1.0	1.0	.5	1,000	N	N	N	20	700	3.0	N
LC592S	60 51 56	153 43 10	10	1.0	1.0	.7	1,500	N	N	N	20	1,000	2.0	N
LC593S	60 49 14	153 41 48	10	1.5	1.5	.7	1,000	N	N	N	20	1,000	2.0	N
LC594S	60 50 6	153 41 43	7	.3	.5	.5	1,000	N	N	N	20	200	2.0	N
LC595S	60 50 30	153 42 59	5	.3	.2	.3	700	N	N	N	20	150	3.0	N
LC596S	60 50 44	153 46 37	10	3.0	5.0	1.0	1,000	N	N	N	20	700	2.0	N
LC597S	60 51 29	153 47 39	10	3.0	5.0	1.0	1,000	N	N	N	50	700	1.5	N
LC598S	60 56 18	154 0 25	10	2.0	3.0	.5	1,000	N	N	N	20	700	2.0	N
LC599S	60 52 18	153 53 54	15	3.0	5.0	1.0	1,500	N	N	N	30	700	1.0	N

Lake Clark Sediments--continued

sample	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SB	S-SC	S-SN	S-SR	S-V
LC689S	N	20	150	30	100	N	<20	50	50	N	30	N	500	300
LC690S	N	50	150	150	50	N	<20	100	50	N	30	N	300	500
LC691S	N	30	100	100	50	N	<20	100	100	N	20	N	500	300
LC692S	N	30	100	50	50	N	<20	50	50	N	30	N	500	300
LC693S	N	20	100	30	50	N	<20	50	30	N	20	N	500	300
LC694S	N	20	100	100	50	N	<20	50	20	N	30	N	700	300
LC695S	N	<5	N	<5	50	N	<20	<5	<10	N	<5	N	700	50
LC696S	N	30	100	100	50	N	<20	30	20	N	30	N	700	500
LC697S	N	30	100	150	50	N	<20	50	<10	N	30	N	700	500
LC698S	N	70	300	200	50	N	<20	100	20	N	50	N	1,500	700
LC699S	N	50	150	100	50	N	<20	30	15	N	30	N	1,000	1,000
LC700S	N	50	100	100	50	N	<20	30	15	N	30	N	1,000	700
LC701S	N	50	200	100	50	N	<20	100	15	N	30	N	1,000	500
LC702S	N	30	150	100	50	N	<20	70	15	N	30	N	1,000	500
LC703S	N	30	20	70	50	N	<20	20	15	N	30	N	1,000	500
LC704S	N	50	50	100	50	N	<20	20	15	N	30	N	1,000	500
LC705S	N	50	150	100	50	N	<20	30	15	N	30	N	1,500	700
LC706S	N	50	70	150	50	N	<20	20	15	N	50	N	1,000	700
LC492S	N	50	200	50	50	N	<20	100	30	N	30	N	700	300
LC493S	N	50	200	50	50	N	<20	100	20	N	30	N	700	500
LC494S	N	20	150	30	50	N	<20	20	50	N	20	N	300	300
LC495S	N	20	50	50	50	N	<20	10	50	N	20	N	500	300
LC496S	N	50	100	100	50	N	<20	20	100	N	30	N	500	500
LC497S	N	100	200	200	50	N	<20	100	100	N	50	N	500	700
LC498S	N	50	200	100	50	N	<20	100	50	N	30	N	200	300
LC499S	N	20	50	50	50	10	<20	10	100	N	20	N	200	300
LC581S	N	10	70	30	50	20	<20	20	200	N	20	N	200	200
LC582S	N	20	70	50	50	N	<20	15	50	N	20	N	500	300
LC583S	N	20	<10	30	50	N	<20	10	50	N	20	N	500	300
LC584S	N	20	20	50	50	N	<20	10	100	N	20	N	500	300
LC535S	N	50	200	100	50	N	<20	100	50	N	20	N	500	500
LC586S	N	50	300	100	50	N	<20	100	50	N	30	N	500	300
LC587S	N	70	1,000	100	50	N	<20	150	50	N	30	N	500	500
LC588S	N	50	500	100	50	50	<20	150	50	N	20	N	500	300
LC589S	N	20	100	20	50	N	<20	20	50	N	20	N	700	300
LC590S	N	50	100	100	50	N	<20	20	30	N	30	N	500	500
LC591S	N	<5	50	10	50	N	<20	10	50	N	<5	N	200	100
LC592S	N	<5	50	30	50	20	<20	10	100	N	10	N	200	200
LC593S	N	<5	200	30	50	N	<20	10	50	N	10	N	500	200
LC594S	N	N	<10	<5	50	N	<20	<5	50	N	N	N	N	20
LC595S	N	N	<10	<5	50	N	<20	<5	50	N	N	N	N	20
LC596S	N	100	700	150	50	N	<20	150	150	N	30	N	700	300
LC597S	N	70	700	100	50	N	<20	150	50	N	30	N	700	300
LC598S	N	50	500	50	50	N	<20	100	50	N	20	N	300	300
LC599S	N	100	500	100	50	N	<20	100	30	N	30	N	700	500

sample	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-AU-P	INST-HG	AA-CU-P	AA-PB-P	AA-ZN-P	CM-AS
LC689S	N	100	N	200	N	.10	.04	--	--	55	10
LC690S	N	50	N	200	N	N	.04	--	--	150	80
LC691S	N	50	N	100	N	N	.14	--	--	100	80
LC692S	N	50	<200	200	N	N	.05	--	--	65	10
LC693S	N	50	N	100	N	N	.20	--	--	85	20
LC694S	N	50	N	70	N	N	<.02	--	--	20	N
LC695S	N	<10	N	50	N	N	.06	--	--	15	10
LC696S	N	50	N	300	N	N	.04	--	--	20	N
LC697S	N	50	N	100	N	N	.06	--	--	15	<10
LC698S	N	50	N	200	N	N	.04	--	--	15	N
LC699S	N	50	N	1,000	N	N	.10	--	--	20	<10
LC700S	N	50	N	300	N	N	.22	--	--	20	<10
LC701S	N	50	N	50	N	N	.02	--	--	20	10
LC702S	N	50	N	50	N	N	.12	--	--	40	10
LC703S	N	50	N	50	N	<.05	.02	--	--	20	N
LC704S	N	50	N	300	N	N	.02	--	--	30	<10
LC705S	N	50	N	500	N	.20	.02	--	--	15	N
LC706S	N	50	N	500	N	N	<.02	--	--	20	N
LC492S	N	50	N	200	N	<.05	.02	--	--	60	20
LC493S	N	50	N	200	N	.05	.04	--	--	50	10
LC494S	N	50	N	200	N	N	.02	--	--	50	<10
LC495S	N	50	N	100	N	<.05	.02	--	--	35	<10
LC496S	N	50	N	300	N	<.05	.02	--	--	65	<10
LC497S	N	50	N	200	N	<.05	.02	--	--	80	10
LC498S	N	50	N	200	N	N	.02	--	--	40	20
LC499S	N	50	N	200	N	<.05	.06	--	--	65	20
LC581S	N	50	<200	300	N	N	<.02	--	--	160	<10
LC582S	N	50	<200	300	N	N	.02	--	--	60	<10
LC583S	N	50	<200	150	N	N	.02	--	--	65	<10
LC584S	N	50	N	200	N	N	.02	--	--	55	<10
LC585S	N	50	N	50	N	<.05	.06	--	--	55	<10
LC586S	N	50	N	200	N	<.05	.04	--	--	50	<10
LC587S	N	50	N	150	N	N	.02	--	--	60	10
LC588S	N	50	N	200	N	<.05	.02	--	--	50	N
LC589S	N	50	N	200	N	<.05	.04	--	--	35	<10
LC590S	N	70	N	200	N	<.05	.02	--	--	55	10
LC591S	N	50	N	300	N	N	<.02	--	--	75	N
LC592S	N	200	N	1,000	N	<.05	.02	--	--	110	20
LC593S	N	70	N	300	N	<.05	<.02	--	--	45	10
LC594S	N	70	N	700	N	N	<.02	--	--	60	<10
LC595S	N	70	N	300	N	N	<.02	--	--	85	<10
LC596S	N	100	<200	300	N	<.05	.04	--	--	95	60
LC597S	N	70	<200	200	N	N	.04	--	--	75	<10
LC598S	N	100	<200	200	N	N	.02	--	--	70	10
LC599S	N	50	<200	200	N	N	.02	--	--	60	<10

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE	S-BI
LC600S	60 52 9	153 54 50	10	3.0	3.0	.7	1,000	N	N	N	30	700	2.0	N
LC601S	60 45 6	153 46 53	10	2.0	3.0	.7	1,000	N	N	N	20	700	2.0	N
LC602S	60 45 7	153 47 35	15	5.0	5.0	1.0	1,000	N	N	N	20	1,000	<1.0	N
LC603S	60 46 27	153 51 29	15	3.0	5.0	1.0	1,500	N	N	N	30	1,500	1.0	N
LC604S	60 56 3	153 48 54	10	2.0	2.0	1.0	1,000	N	N	N	20	700	2.0	N
LC605S	60 56 29	153 46 39	10	3.0	2.0	1.0	1,000	N	N	N	20	700	2.0	N
LC606S	60 57 42	153 44 39	15	3.0	5.0	1.0	1,500	N	N	N	20	700	1.0	N
LC607S	60 56 35	153 41 56	7	1.0	1.5	.5	1,000	N	N	N	10	1,500	1.0	N
LC608S	60 56 49	153 36 47	5	1.0	2.0	.5	500	N	N	N	10	1,500	1.0	N
LC609S	60 57 15	153 38 16	10	3.0	7.0	1.0	1,500	N	N	N	15	1,000	<1.0	N
LC610S	60 55 58	153 38 54	20	2.0	2.0	1.0	2,000	N	N	N	20	700	<1.0	N
LC611S	60 55 4	153 33 23	10	1.5	2.0	.5	700	N	N	N	20	1,000	1.0	N
LC612S	60 54 34	153 33 6	7	.3	2.0	.2	500	N	N	N	10	700	1.0	N
LC613S	60 54 57	153 29 26	5	.7	1.5	.3	700	N	N	N	10	2,000	1.0	N
LC614S	60 55 27	153 27 52	10	.7	1.5	.5	1,000	N	N	N	10	1,500	1.0	N
LC615S	60 56 3	153 28 5	10	1.5	2.0	.5	1,000	N	N	N	10	1,500	1.0	N
LC616S	60 56 26	153 28 5	15	1.5	3.0	.5	1,000	N	N	N	20	1,500	1.0	N
LC617S	60 57 23	153 27 16	10	1.0	2.0	.3	700	N	N	N	10	1,000	1.0	N
LC618S	60 53 23	153 39 14	10	1.0	2.0	.3	700	N	N	N	10	1,000	1.0	N
LC619S	60 52 9	153 39 19	7	.7	1.5	.3	1,000	N	N	N	10	1,000	1.0	N
LC620S	60 38 35	153 48 56	10	2.0	1.5	.5	1,500	N	N	N	20	1,000	1.0	N
LC621S	60 37 41	153 43 44	10	2.0	1.5	.7	1,500	N	N	N	50	700	1.0	N
LC622S	60 37 59	153 44 17	10	2.0	1.5	.7	1,500	N	N	N	50	1,000	1.0	N
LC623S	60 37 44	153 46 18	10	2.0	2.0	.7	2,000	N	N	N	20	1,000	1.0	N
LC624S	60 40 15	153 47 44	10	3.0	2.0	.7	2,000	N	1,000	N	20	1,500	1.0	N
LC625S	60 40 17	153 42 47	15	3.0	2.0	.7	1,500	N	N	N	50	700	<1.0	N
LC626S	60 43 33	153 42 12	15	3.0	10.0	.7	2,000	N	N	N	50	500	<1.0	N
LC627S	60 43 28	153 41 5	15	3.0	15.0	1.0	2,000	N	N	N	50	500	<1.0	N
LC628S	60 41 15	153 39 26	15	5.0	7.0	.7	1,500	N	N	N	20	300	<1.0	N
LC629S	60 56 22	154 1 50	10	2.0	1.5	.7	1,500	N	N	N	100	1,000	<1.0	N
LC630S	60 56 53	154 8 48	7	2.0	1.5	.7	1,500	N	N	N	100	1,000	1.0	N
LC631S	60 41 43	153 37 0	10	2.0	2.0	.7	1,500	N	N	N	20	700	1.0	N
LC632S	60 42 2	153 35 30	10	2.0	2.0	.5	1,500	N	N	N	20	1,000	1.0	N
LC633S	60 41 53	153 34 28	7	1.0	2.0	.5	1,500	N	N	N	20	1,000	1.0	N
LC634S	60 42 25	153 33 8	7	1.0	2.0	.5	1,000	N	N	N	20	1,000	1.0	N
LC635S	60 43 5	153 32 43	10	1.0	2.0	.5	1,000	N	N	N	10	1,000	1.0	N
LC636S	60 44 29	153 36 15	10	1.0	2.0	.5	1,000	N	N	N	10	1,000	1.0	N
LC637S	60 45 29	153 35 57	10	1.0	2.0	.5	1,500	N	N	N	10	1,000	1.0	N
LC638S	60 44 30	153 37 31	10	1.0	2.0	.7	1,500	N	N	N	10	1,000	1.0	N
LC639S	60 53 21	153 57 38	10	3.0	2.0	.7	1,500	N	N	N	20	1,000	1.0	N
LC640S	60 52 37	154 3 23	10	2.0	2.0	.7	1,500	N	N	N	20	1,000	1.0	N
LC641S	60 27 3	153 33 6	7	2.0	3.0	.5	1,500	N	N	N	10	1,000	1.0	N
LC642S	60 26 25	153 28 49	15	2.0	3.0	1.0	1,500	N	N	N	30	1,500	1.0	N
LC643S	60 31 48	153 22 8	10	2.0	3.0	1.0	1,500	N	N	N	20	1,500	1.0	N
LC644S	60 32 48	153 20 54	10	2.0	3.0	.7	1,500	N	N	N	30	1,500	1.0	N

