

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

**Analytical results of soil, stream sediment, panned
concentrate, and water samples from the Lik deposit,
northwestern Brooks Range, Alaska**

By

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INTRODUCTION

An orientation geochemical survey was conducted by the U. S. Geological Survey during the summer of 1990 at the Lik deposit, located in the Delong Mountains of the Brooks Range, 20 km northwest of the Red Dog deposit (Fig. 1). The Lik deposit is a sedimentary exhalative Zn-Pb-Ag sulfide deposit hosted in black shale and chert of Mississippian age (Forrest, 1983; Einaudi and Hitzman, 1986). The mineralized zone, where it occurs at or within approximately 45-50 m (150 ft) of the surface, trends northeast (Fig. 2) and dips steeply to the northwest (Forrest, 1983). Most of the deposit is concealed by thick tundra. The terrain overlying the deposit is flat to gently sloping.

This report includes the trace element data for soil, stream sediment, nonmagnetic heavy mineral concentrate, and water samples, as well as results of alkalinity, conductivity, and pH of water samples, and pH and conductivity of soil samples. These data are also available in digital form on diskette (Briggs and others, 1992).

FIELD METHODS

Soil samples were collected along three traverses, surveyed perpendicular to the northeast-trending strike of the mineralized zone (Fig. 2). The locations of these 3 traverses roughly coincide with cross-sections of subsurface lithologies determined from drill core (Forrest, 1983), which provide geologic control at depth. A fourth line, northeast of the known extent of mineralization, was also surveyed to assure background information. Soil samples were collected approximately every 15 m (50 ft) over the mineralized zone and every 30 m (100 ft) away from mineralization. A total of 88 sites were sampled. At least one site duplicate was collected from each traverse giving a total of 7 site duplicates. The duplicates were taken from the same hole and from the same soil horizon. Where possible, we collected from the B horizon, approximately 25-30 cm (10-12 in) below the black organic-rich surface layer. However, at several sites with poorly-developed soil horizons, the "C" horizon was sampled, which usually consisted of outcrop which had been broken in situ into rubble and talus by frost-heave action. At these sites, the fine-grained matrix material of the rubble was sampled. In some places, the rubble appeared to be colluvium, having been transported a short distance from actual outcrop. Permafrost was encountered at only one site (LK93), at approximately 60 cm (24 in) depth. At this site, the frozen gray-brown clay-rich B soil was sampled 10-13 cm (4-5 in) below a thick (50 cm or 20 in) organic-rich surface layer.

Stream sediment samples were collected at 16 out of the 17 sites surrounding the mineralized zone (Fig. 2). Where possible, several grab samples were collected along 25 ft of active alluvium and composited into a single sample. Each bulk sample was passed through a 2.0 mm (10 mesh) screen to remove coarse material. Approximately 1.2 kg of bulk sediment was bagged and saved for

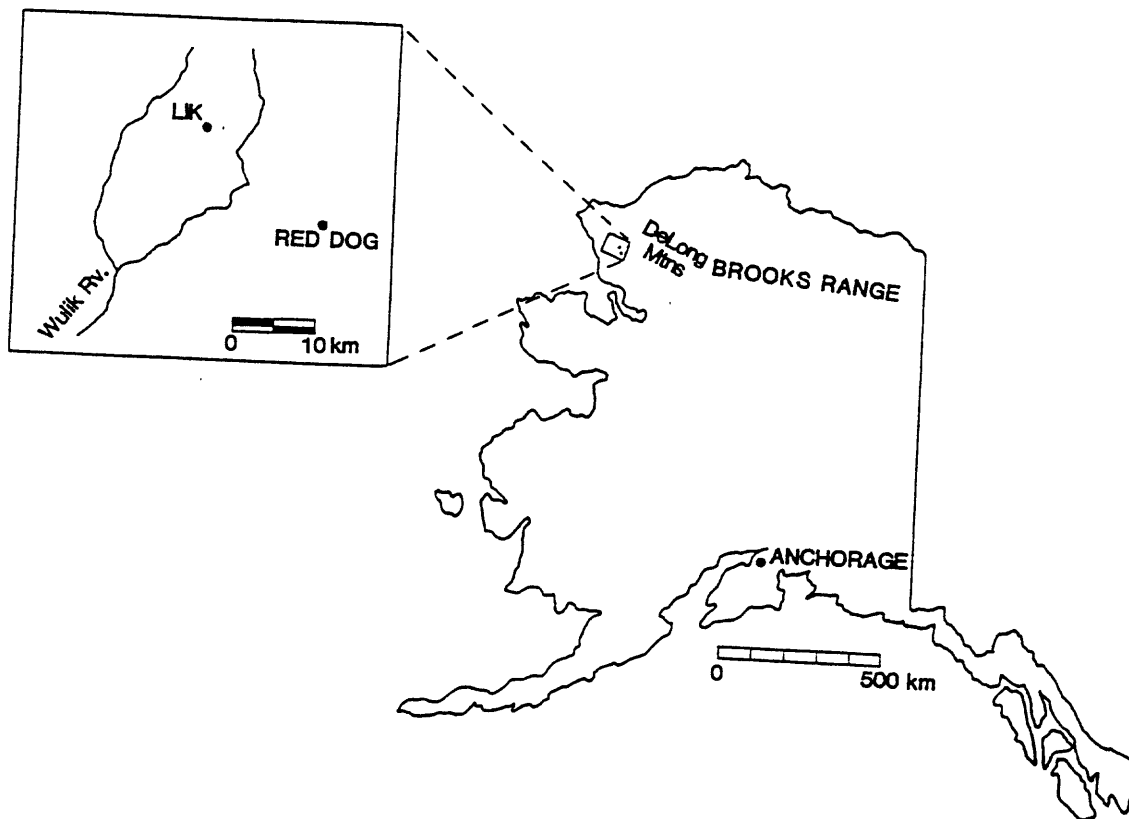


Figure 1. Location of the Lik deposit, northwestern Brooks Range.

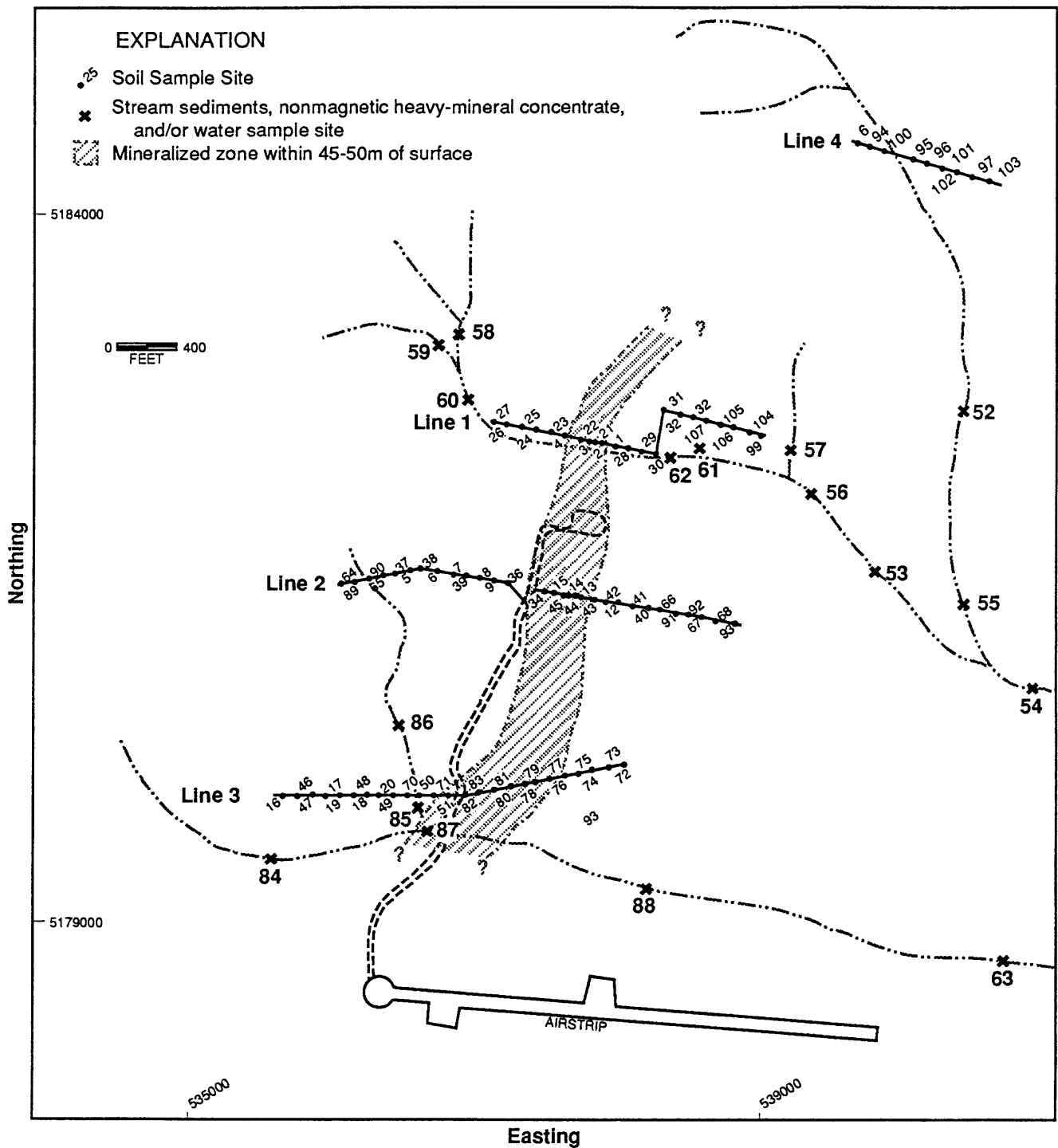


Figure 2. Locations of soil, stream sediment, heavy mineral concentrate, and water samples.

further preparation and analyses. The remaining material was

panned using a standard 14" gold pan to obtain a heavy mineral concentrate sample.

At each of 17 stream sites, the pH of the water was measured using a digital meter after adjusting for temperature which ranged from 5-12°C. Water samples were also collected at each of the 17 sites. Three separate samples, designated for different types of analyses, were obtained: (1) a filtered, acidified sample for trace element analyses, (2) a raw unacidified unfiltered sample for conductivity and alkalinity analyses, and (3) a filtered unacidified sample for anion analyses. The unacidified samples were refrigerated before and after shipment to the laboratory until analysis.

METHODS OF SAMPLE PREPARATION

In the laboratory, the soil and stream sediment samples were sieved to obtain 4 size fractions: (1) minus-80 mesh, (2) minus-30, plus-80 mesh, (3) minus-80, plus-230 mesh, and (4) minus-230 mesh fractions. These fractions are identified as A, B, C, and E suffixes, respectively, on field sample numbers listed in Appendices 1-3.

The heavy minerals of the panned concentrate samples were further separated from remaining light minerals such as quartz by a heavy liquid separation using bromoform (specific gravity approximately 2.8). The heavy minerals were separated into three fractions using a large electromagnet. The most magnetic material (largely magnetite) was discarded. The second fraction (largely ferromagnesian silicates and iron oxides) was archived. The third fraction (nonmagnetic at 1.0 ampere), which contains primarily nonmagnetic ore minerals, zircon, sphene, etc., was divided into two splits; one split was hand-ground for analysis; the other was saved for mineralogical analysis.

ANALYTICAL METHODS

To measure the soil pH, an approximate equal volume of soil and deionized water were added to a 25 ml plastic bottle and shaken vigorously to form a slurry. When most of the dissolved material had settled, the pH of the remaining turbid water was measured using a digital pH meter. Conductivity of soils was measured by pressure squeezing water from a saturated paste. The soil was first sieved using a 2.0 mm screen to remove coarse material. The sample was then saturated with deionized water until a glistening appearance was reached and limited movement occurred upon tilting. The amount of water required to achieve this state varied with the weight of the sample and the texture of the soil. After sitting for a twenty-four hour period, the soil was placed in a Baroid Press under 30 lbs of pressure until all or most of the water was extracted. Because of the small size of some samples, and consequently the limited amount of water able to be removed, a 1:10

mL dilution was used with all samples to maintain consistency in the analyses. The electrical conductivity of the water was measured directly (in micromhos/cm) with a conductivity meter.

At each of the stream sites field pH of the water was determined by pH electrode. Two temperature-corrected buffers (4 and 7) were used to calibrate the pH meter to ensure accuracy of the pH.

Alkalinity (Orion Research, Inc., 1978) and specific conductivity (Skougstad and others, 1979) were measured using a raw unfiltered, unacidified stream sample.

Anions were determined on a filtered unacidified stream sample using ion chromatography (Fishman and Pyen, 1979). The relative standard deviation for the method is about 10 percent.

Soil and stream sediment samples were analyzed for 40 elements using inductively coupled plasma-atomic emission spectrometry (ICP-AES). The following elements were analyzed for by ICP-AES but were not detected at the following limits shown in ppm: Ag (2), As (10), Au (8), Bi (10), Cd (2), Ho (4), Ta (40), and U (100). Each sample was dissolved using a low-temperature multi-acid digestion with concentrated hydrochloric, hydrofluoric, nitric, and perchloric acids (Crock and others, 1983). Lower limits of determination are shown in Table 1. The relative standard deviation for replicate determinations of most elements is about 5 percent.

An organometallic halide extraction method (Motooka, 1988) was used to determine 10 pathfinder elements in soil and stream sediment samples by ICP-AES. A hydrochloric acid-hydrogen peroxide digestion followed by extraction with 10 percent aliquot 3,3,6-diisobutylketone produces the organometallic halide solution. Gold was analyzed for but was below the 0.15 ppm detection limit. Lower limits of determination are shown in Table 2. The relative standard deviation for most elements is about 5 percent.

Water samples were analyzed for 28 elements by ICP-AES. In order to detect most of the trace elements in water a 20:1 preconcentration by evaporation was performed (Thompson and Walsh, 1989). The following elements were analyzed for but not detected at the following limits shown in ppb: Ag (2), Be (1), Bi (10), Co (3), Cr (1), Cu (10), Ga (5), K (1), Mo (10), Pb (10), Sn (6), V (6), Zr (1). The lower limits of determination are listed in Table 1. The relative standard deviation for the method is 10 percent.

The nonmagnetic heavy-mineral concentrate samples were analyzed semi-quantitatively for 37 elements using direct-current arc emission spectrographic method (Grimes and Marranzino, 1968). The following elements were analyzed for but were below the detection limit shown in ppm: As (500), Au (20), B (20), Be (2), Bi (20), Ga (10), Ge (20), Mo (10), Na (0.5), Nb (50), Pd (5), Pt (20), Sb (200), Sc (10), Th (200), W (50). The upper and lower limits of determination are shown in Table 3. Precision of the method is 5-20 percent relative standard deviation depending on the element and sample matrix.

Table 1. Analytical lower limits of determination for 40 element Inductively-coupled plasma-atomic emission spectroscopy (ICP-AES).

Element	Lower Limit	
	Soils/stream sediments	Water
Al	0.005 %	0.1 ppm
Ca	0.005 %	0.02 ppm
Fe	0.005 %	0.005 ppm
K	0.05 %	1 ppm
Mg	0.005 %	0.01 ppm
Na	0.005 %	0.2 ppm
P	0.005 %	—
Si	—	0.01 ppm
Ti	0.005 %	1 ppb
Ag	2 ppm	2 ppb
As	10 ppm	—
B	—	10 ppb
Ba	1 ppm	2 ppb
Be	1 ppm	1 ppb
Bi	10 ppm	10 ppb
Cd	2 ppm	1 ppb
Ce	4 ppm	—
Co	1 ppm	3 ppb
Cr	1 ppm	1 ppb
Cu	1 ppm	10 ppb
Eu	2 ppm	—

Element	Lower Limit	
	Soils/stream sediments	Water
Ga	4 ppm	5 ppb
Ho	4 ppm	—
La	2 ppm	—
Li	2 ppm	4 ppb
Mn	4 ppm	1 ppb
Mo	2 ppm	10 ppb
Nb	4 ppm	—
Nd	4 ppm	—
Ni	2 ppm	5 ppb
Pb	4 ppm	10 ppb
Sc	2 ppm	—
Sn	10 ppm	6 ppb
Sr	2 ppm	0.5 ppb
Ta	40 ppm	—
Th	4 ppm	—
U	100 ppm	—
V	2 ppm	6 ppb
Y	2 ppm	—
Yb	1 ppm	—
Zn	2 ppm	3 ppb
Zr	—	1 ppb

— Not analyzed
ppm parts per million
ppb parts per billion

**Table 2. Analytical limits of determination
for 10-element Inductively-coupled plasma-atomic
emission spectroscopy (ICP-AES)[all values in ppm].**

Element	Lower Limit
Ag	0.045
As	0.60
Au	0.15
Bi	0.60
Cd	0.05
Cu	0.05
Mo	0.09
Pb	0.60
Sb	0.60
Zn	0.05

Table 3. Analytical limits of determination for nonmagnetic heavy-mineral concentrate samples using semi-quantitative emission spectrography [all values in parts per million unless otherwise noted].