Lake Clark Sediments--continued

sample	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SB	S-SC	S-SN	S-SR	S-V
LC600S	N	50	200	100	50	N	<20	100	50	N	20	N	500	500
LC601S	N	30	150	30	100	N	<20	30	30	N	20	N	500	300
LC602S	N	70	700	100	50	N	<20	100	100	N	30	N	1,000	300
LC603S	N	50	700	100	50	N	<20	100	50	N	30	N	1,000	300
LC604S	N	20	100	100	50	N	<20	20	30	N	30	N	500	300
LC605S	N	20	100	20	50	N	<20	20	30	N	30	N	500	300
LC606S	N	50	100	100	50	N	<20	20	100	N	30	N	1,000	500
LC607S	N	<5	30	5	50	N	<20	10	20	N	5	N	300	150
LC608S	N	<5	20	5	50	N	<20	10	20	N	5	N	700	150
LC609S	N	50	150	15	50	N	<20	15	20	N	50	N	1,000	200
LC610S	N	70	200	150	100	N	<20	20	20	N	30	N	500	1,000
LC611S	N	10	100	10	50	N	<20	10	20	N	10	N	700	300
LC612S	N	10	50	5	50	N	<20	5	15	N	<5	N	1,000	300
LC613S	N	10	20	5	50	N	<20	<5	20	N	<5	N	500	100
LC614S	N	10	20	5	100	N	<20	<5	20	N	<5	N	500	300
LC615S	N	10	100	20	100	N	<20	5	30	N	<5	N	500	300
LC616S	N	20	200	30	50	N	<20	10	50	N	<5	N	700	500
LC617S	N	10	100	5	70	N	<20	5	20	N	<5	N	700	300
LC618S	N	10	100	5	50	N	<20	5	20	N	<5	N	700	300
LC619S	N	<5	50	20	50	<5	<20	<5	50	N	10	N	300	200
LC620S	N	30	100	50	50	<5	<20	20	50	N	20	N	300	300
LC621S	N	50	150	15	50	<5	<20	100	50	N	30	N	300	500
LC622S	N	30	300	100	50	<5	<20	20	200	N	30	N	500	500
LC623S	N	30	50	50	50	<5	<20	20	200	N	20	N	300	300
LC624S	N	30	200	50	50	<5	<20	50	100	N	20	N	500	300
LC625S	N	70	150	150	50	<5	<20	100	50	N	30	N	500	700
LC626S	N	70	300	200	50	<5	<20	100	20	N	30	N	500	700
LC627S	N	70	300	200	50	<5	<20	150	20	N	50	N	300	700
LC628S	N	70	700	100	50	<5	<20	200	20	N	50	N	500	700
LC629S	N	50	150	50	50	<5	<20	100	20	N	20	N	500	500
LC630S	N	30	150	30	50	<5	<20	50	50	N	20	N	500	300
LC631S	N	20	100	30	50	<5	<20	20	20	N	15	N	300	300
LC632S	N	20	100	30	50	<5	<20	20	20	N	20	N	300	300
LC633S	N	30	150	100	50	<5	<20	50	70	N	20	N	300	300
LC634S	N	10	50	5	50	<5	<20	<5	30	N	15	N	300	200
LC635S	N	10	50	5	50	<5	<20	<5	30	N	15	N	300	300
LC636S	N	10	50	5	70	<5	<20	<5	30	N	15	N	300	300
LC637S	N	10	100	15	50	<5	<20	20	20	N	20	N	500	300
LC638S	N	10	70	10	50	<5	<20	<5	20	N	20	N	500	300
LC639S	N	30	200	50	50	<5	<20	100	20	N	30	N	500	500
LC640S	N	30	200	50	50	<5	<20	150	30	N	30	N	500	500
LC641S	N	20	50	50	50	<5	<20	10	20	N	20	N	1,000	200
LC642S	N	20	50	100	50	N	<20	10	30	N	20	N	1,000	500
LC643S	N	15	50	20	50	N	<20	15	30	N	15	N	1,500	300
LC644S	N	15	20	100	50	N	<20	10	30	N	10	N	1,500	300

Lake Clark Sediments--continued

sample	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-AU-P	INST-HG	AA-CU-P	AA-PB-P	AA-ZN-P	CM-AS
LC600S	N	100	200	500	N	N	.06	--	--	90	60
LC601S	N	70	<200	300	N	N	<.02	--	--	55	20
LC602S	N	50	<200	100	N	<.05	.02	--	--	65	80
LC603S	N	50	<200	100	N	N	<.02	--	--	70	10
LC604S	N	50	N	300	N	N	<.02	--	--	50	<10
LC605S	N	50	N	300	N	<.05	<.02	--	--	50	<10
LC606S	N	50	N	200	N	<.05	.02	--	--	80	20
LC607S	N	30	N	300	N	<.05	<.02	--	--	40	10
LC608S	N	30	N	50	N	<.05	.02	--	--	35	<10
LC609S	N	50	N	500	N	<.05	<.02	--	--	15	<10
LC610S	N	100	<200	300	N	.74	<.02	--	--	30	<10
LC611S	N	50	N	700	N	<.05	.02	--	--	60	<10
LC612S	N	10	N	100	N	N	<.02	--	--	15	<10
LC613S	N	20	N	500	N	N	<.02	--	--	25	<10
LC614S	N	70	N	1,000	N	<.05	<.02	--	--	20	<10
LC615S	N	50	N	700	N	<.05	.02	--	--	40	<10
LC616S	N	70	N	>1,000	N	N	.02	--	--	20	<10
LC617S	N	50	N	200	N	N	<.02	--	--	20	N
LC618S	N	50	N	500	N	<.05	<.02	--	--	15	N
LC619S	N	70	N	300	N	<.05	<.02	--	--	40	<10
LC620S	N	70	200	200	N	N	<.02	--	--	95	30
LC621S	N	50	200	100	N	<.05	.02	--	--	100	20
LC622S	N	50	<200	100	N	N	.02	--	--	70	10
LC623S	N	70	200	200	N	N	.02	--	--	140	10
LC624S	N	50	<200	200	N	N	.02	--	--	95	40
LC625S	N	50	<200	100	N	N	<.02	--	--	85	30
LC626S	N	70	<200	200	N	N	.02	--	--	80	N
LC627S	N	70	<200	200	N	N	.02	--	--	75	<10
LC628S	N	50	<200	50	N	<.05	.02	--	--	30	10
LC629S	N	50	<200	300	N	N	.10	--	--	70	10
LC630S	N	70	N	200	N	N	.10	--	--	60	<10
LC631S	N	50	<200	200	N	N	.02	--	--	35	<10
LC632S	N	50	N	200	N	N	<.02	--	--	35	<10
LC633S	N	50	N	200	N	N	.02	--	--	45	<10
LC634S	N	70	N	1,000	N	N	<.02	--	--	25	<10
LC635S	N	50	N	500	N	N	<.02	--	--	15	N
LC636S	N	70	N	1,000	N	N	<.02	--	--	15	N
LC637S	N	50	500	500	N	N	<.02	--	--	20	N
LC638S	N	50	N	1,000	N	<.05	<.02	--	--	25	<10
LC639S	N	70	<200	300	N	<.05	.02	--	--	45	<10
LC640S	N	50	<200	200	N	<.05	.02	--	--	60	10
LC641S	N	50	N	100	N	N	.04	--	--	40	<10
LC642S	N	50	N	300	N	N	<.02	--	--	45	<10
LC643S	N	50	N	300	N	<.05	.02	--	--	25	<10
LC644S	N	30	N	300	N	<.05	.02	--	--	30	30

Lake Clark Sediments--continued

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA	S-BE	S-BI
LC707S	60 34 49	154 40 41	5	1.0	1.0	.5	2,000	N	N	N	50	700	1.5	N
LC708S	60 33 38	154 37 9	3	1.5	1.0	.5	2,000	N	N	N	100	2,000	1.5	N
LC709S	60 34 33	154 32 59	3	1.5	2.0	.3	3,000	N	200	N	100	700	1.0	N
LC710S	60 36 50	154 27 28	5	1.5	1.5	.5	3,000	N	N	N	50	700	2.0	N
LC711S	60 37 45	154 39 51	5	1.0	1.5	.3	3,000	N	N	N	70	500	1.5	N
LC712S	60 40 35	154 32 20	7	1.5	1.5	.5	3,000	N	N	N	100	700	1.0	N
LC713S	60 42 46	154 32 30	7	2.0	1.5	.5	3,000	N	N	N	150	700	1.0	N
LC714S	60 43 26	154 33 52	7	2.0	1.0	.5	3,000	N	N	N	200	700	1.0	N
LC715S	60 45 15	154 33 39	5	2.0	1.5	.5	3,000	N	<200	N	150	500	2.0	N
LC716S	60 45 2	154 34 14	5	2.0	1.5	.5	3,000	N	<200	N	100	500	2.0	N

Lake Clark Sediments--continued

sample	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB	S-SB	S-SC	S-SN	S-SR	S-V
LC707S	N	15	50	20	50	N	<20	20	20	N	15	N	200	200
LC708S	N	15	70	50	50	N	<20	50	20	N	15	N	200	300
LC709S	N	10	50	20	50	N	<20	15	20	N	15	N	300	100
LC710S	N	15	50	30	50	N	<20	15	30	N	20	N	200	200
LC711S	N	10	30	30	50	N	<20	20	20	N	15	N	200	150
LC712S	N	20	500	50	50	N	<20	50	30	N	20	N	300	200
LC713S	N	30	100	70	50	N	<20	70	50	N	20	N	300	300
LC714S	N	30	100	70	50	N	<20	70	50	N	20	N	200	300
LC715S	N	20	200	70	50	N	<20	70	50	N	20	N	200	200
LC716S	N	20	150	70	50	N	<20	70	70	N	20	N	300	200

Lake Clark Sediments--continued

sample	S-W	S-Y	S-ZN	S-ZR	S-TH	AA-AU-P	INST-HG	AA-CU-P	AA-PB-P	AA-ZN-P	CM-AS
LC707S	N	15	N	200	N	N	.04	--	--	75	30
LC708S	N	15	<200	150	N	N	.10	--	--	150	100
LC709S	N	15	N	200	N	N	.02	--	--	100	200
LC710S	N	20	N	200	N	N	.08	--	--	85	20
LC711S	N	15	<200	150	N	N	.10	--	--	100	20
LC712S	N	15	<200	300	N	N	.06	--	--	80	60
LC713S	N	15	200	100	N	N	.04	--	--	120	80
LC714S	N	15	<200	200	N	N	.06	--	--	110	100
LC715S	N	15	200	70	N	.10	.08	--	--	110	120
LC716S	N	15	<200	100	N	.40	.04	--	--	120	140

Table 2.--Semiquantitative spectrographic analyses of the nonmagnetic fraction of heavy-mineral concentrate samples from Lake Clark quadrangle, Alaska