Element	Lower Limit	Upper Limit
Ca %	0.1	50
Fe %	0.1	50
Mg %	0.05	20
Na %	0.5	10
P %	0.5	20
Ti %	0.005	2
Ag	0.1	10,000
As	500	20,000
Au	20	1,000
B	20	5,000
Ba	50	10,000
Be	2	2,000
Bi	20	2,000
Cd	50	1,000
Co	20	5,000
Cr	20	10,000
Cu	10	50,000
Ga	10	1,000
Ge	20	200
La	100	2,000
Mn	20	10,000
Mo	10	5,000
Nb	50	5,000
Ni	10	10,000
Pb	20	50,000
Sb	200	20,000
Sc	10	200
Sn	20	2,000
Sr	200	10,000
Th	200	5,000
V	20	20,000
W	50	20,000
Y	20	5,000
Zn	500	20,000
Zr	20	2,000
Pt	20	2,000
Pd	5	2,000

EXPLANATION OF DATA APPENDICES

Appendices 1-5 contain analytical results for soil, stream sediment, nonmagnetic heavy mineral concentrate, and water samples. Locations are given in northing and easting (feet). The northing and eastings were converted to latitude and longitude. The latitude and longitude locations for soils are listed in Appendix 1, and those for stream sites are listed in Appendix 3. All other appendices list easting and northing only. Most element concentrations are in parts per million (ppm) unless otherwise noted (i.e., Ca, Fe, Mg, etc. are in percent). The following additional codes and abbreviations apply to all appendices:

<	element observed but value less than lower limit of determination (lower limit indicated by number following symbol)
N	element was looked for but not detected at lower limit of determination (lower limit indicated by number following N).
>	value greater than upper limit of determination (upper limits indicated by number following symbol).
*	Next to element symbol indicates analytical method is 40 element Inductively Coupled Plasma-Atomic Emission spectrographic analysis (ICP-AES); complete digestion.
+	Next to element symbol indicates analytical method is 10 element Inductively Coupled Plasma-Atomic Emission spectrographic (ICP-AES) analysis; partial digestion.
S	Next to element symbol indicates analytical method is emission spectrographic analysis.
0.0B	Not analyzed due to insufficient sample
Type	Refers to size fraction of soils and stream sediments: 1 = -80 mesh 2 = -30, +80 mesh 3 = -80, +230 mesh 4 = -230 mesh
Line	Number of soil traverse as shown on Figure 2.
D1	Suffix on field number indicates site duplicate
D2	Suffix on field number indicates analytical duplicate

ROCK ANALYSIS STORAGE SYSTEM

The geochemical data were entered into the Branch of Geochemistry's data base. This data base contains both descriptive geological information and the analytical data. Any or all of this information may be retrieved and converted to a binary form (STATPAC) for computerized statistical analysis or publication (VanTrump and Miesch, 1977). The data in this report are also available on diskette (Briggs and others, 1991).

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Appendix 1. Results of pH and conductivity analyses of soil samples from the Lik deposit.

Sample Number	Easting	Northing	Latitude	Longitude	Line	pH	Conductivity (μ mhos/cm)
LK1S	538039	5182355	68 10 21	163 11 33	1	5.50	220
LK2S	537948	5182370	68 10 21	163 11 36	1	5.65	217
LK3S	537845	5182389	68 10 21	163 11 39	1	5.95	139
LK4S	537698	5182420	68 10 22	163 12 12	1	4.15	172
LK5S	536617	5181490	68 10 14	163 12 06	2	6.40	256
LK6S	536806	5181480	68 10 13	163 12 06	2	5.75	146
LK7S	536901	5181460	68 10 14	163 12 04	2	5.15	221
LK8S	537101	5181422	68 10 13	163 11 59	2	4.35	99
LK9S	537198	5181404	68 10 13	163 11 56	2	5.40	117
LK10S	537416	5181260	68 10 12	163 11 50	2	4.80	55
LK11S	537415	5181261	68 10 12	163 11 50	2	5.20	141
LK12S	538082	5181252	68 10 12	163 11 32	2	5.35	267
LK13S	537792	5181297	68 10 12	163 11 40	2	4.55	169
LK14S	537693	5181314	68 10 13	163 11 43	2	4.75	210
LK15S	537592	5181336	68 10 13	163 11 45	2	4.75	151
LK16S	535659	5179912	68 10 01	163 12 37	3	5.45	139
LK17S	535961	5179908	68 10 01	163 12 29	3	5.25	243
LK18S	536256	5179906	68 10 01	163 12 21	3	5.15	187
LK19S	536057	5179908	68 10 01	163 12 27	3	6.00	383
LK20S	536353	5179906	68 10 01	163 12 19	3	5.20	213
LK21S	537894	5182378	68 10 22	163 11 37	1	5.90	140
LK22S	537791	5182402	68 10 22	163 11 40	1	5.00	127
LK23S	537600	5182439	68 10 22	163 11 45	1	4.55	148
LK24S	537498	5182459	68 10 23	163 11 48	1	5.90	232
LK25S	537406	5182477	68 10 23	163 11 50	1	4.80	274
LK26S	537305	5182494	68 10 23	163 11 53	1	5.10	87
LK27S	537215	5182513	68 10 23	163 11 55	1	4.85	126
LK28S	538135	5182333	68 10 21	163 11 31	1	7.20	375
LK29S	538238	5182314	68 10 21	163 11 28	1	6.85	259
LK30S	538331	5182298	68 10 21	163 11 26	1	5.75	211
LK31S	538375	5182594	68 10 24	163 11 24	1	5.65	191
LK32S	538478	5182573	68 10 24	163 11 22	1	6.30	196
LK33S	538580	5182551	68 10 23	163 11 19	1	5.80	156
LK34S	537537	5181344	68 10 13	163 11 47	2	3.95	248
LK36S	537295	5181388	68 10 13	163 11 53	2	4.30	117
LK37S	536512	5181470	68 10 14	163 12 14	2	7.15	162
LK38S	536707	5181503	68 10 14	163 12 09	2	5.70	147
LK39S	537004	5181441	68 10 14	163 12 01	2	4.45	135
LK40S	538275	5181217	68 10 12	163 11 27	2	7.15	462
LK41S	538182	5181233	68 10 12	163 11 30	2	6.10	91
LK42S	537979	5181270	68 10 12	163 11 35	2	6.65	140
LK43S	537880	5181285	68 10 12	163 11 38	2	5.70	201
LK44S	537741	5181307	68 10 12	163 11 41	2	4.85	70
LK45S	537639	5181327	68 10 13	163 11 44	2	4.85	102
LK46S	535760	5179911	68 10 01	163 12 35	3	5.30	193
LK47S	535862	5179909	68 10 00	163 12 32	3	5.65	220
LK48S	536158	5179908	68 10 00	163 12 24	3	5.95	130
LK49S	536455	5179904	68 10 00	163 12 16	3	4.90	161
LK50S	536654	5179906	68 10 00	163 12 11	3	4.95	78
LK51S	536857	5179906	68 10 00	163 12 05	3	5.50	181
LK64S	536113	5181400	68 10 13	163 12 25	2	7.15	08
LK65S	536422	5181453	68 10 14	163 12 17	2	7.00	219
LK66S	538378	5181196	68 10 11	163 11 24	2	6.95	179
LK67S	538675	5181145	68 10 11	163 11 16	2	6.95	161
LK68S	538770	5181129	68 10 11	163 11 14	2	6.35	146
LK69S	539709	5184493	68 10 41	163 10 49	4	6.15	159

Appendix 1. Results of pH and conductivity analyses of soil samples from the Lik deposit (Cont.)

Sample Number	Easting	Northing	Latitude	Longitude	Line	pH	Conductivity (µmhos/cm)
LK70S	536553	5179903	68 10 01	163 12 13	3	4.50	240
LK71S	536752	5179904	68 10 01	163 12 08	3	5.30	284
LK72S	538073	5180104	68 10 02	163 11 32	3	7.30	161
LK73S	537964	5180081	68 10 02	163 11 35	3	5.80	250
LK74S	537868	5180065	68 10 02	163 11 38	3	5.40	139
LK75S	537766	5180046	68 10 01	163 11 41	3	6.30	211
LK76S	537668	5180030	68 10 01	163 11 43	3	6.00	211
LK77S	537571	5180010	68 10 01	163 11 46	3	6.15	188
LK78S	537476	5179993	68 10 01	163 11 48	3	6.50	239
LK79S	537379	5179977	68 10 01	163 11 51	3	6.20	195
LK80S	537290	5179963	68 10 01	163 11 53	3	5.00	183
LK81S	537160	5179936	68 10 00	163 11 57	3	4.85	170
LK82S	537061	5179919	68 10 00	163 11 60	3	5.70	258
LK83S	536961	5179904	68 10 00	163 12 02	3	5.65	210
LK89S	536219	5181417	68 10 13	163 12 22	2	7.55	475
LK90S	536316	5181436	68 10 14	163 12 20	2	6.40	184
LK91S	538475	5181178	68 10 11	163 11 22	2	4.90	109
LK92S	538574	5181161	68 10 11	163 11 19	2	6.85	179
LK93S	538926	5181099	68 10 11	163 11 10	2	7.45	320
LK94S	539809	5184469	68 10 40	163 10 46	4	6.00	210
LK95S	540143	5184373	68 10 39	163 10 37	4	6.75	159
LK96S	540238	5184348	68 10 39	163 10 34	4	6.45	281
LK97S	540607	5184249	68 10 38	163 10 24	4	5.45	237
LK99S	539065	5182439	68 10 22	163 11 06	1	6.90	111
LK100S	539904	5184441	68 10 40	163 10 43	4	6.10	276
LK101S	540333	5184321	68 10 39	163 10 32	4	6.85	300
LK102S	540438	5184294	68 10 39	163 10 29	4	6.80	434
LK103S	540698	5184227	68 10 38	163 10 22	4	6.90	292
LK104S	538971	5182467	68 10 23	163 11 08	1	5.05	112
LK105S	538773	5182511	68 10 23	163 11 14	1	4.85	178
LK106S	538871	5182490	68 10 23	163 11 11	1	5.05	159
LK107S	538680	5182529	68 10 23	163 11 16	1	5.15	176

Appendix 2. Analytical results of soil samples from the Lik deposit (all values in ppm unless otherwise noted).

Sample Number	Eastings	Northing	Type	Line	Al %	Ca %	Fe %	K %	Mg %	Na %	P %	Ti %	Mn %	Ba %
LK1SA	538039	5182355	1	1	6.83	0.54	4.22	1.42	1.17	0.89	0.08	0.41	377	2440
LK2SA	537948	5182370	1	1	6.57	0.24	4.04	1.45	1.04	0.91	0.07	0.42	672	1850
LK3SA	537845	5182389	1	1	5.46	0.34	3.72	1.18	0.62	0.48	0.06	0.29	551	2410
LK4SA	537698	5182420	1	1	5.03	0.09	3.41	1.16	0.46	0.50	0.08	0.34	454	932
LK5SA	536617	5181490	1	2	6.71	0.80	4.31	1.44	0.81	0.60	0.13	0.35	928	911
LK6SA	536806	5181480	1	2	7.64	0.40	4.67	1.55	1.10	0.82	0.07	0.41	917	1180
LK7SA	536901	5181460	1	2	7.37	0.22	4.66	1.59	1.07	1.15	0.06	0.47	1390	1130
LK8SA	537101	5181422	1	2	6.58	0.25	4.89	1.33	0.92	0.67	0.09	0.38	859	837
LK9SA	537198	5181404	1	2	6.18	0.14	4.96	1.52	0.68	0.66	0.09	0.48	1550	2750
LK10SA	537416	5181260	1	2	6.09	0.15	6.55	1.42	0.69	0.82	0.13	0.43	2240	176
LK10SAD2	537416	5181260	1	2	6.13	0.15	6.61	1.43	0.69	0.83	0.14	0.43	2270	186
LK11SA	537415	5181261	1	2	5.92	0.12	4.34	1.27	0.75	0.58	0.08	0.35	850	1360
LK12SA	538082	5181252	1	2	6.33	0.31	3.48	1.28	0.82	0.67	0.06	0.35	465	613
LK13SA	537792	5181297	1	2	6.24	0.20	3.80	1.41	0.74	0.65	0.15	0.36	337	3870
LK14SA	537693	5181314	1	2	6.67	0.17	4.41	1.53	0.77	0.67	0.18	0.36	1060	3300
LK15SA	537592	5181336	1	2	1.87	0.03	3.50	0.45	0.14	0.14	0.05	0.16	54	877
LK16SA	535659	5179912	1	3	7.31	0.18	4.69	1.98	0.85	0.49	0.07	0.41	1670	4370
LK17SA	535961	5179908	1	3	7.21	0.46	2.39	1.07	0.84	0.82	0.12	0.32	175	2070
LK18SA	536256	5179906	1	3	7.91	0.31	4.72	1.77	1.06	0.86	0.06	0.49	999	2400
LK19SA	536057	5179908	1	3	9.16	0.86	2.60	2.00	0.93	0.43	0.06	0.23	258	967
LK20SA	536353	5179906	1	3	7.53	0.13	4.84	1.64	0.82	0.79	0.06	0.46	808	884
LK20SAD2	536353	5179906	1	3	7.45	0.12	4.80	1.62	0.81	0.79	0.06	0.46	808	861
LK21SA	537894	5182378	1	1	6.75	0.50	3.80	1.38	0.76	0.54	0.12	0.38	276	2430
LK22SA	537791	5182402	1	1	6.02	0.11	4.35	1.28	0.66	0.53	0.06	0.32	531	1150
LK23SA	537600	5182439	1	1	3.90	0.06	2.63	0.80	0.33	0.40	0.08	0.25	341	865
LK24SA	537498	5182459	1	1	5.99	0.12	3.99	1.51	0.57	0.53	0.07	0.36	1810	3110
LK25SA	537406	5182477	1	1	5.04	0.13	4.17	1.16	0.58	0.57	0.08	0.32	1010	1100
LK26SA	537305	5182494	1	1	6.65	0.17	4.63	1.20	0.76	0.61	0.10	0.44	1090	992
LK27SA	537215	5182513	1	1	7.03	0.18	4.49	1.43	0.87	0.70	0.09	0.41	722	1040
LK28SA	538135	5182333	1	1	7.92	0.54	4.70	1.98	1.14	0.75	0.09	0.41	883	3320
LK29SA	538238	5182314	1	1	6.90	0.53	4.49	1.74	1.03	0.64	0.08	0.40	1060	3150
LK30SA	538331	5182298	1	1	6.34	0.42	3.97	1.54	1.02	0.83	0.08	0.41	1260	3140
LK30SAD2	538331	5182298	1	1	6.33	0.42	3.94	1.53	1.01	0.83	0.08	0.43	1260	3140
LK31SA	538375	5182594	1	1	5.74	0.38	3.55	1.19	0.95	0.82	0.06	0.39	372	1440
LK32SA	538478	5182573	1	1	6.28	0.39	3.83	1.35	1.14	0.90	0.07	0.43	423	2170
LK33SA	538580	5182551	1	1	6.83	0.29	4.52	1.39	0.86	0.72	0.07	0.37	422	1320
LK34SA	537537	5181344	1	2	4.85	0.23	4.21	1.28	0.43	0.53	0.28	0.29	494	185
LK36SA	537295	5181388	1	2	6.17	0.18	4.44	1.18	0.63	0.63	0.07	0.39	551	1040
LK37SA	536512	5181470	1	2	7.46	0.65	4.57	1.95	0.99	0.73	0.06	0.42	1190	974
LK38SA	536707	5181503	1	2	8.00	0.55	4.64	1.89	1.10	0.78	0.05	0.41	820	1540
LK38SAD1	536707	5181503	1	2	8.15	0.53	4.88	1.93	1.10	0.78	0.05	0.48	864	1500
LK39SA	537004	5181441	1	2	6.66	0.17	4.52	1.22	0.65	0.70	0.07	0.45	2110	731
LK40SA	538275	5181217	1	2	6.09	0.95	4.11	1.25	0.82	0.58	0.09	0.34	661	611
LK40SAD1	538275	5181217	1	2	6.02	1.00	3.96	1.26	0.82	0.57	0.09	0.33	643	611
LK41SA	538182	5181233	1	2	6.48	0.37	4.75	1.25	0.81	0.57	0.09	0.36	694	644
LK41SAD2	538182	5181233	1	2	6.47	0.37	4.75	1.24	0.80	0.57	0.09	0.36	696	662
LK42SA	537979	5181270	1	2	7.00	0.26	4.56	1.50	0.83	0.69	0.06	0.43	410	2840
LK43SA	537880	5181285	1	2	6.90	0.31	4.60	1.54	0.86	0.66	0.10	0.42	625	3260
LK44SA	537741	5181307	1	2	6.00	0.21	4.04	1.26	0.64	0.49	0.21	0.37	179	1940

Appendix 2. Analytical results of soil samples from the Lik deposit (Cont.).