[Sample-site numbers corresponding to sample numbers of this table are shown on the sample-site location map without the prefix "LC", or the suffix "C3." Thus "LC358C3" is shown on the map as "358." Fe, Mg, Ca, and Ti are reported in percent; all other analyses are reported in parts per million. Symbols used: >, an undetermined amount greater than the amount shown was detected; <, an undetermined amount less than the amount shown was detected; --, no analysis; N, not detected. Analyses by E. F. Cooley. Lower limits of detection for elements are shown in parentheses beneath the chemical-symbol column headings on the first three pages of the table.]

sample	LATITUDE	LONGITUD	S-FE% (.1)	S-MG% (.05)	S-CA% (.1)	S-TI% (.005)	S-MN (20)	S-AG (1)	S-AS (500)	S-AU (20)	S-B (20)	S-BA (50)
LC358C3	60 19 8	154 12 34	3.0	1.50	10.0	>1.0	1,000	N	N	N	50	300
LC359C3	60 21 46	154 12 2	7.0	3.00	5.0	>1.0	2,000	N	N	N	50	500
LC360C3	60 24 53	154 11 26	5.0	1.50	5.0	>1.0	1,000	N	N	N	50	500
LC361C3	60 26 57	154 12 8	5.0	1.50	7.0	1.0	1,000	N	N	N	50	300
LC362C3	60 16 59	154 24 24	5.0	5.00	7.0	>1.0	3,000	N	N	N	200	500
LC363C3	60 16 32	154 26 36	5.0	2.00	7.0	>1.0	1,500	N	N	N	500	1,000
LC364C3	60 25 27	154 25 59	10.0	1.50	5.0	.5	1,500	N	N	N	300	500
LC365C3	60 24 5	154 23 35	5.0	1.50	7.0	1.0	1,500	N	N	N	70	700
LC366C3	60 22 41	154 21 38	5.0	1.00	7.0	>1.0	1,000	15	N	N	50	500
LC367C3	60 6 47	154 29 17	5.0	1.50	5.0	>1.0	1,500	N	N	N	50	500
LC368C3	60 8 53	154 20 57	5.0	3.00	7.0	>1.0	1,500	N	N	N	100	700
LC369C3	60 8 41	154 16 54	5.0	2.00	5.0	>1.0	1,500	N	N	N	50	5,000
LC370C3	60 29 48	154 3 25	5.0	1.50	7.0	>1.0	1,500	N	N	N	50	500
LC371C3	60 32 33	154 4 2	5.0	3.00	7.0	>1.0	1,500	N	N	N	50	1,500
LC372C3	60 33 41	154 5 30	5.0	.50	5.0	>1.0	1,500	N	N	N	30	500
LC373C3	60 32 12	154 5 13	3.0	.50	7.0	>1.0	1,500	N	N	N	20	700
LC374C3	60 36 19	154 7 49	5.0	2.00	10.0	>1.0	1,500	N	N	N	20	700
LC375C3	60 38 51	154 6 21	5.0	2.00	7.0	1.0	1,000	N	N	N	100	500
LC376C3	60 34 41	154 25 41	5.0	1.00	3.0	>1.0	1,000	N	N	N	1,500	700
LC377C3	60 23 12	154 6 39	5.0	1.00	5.0	>1.0	1,000	N	N	N	1,000	700
LC378C3	60 24 29	154 9 6	5.0	1.50	5.0	>1.0	1,500	N	N	N	50	500
LC379C3	60 25 0	154 4 57	5.0	2.00	5.0	>1.0	1,000	N	N	N	50	5,000
LC380C3	60 26 53	154 1 28	5.0	2.00	5.0	>1.0	1,000	<1	N	N	70	1,000
LC381C3	60 33 30	154 20 57	5.0	1.50	5.0	>1.0	1,000	N	N	N	50	1,500
LC382C3	60 33 6	154 19 45	3.0	1.50	5.0	>1.0	500	N	N	N	50	300
LC383C3	60 31 40	154 22 27	2.0	1.00	3.0	>1.0	500	N	N	N	50	300
LC384C3	60 5 13	153 59 58	3.0	.50	7.0	>1.0	1,500	N	N	N	<20	300
LC385C3	60 5 17	154 0 23	5.0	2.00	5.0	.7	700	N	N	N	20	300
LC386C3	60 4 42	154 0 2	3.0	.50	5.0	>1.0	1,500	N	N	N	<20	300
LC387C3	60 2 23	154 4 24	10.0	.07	2.0	>1.0	500	N	N	N	20	200
LC388C3	60 3 20	154 6 29	3.0	1.00	7.0	1.0	500	N	N	N	50	700
LC389C3	60 3 14	154 7 9	3.0	2.00	7.0	>1.0	1,000	N	N	N	50	500
LC390C3	60 27 45	153 55 32	3.0	2.00	3.0	>1.0	1,000	N	N	N	200	1,000
LC391C3	60 27 20	153 55 14	5.0	3.00	5.0	>1.0	1,000	N	N	N	300	5,000
LC392C3	60 26 57	153 56 8	15.0	1.50	3.0	>1.0	1,000	N	500	N	100	>5,000
LC393C3	60 27 19	153 57 28	20.0	1.00	2.0	1.0	5,000	N	N	N	20	>5,000
LC394C3	60 26 43	153 58 22	7.0	5.00	5.0	>1.0	1,500	1	N	N	100	700
LC395C3	60 27 11	154 0 56	10.0	5.00	5.0	>1.0	2,000	N	N	N	150	1,000
LC396C3	60 4 41	153 19 23	5.0	.70	5.0	1.0	1,000	N	N	N	20	500
LC397C3	60 5 9	153 17 53	3.0	.50	5.0	.3	500	N	N	N	<20	500
LC398C3	60 4 37	153 18 14	3.0	.70	5.0	.3	500	N	N	N	1,000	700
LC399C3	60 4 9	153 18 47	2.0	.50	5.0	.2	500	N	N	N	500	300
LC400C3	60 3 38	153 20 39	3.0	.50	10.0	>1.0	1,000	N	N	N	70	2,000
LC401C3	60 0 11	153 21 52	10.0	.50	5.0	>1.0	1,500	N	N	N	1,500	>5,000
LC402C3	60 0 28	153 20 5	3.0	.30	5.0	.2	500	N	N	N	300	1,000

Lake Clark Concentrates

sample	S-BE (2)	S-BI (20)	S-CD (50)	S-CO (10)	S-CR (20)	S-CU (10)	S-LA (50)	S-MO (10)	S-NB (50)	S-NI (10)	S-PB (20)
LC358C3	<2	N	N	<10	300	30	100	N	50	50	20
LC359C3	2	N	N	30	500	50	50	N	50	100	20
LC360C3	<2	N	N	15	200	150	150	<10	200	30	1,000
LC361C3	<2	N	N	15	300	50	70	N	50	50	50
LC362C3	<2	N	N	50	2,000	100	200	N	50	100	20
LC363C3	<2	<20	N	15	700	100	200	20	50	50	20
LC364C3	<2	N	N	10	200	150	50	N	<50	<10	100
LC365C3	<2	N	N	10	700	100	70	N	<50	<10	70
LC366C3	<2	N	N	<10	200	200	100	30	100	<10	200
LC367C3	<2	N	N	<10	150	70	200	N	100	<10	50
LC368C3	<2	N	N	10	500	30	100	N	50	50	100
LC369C3	<2	200	N	10	1,000	70	150	<10	100	20	70
LC370C3	<2	N	N	<10	200	70	100	N	100	<10	70
LC371C3	<2	N	N	20	1,000	100	150	N	50	20	100
LC372C3	5	N	N	<10	50	100	150	100	50	<10	7,000
LC373C3	2	N	N	10	150	100	200	70	200	<10	200
LC374C3	<2	N	N	10	1,000	30	100	N	100	30	50
LC375C3	<2	N	N	10	700	30	70	N	<50	100	20
LC376C3	<2	N	N	10	700	500	200	N	<50	<10	70
LC377C3	<2	N	N	10	700	100	100	N	<50	20	70
LC378C3	<2	N	N	10	500	100	200	<10	100	30	30
LC379C3	<2	N	N	10	700	100	50	<10	100	70	100
LC380C3	<2	N	N	10	500	50	50	20	50	50	50
LC381C3	<2	N	N	10	300	50	200	N	50	<10	20
LC382C3	<2	N	N	10	700	20	150	N	100	10	50
LC383C3	<2	N	N	10	500	20	100	N	100	<10	100
LC384C3	3	N	N	10	50	20	50	100	<50	<10	500
LC385C3	<2	N	N	15	150	50	50	<10	<50	50	50
LC386C3	3	N	N	10	50	10	50	<10	<50	10	100
LC387C3	<2	N	N	30	20	20	500	70	200	<10	<20
LC388C3	2	N	N	10	100	50	50	N	<50	30	<20
LC389C3	2	N	N	10	150	20	50	N	50	10	100
LC390C3	<2	N	N	20	500	100	200	N	50	150	30
LC391C3	<2	N	N	50	500	300	200	N	50	150	500
LC392C3	<2	N	N	100	200	500	500	N	100	100	700
LC393C3	5	N	N	15	200	50	50	70	50	20	200
LC394C3	<2	N	N	50	500	300	50	<10	<50	150	200
LC395C3	2	N	N	50	700	200	150	<10	<50	150	50
LC396C3	<2	N	N	30	50	1,000	50	N	<50	<10	<20
LC397C3	<2	N	N	<10	20	150	50	N	<50	<10	<20
LC398C3	<2	N	N	50	20	1,000	50	100	<50	<10	<20
LC399C3	<2	N	N	10	20	500	50	N	N	<10	<20
LC400C3	<2	N	N	50	100	700	500	10	150	<10	<20
LC401C3	<2	200	N	100	50	2,000	100	N	N	70	<20
LC402C3	<2	N	N	50	20	1,000	50	N	N	<10	<20

Lake Clark Concentrates

sample	S-SB (200)	S-SC (10)	S-SN (20)	S-SR (200)	S-V (20)	S-W (100)	S-Y (20)	S-ZN (500)	S-ZR (20)	S-TH (200)
LC358C3	N	50	200	200	200	N	200	N	>1,000	N
LC359C3	N	50	N	300	300	N	200	N	>1,000	N
LC360C3	N	70	30	300	200	100	200	N	>1,000	N
LC361C3	N	50	N	500	200	N	100	N	>1,000	N
LC362C3	N	70	N	200	700	100	150	N	>1,000	N
LC363C3	N	30	300	200	200	N	300	N	>1,000	N
LC364C3	N	20	50	500	300	N	100	N	>1,000	N
LC365C3	N	30	N	300	300	N	70	N	>1,000	N
LC366C3	N	50	50	300	200	<100	200	N	>1,000	N
LC367C3	N	50	30	300	200	N	200	N	>1,000	N
LC368C3	N	30	<20	300	200	N	150	N	>1,000	N
LC369C3	N	50	30	300	200	N	200	N	>1,000	N
LC370C3	N	50	30	300	200	N	200	N	>1,000	N
LC371C3	N	100	30	300	200	N	200	N	>1,000	N
LC372C3	N	50	20	300	300	N	150	N	>1,000	N
LC373C3	N	100	70	300	200	<100	200	N	>1,000	N
LC374C3	N	50	<20	500	300	N	100	N	>1,000	N
LC375C3	N	70	150	300	300	300	300	N	>1,000	N
LC376C3	N	50	N	700	300	500	100	N	>1,000	N
LC377C3	N	50	N	700	300	300	100	N	1,000	N
LC378C3	N	50	<20	300	300	N	200	N	>1,000	N
LC379C3	N	50	N	300	200	<100	200	N	>1,000	N
LC380C3	N	30	N	300	200	N	70	N	>1,000	N
LC381C3	N	30	500	300	200	N	200	N	>1,000	N
LC382C3	N	50	N	300	200	N	500	N	>1,000	N
LC383C3	N	50	N	300	200	100	100	N	>1,000	N
LC384C3	N	20	N	500	200	N	200	N	>1,000	N
LC385C3	N	20	N	300	200	N	50	N	300	N
LC386C3	N	10	N	500	200	N	200	N	1,000	N
LC387C3	N	70	150	N	200	<100	1,000	N	>1,000	N
LC388C3	N	20	N	300	200	<100	100	N	>1,000	N
LC389C3	N	20	N	300	200	N	200	N	>1,000	N
LC390C3	N	20	N	300	200	N	200	N	>1,000	N
LC391C3	N	20	N	300	200	150	200	N	>1,000	N
LC392C3	N	20	N	700	200	200	200	N	>1,000	N
LC393C3	N	50	N	300	100	<100	100	500	>1,000	N
LC394C3	N	50	N	300	300	<100	70	1,000	>1,000	N
LC395C3	N	50	N	300	300	N	100	1,000	1,000	N
LC396C3	N	20	N	1,000	200	N	20	1,000	>1,000	N
LC397C3	N	10	N	1,000	100	N	<20	1,000	1,000	N
LC398C3	N	10	N	700	100	N	<20	1,000	>1,000	N
LC399C3	N	10	N	500	70	N	<20	1,000	1,000	N
LC400C3	N	20	50	500	300	N	500	1,000	>1,000	N
LC401C3	N	20	N	500	150	N	300	1,000	>1,000	<200
LC402C3	N	20	N	500	100	N	200	1,000	>1,000	N

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA
LC403C3	60 9 47	153 14 8	5.0	.50	5.0	1.0	500	N	N	N	150	500
LC404C3	60 9 51	153 13 35	2.0	.30	7.0	.5	500	N	N	N	100	300
LC405C3	60 11 39	153 19 55	2.0	.50	7.0	>1.0	700	N	N	N	50	500
LC406C3	60 12 38	153 15 51	2.0	.50	5.0	>1.0	700	N	N	N	1,500	500
LC407C3	60 13 40	153 18 30	20.0	.07	5.0	>1.0	500	N	N	N	50	300
LC408C3	60 13 51	153 17 32	2.0	.30	5.0	>1.0	1,000	<1	N	N	20	300
LC409C3	60 13 26	153 15 12	3.0	.20	10.0	>1.0	1,000	N	N	N	50	1,000
LC410C3	60 18 10	153 0 24	2.0	.30	5.0	.2	500	N	N	N	500	300
LC411C3	60 17 58	153 2 58	3.0	.30	5.0	.3	500	N	N	N	50	500
LC412C3	60 15 39	153 12 24	5.0	.50	5.0	1.0	500	N	N	N	70	500
LC413C3	60 20 26	153 13 27	2.0	.30	5.0	>1.0	1,000	N	N	N	20	200
LC414C3	60 20 30	153 16 33	2.0	.20	5.0	>1.0	700	N	N	N	20	200
LC415C3	60 38 47	154 8 11	3.0	1.50	5.0	>1.0	1,000	N	N	N	200	300
LC416C3	60 36 53	154 6 47	10.0	3.00	3.0	1.0	3,000	N	N	N	300	500
LC417C3	60 36 24	154 3 55	5.0	3.00	7.0	1.0	1,000	N	N	N	50	300
LC418C3	60 35 6	154 1 28	3.0	3.00	7.0	1.0	1,000	N	N	N	50	300
LC419C3	60 34 50	153 59 7	5.0	2.00	5.0	>1.0	1,000	N	N	N	50	1,000
LC420C3	60 34 14	153 55 18	5.0	.70	5.0	>1.0	1,500	N	N	N	20	1,500
LC421C3	60 35 48	153 50 0	5.0	.50	3.0	1.0	1,500	5	N	N	20	300
LC422C3	60 35 17	153 45 0	5.0	.50	5.0	>1.0	1,500	10	500	N	30	700
LC424C3	60 37 28	153 37 49	3.0	.50	3.0	1.0	1,000	N	N	N	20	500
LC425C3	60 35 54	153 35 11	2.0	.50	3.0	1.0	500	N	N	N	20	500
LC426C3	60 34 53	153 34 42	5.0	.20	3.0	>1.0	1,000	N	N	N	30	1,500
LC427C3	60 26 26	153 35 57	3.0	.20	5.0	>1.0	1,000	N	N	N	20	1,500
LC428C3	60 23 35	153 27 33	2.0	.20	7.0	>1.0	1,000	N	N	N	20	1,000
LC429C3	60 23 40	153 28 9	2.0	.20	7.0	>1.0	1,000	N	N	N	<20	200
LC430C3	60 25 33	153 29 26	3.0	2.00	7.0	>1.0	1,000	N	N	N	20	300
LC431C3	60 26 40	153 23 29	2.0	.30	10.0	>1.0	1,000	N	N	N	<20	300
LC432C3	60 27 2	153 24 30	2.0	.30	10.0	>1.0	700	N	N	N	<20	300
LC433C3	60 27 33	153 23 53	2.0	.30	7.0	>1.0	1,000	N	N	N	<20	300
LC434C3	60 30 51	153 23 48	2.0	.20	7.0	>1.0	1,000	N	N	N	<20	300
LC435C3	60 31 22	153 14 38	3.0	.50	7.0	1.0	700	N	N	N	50	300
LC436C3	60 31 21	153 17 42	2.0	.20	7.0	>1.0	1,000	N	N	N	20	200
LC437C3	60 34 15	153 18 11	2.0	.50	7.0	>1.0	700	N	N	N	20	300
LC438C3	60 36 2	153 16 6	2.0	.50	7.0	>1.0	700	N	N	N	20	200
LC439C3	60 4 40	154 49 6	3.0	1.50	5.0	>1.0	1,000	N	N	N	50	1,000
LC440C3	60 4 45	154 50 16	5.0	3.00	7.0	>1.0	1,000	N	N	N	50	1,000
LC441C3	60 4 58	154 54 6	5.0	2.00	7.0	>1.0	1,000	N	N	N	50	500
LC442C3	60 4 31	154 57 51	3.0	.20	7.0	>1.0	1,000	N	N	N	20	700
LC443C3	60 3 47	155 2 4	2.0	.50	7.0	>1.0	1,000	N	N	N	50	700
LC444C3	60 3 35	155 2 45	5.0	1.50	5.0	>1.0	1,000	N	N	N	2,000	5,000
LC445C3	60 2 58	155 5 20	10.0	1.50	7.0	>1.0	1,000	N	N	N	100	>5,000
LC446C3	60 3 14	155 10 8	5.0	2.00	5.0	>1.0	1,500	N	N	N	200	300
LC447C3	60 9 5	155 3 3	3.0	1.00	5.0	>1.0	1,000	N	N	N	50	200
LC448C3	60 9 11	155 2 11	5.0	1.50	7.0	>1.0	1,000	N	N	N	70	200

Lake Clark Concentrates--continued

sample	S-BE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB
LC403C3	<2	N	N	50	20	700	50	N	N	<10	20
LC404C3	<2	N	N	20	50	1,000	50	N	<50	<10	<20
LC405C3	<2	N	N	20	100	700	200	N	150	<10	<20
LC406C3	<2	N	N	10	20	700	50	N	<50	<10	<20
LC407C3	<2	N	N	100	30	700	300	15	200	50	50
LC408C3	<2	N	N	20	20	300	200	N	200	<10	20
LC409C3	<2	N	N	20	20	300	200	N	100	<10	<20
LC410C3	<2	N	N	10	<20	300	50	N	<50	<10	<20
LC411C3	<2	N	N	10	<20	150	50	N	<50	<10	<20
LC412C3	<2	N	N	10	<20	150	50	N	<50	<10	20
LC413C3	<2	N	N	10	50	300	300	20	100	<10	<20
LC414C3	<2	N	N	10	50	500	300	10	200	<10	<20
LC415C3	<2	200	N	10	200	20	100	N	50	20	20
LC416C3	3	N	N	10	200	30	50	10	<50	30	100
LC417C3	2	200	N	10	700	20	50	N	100	<10	100
LC418C3	<2	N	N	20	2,000	20	50	N	50	50	30
LC419C3	<2	N	N	10	500	20	150	N	70	<10	200
LC420C3	<2	N	N	10	150	20	150	50	50	<10	200
LC421C3	<2	200	N	10	150	300	100	100	50	<10	200
LC422C3	<2	50	N	20	70	50	100	50	50	<10	1,500
LC424C3	<2	20	N	10	70	150	150	<10	<50	<10	100
LC425C3	<2	20	N	10	50	150	300	30	<50	<10	150
LC426C3	<2	<20	N	10	50	150	200	20	100	<10	200
LC427C3	<2	50	N	50	20	200	300	N	50	<10	100
LC428C3	<2	N	N	10	20	500	200	N	100	<10	20
LC429C3	<2	N	N	10	20	200	200	<10	100	<10	30
LC430C3	<2	N	N	50	150	150	200	<10	70	50	20
LC431C3	<2	N	N	10	100	500	200	<10	100	<10	20
LC432C3	<2	N	N	10	100	500	200	<10	100	<10	20
LC433C3	<2	N	N	10	150	300	500	30	150	<10	20
LC434C3	<2	N	N	10	100	50	300	<10	150	<10	50
LC435C3	<2	N	N	10	100	1,000	200	N	<50	<10	20
LC436C3	<2	N	N	10	100	700	700	20	200	<10	20
LC437C3	<2	N	N	10	150	300	300	20	150	<10	20
LC438C3	<2	N	N	10	150	1,000	200	<10	<50	<10	20
LC439C3	<2	N	N	10	700	50	200	<10	50	50	30
LC440C3	<2	N	N	20	3,000	30	150	20	50	70	50
LC441C3	<2	N	N	15	2,000	30	150	10	50	50	50
LC442C3	<2	N	N	20	100	5,000	500	20	200	<10	20
LC443C3	<2	N	N	10	500	50	500	10	50	<10	50
LC444C3	<2	N	N	30	700	100	300	10	50	50	100
LC445C3	<2	N	N	50	1,000	500	200	15	50	50	100
LC446C3	<2	N	N	20	1,000	100	200	10	50	100	200
LC447C3	<2	N	N	10	200	50	200	N	50	<10	70
LC448C3	<2	N	N	20	700	500	200	15	50	<10	20

sample	S-SB	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
LC403C3	N	10	N	500	100	N	70	N	>1,000	N
LC404C3	N	20	N	300	100	N	100	N	>1,000	N
LC405C3	N	20	N	700	200	N	200	N	>1,000	N
LC406C3	N	<10	N	500	150	N	70	N	1,000	N
LC407C3	N	<10	<20	200	200	100	500	N	>1,000	N
LC408C3	N	<10	50	300	200	500	500	N	>1,000	N
LC409C3	N	20	<20	500	200	<100	500	N	>1,000	N
LC410C3	N	<10	N	500	100	N	20	N	>1,000	N
LC411C3	N	<10	N	500	100	N	50	N	>1,000	N
LC412C3	N	<10	N	700	150	N	50	N	>1,000	N
LC413C3	N	<10	30	500	200	N	500	N	>1,000	N
LC414C3	N	<10	50	300	300	N	500	N	>1,000	N
LC415C3	N	30	N	700	200	N	300	N	>1,000	N
LC416C3	N	50	N	1,000	200	N	200	N	1,000	N
LC417C3	N	50	1,000	500	200	N	300	N	>1,000	N
LC418C3	N	50	N	300	200	N	150	N	>1,000	N
LC419C3	N	50	N	500	200	200	150	N	>1,000	N
LC420C3	N	30	N	500	200	200	100	N	>1,000	N
LC421C3	N	30	N	300	150	N	100	N	1,000	N
LC422C3	N	30	50	500	150	100	100	N	1,000	N
LC424C3	N	50	N	300	200	100	100	N	>1,000	<200
LC425C3	N	70	30	200	200	<100	500	N	>1,000	200
LC426C3	N	70	30	500	100	100	300	<500	>1,000	N
LC427C3	N	50	30	300	150	<100	500	N	>1,000	N
LC428C3	N	20	50	500	200	N	200	N	>1,000	N
LC429C3	N	20	50	300	200	N	300	N	>1,000	N
LC430C3	N	30	N	300	150	N	200	N	>1,000	N
LC431C3	N	20	50	500	200	N	500	N	>1,000	N
LC432C3	N	20	30	500	200	N	500	N	>1,000	N
LC433C3	N	20	30	500	300	N	500	N	1,000	N
LC434C3	N	20	30	500	200	N	500	N	>1,000	N
LC435C3	N	20	N	1,000	100	<100	100	N	>1,000	N
LC436C3	N	20	50	300	300	N	500	N	>1,000	N
LC437C3	N	20	30	300	200	N	300	N	>1,000	N
LC438C3	N	20	N	500	200	N	200	N	>1,000	N
LC439C3	N	50	20	500	200	N	200	N	>1,000	N
LC440C3	N	70	N	500	200	N	200	N	>1,000	N
LC441C3	N	70	N	300	200	N	200	N	>1,000	N
LC442C3	N	30	50	200	200	<100	500	N	>1,000	N
LC443C3	N	50	100	200	200	N	500	N	>1,000	N
LC444C3	N	50	50	300	200	N	300	N	>1,000	N
LC445C3	N	50	N	500	200	N	300	1,000	>1,000	N
LC446C3	N	50	N	700	200	N	200	500	>1,000	N
LC447C3	N	30	N	500	200	N	200	N	>1,000	N
LC448C3	N	50	50	500	300	N	300	N	>1,000	N