Sample Number	Ba	Ce	Co	Cr	Cu	Eu	Ga	La	Li	Mo	Nb	Nd	Ni	Pb	Sc	Sn	Sr
LK1SA	2	55	18	134	48	<2	15	32	57	3	7	33	70	26	17	<10	98
LK2SA	2	59	23	123	40	<2	14	32	56	<2	7	31	72	18	15	20	88
LK3SA	2	59	18	113	36	<2	12	30	50	4	5	29	72	110	13	<10	96
LK4SA	1	50	11	105	55	<2	13	25	34	8	5	22	44	29	11	<10	79
LK5SA	2	60	18	117	29	<2	16	32	51	<2	8	28	48	23	16	<10	70
LK6SA	2	66	22	129	42	<2	16	30	59	<2	8	24	62	21	16	<10	82
LK7SA	2	70	26	122	53	<2	17	33	66	<2	8	31	58	23	17	<10	93
LK8SA	1	58	18	120	32	<2	16	28	53	<2	7	25	43	28	13	<10	75
LK9SA	2	82	26	112	194	<2	16	33	48	12	8	34	81	50	20	<10	146
LK10SA	2	72	39	122	227	<2	16	26	54	19	7	32	125	36	26	<10	209
LK10SAD2	2	74	40	124	229	<2	16	26	55	19	6	33	128	40	26	<10	212
LK11SA	1	49	24	96	72	<2	14	25	56	7	7	24	58	33	13	<10	90
LK12SA	2	59	16	128	29	<2	15	34	45	<2	7	27	60	25	13	<10	81
LK13SA	2	60	12	144	68	<2	15	33	44	11	8	29	41	66	14	<10	161
LK14SA	2	62	20	140	112	<2	17	33	43	14	7	32	40	58	17	<10	212
LK15SA	<1	22	2	65	44	<2	5	12	29	14	<4	13	11	332	5	<10	82
LK16SA	2	69	28	123	104	<2	20	33	61	8	7	33	57	33	21	<10	118
LK17SA	2	48	15	143	34	<2	16	26	77	<2	6	25	95	44	17	<10	98
LK18SA	2	77	24	137	71	<2	18	39	66	3	11	36	65	42	20	<10	101
LK19SA	2	41	24	172	73	<2	21	24	103	<2	6	21	137	211	22	<10	129
LK20SA	2	67	18	130	31	<2	19	32	53	3	9	27	42	40	14	<10	78
LK20SAD2	2	66	18	128	31	<2	19	32	53	3	10	27	41	39	14	<10	77
LK21SA	2	57	12	132	36	<2	16	31	55	5	9	28	51	667	15	<10	106
LK22SA	2	51	18	119	42	<2	14	26	57	5	7	23	66	170	12	<10	79
LK23SA	<1	41	8	96	41	<2	11	21	29	26	5	19	34	20	9	<10	67
LK24SA	2	66	28	98	116	2	15	32	53	11	6	37	83	25	18	<10	130
LK25SA	1	50	18	113	78	<2	12	25	60	26	7	24	67	24	13	<10	146
LK26SA	2	57	16	124	35	<2	17	28	52	3	8	23	49	26	14	<10	75
LK27SA	2	55	16	140	40	<2	17	29	49	5	9	24	44	27	15	<10	83
LK28SA	2	60	24	151	57	<2	19	33	60	3	7	32	83	24	20	<10	117
LK29SA	2	61	25	137	50	<2	16	35	58	3	6	34	78	38	19	<10	127
LK30SA	2	58	24	127	47	<2	15	31	49	3	7	30	73	28	16	<10	114
LK30SAD2	2	61	24	125	46	<2	15	32	49	3	7	30	75	27	16	<10	115
LK31SA	1	47	14	115	31	<2	13	27	48	3	7	22	56	26	12	<10	80
LK32SA	2	55	17	126	42	<2	15	32	54	<2	6	33	70	31	16	<10	107
LK33SA	2	54	14	134	28	<2	16	29	58	3	6	26	46	399	14	<10	92
LK34SA	2	46	11	143	99	<2	13	28	37	21	6	28	42	28	13	<10	232
LK36SA	1	52	16	116	51	<2	15	27	41	6	8	23	47	37	13	<10	93
LK37SA	2	71	23	141	43	<2	17	38	47	3	9	35	64	22	19	<10	83
LK38SA	2	70	21	135	44	<2	19	39	58	<2	7	36	65	18	19	<10	84
LK38SAD1	2	73	21	142	46	2	18	41	60	<2	11	38	69	17	20	<10	88
LK39SA	1	59	21	116	41	<2	28	46	46	2	11	26	53	24	15	<10	76
LK40SA	2	57	17	133	28	<2	13	38	48	3	7	34	72	21	15	<10	86
LK40SAD1	2	57	16	131	28	<2	14	39	47	2	6	34	72	21	16	<10	88
LK41SA	2	63	19	136	26	<2	14	36	54	2	8	32	117	22	14	<10	75
LK41SAD2	2	65	19	139	26	<2	14	36	54	3	7	32	119	23	14	<10	75
LK42SA	2	68	19	135	78	<2	16	33	50	6	10	33	53	33	19	<10	114
LK43SA	2	64	18	146	67	<2	16	32	50	6	10	29	46	62	16	<10	127
LK44SA	2	56	8	182	55	<2	15	33	43	12	9	29	34	71	14	<10	149

Appendix 2. Analytical results of soil samples from the Lik deposit (Cont.)

Sample Number	Th	* V	* Y	* Yb	* Zn	Ag ⁺	As ⁺	Bi ⁺	Cd ⁺	Cu ⁺	Mo ⁺	Pb ⁺	Sb ⁺	Zn ⁺
LK1SA	11	162	29	3	136	0.23	7.6	N 0.60	0.28	38	2.8	26	1.1	99
LK2SA	11	148	26	2	186	0.098	7.0	N 0.60	0.57	35	2.0	20	1.0	150
LK3SA	9	137	29	3	200	0.44	9.3	N 0.60	1.2	28	3.3	130	1.3	130
LK4SA	8	191	12	2	190	0.21	8.7	N 0.60	0.18	47	6.3	31	2.0	140
LK5SA	9	147	27	3	106	0.093	9.4	N 0.60	0.13	23	2.0	23	0.61	59
LK6SA	10	167	13	2	110	0.059	5.6	N 0.60	0.15	34	1.8	20	0.82	81
LK7SA	10	164	19	2	116	0.11	11	N 0.60	0.15	47	2.4	25	1.3	91
LK8SA	9	154	12	1	121	0.088	6.4	N 0.60	0.18	25	1.8	30	0.83	73
LK9SA	8	197	18	2	254	0.10	23	1.0	0.71	170	9.4	59	3.0	180
LK10SA	6	346	22	2	359	0.75	51	1.1	2.8	190	16	53	4.1	270
LK10SAD2	7	350	22	3	361	0.75	51	1.0	2.8	190	16	53	3.8	260
LK11SA	7	185	11	1	221	0.10	8.4	N 0.60	0.32	55	4.5	35	1.4	130
LK12SA	9	141	19	2	162	0.15	3.8	N 0.60	0.34	22	1.2	27	0.70	110
LK13SA	10	291	18	2	171	1.2	11	N 0.60	0.32	55	8.7	77	2.4	110
LK14SA	10	334	21	2	213	1.6	15	N 0.60	0.60	93	12	71	3.7	150
LK15SA	4	136	13	1	78	3.5	12	N 0.60	0.27	35	9.2	350	33	57
LK16SA	11	171	20	2	141	0.12	9.3	0.68	0.10	88	7.5	37	1.7	99
LK17SA	9	155	19	2	308	0.47	2.0	N 0.60	1.1	30	1.0	49	0.84	150
LK18SA	12	183	23	3	147	0.28	7.0	N 0.60	0.084	54	2.8	49	1.3	110
LK19SA	7	246	20	2	539	2.7	N 0.60	N 0.60	1.8	58	0.74	250	2.4	290
LK20SA	9	186	12	2	101	N 0.045	5.2	N 0.60	0.11	25	2.4	45	0.67	71
LK20SAD2	9	185	12	2	98	N 0.045	5.6	N 0.60	0.11	25	2.4	45	0.79	71
LK21SA	8	193	20	2	204	0.58	7.4	N 0.60	0.24	32	4.7	830	3.1	140
LK22SA	8	168	17	2	220	0.22	7.9	N 0.60	0.54	36	4.3	200	1.8	50
LK23SA	5	338	10	2	143	0.41	10	N 0.60	0.18	36	21	22	2.3	110
LK24SA	7	231	25	2	379	0.24	10	0.72	1.1	98	9.0	29	2.7	240
LK25SA	6	376	15	2	262	0.56	24	N 0.60	0.54	66	21	26	4.7	170
LK26SA	8	173	14	2	187	N 0.045	5.8	N 0.60	0.28	30	3.1	30	1.1	120
LK27SA	9	224	13	2	125	0.054	7.4	N 0.60	0.18	33	4.4	29	1.3	92
LK28SA	10	189	31	3	161	0.20	11	N 0.60	0.55	51	3.1	28	0.93	130
LK29SA	11	164	38	3	164	0.25	11	N 0.60	0.69	45	3.4	45	1.2	130
LK30SA	9	152	28	3	133	0.12	9.5	N 0.60	0.67	40	3.1	31	0.88	100
LK30SAD2	9	151	29	3	132	0.14	9.8	N 0.60	0.69	41	3.2	32	1.0	110
LK31SA	8	135	17	2	128	N 0.045	6.4	N 0.60	0.23	25	2.3	27	N 0.60	90
LK32SA	9	143	30	3	237	0.052	5.1	N 0.60	0.52	35	2.1	35	0.62	170
LK33SA	8	159	17	2	404	0.30	5.7	N 0.60	0.29	23	3.4	510	1.7	290
LK34SA	7	381	32	3	157	1.5	23	N 0.60	1.2	89	17	36	3.9	130
LK36SA	9	210	11	2	166	0.099	7.4	N 0.60	0.26	44	5.2	44	1.4	110
LK37SA	11	167	33	3	125	0.30	16	N 0.60	0.36	39	3.1	25	1.1	96
LK38SA	12	163	30	3	114	0.082	7.6	N 0.60	0.17	35	1.6	19	0.89	91
LK38SAD1	13	170	34	3	124	0.066	6.6	N 0.60	0.14	32	1.4	17	1.7	86
LK39SA	9	161	16	2	119	N 0.045	4.0	N 0.60	0.088	29	1.7	25	1.2	70
LK40SA	10	145	42	3	182	0.35	7.2	N 0.60	1.1	21	1.9	21	0.75	110
LK40SAD1	9	143	44	3	182	0.36	7.5	N 0.60	1.0	21	1.9	21	0.62	110
LK41SA	10	145	33	3	1070	0.21	5.9	N 0.60	1.7	21	2.2	24	0.86	510
LK41SAD2	10	145	34	3	1070	0.21	6.2	N 0.60	1.7	20	2.2	24	0.74	500
LK42SA	10	222	26	3	205	0.34	5.3	N 0.60	0.25	46	5.0	34	1.7	120
LK43SA	10	230	21	3	169	0.54	7.8	N 0.60	0.32	40	5.2	67	1.8	97
LK44SA	8	271	22	3	177	2.0	8.9	N 0.60	0.27	40	8.4	79	2.3	100

Appendix 2. Analytical results of soil samples from the Lik deposit (Cont.)

Sample Number	Easting	Northing	Type	Line	Al %	Ca %	Fe %	K %	Mg %	Na %	P %	Ti %	Min	Ba
LK45SA	537639	5181327	1	2	5.83	0.11	5.84	1.33	0.59	0.52	0.18	0.36	146	1410
LK46SA	535760	5179911	1	3	7.26	0.11	4.91	1.85	0.81	0.46	0.07	0.42	1250	3350
LK46SAD1	535760	5179911	1	3	7.29	0.11	4.93	1.86	0.81	0.46	0.07	0.42	1130	3420
LK47SA	535862	5179909	1	3	7.39	0.12	4.39	1.90	0.88	0.60	0.06	0.47	640	4020
LK48SA	536158	5179908	1	3	5.97	0.16	3.92	1.15	0.75	0.76	0.05	0.46	1190	1720
LK49SA	536455	5179904	1	3	7.45	0.14	4.39	1.74	0.84	0.61	0.10	0.39	921	1690
LK49SAD2	536455	5179904	1	3	7.45	0.14	4.38	1.74	0.84	0.61	0.10	0.40	926	1680
LK50SA	536654	5179906	1	3	5.99	0.07	5.41	1.70	0.56	0.65	0.13	0.41	130	1570
LK51SA	536857	5179906	1	3	7.75	0.36	5.27	1.50	1.00	0.97	0.13	0.48	1800	2720
LK64SA	536113	5181400	1	2	7.65	1.08	4.90	1.83	1.05	0.72	0.09	0.47	824	733
LK65SA	536422	5181453	1	2	8.38	0.63	5.20	1.98	1.14	0.75	0.08	0.51	1000	879
LK66SA	538378	5181196	1	2	6.92	0.70	4.27	1.35	0.92	0.70	0.08	0.40	386	1020
LK67SA	538675	5181145	1	2	6.60	0.65	4.04	1.16	0.86	0.68	0.07	0.38	455	917
LK68SA	538770	5181129	1	2	6.31	0.58	3.65	1.23	0.84	0.75	0.07	0.39	283	988
LK69SA	539709	5184493	1	4	8.52	0.56	4.67	2.06	1.01	0.61	0.11	0.42	610	2030
LK69SAD1	539709	5184493	1	4	8.54	0.53	4.74	2.06	1.03	0.66	0.11	0.44	641	1960
LK70SA	536553	5179903	1	3	4.90	0.08	4.17	1.19	0.42	0.46	0.07	0.42	506	1390
LK71SA	536752	5179904	1	3	7.58	0.15	5.97	1.69	0.76	0.57	0.13	0.38	557	1320
LK72SA	538073	5180104	1	3	6.22	0.60	3.98	1.23	0.78	0.62	0.07	0.37	629	1260
LK72SAD2	538073	5180104	1	3	6.28	0.61	3.97	1.24	0.78	0.62	0.07	0.37	624	1240
LK73SA	537964	5180081	1	3	6.40	0.25	4.40	1.25	0.77	0.68	0.08	0.39	566	984
LK73SAD1	537964	5180081	1	3	6.41	0.24	4.54	1.26	0.75	0.66	0.09	0.38	542	996
LK74SA	537868	5180065	1	3	6.18	0.30	5.70	1.28	0.74	0.58	0.11	0.37	658	1080
LK75SA	537766	5180046	1	3	6.68	0.56	6.91	1.27	0.70	0.62	0.10	0.40	386	1900
LK76SA	537668	5180030	1	3	3.75	0.58	22.30	0.96	0.32	0.32	0.35	0.21	748	966
LK77SA	537571	5180010	1	3	7.16	0.32	6.73	1.60	0.74	0.70	0.11	0.44	195	1090
LK78SA	537476	5179993	1	3	7.72	0.51	3.03	1.55	0.79	0.71	0.06	0.39	175	2150
LK79SA	537379	5179977	1	3	6.98	0.30	4.11	1.55	0.75	0.61	0.08	0.38	2190	2240
LK80SA	537290	5179963	1	3	5.81	0.08	4.50	1.20	0.59	0.44	0.09	0.32	717	935
LK81SA	537160	5179936	1	3	7.34	0.09	7.38	1.85	0.80	0.56	0.10	0.42	181	1880
LK82SA	537061	5179919	1	3	7.10	0.30	7.72	1.40	0.70	0.50	0.13	0.37	482	3270
LK83SA	536961	5179904	1	3	6.89	0.21	3.81	1.38	0.89	1.05	0.06	0.46	266	2150
LK89SA	536219	5181417	1	2	6.77	0.54	4.37	1.70	1.01	0.73	0.04	0.41	2830	2530
LK89SAD1	536219	5181417	1	2	6.90	0.53	4.41	1.76	1.03	0.67	0.04	0.41	2800	3020
LK90SA	536316	5181436	1	2	7.08	0.78	4.26	1.82	0.99	0.58	0.09	0.37	908	2530
LK90SAD2	536316	5181436	1	2	6.83	0.76	4.12	1.75	0.96	0.56	0.09	0.35	861	2410
LK91SA	538475	5181178	1	2	5.56	0.18	3.75	1.04	0.58	0.62	0.05	0.37	354	520
LK92SA	538574	5181161	1	2	6.44	0.58	3.88	1.28	0.86	0.79	0.07	0.39	383	861
LK93SA	538926	5181099	1	2	5.69	0.78	2.48	0.96	0.73	0.68	0.06	0.29	133	913
LK94SA	539809	5184469	1	4	8.68	0.43	4.81	2.18	1.04	0.64	0.11	0.46	676	1820
LK95SA	540143	5184373	1	4	5.96	0.54	3.51	1.40	0.73	0.51	0.09	0.32	222	988
LK96SA	540238	5184348	1	4	5.62	0.56	3.61	1.33	0.66	0.45	0.09	0.30	391	714
LK97SA	540607	5184249	1	4	7.69	0.28	4.17	1.74	0.86	0.63	0.16	0.38	679	1550
LK99SA	539065	5182439	1	1	4.99	0.22	9.12	1.14	0.42	0.32	0.21	0.29	270	833
LK100SA	539904	5184441	1	4	7.08	0.40	4.28	1.71	1.04	0.97	0.09	0.46	930	1140
LK101SA	540333	5184321	1	4	5.11	0.78	3.30	1.10	0.57	0.43	0.11	0.25	348	923
LK102SA	540438	5184294	1	4	4.89	1.70	3.56	1.02	0.76	0.43	0.11	0.24	387	853
LK103SA	540698	5184227	1	4	5.36	0.55	5.41	1.08	0.19	0.12	0.12	0.22	1160	625
LK104SA	538971	5182467	1	1	6.25	0.10	4.67	1.29	0.60	0.43	0.11	0.31	307	806

Appendix 2. Analytical results of soil samples from the Lik deposit (Cont.)