Lake Clark Concentrates--continued

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA
LC449C3	60 9 52	155 8 44	5.0	2.00	7.0	>1.0	1,000	N	N	N	100	300
LC450C3	60 9 47	155 9 48	5.0	1.50	5.0	>1.0	1,000	N	N	N	100	500
LC451C3	60 10 0	155 14 26	5.0	1.50	5.0	>1.0	1,000	N	N	N	100	300
LC452C3	60 10 55	155 16 35	5.0	2.00	5.0	>1.0	1,500	N	N	N	200	500
LC453C3	60 7 59	154 7 35	5.0	1.00	5.0	>1.0	1,000	N	N	N	100	700
LC454C3	60 8 40	154 9 21	5.0	1.00	5.0	.5	500	N	N	N	20	100
LC455C3	60 6 28	154 9 50	3.0	1.00	5.0	>1.0	1,000	N	N	N	20	300
LC456C3	60 6 2	154 10 18	5.0	1.00	5.0	>1.0	1,000	N	N	N	50	500
LC457C3	60 19 47	153 31 12	3.0	1.00	5.0	>1.0	1,000	N	N	N	50	300
LC458C3	60 8 3	154 15 45	3.0	5.00	5.0	>1.0	1,500	N	N	N	50	500
LC459C3	60 41 29	155 20 40	3.0	1.50	5.0	>1.0	1,000	N	N	N	700	500
LC460C3	60 42 47	155 22 59	5.0	2.00	5.0	>1.0	1,500	N	N	N	700	500
LC461C3	60 40 5	155 33 19	3.0	1.50	5.0	>1.0	1,000	N	N	N	1,500	500
LC462C3	60 29 27	153 43 53	5.0	2.00	5.0	>1.0	1,000	N	N	N	50	1,500
LC463C3	60 4 45	153 38 21	2.0	.20	5.0	>1.0	1,500	N	N	N	20	150
LC464C3	60 5 26	153 36 46	1.5	.20	10.0	>1.0	1,000	N	N	N	20	100
LC465C3	60 5 59	153 34 26	2.0	.20	10.0	>1.0	1,500	N	N	N	20	100
LC466C3	60 6 47	153 44 0	5.0	.07	1.0	>1.0	500	N	N	N	70	300
LC467C3	60 8 27	153 38 43	2.0	.30	5.0	>1.0	500	N	N	N	70	200
LC468C3	60 6 38	153 41 40	2.0	.20	5.0	>1.0	500	N	N	N	50	200
LC469C3	60 29 20	153 42 54	1.0	.20	5.0	>1.0	500	N	N	N	20	200
LC470C3	60 29 30	153 40 41	2.0	.20	5.0	>1.0	1,000	N	N	N	50	200
LC471C3	60 30 30	153 36 14	2.0	.30	5.0	>1.0	500	N	N	N	50	200
LC472C3	60 31 40	153 33 38	1.0	.10	7.0	>1.0	1,000	N	N	N	20	100
LC473C3	60 32 30	153 30 56	1.0	.10	7.0	>1.0	1,000	N	N	N	20	150
LC474C3	60 34 26	153 28 6	1.0	.10	7.0	>1.0	1,000	N	N	N	20	50
LC589C3	60 55 50	153 53 57	2.0	1.00	5.0	>1.0	700	N	N	N	50	300
LC590C3	60 54 15	153 47 17	3.0	1.00	15.0	1.0	1,000	N	N	N	50	500
LC591C3	60 51 33	153 42 33	2.0	.20	3.0	>1.0	700	N	<500	N	20	500
LC592C3	60 51 56	153 43 10	3.0	.20	.5	>1.0	500	N	<500	N	50	200
LC593C3	60 49 14	153 41 48	5.0	1.50	10.0	.7	1,000	N	N	N	300	500
LC594C3	60 50 6	153 41 43	2.0	.20	3.0	>1.0	1,000	N	N	N	50	200
LC595C3	60 50 30	153 42 59	2.0	.15	2.0	>1.0	700	N	1,000	N	50	200
LC596C3	60 50 44	153 46 37	5.0	2.00	10.0	>1.0	1,000	N	1,000	N	200	300
LC597C3	60 51 29	153 47 39	3.0	3.00	10.0	.7	1,000	N	N	N	500	2,000
LC598C3	60 56 18	154 0 25	5.0	1.50	10.0	>1.0	1,000	N	N	N	100	1,000
LC599C3	60 52 18	153 53 54	5.0	3.00	10.0	>1.0	1,000	N	500	N	100	300
LC600C3	60 52 9	153 54 50	3.0	1.00	1.0	>1.0	700	N	7,000	N	100	300
LC601C3	60 45 6	153 46 53	5.0	1.50	10.0	1.0	1,000	N	700	N	70	500
LC602C3	60 45 7	153 47 35	5.0	3.00	5.0	.5	1,000	N	N	N	100	300
LC603C3	60 46 27	153 51 29	5.0	5.00	7.0	.7	1,500	N	N	N	150	700
LC604C3	60 56 3	153 48 54	3.0	1.00	7.0	1.0	1,000	N	N	N	100	300
LC605C3	60 56 29	153 46 39	2.0	1.00	5.0	>1.0	1,000	N	N	N	20	300
LC606C3	60 57 42	153 44 39	5.0	1.50	5.0	>1.0	1,000	N	N	N	100	500
LC607C3	60 56 35	153 41 56	10.0	.50	3.0	>1.0	1,000	N	N	N	50	300

sample	S-BE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB
LC449C3	<2	N	N	20	700	150	200	<10	100	50	100
LC450C3	<2	N	N	15	700	150	200	<10	70	50	30
LC451C3	<2	N	N	15	700	100	150	<10	50	50	20
LC452C3	<2	N	N	20	700	100	150	<10	50	70	50
LC453C3	<2	N	N	20	150	100	200	10	50	30	150
LC454C3	<2	N	N	10	200	200	50	<10	<50	50	20
LC455C3	<2	N	N	10	200	100	300	30	200	10	50
LC456C3	<2	N	N	10	200	70	100	<10	50	10	200
LC457C3	<2	N	N	15	700	50	200	20	70	20	30
LC458C3	<2	N	N	10	100	50	50	N	50	20	30
LC459C3	<2	N	N	10	700	50	300	N	50	50	20
LC460C3	<2	N	N	10	700	50	300	N	50	70	20
LC461C3	<2	N	N	10	500	20	100	N	50	50	20
LC462C3	<2	N	N	20	500	300	200	50	70	150	20
LC463C3	<2	N	N	10	20	200	200	<10	500	<10	50
LC464C3	<2	N	N	10	50	200	500	10	100	<10	20
LC465C3	<2	N	N	50	50	300	500	<10	100	<10	100
LC466C3	<2	N	N	50	30	1,000	200	30	<50	30	20
LC467C3	<2	N	N	50	70	300	1,000	50	100	<10	50
LC468C3	<2	N	N	20	50	1,000	300	<10	<50	<10	20
LC469C3	<2	50	N	10	50	100	300	70	50	<10	20
LC470C3	<2	100	N	50	50	300	1,000	200	50	<10	50
LC471C3	<2	N	N	<10	30	100	200	100	50	<10	50
LC472C3	<2	N	N	<10	30	70	500	50	200	<10	20
LC473C3	<2	N	N	<10	20	70	700	20	100	<10	20
LC474C3	<2	N	N	<10	20	100	500	50	100	<10	20
LC589C3	<2	N	N	<10	100	30	100	N	50	<10	20
LC590C3	<2	N	N	20	50	500	200	N	50	<10	20
LC591C3	50	N	N	<10	20	100	700	N	100	<10	100
LC592C3	<2	N	N	<10	20	70	1,000	N	150	<10	70
LC593C3	3	N	N	10	300	1,000	100	N	70	50	50
LC594C3	15	N	N	<10	50	200	1,000	N	200	<10	200
LC595C3	20	N	N	<10	50	70	>1,000	100	150	<10	2,000
LC596C3	7	N	N	30	200	200	1,000	N	100	50	100
LC597C3	<2	N	N	10	2,000	100	100	N	50	100	50
LC598C3	5	N	N	<10	500	150	500	N	100	70	30
LC599C3	2	N	N	10	2,000	50	1,000	N	100	100	70
LC600C3	10	N	N	<10	150	50	>1,000	N	150	50	20
LC601C3	2	N	N	20	200	200	200	N	50	50	500
LC602C3	2	N	N	20	1,000	500	50	N	<50	200	70
LC603C3	2	N	N	30	5,000	500	50	N	<50	200	100
LC604C3	<2	N	N	10	100	150	200	N	100	<10	30
LC605C3	<2	N	N	10	150	200	200	N	50	<10	30
LC606C3	<2	N	N	20	100	100	100	N	<50	<10	50
LC607C3	<2	N	N	70	50	150	200	10	<50	<10	150

sample	S-SB	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
LC449C3	N	70	200	500	200	<100	300	N	>1,000	<200
LC450C3	N	50	20	500	200	N	200	N	>1,000	N
LC451C3	N	50	100	300	200	N	200	N	>1,000	N
LC452C3	N	70	150	500	300	N	200	N	>1,000	N
LC453C3	N	50	50	300	200	N	300	N	>1,000	N
LC454C3	N	20	N	200	200	200	20	N	500	N
LC455C3	N	50	100	300	200	<100	500	N	>1,000	N
LC456C3	N	50	N	500	200	N	100	N	>1,000	N
LC457C3	N	50	70	300	200	N	300	N	>1,000	N
LC458C3	N	20	N	300	100	N	50	N	700	N
LC459C3	N	50	500	500	200	N	300	N	>1,000	N
LC460C3	N	50	200	500	200	N	300	N	>1,000	N
LC461C3	N	20	50	500	200	N	200	N	>1,000	N
LC462C3	N	20	<20	300	200	<100	300	N	>1,000	N
LC463C3	N	20	100	300	200	<100	700	N	1,000	N
LC464C3	N	20	50	200	200	N	700	N	>1,000	N
LC465C3	N	50	100	200	200	N	1,000	N	>1,000	1,500
LC466C3	N	50	N	200	100	N	700	N	>1,000	1,000
LC467C3	N	30	50	200	200	100	700	N	>1,000	1,000
LC468C3	N	50	70	200	150	N	700	N	>1,000	500
LC469C3	N	20	50	200	200	500	700	N	>1,000	N
LC470C3	N	100	150	200	200	500	1,000	N	>1,000	1,000
LC471C3	N	20	50	300	200	700	200	N	>1,000	N
LC472C3	N	20	70	200	200	N	500	N	>1,000	N
LC473C3	N	20	70	200	200	N	700	N	>1,000	N
LC474C3	N	20	50	<200	200	N	500	N	>1,000	N
LC589C3	N	20	30	200	200	N	300	N	>1,000	<200
LC590C3	N	20	70	500	200	N	500	N	>1,000	1,000
LC591C3	N	20	100	200	150	N	2,000	2,000	>1,000	200
LC592C3	N	20	100	200	100	N	>2,000	N	>1,000	1,000
LC593C3	N	20	N	200	200	N	700	N	>1,000	<200
LC594C3	N	20	150	200	<20	N	>2,000	N	>1,000	1,000
LC595C3	N	50	150	200	50	N	>2,000	N	>1,000	1,000
LC596C3	N	50	100	200	200	N	1,500	N	>1,000	200
LC597C3	N	70	N	200	200	N	300	N	>1,000	<200
LC598C3	N	50	50	200	200	N	1,500	N	>1,000	<200
LC599C3	N	70	70	200	200	N	2,000	N	>1,000	200
LC600C3	N	20	50	200	50	<100	>2,000	N	>1,000	500
LC601C3	N	30	N	200	200	N	500	N	>1,000	<200
LC602C3	N	30	N	300	200	N	20	N	700	N
LC603C3	N	50	N	300	300	N	20	N	700	N
LC604C3	N	20	N	500	200	N	300	N	>1,000	<200
LC605C3	N	20	20	300	200	N	200	N	>1,000	<200
LC606C3	N	20	N	300	200	N	100	N	>1,000	N
LC607C3	N	50	50	200	150	200	500	N	>1,000	500

Lake Clark Concentrates--continued

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA
LC608C3	60 56 49	153 36 47	1.5	.30	5.0	>1.0	500	N	N	N	20	500
LC609C3	60 57 15	153 38 16	2.0	.70	5.0	>1.0	700	N	N	N	20	500
LC610C3	60 55 58	153 38 54	2.0	.50	7.0	>1.0	700	100	N	200	50	300
LC611C3	60 55 4	153 33 23	5.0	.70	5.0	>1.0	1,000	N	N	N	50	300
LC612C3	60 54 34	153 33 6	10.0	.10	1.0	1.0	300	5	N	N	<20	500
LC613C3	60 54 57	153 29 26	10.0	.20	1.5	>1.0	500	10	N	N	20	700
LC614C3	60 55 27	153 27 52	5.0	.05	.7	>1.0	300	N	N	N	300	300
LC615C3	60 56 3	153 28 5	2.0	1.00	3.0	>1.0	1,500	3	N	N	300	500
LC616C3	60 56 26	153 28 5	5.0	.50	3.0	>1.0	1,000	50	500	N	100	300
LC617C3	60 57 23	153 27 16	5.0	.10	5.0	>1.0	1,000	N	N	N	<20	500
LC618C3	60 53 23	153 39 14	5.0	.05	5.0	>1.0	500	15	N	N	<20	700
LC619C3	60 52 9	153 39 19	10.0	.50	2.0	>1.0	1,000	10	N	N	20	500
LC620C3	60 38 35	153 48 56	5.0	1.00	3.0	>1.0	1,000	N	N	N	20	1,500
LC621C3	60 37 41	153 43 44	5.0	1.50	3.0	>1.0	1,000	2	N	N	20	5,000
LC622C3	60 37 59	153 44 17	5.0	1.00	3.0	>1.0	700	2	<500	N	<20	>5,000
LC623C3	60 37 44	153 46 18	5.0	3.00	5.0	1.0	1,500	3	>10,000	N	<20	700
LC624C3	60 40 15	153 47 44	5.0	.20	3.0	1.0	1,500	1	N	N	100	300
LC625C3	60 40 17	153 42 47	3.0	1.50	5.0	>1.0	1,000	N	N	N	150	2,000
LC626C3	60 43 33	153 42 12	5.0	2.00	10.0	.7	2,000	N	N	N	150	500
LC627C3	60 43 28	153 41 5	3.0	2.00	1.0	.7	1,500	N	N	N	150	300
LC628C3	60 41 15	153 39 26	3.0	3.00	5.0	.5	1,000	N	<500	N	50	200
LC475C3	60 47 26	154 0 21	3.0	2.00	5.0	.5	1,000	N	N	N	1,000	300
LC476C3	60 46 31	153 59 14	3.0	2.00	5.0	.5	1,000	N	N	N	300	200
LC477C3	60 46 18	153 48 54	3.0	1.00	7.0	.5	500	20	>10,000	N	100	500
LC473C3	60 32 30	153 52 14	3.0	2.00	3.0	>1.0	1,000	N	N	N	70	500
LC479C3	60 10 26	153 36 42	1.0	.07	5.0	>1.0	500	N	N	N	50	<50
LC480C3	60 9 12	153 34 32	1.5	.10	5.0	>1.0	700	N	N	N	20	<50
LC481C3	60 9 0	153 33 47	1.0	.10	7.0	>1.0	1,000	N	N	N	20	<50
LC482C3	60 8 9	153 35 9	1.0	.07	5.0	>1.0	700	N	N	N	20	<50
LC483C3	60 42 2	153 50 27	5.0	3.00	7.0	.5	1,000	100	N	N	70	5,000
LC484C3	60 42 7	153 50 44	5.0	5.00	7.0	.5	1,000	2	N	N	20	1,000
LC485C3	60 41 49	153 51 34	5.0	5.00	5.0	>1.0	1,000	2	2,000	N	300	>5,000
LC486C3	60 40 33	153 51 47	20.0	.50	1.0	1.0	500	50	>10,000	N	1,000	>5,000
LC487C3	60 40 5	153 54 34	5.0	5.00	5.0	1.0	700	2	N	N	20	>5,000
LC488C3	60 37 1	153 54 47	7.0	.50	3.0	1.0	1,000	N	N	N	20	>5,000
LC489C3	60 36 53	153 55 59	5.0	2.00	5.0	1.0	1,000	N	N	N	30	500
LC490C3	60 37 32	154 1 50	5.0	5.00	5.0	>1.0	1,000	N	N	N	20	200
LC491C3	60 40 26	154 0 34	5.0	5.00	5.0	1.0	1,000	N	N	N	50	200
LC492C3	60 41 5	154 2 27	5.0	2.00	5.0	1.0	1,000	N	N	N	200	300
LC493C3	60 58 0	153 50 0	5.0	.50	5.0	>1.0	1,000	N	N	N	70	200
LC494C3	60 33 47	153 51 46	5.0	2.00	5.0	1.0	2,000	N	N	N	30	700
LC495C3	60 35 57	153 38 22	2.0	.50	5.0	1.0	1,000	N	N	N	30	300
LC496C3	60 38 47	153 34 1	5.0	.50	7.0	>1.0	1,500	N	N	N	20	300
LC497C3	60 38 3	153 34 36	10.0	1.00	7.0	1.0	1,000	5	2,000	N	70	200
LC498C3	60 37 41	153 37 36	5.0	2.00	5.0	.2	1,500	N	N	N	50	200

Lake Clark Concentrates--continued

sample	S-BE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB
LC608C3	<2	N	N	<10	50	50	200	N	100	<10	30
LC609C3	<2	N	N	10	70	50	200	<10	50	<10	20
LC610C3	5	70	N	<10	70	300	300	70	<50	<10	100
LC611C3	<2	N	N	100	100	200	700	10	150	<10	150
LC612C3	<2	<20	N	70	<20	500	1,000	10	<50	<10	20
LC613C3	<2	N	N	70	<20	150	700	N	<50	20	200
LC614C3	<2	N	N	70	<20	100	300	70	<50	<10	200
LC615C3	<2	N	N	10	70	50	300	<10	200	<10	50
LC616C3	<2	50	N	100	70	200	500	20	100	30	150
LC617C3	<2	30	N	70	70	300	700	10	200	20	50
LC618C3	<2	200	N	50	<20	300	700	<10	<50	20	50
LC619C3	<2	50	N	100	50	200	500	50	50	20	200
LC620C3	<2	50	N	20	200	100	100	N	50	50	200
LC621C3	<2	N	N	50	300	200	100	N	50	70	100
LC622C3	<2	N	N	15	500	150	50	50	50	10	200
LC623C3	2	N	N	15	1,000	100	70	N	<50	100	100
LC624C3	2	N	N	15	20	50	100	100	50	<10	700
LC625C3	<2	N	N	20	500	100	100	N	50	50	50
LC626C3	2	N	N	20	200	300	150	<10	<50	50	200
LC627C3	3	N	N	10	100	500	100	<10	<50	50	100
LC628C3	<2	N	N	30	500	200	50	10	<50	100	50
LC475C3	<2	N	N	10	500	50	500	N	50	70	50
LC476C3	<2	N	N	20	700	150	200	N	50	100	100
LC477C3	5	30	N	300	200	1,000	500	50	100	200	1,000
LC478C3	<2	N	N	20	500	50	150	N	70	70	50
LC479C3	<2	N	N	20	50	300	1,000	50	100	N	20
LC480C3	<2	N	N	20	50	300	1,000	30	150	N	30
LC481C3	<2	N	N	<10	50	500	>1,000	20	100	N	20
LC482C3	<2	N	N	<10	50	500	1,000	20	200	N	20
LC483C3	5	100	150	20	2,000	500	70	N	<50	150	10,000
LC484C3	<2	N	N	50	>5,000	500	50	N	<50	300	500
LC485C3	<2	N	N	50	1,500	200	70	N	50	200	3,000
LC486C3	<2	500	N	70	200	500	70	20	50	50	5,000
LC487C3	<2	N	N	50	300	150	50	N	<50	200	200
LC488C3	<2	N	N	20	200	150	150	100	50	50	700
LC489C3	<2	N	N	20	300	100	100	N	70	100	100
LC490C3	<2	N	N	50	5,000	100	70	N	200	100	500
LC491C3	2	N	N	20	3,000	20	100	N	<50	200	20
LC492C3	<2	N	N	20	700	50	70	N	50	70	50
LC493C3	<2	20	N	20	100	100	150	N	50	<10	50
LC494C3	2	N	N	20	200	70	200	<10	50	70	700
LC495C3	<2	N	N	<10	100	50	100	N	70	<10	150
LC496C3	2	N	N	20	70	150	100	<10	<50	<10	500
LC497C3	<2	N	N	50	100	500	100	100	<50	100	500
LC498C3	<2	N	N	50	500	150	100	N	<50	200	20

Lake Clark Concentrates--continued

sample	S-SB	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
LC608C3	N	30	30	500	200	N	200	N	>1,000	N
LC609C3	N	30	20	500	300	N	300	N	>1,000	N
LC610C3	N	30	N	500	200	200	500	N	>1,000	200
LC611C3	N	100	50	200	200	<100	1,000	N	>1,000	200
LC612C3	N	50	200	200	100	<100	500	N	>1,000	200
LC613C3	N	50	200	200	70	<100	500	N	>1,000	<200
LC614C3	N	100	700	700	70	150	700	N	>1,000	500
LC615C3	N	50	500	500	200	500	500	N	>1,000	300
LC616C3	N	30	<20	<200	200	200	500	N	>1,000	<200
LC617C3	N	30	<20	<200	200	300	700	N	>1,000	300
LC618C3	N	100	200	200	150	200	700	N	>1,000	200
LC619C3	N	50	200	200	150	200	300	N	>1,000	200
LC620C3	N	30	500	500	200	N	50	N	>1,000	N
LC621C3	N	30	500	500	200	N	50	N	1,000	N
LC622C3	N	30	500	500	100	150	70	N	>1,000	N
LC623C3	N	50	500	500	200	100	50	N	1,000	N
LC624C3	N	30	500	500	100	<100	70	N	>1,000	N
LC625C3	N	30	300	300	200	<100	70	N	>1,000	N
LC626C3	N	20	300	300	200	<100	70	N	>1,000	N
LC627C3	N	30	300	300	200	<100	70	N	>1,000	N
LC628C3	N	30	300	300	200	500	20	N	>1,000	N
LC475C3	N	20	150	300	150	<100	700	N	>1,000	200
LC476C3	N	20	100	300	150	100	500	N	>1,000	<200
LC477C3	N	20	50	300	100	500	500	N	>1,000	N
LC478C3	N	30	N	200	150	<100	100	N	>1,000	N
LC479C3	N	20	100	<200	200	N	700	N	>1,000	700
LC480C3	N	20	100	<200	200	100	1,000	N	>1,000	1,500
LC481C3	N	50	100	<200	200	N	1,000	N	>1,000	1,000
LC482C3	N	30	100	<200	200	N	1,000	N	>1,000	1,500
LC483C3	N	30	N	300	200	N	50	7,000	700	N
LC484C3	N	100	N	300	300	N	20	N	500	N
LC485C3	N	50	N	300	200	N	50	N	500	N
LC486C3	N	20	<20	300	70	N	50	700	500	N
LC487C3	N	50	N	500	200	N	50	N	1,000	N
LC488C3	N	50	70	500	150	200	300	N	>1,000	N
LC489C3	N	50	N	500	200	<100	300	N	>1,000	N
LC490C3	N	100	100	<200	200	<100	200	N	>1,000	N
LC491C3	N	50	N	300	200	N	50	N	700	N
LC492C3	N	30	N	500	200	N	100	N	>1,000	N
LC493C3	N	30	70	500	200	N	200	N	>1,000	N
LC494C3	N	30	30	300	200	N	200	N	>1,000	N
LC495C3	N	50	50	<200	100	N	>2,000	N	>1,000	1,500
LC496C3	N	30	<20	500	150	N	100	N	>1,000	N
LC497C3	N	30	N	500	200	N	50	N	>1,000	N
LC498C3	N	30	N	200	200	N	20	N	100	N