Sample Number	Be	Ce	Co	Cr	Cu	Eu	Ga	La	Li	Mo	Nb	Nd	Ni	Pb	Sc	Sn	Sr
LK45SA	2	51	6	137	97	<2	15	27	32	22	9	27	27	63	15	<10	212
LK46SA	2	66	22	126	100	<2	18	32	52	10	10	29	68	20	18	<10	167
LK46SAD1	2	66	21	126	101	<2	18	32	52	11	9	29	71	20	18	<10	168
LK47SA	2	68	19	120	86	<2	17	34	57	6	10	31	77	19	18	<10	175
LK48SA	2	61	19	119	50	<2	14	30	54	4	10	28	66	139	13	<10	88
LK49SA	2	62	20	152	49	<2	17	31	60	3	9	30	63	50	17	<10	84
LK49SAD2	2	63	20	152	50	<2	17	31	60	3	9	30	64	49	17	<10	85
LK50SA	2	53	9	111	104	<2	15	27	25	27	9	30	25	19	16	<10	223
LK51SA	2	64	34	138	33	<2	19	31	74	5	11	28	61	34	16	<10	100
LK64SA	2	73	21	138	26	<2	18	33	57	3	11	31	62	25	16	<10	86
LK65SA	2	76	24	128	35	<2	19	36	56	<2	11	34	66	23	18	<10	86
LK66SA	2	62	16	147	38	<2	15	36	50	2	8	34	64	41	16	<10	97
LK67SA	2	57	16	134	27	<2	15	35	50	2	8	32	70	32	14	<10	85
LK68SA	2	59	12	132	28	<2	13	35	46	<2	8	33	62	26	15	<10	87
LK69SA	2	63	19	168	57	<2	19	33	70	3	10	32	77	21	21	<10	103
LK69SAD1	2	65	20	170	57	<2	19	34	72	4	10	33	73	17	21	<10	103
LK70SA	1	55	10	94	70	<2	15	26	28	14	8	25	33	33	11	<10	108
LK71SA	2	57	17	148	105	<2	18	30	43	21	9	30	53	66	19	<10	190
LK72SA	2	60	16	133	45	2	14	38	49	3	7	36	77	27	18	<10	85
LK72SAD2	2	62	16	133	47	2	14	38	50	3	8	38	74	28	18	<10	84
LK73SA	2	60	18	136	45	<2	14	31	46	5	8	29	51	41	14	<10	85
LK73SAD1	2	60	18	137	41	<2	14	32	46	6	8	29	48	46	14	<10	87
LK74SA	2	51	18	148	28	<2	15	28	49	9	8	25	45	54	11	<10	98
LK75SA	2	60	13	184	92	<2	16	32	53	11	10	34	56	44	18	<10	111
LK76SA	<1	31	11	206	19	<2	12	17	21	10	5	16	25	114	8	<10	149
LK77SA	1	63	9	154	29	<2	18	31	36	8	10	30	32	1420	18	<10	93
LK78SA	2	67	15	139	53	<2	18	32	58	3	10	30	65	4730	19	<10	101
LK79SA	3	68	34	146	84	2	17	37	59	4	9	37	121	80	18	<10	90
LK80SA	2	48	19	135	69	<2	13	27	54	5	6	24	99	66	14	<10	73
LK81SA	2	59	11	148	49	<2	17	30	43	8	11	28	41	59	17	<10	104
LK82SA	2	55	14	142	51	<2	18	28	53	7	8	27	41	68	17	<10	98
LK83SA	2	61	12	115	37	<2	14	31	54	3	9	27	48	19	13	<10	87
LK89SA	2	70	75	118	131	<2	17	38	55	5	8	33	170	29	17	<10	89
LK89SAD1	2	70	75	123	135	2	18	38	56	6	9	34	179	28	18	<10	92
LK90SA	2	56	24	130	86	<2	16	32	56	3	8	28	87	20	16	<10	73
LK90SAD2	2	53	22	122	84	<2	15	30	54	3	8	26	86	21	15	<10	70
LK91SA	1	52	13	112	20	<2	12	28	43	<2	7	23	49	34	10	<10	67
LK92SA	2	58	14	131	28	<2	13	35	46	<2	8	30	58	29	14	<10	91
LK93SA	1	49	17	127	36	<2	12	30	47	<2	6	24	97	43	12	<10	84
LK94SA	2	70	20	173	53	<2	19	35	76	3	10	31	68	19	18	<10	102
LK95SA	2	56	13	131	40	2	12	37	51	2	8	36	70	15	17	<10	86
LK96SA	2	58	15	123	30	<2	11	31	54	3	6	26	68	16	13	<10	76
LK97SA	2	63	22	219	59	<2	18	33	69	5	8	31	73	51	17	<10	112
LK99SA	2	47	9	214	64	<2	10	29	38	14	7	26	45	116	11	<10	128
LK100SA	2	68	25	150	52	<2	15	34	62	3	8	31	65	25	15	<10	106
LK101SA	2	51	13	123	33	<2	11	38	41	3	6	30	72	13	13	<10	80
LK102SA	2	49	15	112	25	<2	9	35	45	4	6	28	67	17	13	<10	96
LK103SA	2	46	26	222	63	<2	11	33	49	8	5	28	198	22	14	<10	83
LK104SA	3	53	15	229	81	3	12	32	56	8	7	33	122	173	14	<10	131

Appendix 2. Analytical results of soil samples from the Lik deposit (Cont.)

Sample Number	Th	* V	* Y	* Yb	* Zn	Ag ⁺	As ⁺	Bi ⁺	Cd ⁺	Cu ⁺	Mo ⁺	Pb ⁺	Sb ⁺	Zn ⁺
LK45SA	8	394	21	3	142	1.1	17	N 0.60	0.45	70	16	72	3.7	88
LK46SA	10	176	19	3	138	0.32	7.0	N 0.60	0.12	70	7.7	19	2.3	88
LK46SAD1	10	177	19	3	138	0.34	7.5	N 0.60	0.11	72	8.0	20	2.1	89
LK47SA	10	173	21	3	142	0.14	5.5	N 0.60	0.061	61	3.8	16	1.1	94
LK48SA	8	143	22	2	192	0.11	6.2	N 0.60	0.19	34	2.6	150	1.7	130
LK49SA	10	184	22	3	173	0.13	8.2	N 0.60	0.25	36	2.8	55	1.1	110
LK49SAD2	11	185	23	3	173	0.16	9.3	N 0.60	0.26	38	2.9	55	1.2	120
LK50SA	7	388	19	3	118	0.63	25	N 0.60	0.21	80	20	29	4.4	85
LK51SA	11	191	20	3	249	0.094	6.9	N 0.60	0.36	23	3.7	35	1.1	120
LK64SA	10	175	26	3	127	0.070	13	N 0.60	0.35	18	1.9	23	0.69	68
LK65SA	13	182	28	3	122	0.074	10	N 0.60	0.15	25	1.8	25	0.83	77
LK66SA	10	161	34	3	181	0.39	4.0	N 0.60	0.30	25	1.3	42	0.71	110
LK67SA	10	154	34	3	189	0.38	4.0	N 0.60	0.36	15	1.2	30	0.77	100
LK68SA	9	140	34	3	240	0.24	3.2	N 0.60	0.37	19	1.0	24	N 0.60	150
LK69SA	10	202	29	3	154	0.43	9.9	N 0.60	0.16	39	2.3	17	0.96	89
LK69SAD1	11	203	29	3	154	0.34	7.9	N 0.60	0.15	33	1.9	14	N 0.60	78
LK70SA	7	228	14	2	124	0.12	17	N 0.60	0.15	51	10	34	2.5	81
LK71SA	9	430	21	3	226	0.81	18	N 0.60	0.47	76	16	80	4.0	150
LK72SA	10	162	46	4	246	0.42	5.8	N 0.60	1.2	29	2.3	29	0.76	150
LK72SAD2	10	160	47	4	248	0.42	5.7	N 0.60	1.2	29	2.3	29	0.97	150
LK73SA	10	178	21	2	195	0.44	7.5	N 0.60	0.31	25	3.4	43	1.1	110
LK73SAD1	9	183	22	2	186	0.41	7.6	N 0.60	0.30	25	4.3	47	1.3	110
LK74SA	9	221	14	2	259	0.29	13	N 0.60	0.31	21	6.7	54	1.8	150
LK75SA	11	289	33	4	320	0.89	12	N 0.60	1.3	61	7.7	46	3.2	170
LK76SA	8	413	10	2	1470	0.27	77	N 0.60	1.6	14	6.4	120	2.5	700
LK77SA	10	250	19	3	201	0.88	15	N 0.60	0.041	21	6.5	1600	5.8	130
LK78SA	6	246	22	3	3470	N 0.045	N 0.60	N 0.60	13	34	2.6	5200	N 0.60	> 1300
LK79SA	11	202	46	4	972	0.39	8.6	N 0.60	2.4	61	3.5	67	1.6	580
LK80SA	8	176	22	2	584	0.65	7.4	N 0.60	0.73	51	4.0	73	1.4	330
LK81SA	10	253	18	3	137	0.43	10	N 0.60	0.062	37	5.4	67	1.8	88
LK82SA	11	246	19	2	183	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08
LK83SA	10	167	20	2	111	0.27	3.4	N 0.60	0.087	24	2.4	18	70	66
LK89SA	11	162	35	3	295	0.19	12	N 0.60	0.31	96	4.9	29	58	180
LK89SAD1	11	167	37	3	320	0.17	10	N 0.60	0.29	97	5.0	28	48	200
LK90SA	10	160	32	3	191	0.21	9.1	N 0.60	0.17	48	1.7	18	9.0	80
LK90SAD2	10	154	30	3	184	0.21	9.0	N 0.60	0.18	47	1.6	18	5.3	80
LK91SA	9	135	17	2	144	0.094	4.3	N 0.60	0.29	13	1.5	31	8.5	82
LK92SA	11	140	31	3	168	0.26	3.3	N 0.60	0.26	18	1.1	25	12	98
LK93SA	8	128	28	2	661	0.32	1.8	N 0.60	2.4	23	0.51	36	4.7	310
LK94SA	12	204	24	3	163	0.20	7.5	N 0.60	0.17	32	2.0	15	3.8	83
LK95SA	10	148	49	4	163	0.40	6.8	N 0.60	0.48	25	1.6	12	1.6	92
LK96SA	9	144	28	2	205	0.18	6.7	N 0.60	0.53	17	2.1	13	2.2	92
LK97SA	10	213	33	3	239	0.87	7.2	N 0.60	0.81	41	3.5	42	2.4	130
LK99SA	9	243	28	3	873	1.2	23	N 0.60	1.7	48	11	110	2.5	500
LK100SA	10	165	26	3	140	0.29	10	N 0.60	0.26	39	2.2	22	2.0	92
LK101SA	9	130	51	3	183	0.23	6.5	N 0.60	0.53	19	1.8	11	0.85	94
LK102SA	8	131	42	3	205	0.35	8.1	N 0.60	1.1	17	3.1	16	0.93	99
LK103SA	9	170	43	4	599	1.9	26	N 0.60	1.4	48	6.9	22	1.5	370
LK104SA	9	183	66	6	1390	1.7	8.4	N 0.60	2.0	59	6.5	160	1.8	680

Appendix 2. Analytical results of soil samples from the Lik deposit (Cont.)

Sample Number	Easting	Northing	Type	Line	Al %	Ca %	Fe %	K %	Mg %	Na %	P %	Ti %	Mn	Ba
LK105SA	538773	5182511	1	1	5.36	0.10	5.51	1.24	0.64	0.55	0.13	0.33	670	503
LK106SA	538871	5182490	1	1	6.36	0.10	9.74	1.20	0.63	0.42	0.20	0.28	932	979
LK107SA	538680	5182529	1	1	8.89	0.08	10.80	2.18	0.84	0.72	0.31	0.46	220	701
LK107SAD1	538680	5182529	1	1	8.74	0.08	10.60	2.16	0.82	0.70	0.32	0.44	208	603
LK1SB	538039	5182355	2	1	6.76	0.51	4.47	1.43	1.13	0.81	0.08	0.39	681	3230
LK2SB	537948	5182370	2	1	6.81	0.23	4.73	1.62	1.10	0.79	0.08	0.39	1280	2700
LK3SB	537845	5182389	2	1	6.00	0.30	4.20	1.39	0.73	0.49	0.07	0.31	690	2720
LK4SB	537698	5182420	2	1	4.95	0.07	3.66	1.23	0.43	0.42	0.08	0.32	562	1040
LK5SB	536617	5181490	2	2	6.98	0.69	5.16	1.57	0.83	0.56	0.12	0.33	2170	1010
LK6SB	536806	5181480	2	2	8.13	0.35	5.22	1.71	1.16	0.80	0.07	0.43	1400	1280
LK7SB	536901	5181460	2	2	8.12	0.18	5.53	1.90	1.17	0.97	0.06	0.48	2500	1360
LK8SB	537101	5181422	2	2	6.70	0.21	5.19	1.41	0.87	0.60	0.10	0.41	952	945
LK9SB	537198	5181404	2	2	6.26	0.09	4.50	1.74	0.64	0.51	0.09	0.47	1370	2320
LK10SB	537416	5181260	2	2	6.42	0.05	6.52	1.66	0.61	0.47	0.16	0.47	1460	161
LK10SBD2	537416	5181260	2	2	6.34	0.05	6.40	1.65	0.60	0.46	0.16	0.47	1450	190
LK11SB	537415	5181261	2	2	5.88	0.06	4.13	1.46	0.75	0.43	0.07	0.33	761	1850
LK12SB	538082	5181252	2	2	6.17	0.28	3.97	1.26	0.76	0.56	0.07	0.34	636	606
LK13SB	537792	5181297	2	2	5.59	0.14	4.02	1.32	0.59	0.44	0.18	0.31	374	4070
LK14SB	537693	5181314	2	2	6.37	0.12	4.70	1.54	0.68	0.58	0.20	0.34	1440	2710
LK15SB	537592	5181336	2	2	1.41	0.02	3.22	0.32	0.08	0.07	0.04	0.10	40	1190
LK16SB	535659	5179912	2	3	7.45	0.16	5.00	2.12	0.83	0.41	0.08	0.41	2850	3140
LK17SB	535961	5179908	2	3	7.47	0.44	2.59	1.13	0.85	0.77	0.12	0.31	199	2140
LK18SB	536256	5179906	2	3	8.27	0.28	5.39	1.93	1.06	0.77	0.07	0.47	2030	2550
LK19SB	536057	5179908	2	3	9.30	0.86	2.78	2.09	0.86	0.38	0.07	0.22	270	1920
LK20SB	536353	5179906	2	3	7.75	0.10	5.40	1.76	0.84	0.72	0.07	0.46	1110	941
LK20SBD2	536353	5179906	2	3	7.79	0.10	5.41	1.77	0.85	0.72	0.06	0.46	1110	937
LK21SB	537894	5182378	2	1	6.33	0.40	4.56	1.40	0.75	0.50	0.10	0.36	480	2020
LK22SB	537791	5182402	2	1	6.15	0.10	4.47	1.46	0.74	0.49	0.06	0.32	642	1260
LK23SB	537600	5182439	2	1	3.48	0.03	2.73	0.90	0.30	0.26	0.06	0.22	540	1040
LK24SB	537498	5182459	2	1	5.29	0.08	3.13	1.53	0.48	0.38	0.05	0.30	1450	2950
LK25SB	537406	5182477	2	1	2.88	0.04	2.73	0.75	0.27	0.24	0.06	0.18	680	913
LK26SB	537305	5182494	2	1	6.46	0.11	4.70	1.26	0.69	0.50	0.09	0.41	1740	1010
LK27SB	537215	5182513	2	1	7.25	0.12	4.97	1.57	0.87	0.57	0.09	0.41	1090	1080
LK28SB	538135	5182333	2	1	8.04	0.51	5.01	2.05	1.21	0.74	0.08	0.40	850	3530
LK29SB	538238	5182314	2	1	7.47	0.45	4.82	1.97	1.22	0.75	0.08	0.41	635	3330
LK30SB	538331	5182298	2	1	7.03	0.40	4.82	1.80	1.22	0.82	0.09	0.40	1400	3580
LK30SBD2	538331	5182298	2	1	7.02	0.40	4.80	1.80	1.22	0.82	0.09	0.41	1410	3880
LK31SB	538375	5182594	2	1	6.20	0.37	4.54	1.39	1.09	0.74	0.07	0.37	959	2120
LK32SB	538478	5182573	2	1	6.45	0.39	4.40	1.43	1.16	0.82	0.08	0.41	851	3600
LK33SB	538580	5182551	2	1	6.53	0.27	5.14	1.35	0.78	0.59	0.08	0.32	985	1320
LK34SB	537537	5181344	2	2	4.75	0.30	3.99	1.32	0.41	0.44	0.34	0.26	532	208
LK36SB	537295	5181388	2	2	6.07	0.14	4.71	1.23	0.58	0.52	0.08	0.39	750	1170
LK37SB	536512	5181470	2	2	8.23	0.54	4.84	2.23	1.05	0.66	0.06	0.44	1630	1040
LK38SB	536707	5181503	2	2	8.37	0.49	5.15	2.06	1.08	0.69	0.05	0.42	1530	1720
LK38SBD1	536707	5181503	2	2	8.41	0.47	5.07	2.11	1.08	0.66	0.05	0.43	1540	1640
LK39SB	537004	5181441	2	2	6.80	0.14	4.80	1.29	0.65	0.63	0.08	0.44	3360	866
LK40SB	538275	5181217	2	2	5.78	0.80	3.95	1.25	0.78	0.53	0.09	0.29	700	617
LK40SBD1	538275	5181217	2	2	5.61	0.89	3.75	1.23	0.77	0.52	0.09	0.30	672	605
LK41SB	538182	5181233	2	2	6.20	0.33	4.48	1.27	0.81	0.52	0.09	0.31	665	654

Appendix 2. Analytical results of soil samples from the Lik deposit (Cont.)