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA
LC499C3	60 36 56	153 38 44	3.0	1.00	2.0	>1.0	1,000	N	N	N	50	300
LC581C3	60 35 6	153 36 27	5.0	1.00	5.0	.5	1,500	7	N	N	20	700
LC582C3	60 33 43	153 39 56	5.0	1.00	5.0	.7	700	N	N	N	300	200
LC583C3	60 33 56	153 39 47	3.0	.30	5.0	>1.0	1,500	N	N	N	100	300
LC584C3	60 33 50	153 40 46	3.0	.30	5.0	>1.0	1,500	N	N	N	50	300
LC585C3	60 34 56	153 44 2	5.0	1.00	5.0	1.0	1,500	5	N	N	70	1,000
LC586C3	60 34 24	153 45 42	3.0	2.00	5.0	.5	1,000	N	<500	N	30	150
LC587C3	60 32 17	153 46 45	5.0	5.00	5.0	.5	1,000	N	N	N	50	1,500
LC588C3	60 32 12	153 45 47	5.0	5.00	5.0	1.0	1,000	N	N	N	50	1,000
LC629C3	60 56 22	154 1 50	2.0	.50	7.0	>1.0	500	N	N	N	50	300
LC630C3	60 56 53	154 8 48	2.0	.50	7.0	>1.0	500	N	N	N	100	300
LC631C3	60 41 43	153 37 0	3.0	2.00	7.0	>1.0	1,000	N	N	N	100	300
LC632C3	60 42 2	153 35 30	5.0	.20	2.0	>1.0	1,000	N	N	N	50	500
LC633C3	60 41 53	153 34 28	3.0	.30	3.0	>1.0	700	N	N	N	20	300
LC634C3	60 42 25	153 33 8	2.0	.20	1.5	>1.0	500	N	N	N	20	200
LC635C3	60 43 5	153 32 43	7.0	.05	1.5	>1.0	300	N	N	N	<20	300
LC636C3	60 44 29	153 36 15	2.0	.05	1.0	>1.0	500	20	N	N	30	500
LC637C3	60 45 29	153 35 57	5.0	.10	1.0	>1.0	500	30	<500	N	<20	500
LC638C3	60 44 30	153 37 31	5.0	.20	1.0	>1.0	700	50	N	N	50	1,000
LC639C3	60 53 21	153 57 38	2.0	1.50	5.0	>1.0	700	N	N	N	150	300
LC640C3	60 52 37	154 3 23	3.0	1.00	5.0	>1.0	1,000	N	N	N	50	300
LC641C3	60 27 3	153 33 6	1.5	.20	10.0	>1.0	1,000	N	N	N	20	100
LC642C3	60 26 25	153 28 49	1.5	.10	10.0	>1.0	1,000	N	N	N	20	100
LC643C3	60 31 48	153 22 8	1.5	.10	10.0	>1.0	1,000	N	N	N	30	50
LC644C3	60 32 48	153 20 54	1.5	.10	10.0	>1.0	1,000	N	N	N	20	1,500
LC645C3	60 34 27	153 10 44	2.0	.30	10.0	>1.0	500	N	N	N	50	200
LC646C3	60 35 17	153 13 30	3.0	.50	10.0	>1.0	500	N	N	N	30	200
LC647C3	60 35 44	153 13 28	2.0	.50	10.0	>1.0	500	5	N	N	30	200
LC648C3	60 38 39	153 14 7	1.0	.07	10.0	>1.0	500	N	N	N	20	200
LC649C3	60 39 41	153 11 21	2.0	.20	10.0	>1.0	700	N	N	N	20	100
LC650C3	60 37 5	153 7 10	2.0	.20	10.0	>1.0	500	N	N	N	30	200
LC651C3	60 40 0	153 8 21	2.0	.50	10.0	>1.0	500	N	N	N	20	200
LC652C3	60 35 29	153 28 1	2.0	.20	10.0	>1.0	1,000	N	N	N	20	>5,000
LC653C3	60 35 43	153 26 51	1.5	.10	10.0	>1.0	1,500	N	N	N	<20	500
LC654C3	60 36 46	153 26 29	3.0	.20	1.5	>1.0	500	30	1,500	N	50	5,000
LC655C3	60 40 50	153 28 0	5.0	.20	1.5	>1.0	700	5	N	N	20	700
LC656C3	60 41 13	153 27 42	15.0	.50	2.0	>1.0	1,500	50	3,000	N	20	1,500
LC657C3	60 40 37	153 25 50	3.0	.10	5.0	>1.0	700	N	N	N	20	300
LC658C3	60 40 19	153 25 42	1.5	.10	5.0	>1.0	700	N	N	N	20	300
LC659C3	60 39 6	153 26 4	5.0	.20	3.0	>1.0	1,000	N	N	N	30	5,000
LC660C3	60 36 51	153 25 13	2.0	.10	10.0	>1.0	1,500	N	N	N	<20	100
LC661C3	60 56 34	154 16 15	2.0	.50	7.0	>1.0	700	N	N	N	300	300
LC662C3	60 38 8	153 19 41	1.5	.10	7.0	>1.0	1,000	N	N	N	<20	200
LC663C3	60 38 11	153 18 38	1.5	.10	10.0	>1.0	1,000	N	N	N	<20	150
LC664C3	60 37 41	153 18 6	1.0	.05	10.0	>1.0	1,000	N	N	N	<20	200

sample	S-BE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB
LC499C3	<2	200	N	10	200	100	300	50	200	50	500
LC581C3	5	<20	N	10	150	100	200	100	<50	30	3,000
LC582C3	<2	N	N	10	200	100	100	10	50	30	700
LC583C3	7	N	N	<10	100	70	200	20	200	<10	150
LC584C3	5	N	N	<10	100	100	500	300	200	<10	3,000
LC585C3	<2	N	N	10	200	100	100	20	100	50	700
LC586C3	<2	N	N	10	500	20	70	<10	<50	150	20
LC587C3	<2	N	N	50	1,000	100	70	<10	<50	200	20
LC588C3	<2	N	N	50	700	500	100	<10	50	200	20
LC629C3	<2	N	N	<10	150	20	500	N	50	<10	50
LC630C3	<2	N	N	<10	200	150	300	N	70	<10	30
LC631C3	<2	N	N	50	150	150	100	N	<50	70	20
LC632C3	<2	1,000	N	70	50	300	500	30	70	50	150
LC633C3	<2	N	N	100	50	700	300	N	50	70	150
LC634C3	<2	50	N	<10	20	50	500	N	<50	20	50
LC635C3	<2	20	N	100	<20	300	100	N	<50	20	100
LC636C3	<2	N	N	20	20	50	300	N	<50	<10	20
LC637C3	<2	N	N	100	20	200	300	N	<50	20	150
LC638C3	<2	N	N	70	100	150	300	N	<50	20	150
LC639C3	<2	N	N	<10	700	50	300	N	70	<10	30
LC640C3	<2	N	N	<10	150	50	200	N	50	<10	20
LC641C3	<2	N	N	<10	30	50	500	<10	100	<10	20
LC642C3	<2	N	N	<10	20	500	500	10	70	<10	20
LC643C3	<2	N	N	<10	20	100	300	N	150	<10	20
LC644C3	<2	N	N	<10	20	150	300	N	150	<10	100
LC645C3	<2	N	N	10	50	1,500	200	<10	50	<10	20
LC646C3	<2	N	N	10	150	1,500	200	<10	50	<10	30
LC647C3	<2	N	N	10	50	3,000	200	N	50	<10	50
LC648C3	<2	N	N	<10	20	700	200	30	100	<10	<20
LC649C3	<2	N	N	<10	100	2,000	300	20	150	<10	<20
LC650C3	<2	N	N	<10	100	2,000	150	10	50	<10	<20
LC651C3	<2	N	N	<10	100	3,000	150	10	50	<10	<20
LC652C3	<2	50	N	10	50	500	300	30	50	<10	20
LC653C3	<2	N	N	<10	30	300	500	10	150	<10	30
LC654C3	<2	30	N	20	20	300	300	20	50	<10	500
LC655C3	<2	N	N	50	20	500	300	100	<50	<10	200
LC656C3	<2	50	N	30	30	1,500	500	70	70	20	1,000
LC657C3	<2	N	N	70	<20	1,000	300	50	<50	<10	100
LC658C3	<2	N	N	10	20	500	500	70	100	<10	150
LC659C3	<2	N	N	20	20	500	100	10	50	<10	200
LC660C3	<2	N	N	10	50	50	500	15	150	<10	<20
LC661C3	<2	N	N	<10	150	200	200	N	50	<10	<20
LC662C3	<2	N	N	<10	30	300	500	70	150	<10	<20
LC663C3	<2	<20	N	<10	20	300	500	30	50	<10	50
LC664C3	<2	N	N	<10	20	200	500	20	150	<10	<20

Lake Clark Concentrates--continued

sample	S-SB	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
LC499C3	N	70	>1,000	200	100	700	1,000	N	>1,000	1,500
LC581C3	N	30	50	300	200	<100	100	N	>1,000	N
LC582C3	N	30	30	200	200	<100	200	N	>1,000	N
LC583C3	N	>100	500	200	100	<100	2,000	1,000	>1,000	500
LC584C3	N	>100	150	200	100	<100	2,000	N	>1,000	1,000
LC585C3	N	30	N	700	200	100	150	N	1,000	N
LC586C3	N	30	70	200	150	N	50	N	700	N
LC587C3	N	50	N	200	150	N	50	N	1,000	N
LC588C3	N	50	N	200	150	N	50	N	300	N
LC629C3	N	30	100	500	150	<100	500	N	>1,000	200
LC630C3	N	30	150	500	200	<100	500	N	>1,000	<200
LC631C3	N	20	<20	500	200	100	100	N	>1,000	<200
LC632C3	N	30	100	200	200	500	300	N	>1,000	<200
LC633C3	N	20	20	500	200	<100	200	N	>1,000	N
LC634C3	N	70	100	200	100	<100	1,000	N	>1,000	300
LC635C3	N	50	100	<200	200	100	700	N	>1,000	<200
LC636C3	N	100	100	<200	150	N	1,000	N	>1,000	300
LC637C3	N	70	70	<200	150	<100	1,000	N	>1,000	300
LC638C3	N	50	70	200	150	<100	700	N	>1,000	200
LC639C3	N	20	70	500	200	N	700	N	>1,000	<200
LC640C3	N	30	50	500	200	N	500	N	>1,000	<200
LC641C3	N	30	50	500	200	N	500	N	>1,000	N
LC642C3	N	30	50	200	200	N	700	N	>1,000	N
LC643C3	N	30	50	200	200	N	500	N	>1,000	N
LC644C3	N	30	50	500	200	N	500	N	>1,000	N
LC645C3	N	30	N	700	200	N	300	N	>1,000	N
LC646C3	N	30	N	500	200	N	300	N	>1,000	N
LC647C3	N	30	N	700	200	N	300	N	>1,000	N
LC648C3	N	30	20	300	200	N	300	N	>1,000	N
LC649C3	N	30	50	300	300	N	500	N	>1,000	N
LC650C3	N	30	N	500	200	N	200	N	>1,000	N
LC651C3	N	30	N	500	200	<100	200	N	>1,000	N
LC652C3	N	20	50	200	300	N	300	N	>1,000	N
LC653C3	N	20	70	300	300	N	500	N	>1,000	200
LC654C3	N	20	N	200	100	N	200	N	>1,000	<200
LC655C3	N	20	30	200	150	N	500	N	>1,000	<200
LC656C3	N	20	N	300	150	100	300	1,000	>1,000	N
LC657C3	N	30	50	200	300	N	700	N	>1,000	N
LC658C3	N	30	50	200	300	N	500	N	>1,000	<200
LC659C3	N	20	30	500	100	<100	200	N	>1,000	<200
LC660C3	N	20	50	500	300	N	700	N	>1,000	N
LC661C3	N	30	30	300	200	N	500	N	>1,000	N
LC662C3	N	20	50	200	300	N	500	N	>1,000	N
LC663C3	N	30	50	<200	300	<100	500	N	>1,000	<200
LC664C3	N	30	50	<200	300	N	500	N	>1,000	N

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA
LC665C3	60 38 45	153 15 59	1.5	.20	10.0	>1.0	1,000	N	N	N	<20	100
LC666C3	60 39 46	153 12 41	1.0	.10	10.0	>1.0	1,000	N	N	N	<20	500
LC667C3	60 39 6	153 3 8	2.0	.20	10.0	>1.0	700	N	N	N	50	300
LC668C3	60 40 56	153 4 33	2.0	.10	10.0	>1.0	500	N	N	N	20	300
LC669C3	60 41 44	153 1 2	1.0	.07	5.0	>1.0	500	N	N	N	<20	200
LC670C3	60 41 43	153 3 24	2.0	.07	7.0	>1.0	700	N	N	N	<20	50
LC671C3	60 41 17	153 7 54	2.0	.10	5.0	>1.0	700	N	N	N	<20	<50
LC672C3	60 41 42	153 8 22	2.0	.10	7.0	>1.0	1,000	N	N	N	<20	<50
LC673C3	60 42 41	153 10 23	1.0	.07	10.0	>1.0	1,000	10	N	50	<20	150
LC674C3	60 42 56	153 12 44	3.0	.10	5.0	>1.0	700	N	N	N	<20	300
LC675C3	60 44 41	153 13 41	1.0	.10	7.0	>1.0	700	N	N	N	<20	200
LC676C3	60 44 45	153 13 57	10.0	.20	3.0	>1.0	700	N	N	N	20	700
LC677C3	60 42 38	153 16 23	7.0	.10	3.0	>1.0	500	15	N	N	<20	1,000
LC678C3	60 42 20	153 19 49	1.0	.05	7.0	>1.0	1,000	N	N	N	<20	200
LC679C3	60 43 23	153 21 32	5.0	.10	10.0	>1.0	700	N	N	N	<20	300
LC680C3	60 42 23	153 17 21	5.0	.10	10.0	>1.0	1,500	N	N	N	<20	700
LC681C3	60 31 41	153 11 47	1.5	.30	7.0	.7	500	N	N	N	20	200
LC682C3	60 31 17	153 13 36	2.0	1.00	10.0	1.0	700	N	N	N	50	300
LC683C3	60 28 57	153 16 13	2.0	.30	7.0	>1.0	700	N	N	N	50	200
LC684C3	60 29 52	153 18 38	2.0	.70	5.0	>1.0	700	N	N	N	20	300
LC685C3	60 13 58	154 13 47	2.0	2.00	5.0	>1.0	1,000	N	N	N	70	300
LC686C3	60 45 51	154 16 36	3.0	5.00	7.0	1.0	1,500	N	N	N	20	200
LC687C3	60 48 5	154 20 31	5.0	5.00	7.0	.7	1,500	N	N	N	20	500
LC688C3	60 43 35	154 25 27	5.0	5.00	5.0	.5	2,000	N	N	N	70	200
LC689C3	60 43 9	154 24 45	3.0	5.00	7.0	1.0	1,000	N	N	N	20	300
LC690C3	60 42 11	154 32 21	10.0	5.00	7.0	1.0	1,000	N	N	N	1,500	700
LC691C3	60 42 26	154 31 51	7.0	3.00	7.0	1.0	1,000	N	N	N	2,000	500
LC692C3	60 39 11	154 31 40	3.0	2.00	10.0	1.0	1,000	N	N	N	N	700
LC693C3	60 37 50	154 39 56	3.0	1.50	5.0	1.0	1,000	N	N	N	N	300
LC694C3	60 34 27	153 3 21	2.0	.50	5.0	>1.0	500	N	N	N	N	300
LC695C3	60 34 46	153 1 58	1.5	.70	10.0	>1.0	1,000	N	N	N	N	300
LC696C3	60 35 17	153 1 40	1.0	.20	7.0	>1.0	700	N	N	N	N	100
LC697C3	60 30 2	153 4 41	2.0	.50	7.0	>1.0	1,000	N	N	N	N	700
LC698C3	60 28 55	153 5 20	1.5	1.00	7.0	>1.0	700	N	N	N	N	200
LC699C3	60 28 18	153 5 0	2.0	.50	5.0	>1.0	700	N	N	N	N	300
LC700C3	60 26 47	153 5 12	1.0	.20	7.0	>1.0	700	N	N	N	N	100
LC701C3	60 27 11	153 2 29	2.0	1.50	5.0	.2	1,000	N	N	N	N	500
LC702C3	60 25 45	153 3 51	3.0	1.50	3.0	.2	1,000	N	N	N	N	500
LC703C3	60 23 30	153 0 32	3.0	.50	3.0	.2	700	N	N	N	N	500
LC704C3	60 23 35	153 7 18	2.0	.50	3.0	.2	700	N	N	N	N	500
LC705C3	60 23 57	153 7 5	2.0	.70	5.0	>1.0	1,000	N	N	N	N	300
LC706C3	60 23 44	153 4 51	2.0	.20	3.0	.1	500	N	N	N	N	300
LC707C3	60 34 49	154 40 41	2.0	.70	2.0	>1.0	500	N	N	N	N	500
LC708C3	60 33 38	154 37 9	2.0	1.50	5.0	1.0	500	N	N	N	N	>5,000
LC709C3	60 34 33	154 32 59	2.0	.70	3.0	>1.0	700	N	N	N	N	500

Lake Clark Concentrates--continued

sample	S-BE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB
LC665C3	<2	N	N	10	20	500	500	30	100	<10	<20
LC666C3	<2	N	N	10	50	100	500	50	150	<10	50
LC667C3	<2	N	N	10	50	3,000	300	50	70	<10	20
LC668C3	<2	N	N	10	50	2,000	200	30	100	<10	20
LC669C3	<2	N	N	<10	30	100	200	20	150	<10	<20
LC670C3	<2	N	N	10	50	500	300	70	100	<10	<20
LC671C3	<2	<20	N	<10	50	100	300	50	50	<10	<20
LC672C3	<2	N	N	<10	50	500	500	70	50	<10	<20
LC673C3	<2	N	N	<10	50	500	500	50	50	<10	<20
LC674C3	<2	N	N	70	20	1,000	500	50	100	<10	200
LC675C3	<2	N	N	<10	20	500	500	70	100	<10	<20
LC676C3	<2	N	N	200	<20	700	300	50	100	20	150
LC677C3	<2	50	N	150	<20	1,000	500	50	50	N	500
LC678C3	<2	50	N	<10	<20	700	500	50	100	N	<20
LC679C3	<2	N	N	100	50	3,000	500	30	150	N	50
LC680C3	<2	N	N	50	20	500	500	500	100	N	50
LC681C3	<2	N	N	<10	<20	700	70	N	<50	N	N
LC682C3	<2	N	N	<10	100	2,000	150	N	<50	N	<20
LC683C3	<2	N	N	<10	70	700	300	10	100	N	<20
LC684C3	<2	N	N	<10	50	700	150	N	70	N	<20
LC685C3	<2	N	N	<10	200	50	100	N	50	50	<20
LC686C3	<2	N	N	20	1,000	30	50	N	50	100	<20
LC687C3	<2	N	N	20	700	30	50	N	<50	100	20
LC688C3	<2	N	N	20	500	20	50	N	<50	70	<20
LC689C3	<2	N	N	20	1,000	20	50	N	<50	100	<20
LC690C3	<2	N	N	20	1,000	150	50	N	<50	100	50
LC691C3	<2	N	N	15	500	150	70	N	<50	70	200
LC692C3	<2	N	N	10	500	50	100	N	<50	50	50
LC693C3	<2	N	N	10	500	50	70	N	<50	50	20
LC694C3	<2	N	N	10	70	500	200	20	100	<10	20
LC695C3	<2	N	N	<10	200	100	50	N	50	<10	20
LC696C3	<2	N	N	<10	50	200	500	30	100	<10	<20
LC697C3	<2	N	N	20	20	1,000	150	N	50	<10	<20
LC698C3	<2	N	N	10	500	200	200	N	50	<10	<20
LC699C3	<2	N	N	20	50	500	200	N	50	<10	<20
LC700C3	<2	N	N	10	100	200	500	20	150	<10	<20
LC701C3	<2	N	N	10	100	50	50	N	<50	50	<20
LC702C3	<2	N	N	10	100	20	50	N	<50	50	<20
LC703C3	<2	N	N	10	20	30	50	N	<50	<10	20
LC704C3	<2	N	N	10	20	20	50	N	<50	<10	<20
LC705C3	<2	N	N	10	20	50	100	10	50	<10	<20
LC706C3	<2	N	N	<10	20	30	50	N	<50	<10	<20
LC707C3	<2	N	N	<10	300	50	50	N	<50	20	20
LC708C3	<2	N	N	10	700	50	70	N	<50	50	20
LC709C3	<2	N	N	<10	200	20	50	N	<50	<10	<20

sample	S-SB	S-SC	S-SN	S-SR	S-V	S-W	S-Y	S-ZN	S-ZR	S-TH
LC665C3	N	30	30	300	300	N	300	N	>1,000	N
LC666C3	N	30	50	<200	300	100	500	N	>1,000	N
LC667C3	N	30	30	500	300	N	500	N	>1,000	N
LC668C3	N	30	20	500	300	N	300	N	>1,000	N
LC669C3	N	20	30	200	500	<100	500	N	>1,000	N
LC670C3	N	20	30	<200	300	<100	500	N	>1,000	N
LC671C3	N	20	30	<200	300	200	300	N	>1,000	N
LC672C3	N	20	50	<200	500	150	500	N	>1,000	N
LC673C3	N	20	50	<200	500	N	500	N	>1,000	N
LC674C3	N	20	50	<200	300	<100	300	N	>1,000	N
LC675C3	N	20	50	200	300	N	500	N	>1,000	N
LC676C3	N	20	30	200	300	<100	300	N	>1,000	N
LC677C3	N	20	150	200	150	150	500	N	>1,000	500
LC678C3	N	20	50	<200	300	N	300	N	>1,000	N
LC679C3	N	20	200	<200	300	100	1,000	N	>1,000	700
LC680C3	N	20	70	300	300	100	500	N	>1,000	N
LC681C3	N	20	<20	1,500	100	N	50	N	700	N
LC682C3	N	20	N	1,500	100	N	100	N	>1,000	N
LC683C3	N	20	<20	500	200	N	300	N	>1,000	N
LC684C3	N	20	N	700	200	N	100	N	>1,000	N
LC685C3	N	20	N	300	150	N	100	N	>1,000	N
LC686C3	N	50	N	300	200	N	300	N	>1,000	N
LC687C3	N	30	N	500	200	N	100	N	>1,000	N
LC688C3	N	30	N	300	200	N	50	N	>1,000	N
LC689C3	N	50	N	300	200	N	100	N	>1,000	N
LC690C3	N	50	N	300	200	100	100	N	>1,000	N
LC691C3	N	30	>1,000	300	200	300	200	N	>1,000	N
LC692C3	N	30	30	500	200	N	300	N	>1,000	<200
LC693C3	N	20	N	500	150	N	150	N	>1,000	N
LC694C3	N	20	N	500	200	N	200	N	>1,000	N
LC695C3	N	20	N	700	100	N	200	N	1,000	N
LC696C3	N	20	30	300	300	N	300	N	>1,000	N
LC697C3	N	20	N	1,000	200	N	200	N	>1,000	N
LC698C3	N	20	N	1,000	150	N	200	N	>1,000	N
LC699C3	N	20	N	700	200	N	200	N	>1,000	N
LC700C3	N	20	50	300	300	N	300	N	>1,000	N
LC701C3	N	20	N	500	100	N	20	N	100	N
LC702C3	N	20	N	700	100	N	<20	N	50	N
LC703C3	N	20	N	700	100	N	20	N	100	N
LC704C3	N	20	N	1,000	100	N	<20	N	100	N
LC705C3	N	20	N	700	200	N	100	N	500	N
LC706C3	N	20	N	700	70	N	<20	N	300	N
LC707C3	N	30	200	300	100	N	300	N	>1,000	N
LC708C3	N	30	1,000	300	200	N	200	N	>1,000	N
LC709C3	N	20	N	300	100	N	200	N	>1,000	N

Lake Clark Concentrates--continued

sample	LATITUDE	LONGITUD	S-FE%	S-MG%	S-CA%	S-TI%	S-MN	S-AG	S-AS	S-AU	S-B	S-BA
LC710C3	60 36 50	154 27 28	2.0	1.00	3.0	1.0	500	N	N	N	N	500
LC711C3	60 37 45	154 39 51	3.0	2.00	3.0	1.0	1,500	N	N	N	N	300
LC712C3	60 40 35	154 32 20	2.0	1.50	3.0	1.0	1,000	N	N	N	N	300
LC713C3	60 42 46	154 32 30	2.0	1.50	3.0	1.0	700	N	N	N	N	300
LC714C3	60 43 26	154 33 52	3.0	1.50	2.0	1.0	700	N	N	N	N	500
LC715C3	60 45 15	154 33 39	5.0	5.00	5.0	.7	1,500	1,500	1,000	>500	1,000	500
LC716C3	60 45 2	154 34 14	5.0	5.00	7.0	1.0	1,500	N	N	N	1,000	500

Lake Clark Concentrates--continued

sample	S-BE	S-BI	S-CD	S-CO	S-CR	S-CU	S-LA	S-MO	S-NB	S-NI	S-PB
LC710C3	<2	N	N	<10	200	20	50	N	<50	20	20
LC711C3	<2	N	N	20	200	20	200	N	<50	30	<20
LC712C3	<2	N	N	10	500	20	100	N	<50	50	<20
LC713C3	<2	N	N	10	700	30	100	N	<50	50	<20
LC714C3	<2	N	N	10	500	100	100	N	<50	50	100
LC715C3	<2	N	N	50	1,500	150	300	15	<50	100	200
LC716C3	<2	N	N	20	1,500	100	300	<10	<50	100	500