Sample Number	Be	Ce	Co	Cr	Cu	Eu	Ga	La	Li	Mo	Nb	Nd	Ni	Pb	Sc	Sn	Sr
LK105SA	1	49	13	147	38	<2	13	28	47	9	6	24	58	132	11	<10	186
LK106SA	3	50	18	232	91	3	12	30	54	10	7	34	136	117	16	<10	115
LK107SA	3	70	18	385	81	<2	18	33	78	4	10	30	96	33	25	<10	275
LK107SAD1	3	70	17	351	83	<2	16	33	76	5	10	29	102	33	24	<10	264
LK1SB	2	55	29	127	46	<2	15	29	57	3	7	28	77	35	16	<10	105
LK2SB	2	55	32	124	47	<2	15	28	58	3	8	26	88	28	15	<10	91
LK3SB	2	57	23	111	43	<2	13	29	56	3	5	26	81	124	13	<10	102
LK4SB	1	50	14	100	61	<2	13	23	34	7	6	20	48	35	10	<10	76
LK5SB	2	68	36	113	36	<2	17	31	54	3	7	26	65	32	14	<10	66
LK6SB	2	71	29	127	48	<2	18	30	64	2	8	23	70	26	15	<10	77
LK7SB	2	77	42	125	63	<2	19	32	76	3	10	29	74	33	16	<10	82
LK8SB	1	56	20	114	35	<2	16	27	54	2	8	23	44	32	13	<10	72
LK9SB	2	84	28	100	178	<2	15	32	48	11	7	31	84	44	18	<10	139
LK10SB	2	83	27	123	217	2	15	27	55	19	9	33	121	32	27	<10	228
LK10SBD2	2	84	26	124	216	2	15	27	54	18	8	32	118	36	26	<10	226
LK11SB	1	49	27	82	76	<2	13	24	59	5	5	22	61	33	12	<10	90
LK12SB	2	57	21	129	31	<2	13	33	45	<2	6	25	63	37	12	<10	74
LK13SB	2	52	14	143	69	<2	13	29	43	10	7	24	36	76	12	<10	150
LK14SB	2	58	24	130	115	<2	16	31	43	13	8	28	45	64	15	<10	206
LK15SB	<1	16	3	37	34	<2	<4	9	36	7	<4	8	8	286	3	<10	50
LK16SB	2	72	42	108	109	<2	21	32	59	7	9	31	59	43	19	<10	116
LK17SB	2	46	16	134	34	<2	17	24	80	<2	6	22	100	53	15	<10	89
LK18SB	2	82	36	135	83	<2	21	37	68	4	11	33	78	91	19	<10	92
LK19SB	2	39	26	178	87	<2	22	23	104	<2	6	20	152	296	19	<10	121
LK20SB	2	65	23	119	33	<2	19	32	54	3	11	26	48	55	14	<10	70
LK20SBD2	2	66	22	124	33	<2	19	31	54	3	10	24	44	54	14	<10	69
LK21SB	2	51	16	121	41	<2	14	28	51	6	8	23	51	920	12	<10	104
LK22SB	2	50	22	112	51	<2	14	25	59	5	6	20	75	188	12	<10	75
LK23SB	<1	35	12	84	53	<2	9	17	33	19	4	15	39	28	8	<10	64
LK24SB	1	56	25	79	102	<2	13	27	50	7	4	28	76	19	13	<10	100
LK25SB	<1	33	12	70	64	<2	7	15	55	19	4	13	43	19	8	<10	111
LK26SB	1	54	24	115	41	<2	17	27	53	4	8	22	53	43	12	<10	68
LK27SB	2	55	23	138	43	<2	18	28	51	5	9	23	52	36	14	<10	74
LK28SB	2	55	26	143	54	<2	18	30	64	3	8	27	89	25	18	<10	130
LK29SB	2	55	22	135	49	<2	17	31	64	<2	7	26	83	33	17	<10	146
LK30SB	2	53	28	131	52	<2	15	26	55	3	7	25	88	35	16	<10	149
LK30SBD2	2	55	29	131	52	<2	16	28	55	3	8	27	91	35	16	<10	147
LK31SB	2	46	27	121	39	<2	14	24	52	3	6	19	71	51	13	<10	84
LK32SB	2	56	27	125	45	<2	14	30	55	3	7	23	80	58	15	<10	158
LK33SB	2	49	21	124	28	<2	14	26	57	4	7	28	51	747	12	<10	84
LK34SB	2	46	15	126	92	<2	12	28	39	15	6	27	44	26	11	<10	199
LK36SB	1	53	19	112	57	<2	15	25	41	6	9	21	51	46	12	<10	86
LK37SB	2	83	29	145	52	<2	18	38	52	3	10	33	76	25	17	<10	78
LK38SB	2	77	28	137	50	<2	19	38	60	<2	9	35	75	23	17	<10	79
LK38SBD1	2	79	29	160	56	<2	19	39	61	<2	9	35	76	25	18	<10	86
LK39SB	1	60	31	125	52	<2	19	26	49	3	9	22	56	36	14	<10	74
LK40SB	2	51	18	138	30	<2	11	34	48	2	5	27	67	22	13	<10	81
LK40SBD1	2	52	17	134	28	<2	11	35	46	2	7	28	65	24	13	<10	83
LK41SB	2	58	19	143	29	<2	12	33	54	<2	6	27	113	23	12	<10	71

Appendix 2. Analytical results of soil samples from the Lik deposit (Cont.)

Sample Number	Th	* V	* Y	* Yb	* Zn	Ag ⁺	As ⁺	Bi ⁺	Cd ⁺	Cu ⁺	Mo ⁺	Pb ⁺	Sb ⁺	Zn ⁺
LK105SA	8	167	25	2	833	0.82	16	N 0.60	1.0	29	7.7	130	1.9	470
LK106SA	9	225	71	7	2050	1.3	17	N 0.60	4.3	69	8.1	110	1.8	990
LK107SA	15	312	38	4	1610	0.089	68	N 0.60	2.5	64	3.4	36	1.3	950
LK107SAD1	14	308	38	3	1730	0.082	67	N 0.60	2.6	67	3.5	36	N 0.60	1000
LK11SB	10	167	29	3	142	0.20	7.6	N 0.60	0.37	41	3.2	35	0.82	110
LK2SB	9	164	26	2	202	0.058	9.8	N 0.60	0.92	44	2.6	30	0.86	160
LK3SB	10	155	26	2	240	0.29	9.0	N 0.60	1.3	37	3.8	130	1.5	160
LK4SB	7	205	11	1	216	0.14	8.6	N 0.60	0.21	52	6.3	33	1.6	160
LK5SB	10	162	25	2	125	0.066	11	N 0.60	0.21	24	2.3	27	N 0.60	56
LK6SB	10	186	13	2	124	N 0.045	6.0	N 0.60	0.22	46	2.1	28	0.87	100
LK7SB	11	194	19	2	136	0.063	13	N 0.60	0.31	61	2.8	36	0.83	120
LK8SB	9	168	11	2	131	0.046	5.4	N 0.60	0.18	30	2.0	32	0.62	83
LK9SB	7	197	14	2	237	N 0.045	19	0.78	0.65	160	12	46	3.4	180
LK10SB	5	496	22	3	339	0.61	61	1.1	2.4	200	19	45	4.8	260
LK10SBD2	10	494	21	2	332	0.62	61	1.2	2.4	200	19	45	4.7	260
LK11SB	9	202	11	2	233	0.065	6.3	N 0.60	0.32	62	4.7	33	1.1	150
LK12SB	10	154	20	2	184	0.11	5.7	N 0.60	0.45	29	1.7	41	N 0.60	140
LK13SB	9	284	17	2	161	1.4	15	N 0.60	0.31	63	10	81	2.8	120
LK14SB	10	353	21	2	223	1.7	18	N 0.60	0.64	110	14	70	4.3	170
LK15SB	4	93	9	< 1	60	2.6	9.4	N 0.60	0.23	29	6.4	270	31	46
LK16SB	11	179	19	2	150	0.075	9.0	N 0.60	0.16	99	9.0	49	1.5	110
LK17SB	7	166	19	2	335	0.41	1.8	N 0.60	0.96	26	1.0	45	N 0.60	140
LK18SB	12	203	24	2	161	0.25	7.6	N 0.60	0.20	71	4.1	99	1.4	130
LK19SB	7	266	21	2	620	2.4	0.73	N 0.60	2.1	58	0.67	220	1.8	270
LK20SB	10	203	12	2	108	N 0.045	6.7	N 0.60	0.13	30	2.6	58	0.99	83
LK20SBD2	10	201	12	2	108	N 0.045	6.6	N 0.60	0.12	30	2.8	59	0.87	83
LK21SB	8	200	18	2	224	0.48	11	N 0.60	0.28	37	6.4	960	3.8	170
LK22SB	8	178	15	2	253	0.21	9.1	N 0.60	0.61	47	4.7	190	1.6	180
LK23SB	4	317	8	1	167	0.32	14	N 0.60	0.19	44	18	26	2.9	120
LK24SB	5	222	17	2	329	0.15	9.3	N 0.60	0.96	91	6.7	21	2.4	220
LK25SB	4	368	10	1	182	0.38	24	0.61	0.46	56	19	19	4.8	130
LK26SB	9	184	13	2	202	0.080	5.9	N 0.60	0.31	39	3.9	44	1.5	150
LK27SB	9	240	14	2	140	0.10	7.8	N 0.60	0.23	42	4.8	40	1.7	110
LK28SB	10	196	28	3	165	0.19	11	N 0.60	0.56	53	2.9	27	0.95	140
LK29SB	9	176	30	3	154	0.15	11	N 0.60	0.55	48	2.7	34	1.2	130
LK30SB	10	172	25	2	144	0.12	12	0.63	0.88	49	3.3	37	1.2	120
LK30SBD2	9	172	26	2	143	0.13	12	N 0.60	0.87	49	3.3	38	1.2	120
LK31SB	8	158	17	2	145	0.062	10	0.82	0.43	36	3.1	53	1.0	110
LK32SB	9	155	30	2	260	0.11	7.9	N 0.60	0.93	43	2.7	64	1.0	200
LK33SB	8	164	16	2	412	0.41	9.7	N 0.60	0.43	25	4.2	820	2.3	290
LK34SB	7	353	34	3	165	1.2	23	0.65	1.2	87	16	33	4.0	130
LK36SB	8	226	11	2	181	0.13	9.8	0.70	0.27	51	5.8	50	2.1	120
LK37SB	12	191	29	3	143	0.23	16	0.67	0.46	49	3.1	27	1.4	110
LK38SB	12	181	29	3	127	0.076	8.1	N 0.60	0.23	44	1.8	26	0.90	100
LK38SBD1	12	180	29	3	127	0.074	8.0	N 0.60	0.23	47	1.7	27	0.89	100
LK39SB	8	170	12	2	128	N 0.045	4.5	N 0.60	0.12	41	2.0	38	1.3	86
LK40SB	8	138	36	2	176	0.36	8.2	N 0.60	1.2	25	2.0	23	1.0	120
LK40SBD1	8	133	38	2	172	0.34	8.2	N 0.60	1.1	25	1.9	22	N 0.60	120
LK41SB	8	140	28	2	1050	0.25	7.3	N 0.60	1.9	25	2.3	24	0.74	570

Appendix 2. Analytical results of soil samples from the Lik deposit (Cont.)

Sample Number	Easting	Northing	Type	Line	Al %	Ca %	Fe %	K %	Mg %	Na %	P %	Ti %	Mn %	Ba %
LK41SBD2	538182	5181233	2	2	6.11	0.33	4.42	1.25	0.79	0.52	0.09	0.30	644	639
LK42SB	537979	5181270	2	2	6.78	0.24	4.69	1.52	0.78	0.55	0.08	0.37	836	4170
LK43SB	537880	5181285	2	2	6.52	0.26	4.38	1.53	0.78	0.52	0.10	0.34	1070	3980
LK44SB	537741	5181307	2	2	5.47	0.18	4.21	1.22	0.54	0.36	0.25	0.32	217	2640
LK45SB	537639	5181327	2	2	5.53	0.07	6.49	1.38	0.56	0.40	0.21	0.31	158	F25
LK46SB	535760	5179911	2	3	7.06	0.08	4.99	1.94	0.76	0.34	0.07	0.34	3160	2330
LK46SBD1	535760	5179911	2	3	7.23	0.08	5.07	2.00	0.77	0.35	0.08	0.35	2940	2470
LK47SB	535862	5179909	2	3	7.44	0.10	4.40	2.08	0.87	0.52	0.06	0.40	1340	2620
LK48SB	536158	5179908	2	3	6.30	0.14	4.51	1.35	0.80	0.63	0.06	0.40	3260	1980
LK49SB	536455	5179904	2	3	7.74	0.12	4.83	1.99	0.90	0.57	0.10	0.39	1630	1600
LK49SBD2	536455	5179904	2	3	7.68	0.12	4.81	1.99	0.89	0.57	0.10	0.39	1660	1610
LK50SB	536654	5179906	2	3	5.67	0.04	4.52	1.78	0.53	0.53	0.11	0.34	103	232
LK51SB	536857	5179906	2	3	7.76	0.32	5.37	1.62	1.03	0.97	0.12	0.45	2770	2800
LK64SB	536113	5181400	2	2	8.13	0.95	5.01	2.06	1.10	0.71	0.08	0.45	1020	766
LK65SB	536422	5181453	2	2	8.84	0.60	5.27	2.23	1.18	0.70	0.08	0.47	1160	955
LK66SB	538378	5181196	2	2	6.76	0.68	4.30	1.37	0.89	0.63	0.08	0.35	442	947
LK67SB	538675	5181145	2	2	6.26	0.59	3.92	1.17	0.83	0.60	0.07	0.33	535	924
LK68SB	538770	5181129	2	2	5.95	0.51	3.72	1.20	0.78	0.64	0.07	0.34	395	986
LK69SB	539709	5184493	2	4	8.37	0.48	4.69	2.14	1.05	0.62	0.10	0.40	777	1890
LK69SBD1	539709	5184493	2	4	8.43	0.45	4.77	2.15	1.08	0.67	0.10	0.41	817	1840
LK70SB	536553	5179903	2	3	4.88	0.06	4.23	1.30	0.44	0.36	0.08	0.36	616	1690
LK71SB	536752	5179904	2	3	7.63	0.12	6.10	1.81	0.75	0.46	0.15	0.34	696	365
LK72SB	538073	5180104	2	3	5.94	0.57	3.97	1.26	0.77	0.55	0.08	0.33	660	1180
LK72SBD2	538073	5180104	2	3	5.94	0.57	3.99	1.26	0.77	0.56	0.08	0.31	667	1200
LK73SB	537964	5180081	2	3	5.92	0.20	4.58	1.19	0.69	0.54	0.10	0.32	1150	992
LK73SBD1	537964	5180081	2	3	5.99	0.20	4.81	1.21	0.69	0.52	0.10	0.32	951	1030
LK74SB	537868	5180065	2	3	5.75	0.26	5.68	1.24	0.67	0.47	0.12	0.32	946	1090
LK75SB	537766	5180046	2	3	6.28	0.51	6.99	1.25	0.64	0.54	0.11	0.36	540	1940
LK76SB	537668	5180030	2	3	3.17	0.50	25.60	0.95	0.26	0.24	0.42	0.15	1110	218
LK77SB	537571	5180010	2	3	6.94	0.30	7.10	1.63	0.71	0.59	0.12	0.40	324	1140
LK78SB	537476	5179993	2	3	7.71	0.50	3.24	1.60	0.79	0.68	0.07	0.36	254	2400
LK79SB	537379	5179977	2	3	6.62	0.29	4.00	1.55	0.72	0.51	0.08	0.32	2430	2290
LK80SB	537290	5179963	2	3	5.68	0.08	4.50	1.26	0.61	0.40	0.09	0.29	943	986
LK81SB	537160	5179936	2	3	6.95	0.07	8.04	1.82	0.75	0.49	0.11	0.38	202	1830
LK82SB	537061	5179919	2	3	6.76	0.27	8.54	1.39	0.66	0.42	0.14	0.31	928	3400
LK83SB	536961	5179904	2	3	6.66	0.18	4.36	1.38	0.87	0.91	0.07	0.44	784	2200
LK89SB	536219	5181417	2	2	7.37	0.44	4.72	2.03	1.16	0.50	0.04	0.43	2840	4310
LK89SBD1	536219	5181417	2	2	7.47	0.45	4.71	2.06	1.17	0.49	0.04	0.42	2510	4980
LK90SB	536316	5181436	2	2	7.58	0.68	4.68	2.06	1.09	0.51	0.07	0.40	1390	3420
LK90SBD2	536316	5181436	2	2	7.37	0.65	4.57	2.01	1.06	0.50	0.07	0.38	1360	3320
LK91SB	538475	5181178	2	2	5.67	0.17	4.13	1.09	0.62	0.50	0.06	0.34	535	558
LK92SB	538574	5181161	2	2	6.28	0.55	4.14	1.28	0.83	0.66	0.07	0.35	502	870
LK93SB	538926	5181099	2	2	5.33	0.76	2.41	0.91	0.69	0.59	0.06	0.31	126	875
LK94SB	539809	5184469	2	4	8.57	0.38	4.80	2.18	1.05	0.61	0.09	0.44	758	1690
LK95SB	540143	5184373	2	4	6.34	0.49	3.90	1.55	0.87	0.55	0.08	0.35	318	1020
LK96SB	540238	5184348	2	4	5.99	0.47	3.78	1.47	0.73	0.44	0.08	0.32	455	728
LK97SB	540607	5184249	2	4	7.34	0.25	4.82	1.71	0.88	0.60	0.17	0.36	1040	1360
LK99SB	539065	5182439	2	1	4.60	0.19	11.80	1.07	0.38	0.25	0.27	0.27	345	794
LK100SB	539904	5184441	2	4	7.51	0.34	4.45	1.86	1.15	0.91	0.08	0.45	845	1180

Appendix 2. Analytical results of soil samples from the Lik deposit (Cont.)

Sample Number	Be	Ce	Co	Cr	Cu	Eu	Ga	La	Li	Mo	Nb	Nd	Ni	Pb	Sc	Sn	Sr
LK41SBD2	2	56	19	141	28	<2	12	33	53	2	6	28	111	23	12	<10	70
LK42SB	2	67	31	147	84	<2	16	31	50	6	7	31	52	45	17	<10	116
LK43SB	2	60	26	158	73	<2	15	29	49	6	6	25	44	128	13	<10	128
LK44SB	2	53	9	201	60	<2	13	31	43	11	8	25	31	86	11	<10	154
LK45SB	2	49	7	149	101	<2	13	27	33	20	8	24	28	80	13	<10	222
LK46SB	2	63	39	131	113	<2	19	28	51	10	6	24	77	29	15	<10	176
LK46SBD1	2	64	40	131	115	<2	19	29	52	10	7	25	79	27	16	<10	182
LK47SB	2	66	24	126	94	<2	18	31	54	5	8	28	78	28	16	<10	164
LK48SB	2	67	40	134	64	<2	16	30	58	4	8	25	81	394	13	<10	84
LK49SB	2	67	29	165	57	<2	17	32	62	4	8	27	69	78	16	<10	84
LK49SBD2	2	68	30	162	56	<2	17	32	62	3	8	28	70	80	16	<10	85
LK50SB	2	49	8	113	107	<2	14	26	25	20	8	25	26	20	13	<10	185
LK51SB	2	63	52	144	34	<2	20	30	74	4	9	24	60	46	14	<10	95
LK64SB	2	79	25	152	31	<2	18	34	62	2	10	27	66	27	15	<10	86
LK65SB	2	76	28	139	42	<2	20	37	59	2	9	31	65	27	17	<10	86
LK66SB	2	59	18	127	43	<2	14	36	50	<2	7	30	63	56	15	<10	98
LK67SB	2	57	17	142	28	<2	13	34	50	<2	6	27	64	34	13	<10	82
LK68SB	2	54	15	142	32	<2	12	34	45	<2	7	29	59	38	13	<10	84
LK69SB	2	60	23	176	56	<2	18	31	69	3	8	29	72	22	17	<10	97
LK69SBD1	2	61	24	177	57	<2	18	31	71	3	8	27	75	20	17	<10	96
LK70SB	1	54	13	102	78	<2	13	25	31	12	8	21	34	43	11	<10	113
LK71SB	2	55	20	160	117	<2	17	28	42	18	8	27	53	78	17	<10	188
LK72SB	2	59	17	137	47	2	12	37	50	3	6	32	73	29	16	<10	81
LK72SBD2	2	58	18	138	49	2	13	36	49	2	6	33	75	28	16	<10	80
LK73SB	2	60	27	144	47	<2	13	30	47	4	6	25	51	65	12	<10	85
LK73SBD1	2	58	25	145	45	<2	13	30	47	6	7	25	47	67	13	<10	82
LK74SB	2	47	23	158	34	<2	13	26	48	8	7	20	46	77	10	<10	95
LK75SB	2	57	16	195	96	<2	14	31	52	9	8	29	54	52	16	<10	107
LK76SB	<1	24	13	226	20	<2	6	13	20	11	7	12	23	161	6	<10	163
LK77SB	1	62	11	167	31	<2	16	31	36	8	9	25	29	1820	16	<10	90
LK78SB	2	66	16	156	59	<2	18	31	59	4	9	27	64	6140	16	<10	100
LK79SB	2	64	37	155	84	<2	15	35	58	4	7	30	122	85	15	<10	86
LK80SB	2	49	25	145	74	<2	12	26	54	5	7	22	104	72	12	<10	102
LK81SB	1	54	11	158	54	<2	15	27	41	7	9	23	41	61	15	<10	102
LK82SB	2	52	22	149	53	<2	15	26	52	8	8	22	40	105	14	<10	93
LK83SB	2	63	21	94	42	<2	14	31	56	4	9	27	50	36	13	<10	83
LK89SB	2	76	80	125	142	<2	21	38	62	6	9	30	197	27	19	<10	91
LK89SBD1	2	74	71	126	134	<2	19	38	61	5	9	31	181	24	20	<10	96
LK90SB	2	66	32	134	107	<2	19	33	61	4	8	29	104	25	18	<10	77
LK90SBD2	2	65	31	130	103	<2	18	33	59	4	8	27	107	24	17	<10	75
LK91SB	1	51	16	121	25	<2	12	28	49	2	7	22	56	40	10	<10	68
LK92SB	2	57	17	134	33	<2	13	35	47	2	8	29	63	41	14	<10	87
LK93SB	1	49	17	122	35	<2	11	30	46	<2	7	24	96	44	11	<10	82
LK94SB	2	67	23	169	52	<2	19	34	74	3	10	28	69	20	17	<10	96
LK95SB	2	57	17	134	39	<2	14	36	53	2	7	32	74	16	16	<10	87
LK96SB	2	58	18	127	31	<2	13	31	55	3	7	25	64	17	13	<10	79
LK97SB	2	59	27	204	60	<2	16	31	68	5	8	27	76	53	16	<10	103
LK99SB	2	43	10	211	70	<2	9	27	37	17	7	23	43	140	10	<10	124
LK100SB	2	66	25	161	55	<2	15	33	68	3	8	29	72	19	16	<10	101

Appendix 2. Analytical results of soil samples from the Lik deposit (Cont.)

Sample Number	Th	* V	* Y	* Yb	* Zn	Ag ⁺	As ⁺	Bi ⁺	Cd ⁺	Cu ⁺	Mo ⁺	Pb ⁺	Sb ⁺	Zn ⁺
LK41SBD2	9	138	28	2	1040	0.24	7.0	N 0.60	1.9	25	2.3	24	N 0.60	570
LK42SB	9	227	21	2	215	0.39	7.8	N 0.60	0.37	61	6.2	47	2.0	150
LK43SB	9	230	16	2	162	0.62	10	N 0.60	0.45	53	6.5	89	1.7	110
LK44SB	8	272	20	2	183	1.7	15	N 0.60	0.32	50	11	90	3.2	130
LK45SB	7	404	17	2	161	1.3	26	N 0.60	0.60	85	20	90	5.3	120
LK46SB	9	173	13	2	144	0.32	10	N 0.60	0.25	94	10	32	2.4	110
LK46SBD1	10	177	13	2	147	0.32	9.9	N 0.60	0.23	93	10	31	2.2	110
LK47SB	10	174	16	2	148	0.12	7.2	N 0.60	0.12	77	4.6	30	1.1	110
LK48SB	9	158	19	2	217	0.083	9.9	N 0.60	0.58	53	4.4	410	2.0	170
LK49SB	10	194	20	2	201	0.091	12	N 0.60	0.39	47	3.5	83	1.3	150
LK49SBD2	10	193	20	2	199	0.097	12	N 0.60	0.40	47	3.5	84	1.1	150
LK50SB	6	396	14	2	121	0.58	26	N 0.60	0.22	90	20	27	4.8	96
LK51SB	10	191	15	2	254	0.082	7.8	N 0.60	0.67	28	4.4	50	1.2	150
LK64SB	11	184	23	2	130	0.050	13	N 0.60	0.49	25	2.1	29	0.91	90
LK65SB	12	194	25	3	129	0.046	11	N 0.60	0.21	35	2.0	29	0.94	98
LK66SB	11	162	32	3	187	0.45	5.3	N 0.60	0.40	31	1.6	55	0.68	140
LK67SB	9	147	30	2	183	0.39	4.7	N 0.60	0.48	20	1.5	36	N 0.60	120
LK68SB	9	137	32	2	252	0.25	5.7	N 0.60	0.50	26	1.4	39	0.64	180
LK69SB	10	198	23	3	151	0.41	10	N 0.60	0.24	49	2.8	23	1.0	120
LK69SBD1	9	199	23	2	154	0.33	11	N 0.60	0.22	43	2.4	20	0.73	110
LK70SB	7	228	10	2	133	0.14	21	0.69	0.21	67	12	47	3.1	100
LK71SB	10	468	18	2	236	0.96	24	N 0.60	0.60	100	20	100	5.5	190
LK72SB	8	154	43	3	251	0.40	7.2	N 0.60	1.5	36	2.6	32	0.98	180
LK72SBD2	9	153	43	3	252	0.40	7.4	N 0.60	1.5	36	2.6	32	0.85	180
LK73SB	9	176	18	2	192	0.51	12	N 0.60	0.39	32	4.8	69	1.5	130
LK73SBD1	8	184	19	2	189	0.46	12	N 0.60	0.41	33	6.0	69	1.9	130
LK74SB	8	215	11	2	271	0.31	17	N 0.60	0.49	28	8.6	70	2.0	190
LK75SB	9	279	29	3	333	1.0	14	N 0.60	1.8	74	9.2	54	3.0	210
LK76SB	7	429	6	1	1570	0.30	120	N 0.60	2.3	16	7.3	170	3.3	410
LK77SB	8	251	14	2	210	0.93	20	N 0.60	0.072	28	8.2	2000	7.6	170
LK78SB	5	251	18	2	3840	0.25	2.5	N 0.60	20	43	3.1	6400	3.5	1900
LK79SB	8	197	41	3	1060	0.45	10	N 0.60	3.1	69	3.9	64	1.4	700
LK80SB	8	176	21	2	611	0.70	9.6	N 0.60	0.97	62	4.5	75	1.5	380
LK81SB	9	249	14	2	137	0.47	16	N 0.60	0.074	46	7.0	69	2.3	98
LK82SB	9	241	15	2	191	0.52	11	N 0.60	0.18	40	7.4	110	1.9	120
LK83SB	9	178	20	2	126	0.23	7.3	N 0.60	0.13	31	3.7	35	1.1	77
LK89SB	10	187	32	3	354	0.085	10	N 0.60	0.35	120	6.1	26	2.6	240
LK89SBD1	10	186	33	3	356	0.073	8.7	N 0.60	0.31	110	5.4	25	2.6	250
LK90SB	11	177	30	3	212	0.16	11	N 0.60	0.28	78	2.7	25	1.2	130
LK90SBD2	10	172	29	3	206	0.16	11	N 0.60	0.27	78	2.7	24	0.83	130
LK91SB	8	145	18	2	172	0.069	6.0	N 0.60	0.45	20	2.1	42	0.65	110
LK92SB	10	148	31	3	185	0.24	5.7	N 0.60	0.37	27	1.7	41	0.65	130
LK93SB	8	127	27	2	651	0.28	2.2	N 0.60	2.8	27	0.71	41	N 0.60	370
LK94SB	11	200	22	3	157	0.14	9.7	N 0.60	0.21	45	2.7	20	N 0.60	110
LK95SB	10	162	42	3	164	0.29	9.8	N 0.60	0.67	34	2.6	18	0.66	130
LK96SB	9	155	24	2	199	0.11	10	N 0.60	0.65	27	3.4	20	N 0.60	140
LK97SB	10	209	30	3	249	0.65	12	N 0.60	1.0	52	5.1	55	0.99	180
LK99SB	9	280	25	2	961	1.2	38	N 0.60	2.4	63	17	150	1.3	650
LK100SB	9	183	25	3	141	0.20	12	N 0.60	0.29	48	2.4	21	N 0.60	100

Appendix 2. Analytical results of soil samples from the Lik deposit (Cont.)

Sample Number	Easting	Northing	Type	Line	Al %	Ca %	Fe %	K %	Mg %	Na %	P %	Ti %	Mn %	Ba %
LK101SB	540333	5184321	2	4	5.44	0.69	3.46	1.17	0.61	0.41	0.10	0.27	439	961
LK102SB	540438	5184294	2	4	5.53	1.09	3.73	1.31	0.75	0.47	0.09	0.30	363	907
LK103SB	540698	5184227	2	4	5.33	0.47	4.53	1.10	0.18	0.10	0.09	0.21	1060	565
LK104SB	538971	5182467	2	1	5.83	0.07	4.62	1.24	0.55	0.34	0.11	0.30	527	934
LK105SB	538773	5182511	2	1	5.81	0.11	5.76	1.37	0.77	0.51	0.13	0.34	1330	651
LK106SB	538871	5182490	2	1	6.08	0.08	10.60	1.20	0.63	0.37	0.20	0.27	1920	996
LK107SB	538680	5182529	2	1	9.23	0.08	9.48	2.30	0.89	0.77	0.26	0.45	197	540
LK107SBD1	538680	5182529	2	1	8.89	0.08	9.37	2.23	0.85	0.75	0.27	0.44	190	552
LK1SC	538039	5182355	3	1	6.81	0.52	4.34	1.44	1.16	0.85	0.07	0.39	458	2770
LK2SC	537948	5182370	3	1	6.47	0.22	4.12	1.49	1.01	0.83	0.07	0.38	1040	2050
LK3SC	537845	5182389	3	1	5.72	0.32	3.96	1.29	0.66	0.46	0.06	0.29	644	1400
LK4SC	537698	5182420	3	1	5.07	0.07	3.54	1.21	0.45	0.44	0.08	0.35	490	929
LK5SC	536617	5181490	3	1	6.82	0.71	4.66	1.50	0.80	0.57	0.11	0.35	1340	958
LK6SC	536806	5181480	3	2	7.80	0.36	4.79	1.61	1.11	0.81	0.07	0.41	1130	1240
LK7SC	536901	5181460	3	2	7.91	0.18	5.20	1.82	1.14	0.98	0.06	0.45	2450	1350
LK8SC	537101	5181422	3	2	6.86	0.21	5.18	1.42	0.91	0.62	0.10	0.40	933	917
LK9SC	537198	5181404	3	2	6.46	0.10	4.87	1.67	0.68	0.55	0.10	0.48	1640	1920
LK10SC	537416	5181260	3	2	6.44	0.05	7.25	1.64	0.65	0.50	0.17	0.48	2900	118
LK10SCD2	537416	5181260	3	2	6.44	0.05	7.15	1.64	0.65	0.50	0.16	0.44	2860	424
LK11SC	537415	5181261	3	2	6.09	0.08	4.30	1.39	0.75	0.47	0.08	0.36	835	1320
LK12SC	538082	5181252	3	2	5.90	0.27	3.46	1.19	0.74	0.57	0.06	0.34	606	579
LK13SC	537792	5181297	3	2	5.78	0.13	3.74	1.36	0.62	0.47	0.16	0.31	302	1070
LK14SC	537693	5181314	3	2	6.68	0.12	4.56	1.59	0.73	0.60	0.19	0.35	1200	623
LK15SC	537592	5181336	3	2	1.60	0.03	3.36	0.38	0.11	0.10	0.04	0.11	53	108
LK16SC	535659	5179912	3	3	7.45	0.17	4.84	2.07	0.84	0.42	0.08	0.42	2180	2330
LK17SC	535961	5179908	3	3	7.11	0.44	2.32	1.05	0.80	0.76	0.12	0.33	163	570
LK18SC	536256	5179906	3	3	8.31	0.29	5.03	1.92	1.08	0.79	0.06	0.48	1400	2570
LK19SC	536057	5179908	3	3	9.24	0.89	2.54	2.07	0.92	0.36	0.06	0.22	258	294
LK20SC	536353	5179906	3	3	7.67	0.10	4.98	1.70	0.82	0.72	0.06	0.48	955	918
LK20SCD2	536353	5179906	3	3	7.63	0.10	4.96	1.69	0.82	0.73	0.06	0.47	963	914
LK21SC	537894	5182378	3	1	6.62	0.41	4.16	1.44	0.77	0.52	0.09	0.38	334	2130
LK22SC	537791	5182402	3	1	6.03	0.10	4.34	1.35	0.68	0.48	0.06	0.33	569	1300
LK23SC	537600	5182439	3	1	3.45	0.04	2.43	0.80	0.29	0.27	0.06	0.23	400	923
LK24SC	537498	5182459	3	1	5.65	0.09	3.42	1.58	0.52	0.40	0.06	0.33	1850	1690
LK25SC	537406	5182477	3	1	3.98	0.06	3.41	0.97	0.40	0.33	0.07	0.25	994	526
LK26SC	537305	5182494	3	1	6.52	0.13	4.66	1.21	0.70	0.51	0.10	0.43	1400	1000
LK27SC	537215	5182513	3	1	7.22	0.13	4.76	1.52	0.85	0.58	0.09	0.42	1000	1090
LK28SC	538135	5182333	3	1	8.07	0.54	4.77	2.05	1.16	0.70	0.09	0.40	1080	3480
LK29SC	538238	5182314	3	1	6.84	0.50	4.37	1.77	1.04	0.64	0.08	0.38	908	2380
LK30SC	538331	5182298	3	1	6.59	0.41	4.23	1.67	1.08	0.76	0.08	0.38	1960	3620
LK30SCD2	538331	5182298	3	1	6.57	0.41	4.21	1.65	1.08	0.76	0.08	0.40	1960	3890
LK31SC	538375	5182594	3	1	5.84	0.39	3.86	1.26	0.99	0.73	0.06	0.36	624	1840
LK32SC	538478	5182573	3	1	6.24	0.39	3.89	1.36	1.11	0.84	0.07	0.39	433	3200
LK33SC	538580	5182551	3	1	6.56	0.27	4.60	1.34	0.80	0.64	0.07	0.34	564	1320
LK34SC	537537	5181344	3	2	4.46	0.26	3.61	1.20	0.37	0.40	0.30	0.25	506	226
LK36SC	537295	5181388	3	2	5.96	0.13	4.45	1.18	0.58	0.50	0.08	0.38	579	1150
LK37SC	536512	5181470	3	2	7.89	0.59	4.55	2.11	1.02	0.66	0.05	0.42	1570	1020
LK38SC	536707	5181503	3	2	8.21	0.52	4.82	1.98	1.09	0.71	0.05	0.41	1160	1720
LK38SCD1	536707	5181503	3	2	8.26	0.49	4.78	2.06	1.06	0.68	0.05	0.41	1270	1630

Appendix 2. Analytical results of soil samples from the Lik deposit (Cont.)

Sample Number	Ba	Ce	Co	Cr	Cu	Eu	Ga	La	Li	Mo	Nb	Nd	Ni	Pb	Sc	Sn	Sr
LK101SB	2	52	15	127	29	<2	11	37	44	2	6	28	68	15	12	<10	82
LK102SB	2	50	18	119	30	<2	12	33	50	4	6	25	72	18	12	<10	94
LK103SB	2	45	25	216	61	<2	11	32	47	8	5	25	186	19	12	<10	78
LK104SB	3	50	22	229	80	3	11	30	52	8	6	33	110	194	13	<10	126
LK105SB	2	52	22	160	46	<2	14	30	52	8	8	24	71	140	12	<10	182
LK106SB	3	50	28	237	98	3	13	29	52	11	7	32	145	128	15	<10	114
LK107SB	2	67	17	346	80	<2	17	31	82	3	9	27	96	26	22	<10	230
LK107SBD1	2	68	17	296	80	<2	17	33	77	4	10	28	97	25	22	<10	232
LK1SC	2	55	21	137	48	<2	15	30	61	3	8	32	73	26	16	<10	110
LK2SC	2	58	29	128	42	<2	14	29	60	4	10	28	78	24	14	<10	94
LK3SC	2	59	19	118	39	<2	12	29	54	4	5	29	73	113	13	<10	111
LK4SC	1	51	12	109	58	<2	13	25	36	9	8	23	45	31	11	<10	82
LK5SC	2	66	24	122	33	<2	17	32	55	4	9	30	56	26	15	<10	73
LK6SC	2	65	24	134	45	<2	18	29	64	3	9	24	64	23	15	<10	82
LK7SC	2	75	40	136	65	<2	19	32	77	5	10	31	69	34	17	<10	91
LK8SC	1	58	19	128	35	<2	18	27	57	2	8	25	45	31	13	<10	77
LK9SC	2	86	28	117	180	<2	17	33	51	12	9	34	80	54	18	<10	137
LK10SC	2	78	48	143	278	2	17	22	63	27	7	36	154	23	29	<10	234
LK10SCD2	2	76	48	141	275	2	17	21	63	24	7	34	152	13	29	<10	223
LK11SC	1	52	26	96	78	<2	14	25	61	7	7	25	63	35	13	<10	96
LK12SC	2	53	18	135	31	<2	13	30	45	3	8	25	60	35	11	<10	78
LK13SC	2	55	9	158	72	<2	14	29	45	13	8	26	35	58	12	<10	174
LK14SC	2	62	20	148	116	<2	17	32	45	17	9	30	41	45	16	<10	230
LK15SC	<1	17	2	56	42	<2	4	9	33	12	<4	10	10	178	4	<10	64
LK16SC	2	71	32	128	111	2	21	33	62	11	9	34	57	38	20	<10	125
LK17SC	2	47	13	149	37	<2	15	25	78	<2	7	23	92	41	16	<10	96
LK18SC	2	80	28	148	82	<2	20	38	71	4	12	36	72	60	19	<10	103
LK19SC	2	37	23	179	89	<2	22	20	105	<2	6	20	137	174	20	<10	125
LK20SC	2	67	20	136	35	<2	19	32	55	4	11	26	43	49	14	<10	78
LK20SCD2	2	66	20	136	32	<2	19	32	55	4	11	25	42	46	14	<10	77
LK21SC	2	56	13	132	39	<2	16	30	56	8	9	27	51	789	13	<10	107
LK22SC	2	52	19	121	46	<2	14	25	60	6	6	23	67	176	11	<10	83
LK23SC	<1	36	9	93	45	<2	9	17	31	25	4	16	34	22	7	<10	64
LK24SC	1	62	29	92	115	<2	14	28	54	10	5	33	81	27	14	<10	119
LK25SC	1	41	17	96	79	<2	10	19	62	27	5	19	57	26	10	<10	128
LK26SC	2	55	19	127	38	<2	17	27	54	5	9	25	50	36	12	<10	74
LK27SC	2	58	19	152	44	<2	18	29	51	7	9	25	48	36	14	<10	83
LK28SC	2	60	28	156	57	<2	19	32	64	4	8	32	87	27	19	<10	131
LK29SC	2	58	22	138	48	<2	16	31	59	3	6	32	76	36	17	<10	149
LK30SC	2	57	32	134	52	<2	16	27	52	5	7	27	84	41	15	<10	143
LK30SCD2	2	62	32	133	51	<2	17	29	52	4	8	30	85	41	16	<10	145
LK31SC	2	46	19	124	37	<2	14	24	50	4	6	22	60	38	12	<10	85
LK32SC	2	52	19	129	43	<2	14	29	55	3	7	31	67	50	15	<10	136
LK33SC	2	51	15	136	31	<2	15	26	57	6	7	25	46	510	13	<10	91
LK34SC	2	44	11	148	92	<2	12	26	37	20	7	28	39	23	11	<10	205
LK36SC	1	51	16	122	60	<2	16	25	42	8	9	23	49	44	12	<10	95
LK37SC	2	81	28	152	51	<2	19	38	51	4	10	36	69	26	18	<10	92
LK38SC	2	75	24	145	49	<2	19	39	60	<2	8	37	69	22	18	<10	85
LK38SCD1	2	76	24	146	53	<2	20	39	62	<2	9	39	73	21	18	<10	86

Appendix 2. Analytical results of soil samples from the Lik deposit (Cont.)

Sample Number	Th	* V	* Y	* Yb	* Zn	Ag ⁺	As ⁺	Bi ⁺	Cd ⁺	Cu ⁺	Mo ⁺	Pb ⁺	Sb ⁺	Zn ⁺
LK101SB	9	140	43	3	180	0.18	8.2	N 0.60	0.71	25	2.6	16	N 0.60	130
LK102SB	8	170	31	3	216	0.18	10	N 0.60	1.2	26	4.8	18	N 0.60	140
LK103SB	9	161	38	3	536	1.5	28	N 0.60	1.5	54	8.1	22	N 0.60	390
LK104SB	9	180	68	6	1280	1.6	11	N 0.60	2.8	70	7.8	200	1.9	770
LK105SB	9	180	26	3	981	0.86	19	N 0.60	1.7	40	8.2	150	1.8	630
LK106SB	9	231	67	7	2120	1.2	25	N 0.60	6.2	85	9.9	130	1.7	1200
LK107SB	13	295	33	3	1600	N 0.045	61	N 0.60	2.4	70	2.8	29	N 0.60	1000
LK107SBD1	13	291	34	3	1730	N 0.045	65	N 0.60	2.6	73	3.1	30	N 0.60	1200
LK1TSC	9	161	30	3	137	0.22	8.5	N 0.60	0.33	41	3.1	31	1.0	110
LK2SC	7	151	25	2	185	0.075	8.5	N 0.60	0.79	38	2.3	26	0.84	150
LK3SC	10	148	28	2	221	0.36	10	N 0.60	1.4	33	3.8	140	1.5	150
LK4SC	7	201	12	2	202	0.21	10	N 0.60	0.23	52	7.1	36	2.1	150
LK5SC	10	154	26	3	115	0.10	12	N 0.60	0.18	28	2.6	30	0.81	75
LK6SC	10	175	12	2	117	N 0.045	6.2	N 0.60	0.20	41	2.1	25	0.98	92
LK7SC	11	189	19	2	134	0.073	14	N 0.60	0.28	60	3.0	40	1.4	110
LK8SC	9	170	11	2	131	0.067	5.8	N 0.60	0.22	30	2.1	35	1.1	92
LK9SC	8	206	16	2	254	0.076	17	0.87	0.66	150	8.5	59	2.6	180
LK10SC	6	475	24	3	426	0.74	64	1.1	3.7	220	19	61	4.6	300
LK10SCD2	5	461	25	3	425	0.76	69	1.3	4.0	240	20	64	4.6	310
LK11SC	6	201	12	2	239	0.075	7.9	0.62	0.37	65	5.2	40	1.3	160
LK12SC	9	144	18	2	162	0.084	5.1	N 0.60	0.38	24	1.5	37	0.73	120
LK13SC	7	300	16	2	162	1.4	15	N 0.60	0.30	63	10	83	2.6	110
LK14SC	9	363	21	2	225	1.7	18	N 0.60	0.62	100	14	74	4.0	170
LK15SC	4	117	10	< 1	73	2.6	11	N 0.60	0.26	34	7.9	260	30	55
LK16SC	11	180	21	2	149	0.081	9.7	N 0.60	0.13	99	8.7	47	1.6	110
LK17SC	7	157	19	2	307	0.45	2.1	N 0.60	1.2	31	1.1	53	0.72	170
LK18SC	11	197	24	3	158	0.25	6.9	0.71	0.13	65	3.5	71	1.6	120
LK19SC	7	255	22	2	562	3.2	N 0.60	N 0.60	2.5	77	0.96	290	3.3	340
LK20SC	8	195	13	2	107	N 0.045	7.7	0.66	0.12	29	2.8	56	1.0	80
LK20SCD2	9	193	12	2	104	N 0.045	7.8	0.65	0.12	30	2.8	57	0.98	81
LK21SC	8	201	19	2	223	0.51	12	N 0.60	0.27	34	5.5	920	3.5	160
LK22SC	8	174	16	2	237	0.22	9.4	N 0.60	0.58	42	4.8	210	1.6	170
LK23SC	5	341	9	1	142	0.36	12	N 0.60	0.17	38	18	23	2.7	100
LK24SC	5	227	20	2	363	0.18	11	0.70	1.2	96	7.9	29	2.7	230
LK25SC	4	371	12	2	234	0.44	25	0.72	0.53	64	20	27	5.3	160
LK26SC	9	183	14	2	195	0.077	7.1	N 0.60	0.29	35	3.7	41	1.2	140
LK27SC	10	244	14	2	137	0.087	8.6	0.63	0.20	39	5.1	42	1.6	110
LK28SC	10	197	30	3	166	0.23	11	N 0.60	0.70	54	3.2	33	1.3	140
LK29SC	10	164	34	3	158	0.23	11	N 0.60	0.68	44	3.2	43	1.5	130
LK30SC	9	162	27	2	140	0.16	11	N 0.60	1.1	46	3.5	46	1.1	110
LK30SCD2	9	161	27	3	139	0.16	11	N 0.60	1.0	46	3.4	46	1.3	110
LK31SC	7	147	16	2	137	0.058	8.7	0.70	0.30	30	2.8	41	0.87	100
LK32SC	8	147	28	3	242	0.13	6.5	N 0.60	0.63	37	2.5	58	1.1	180
LK33SC	9	160	16	2	401	0.40	7.7	N 0.60	0.34	24	3.9	620	2.4	290
LK34SC	6	353	33	3	150	1.4	21	0.60	1.2	82	15	33	3.7	120
LK36SC	8	237	11	2	182	0.14	9.6	0.90	0.28	53	6.4	50	2.5	130
LK37SC	11	181	31	3	136	0.26	15	0.74	0.44	45	3.2	29	1.3	110
LK38SC	11	174	30	3	123	0.084	7.6	0.65	0.20	41	1.8	25	0.98	98
LK38SCD1	13	178	29	3	125	N 0.045	5.8	N 0.60	0.18	43	1.8	23	N 0.60	100

Appendix 2. Analytical results of soil samples from the Lik deposit (Cont.)

Sample Number	Easting	Northing	Type	Line	Al %	Ca %	Fe %	K %	Mg %	Na %	P %	Ti %	Mn %	Ba %
LK39SC	537004	5181441	3	2	6.79	0.14	4.68	1.27	0.65	0.63	0.08	0.43	2810	810
LK40SC	538275	5181217	3	2	5.84	0.91	3.87	1.24	0.80	0.52	0.08	0.28	740	608
LK40SCD1	538275	5181217	3	2	5.78	1.08	3.73	1.25	0.86	0.52	0.08	0.30	708	604
LK41SC	538182	5181233	3	2	6.08	0.35	4.29	1.22	0.77	0.51	0.08	0.30	712	624
LK41SCD2	538182	5181233	3	2	6.03	0.34	4.25	1.21	0.76	0.51	0.08	0.29	701	638
LK42SC	537979	5181270	3	2	6.91	0.25	4.54	1.53	0.81	0.59	0.07	0.37	471	3740
LK43SC	537880	5181285	3	2	6.64	0.26	4.27	1.54	0.81	0.54	0.10	0.34	742	3740
LK44SC	537741	5181307	3	2	5.44	0.18	3.66	1.19	0.55	0.38	0.21	0.31	152	2390
LK45SC	537639	5181327	3	2	5.60	0.08	6.00	1.35	0.56	0.42	0.19	0.31	146	367
LK46SC	535760	5179911	3	3	7.28	0.09	4.87	1.96	0.80	0.38	0.07	0.35	1870	1350
LK46SCD1	535760	5179911	3	3	7.40	0.09	4.93	1.99	0.80	0.36	0.07	0.35	1800	1470
LK47SC	535862	5179909	3	3	7.41	0.10	4.16	2.02	0.88	0.54	0.06	0.39	825	1840
LK48SC	536158	5179908	3	3	6.18	0.15	4.23	1.28	0.79	0.67	0.05	0.39	2250	1860
LK49SC	536455	5179904	3	3	7.55	0.12	4.33	1.87	0.87	0.58	0.09	0.36	1010	1610
LK49SCD2	536455	5179904	3	3	7.48	0.12	4.26	1.85	0.86	0.57	0.09	0.36	996	1600
LK50SC	536654	5179906	3	3	5.59	0.04	4.42	1.73	0.53	0.53	0.11	0.32	115	144
LK51SC	536857	5179906	3	3	7.68	0.33	5.09	1.56	1.02	0.99	0.12	0.43	2210	2760
LK64SC	536113	5181400	3	2	7.76	1.13	4.71	1.94	1.06	0.67	0.08	0.43	908	732
LK65SC	536422	5181453	3	2	8.57	0.64	5.06	2.12	1.16	0.70	0.08	0.47	1160	930
LK66SC	538378	5181196	3	2	6.66	0.66	4.01	1.34	0.88	0.63	0.07	0.34	404	915
LK67SC	538675	5181145	3	2	6.30	0.61	3.79	1.15	0.83	0.62	0.07	0.32	522	908
LK68SC	538770	5181129	3	2	6.17	0.54	3.53	1.27	0.82	0.66	0.07	0.33	308	1030
LK69SC	539709	5184493	3	4	8.48	0.54	4.50	2.13	1.04	0.61	0.10	0.38	619	2020
LK69SCD1	539709	5184493	3	4	8.41	0.51	4.52	2.11	1.04	0.63	0.10	0.39	550	2020
LK70SC	536553	5179903	3	3	5.06	0.07	4.32	1.29	0.44	0.39	0.08	0.34	597	1580
LK71SC	536752	5179904	3	3	7.81	0.13	6.01	1.80	0.77	0.46	0.14	0.34	597	312
LK72SC	538073	5180104	3	3	6.00	0.55	3.78	1.21	0.76	0.55	0.07	0.33	625	1240
LK72SCD2	538073	5180104	3	3	6.13	0.57	3.87	1.23	0.77	0.56	0.07	0.32	637	1270
LK73SC	537964	5180081	3	3	5.79	0.20	3.97	1.16	0.68	0.58	0.08	0.30	690	928
LK73SCD1	537964	5180081	3	3	5.89	0.19	4.17	1.18	0.68	0.56	0.09	0.31	621	987
LK74SC	537868	5180065	3	3	5.77	0.26	5.34	1.23	0.68	0.49	0.11	0.31	764	1080
LK75SC	537766	5180046	3	3	6.14	0.51	6.25	1.22	0.64	0.53	0.09	0.35	436	1880
LK76SC	537668	5180030	3	3	3.42	0.60	22.6	0.93	0.28	0.24	0.36	0.16	989	253
LK77SC	537571	5180010	3	3	6.87	0.30	6.49	1.57	0.71	0.67	0.10	0.39	197	1080
LK78SC	537476	5179993	3	3	7.52	0.51	3.12	1.55	0.78	0.65	0.07	0.36	201	2420
LK79SC	537379	5179977	3	3	6.59	0.28	3.76	1.51	0.71	0.54	0.07	0.32	2730	2270
LK80SC	537290	5179963	3	3	5.57	0.09	4.26	1.19	0.58	0.40	0.09	0.28	741	945
LK81SC	537160	5179936	3	3	7.06	0.07	7.29	1.84	0.76	0.50	0.10	0.37	173	1330
LK82SC	537061	5179919	3	3	6.88	0.28	7.86	1.41	0.69	0.45	0.13	0.33	588	3190
LK83SC	536961	5179904	3	3	6.66	0.19	3.86	1.32	0.86	0.97	0.07	0.38	378	2340
LK89SC	536219	5181417	3	2	7.15	0.53	4.66	1.88	1.09	0.54	0.04	0.42	4960	3880
LK89SCD1	536219	5181417	3	2	7.24	0.50	4.64	1.92	1.09	0.53	0.04	0.42	4710	4380
LK90SC	536316	5181436	3	2	7.35	0.77	4.43	1.93	1.02	0.51	0.08	0.37	1170	3020
LK90SCD2	536316	5181436	3	2	7.27	0.76	4.41	1.91	1.01	0.51	0.08	0.37	1160	3060
LK91SC	538475	5181178	3	2	5.42	0.16	3.81	1.01	0.57	0.49	0.05	0.32	508	517
LK92SC	538574	5181161	3	2	6.28	0.55	3.87	1.26	0.82	0.66	0.06	0.34	458	874
LK93SC	538926	5181099	3	2	5.35	0.81	2.37	0.89	0.68	0.58	0.05	0.28	132	908
LK94SC	539809	5184469	3	4	8.62	0.42	4.68	2.17	1.01	0.59	0.09	0.42	694	1800
LK95SC	540143	5184373	3	4	6.18	0.54	3.62	1.46	0.76	0.50	0.07	0.32	263	1050

Appendix 2. Analytical results of soil samples from the Lik deposit (Cont.)

Sample Number	Be	Ce	Co	Cr	Cu	Eu	Ga	La	Li	Mo	Nb	Nd	Ni	Pb	Sc	Sn	Sr
LK39SC	1	61	25	118	48	<2	20	28	50	2	9	26	53	29	14	<10	76
LK40SC	2	54	17	129	32	<2	13	36	50	3	6	33	70	20	13	<10	81
LK40SCD1	2	55	16	127	31	<2	13	38	48	3	6	33	70	20	14	<10	85
LK41SC	2	59	19	129	29	<2	13	34	53	2	5	32	113	21	13	<10	71
LK41SCD2	2	56	18	128	28	<2	12	33	53	4	6	30	110	22	12	<10	70
LK42SC	2	66	21	138	81	<2	16	32	51	8	8	33	51	36	17	<10	116
LK43SC	2	60	19	148	71	<2	15	30	51	9	8	29	42	66	14	<10	132
LK44SC	2	51	7	182	54	<2	13	31	42	13	8	27	28	73	11	<10	151
LK45SC	2	48	6	138	100	<2	15	26	34	26	6	28	30	67	14	<10	225
LK46SC	2	65	26	121	104	<2	20	31	54	13	8	27	70	21	16	<10	179
LK46SCD1	2	65	27	127	107	<2	20	31	55	14	9	28	73	22	17	<10	182
LK47SC	2	66	19	111	84	<2	18	32	57	7	9	30	74	20	16	<10	169
LK48SC	2	63	30	125	59	<2	16	30	59	5	8	29	75	245	13	<10	85
LK49SC	2	66	21	152	51	<2	18	32	63	4	8	30	65	55	16	<10	84
LK49SCD2	2	64	21	143	50	<2	18	32	62	4	8	29	64	53	16	<10	83
LK50SC	2	45	7	104	104	<2	13	22	25	27	7	26	25	11	13	<10	187
LK51SC	2	57	41	134	34	<2	20	28	76	7	0	27	57	40	14	<10	95
LK64SC	2	76	22	136	30	<2	18	33	61	2	8	29	59	24	15	<10	84
LK65SC	2	80	26	119	40	<2	20	37	60	2	0	34	66	26	17	<10	86
LK66SC	2	58	15	142	40	<2	15	35	51	3	6	31	64	45	15	<10	95
LK67SC	2	58	15	128	29	<2	13	33	51	2	5	29	62	34	13	<10	82
LK68SC	2	53	12	133	31	<2	14	35	47	2	6	31	59	30	14	<10	86
LK69SC	2	61	20	164	57	<2	19	32	72	4	9	31	70	18	19	<10	101
LK69SCD1	2	63	20	165	56	<2	19	33	72	3	8	31	70	16	19	<10	101
LK70SC	1	57	11	98	77	<2	15	27	31	16	7	24	32	38	11	<10	113
LK71SC	2	56	16	150	113	<2	20	30	45	24	9	30	52	66	18	<10	196
LK72SC	2	59	16	129	45	<2	14	36	50	4	7	33	71	32	15	<10	82
LK72SCD2	2	61	16	132	46	<2	14	36	50	2	6	35	70	32	15	<10	84
LK73SC	2	53	18	128	43	<2	13	28	46	5	6	26	46	45	12	<10	78
LK73SCD1	2	54	18	133	41	<2	13	29	46	7	6	28	45	47	12	<10	82
LK74SC	2	47	19	147	31	<2	14	26	49	10	6	22	43	59	10	<10	94
LK75SC	2	55	13	179	90	<2	14	31	52	12	9	31	55	47	15	<10	106
LK76SC	1	21	11	211	22	<2	12	15	20	14	6	14	23	124	7	<10	151
LK77SC	1	61	9	151	31	<2	17	30	36	10	9	29	27	450	16	<10	90
LK78SC	2	67	15	140	59	<2	17	32	60	4	0	31	65	980	17	<10	101
LK79SC	3	69	39	141	84	<2	17	36	59	5	7	35	126	84	16	<10	85
LK80SC	2	48	19	132	67	<2	12	26	53	5	6	23	94	66	12	<10	73
LK81SC	2	55	10	146	50	<2	16	28	43	9	0	27	36	59	16	<10	105
LK82SC	2	53	15	139	52	<2	17	27	54	11	9	27	37	77	15	<10	96
LK83SC	2	57	12	101	37	<2	15	30	53	3	7	28	50	24	13	<10	81
LK89SC	2	86	22	110	163	2	22	41	62	7	7	38	248	36	21	<10	90
LK89SCD1	2	85	15	114	161	2	23	41	62	8	8	39	241	36	22	<10	95
LK90SC	2	61	27	119	98	<2	18	35	60	3	8	33	104	25	19	<10	74
LK90SCD2	2	61	27	115	98	<2	18	34	59	3	8	31	102	24	18	<10	74
LK91SC	1	49	14	104	23	<2	13	27	47	2	6	22	57	35	10	<10	64
LK92SC	2	55	14	121	31	<2	14	36	47	<2	6	32	53	30	15	<10	87
LK93SC	1	47	16	112	37	<2	12	30	46	<2	5	27	98	38	13	<10	80
LK94SC	2	70	19	152	50	<2	20	36	74	3	0	31	70	19	20	<10	99
LK95SC	2	57	15	119	38	2	13	39	52	2	7	38	71	16	18	<10	88

Appendix 2. Analytical results of soil samples from the Lik deposit (Cont.)

Sample Number	Th	* V	* Y	* Yb	* Zn	Ag ⁺	As ⁺	Bi ⁺	Cd ⁺	Cu ⁺	Mo ⁺	Pb ⁺	Sb ⁺	Zn ⁺
LK39SC	9	172	13	2	128	N 0.045	2.3	N 0.60	0.10	38	2.0	33	N 0.60	89
LK40SC	9	142	38	3	182	0.35	6.7	N 0.60	1.2	24	2.1	23	N 0.60	130
LK40SCD1	9	139	40	3	182	0.35	7.2	N 0.60	1.1	24	2.0	23	N 0.60	130
LK41SC	10	139	30	2	1040	0.26	6.4	N 0.60	2.1	23	2.4	25	N 0.60	590
LK41SCD2	8	137	29	2	1040	0.23	6.2	N 0.60	2.1	23	2.4	25	N 0.60	590
LK42SC	9	231	21	2	217	0.36	5.2	N 0.60	0.29	62	5.8	40	1.7	160
LK43SC	9	237	16	2	163	0.59	8.0	N 0.60	0.34	54	6.2	80	1.7	120
LK44SC	8	270	18	2	164	1.7	12	N 0.60	0.27	45	9.9	86	2.4	120
LK45SC	9	406	18	2	157	1.3	21	N 0.60	0.58	88	19	90	4.9	120
LK46SC	9	179	13	2	145	0.35	7.9	N 0.60	0.17	91	9.5	26	2.1	110
LK46SCD1	9	184	14	2	145	0.37	8.1	N 0.60	0.16	91	9.8	27	2.4	110
LK47SC	9	174	16	2	145	0.13	6.0	N 0.60	0.080	72	4.4	23	1.1	110
LK48SC	9	157	19	2	211	0.097	8.9	N 0.60	0.38	49	3.9	300	1.5	160
LK49SC	9	188	19	2	185	0.12	8.6	N 0.60	0.31	43	3.2	66	0.90	140
LK49SCD2	10	186	19	2	180	0.11	8.6	N 0.60	0.31	43	3.1	65	1.1	140
LK50SC	5	400	13	2	124	0.55	27	N 0.60	0.22	92	20	26	4.9	100
LK51SC	10	188	15	2	251	0.079	6.3	N 0.60	0.46	27	4.3	47	0.86	150
LK64SC	11	177	24	2	130	0.058	10	N 0.60	0.41	23	2.1	29	0.70	90
LK65SC	12	188	25	3	127	N 0.045	8.5	N 0.60	0.17	34	2.1	31	0.87	99
LK66SC	9	159	31	3	183	0.42	4.1	N 0.60	0.32	30	1.5	51	0.77	140
LK67SC	8	150	30	3	186	0.37	3.7	N 0.60	0.42	19	1.4	37	0.68	130
LK68SC	9	143	32	3	256	0.26	3.7	N 0.60	0.41	26	1.4	32	0.65	190
LK69SC	9	201	24	2	153	0.47	8.8	N 0.60	0.17	49	2.7	21	0.96	120
LK69SCD1	10	200	24	3	154	0.44	8.0	N 0.60	0.18	49	2.8	21	1.1	120
LK70SC	7	244	11	2	135	0.14	19	N 0.60	0.16	64	12	44	3.1	100
LK71SC	9	468	18	2	240	0.95	19	N 0.60	0.55	95	19	98	4.5	180
LK72SC	8	161	38	3	232	0.38	5.1	N 0.60	1.2	33	2.6	36	0.87	170
LK72SCD2	9	164	39	3	237	0.38	6.1	N 0.60	1.3	34	2.6	36	1.0	170
LK73SC	9	169	18	2	182	0.48	10	N 0.60	0.34	31	3.8	53	1.3	130
LK73SCD1	9	179	18	2	178	0.45	11	N 0.60	0.33	31	4.7	55	1.5	130
LK74SC	8	217	10	2	257	0.33	17	N 0.60	0.39	25	6.7	60	1.9	180
LK75SC	8	276	28	3	301	0.95	15	0.61	1.5	68	7.2	50	2.2	200
LK76SC	7	431	7	1	1580	0.30	85	N 0.60	2.2	15	6.7	150	2.6	950
LK77SC	9	247	14	2	206	0.78	19	N 0.60	0.067	22	5.7	1600	6.5	150
LK78SC	6	246	18	2	3710	N 0.045	N 0.60	N 0.60	17	43	2.8	5600	N 0.60	> 1500
LK79SC	10	196	42	3	1040	0.36	5.6	N 0.60	3.3	67	3.2	68	1.1	690
LK80SC	7	174	19	2	509	0.59	5.6	N 0.60	0.78	59	3.7	71	1.4	330
LK81SC	10	255	14	2	134	0.43	9.7	N 0.60	0.077	39	5.3	68	1.5	97
LK82SC	10	248	16	2	188	0.40	4.4	N 0.60	0.14	39	5.9	91	1.6	130
LK83SC	9	172	18	2	106	0.25	3.5	N 0.60	0.11	30	2.8	24	1.1	80
LK89SC	12	183	37	4	352	0.15	9.8	0.75	0.57	140	6.4	42	3.0	270
LK89SCD1	12	186	37	3	362	0.14	8.4	N 0.60	0.52	140	6.2	40	3.4	280
LK90SC	10	170	31	3	200	0.25	4.6	N 0.60	0.27	75	2.4	25	1.2	140
LK90SCD2	9	170	31	3	197	0.24	5.2	N 0.60	0.27	74	2.4	25	1.2	140
LK91SC	7	140	17	2	157	0.086	4.3	N 0.60	0.47	19	1.9	40	0.90	120
LK92SC	10	147	30	3	170	0.26	3.4	N 0.60	0.36	26	1.5	34	0.76	140
LK93SC	7	129	27	2	617	0.32	1.2	N 0.60	0.36	30	0.66	44	0.76	420
LK94SC	11	203	22	3	151	0.21	8.4	N 0.60	0.25	44	2.7	21	0.99	120
LK95SC	10	158	46	3	159	0.40	8.4	N 0.60	0.65	34	2.3	17	N 0.60	130

Appendix 2. Analytical results of soil samples from the Lik deposit (Cont.)

Sample Number	Easting	Northing	Type	Line	Al %	Ca %	Fe %	K %	Mg %	Na %	P %	Ti %	Mn	Ba
LK96SC	540238	5184348	3	4	5.66	0.54	3.57	1.35	0.67	0.42	0.08	0.30	431	707
LK97SC	540607	5184249	3	4	7.29	0.27	4.05	1.64	0.81	0.58	0.14	0.34	700	1490
LK99SC	539065	5182439	3	1	4.76	0.22	9.09	1.07	0.39	0.28	0.18	0.26	266	782
LK100SC	539904	5184441	3	4	7.46	0.37	4.35	1.82	1.09	0.90	0.08	0.44	973	1210
LK101SC	540333	5184321	3	4	5.12	0.74	3.25	1.10	0.58	0.39	0.09	0.26	397	918
LK102SC	540438	5184294	3	4	4.97	1.83	3.51	1.07	0.87	0.42	0.09	0.24	397	910
LK103SC	540698	5184227	3	4	5.52	0.54	4.95	1.11	0.18	0.11	0.10	0.21	1160	625
LK104SC	538971	5182467	3	1	5.50	0.08	4.33	1.14	0.51	0.34	0.09	0.27	340	788
LK105SC	538773	5182511	3	1	5.57	0.11	5.34	1.27	0.68	0.51	0.12	0.31	868	501
LK106SC	538871	5182490	3	1	6.15	0.09	10.3	1.16	0.60	0.39	0.18	0.26	1290	966
LK107SC	538680	5182529	3	1	9.09	0.08	10.1	2.22	0.86	0.73	0.26	0.45	222	534
LK107SCD1	538680	5182529	3	1	8.95	0.08	10.4	2.20	0.83	0.72	0.28	0.42	219	519
LK1SE	538039	5182355	4	1	6.73	0.50	4.15	1.41	1.11	0.91	0.08	0.43	309	2090
LK2SE	537948	5182370	4	1	6.67	0.24	4.08	1.47	1.00	0.96	0.08	0.46	468	1680
LK3SE	537845	5182389	4	1	5.21	0.33	3.54	1.10	0.54	0.50	0.06	0.29	444	1880
LK4SE	537698	5182420	4	1	4.93	0.10	3.27	1.09	0.43	0.60	0.08	0.34	382	832
LK5SE	536617	5181490	4	2	6.61	0.78	4.19	1.42	0.76	0.62	0.14	0.36	724	905
LK6SE	536806	5181480	4	2	7.65	0.40	4.69	1.56	1.05	0.86	0.07	0.44	695	1170
LK7SE	536901	5181460	4	2	7.26	0.22	4.61	1.55	1.01	1.23	0.06	0.51	1020	1090
LK8SE	537101	5181422	4	2	6.61	0.26	4.95	1.34	0.91	0.73	0.09	0.40	783	815
LK9SE	537198	5181404	4	2	6.04	0.17	5.31	1.41	0.67	0.82	0.09	0.47	1410	2750
LK10SE	537416	5181260	4	2	6.10	0.18	6.55	1.38	0.69	0.97	0.13	0.43	1940	985
LK10SED2	537416	5181260	4	2	6.12	0.18	6.61	1.39	0.69	0.98	0.13	0.43	1970	807
LK11SE	537415	5181261	4	2	5.72	0.16	4.31	1.16	0.70	0.71	0.08	0.35	759	1090
LK12SE	538082	5181252	4	2	6.33	0.31	3.54	1.28	0.81	0.71	0.06	0.39	348	617
LK13SE	537792	5181297	4	2	6.40	0.21	3.96	1.44	0.75	0.73	0.15	0.40	318	3160
LK14SE	537693	5181314	4	2	6.87	0.19	4.62	1.56	0.79	0.72	0.18	0.39	1010	2910
LK15SE	537592	5181336	4	2	2.42	0.04	3.83	0.60	0.19	0.23	0.07	0.23	69	341
LK16SE	535659	5179912	4	3	7.25	0.19	4.69	1.96	0.83	0.55	0.08	0.44	1270	4180
LK17SE	535961	5179908	4	3	7.22	0.44	2.43	1.08	0.81	0.85	0.12	0.34	169	2020
LK18SE	536256	5179906	4	3	7.63	0.30	4.55	1.69	0.99	0.90	0.06	0.50	713	2290
LK19SE	536057	5179908	4	3	8.80	0.76	2.58	1.92	0.87	0.47	0.06	0.26	230	1870
LK20SE	536353	5179906	4	3	7.25	0.13	4.66	1.57	0.75	0.82	0.06	0.47	653	839
LK20SED2	536353	5179906	4	3	7.24	0.13	4.66	1.56	0.75	0.82	0.06	0.47	652	828
LK21SE	537894	5182378	4	1	6.73	0.49	3.67	1.35	0.72	0.55	0.13	0.39	240	2480
LK22SE	537791	5182402	4	1	5.90	0.11	4.34	1.22	0.59	0.56	0.07	0.34	456	1050
LK23SE	537600	5182439	4	1	4.09	0.06	2.82	0.80	0.33	0.46	0.10	0.28	295	851
LK24SE	537498	5182459	4	1	6.25	0.14	4.61	1.47	0.57	0.64	0.09	0.39	1710	2500
LK25SE	537406	5182477	4	1	5.75	0.16	4.71	1.28	0.66	0.72	0.09	0.37	978	414
LK26SE	537305	5182494	4	1	6.68	0.18	4.75	1.20	0.75	0.64	0.11	0.47	898	1010
LK27SE	537215	5182513	4	1	6.84	0.19	4.37	1.38	0.84	0.76	0.09	0.43	536	1000
LK28SE	538135	5182333	4	1	7.77	0.51	4.71	1.94	1.06	0.78	0.09	0.44	680	2920
LK29SE	538238	5182314	4	1	6.83	0.53	4.58	1.71	0.96	0.64	0.08	0.42	1090	2650
LK30SE	538331	5182298	4	1	6.08	0.40	3.82	1.46	0.92	0.85	0.08	0.43	847	2260
LK30SED2	538331	5182298	4	1	6.13	0.40	3.84	1.47	0.93	0.85	0.08	0.45	857	2260
LK31SE	538375	5182594	4	1	5.72	0.37	3.53	1.18	0.91	0.86	0.06	0.42	284	1310
LK32SE	538478	5182573	4	1	6.26	0.38	3.83	1.34	1.09	0.94	0.07	0.46	352	1440
LK33SE	538580	5182551	4	1	6.96	0.28	4.56	1.42	0.86	0.76	0.07	0.41	335	1330
LK34SE	537537		4	2	5.39	0.16	5.03	1.39	0.49	0.70	0.26	0.33	456	1150

Appendix 2. Analytical results of soil samples from the Lik deposit (Cont.)

Sample Number	Be	Ce	Co	Cr	Cu	Eu	Ga	La	Li	Mo	Nb	Nd	Ni	Pb	Sc	Sn	Sr
LK96SC	2	57	15	111	30	<2	13	32	54	3	7	29	67	16	13	<10	76
LK97SC	2	58	20	189	56	<2	18	32	66	5	7	32	71	42	18	<10	106
LK99SC	2	45	8	189	65	<2	11	28	36	16	6	27	44	101	12	<10	126
LK100SC	2	69	25	148	53	<2	17	35	67	2	8	32	73	22	18	<10	103
LK101SC	2	52	13	108	29	<2	11	38	41	3	6	31	73	14	13	<10	80
LK102SC	1	48	15	99	25	<2	11	34	46	4	5	30	68	17	13	<10	93
LK103SC	2	46	26	204	63	<2	13	34	50	9	5	31	204	20	14	<10	81
LK104SC	3	48	13	206	77	3	11	31	49	8	6	35	113	126	14	<10	123
LK105SC	2	48	15	142	41	<2	15	28	48	9	6	25	65	100	13	<10	197
LK106SC	3	47	19	215	92	3	15	29	52	10	5	39	144	99	17	<10	119
LK107SC	3	70	16	337	82	<2	20	33	81	4	10	33	94	29	28	<10	252
LK107SCD1	3	69	16	324	84	<2	20	33	78	3	8	31	97	29	28	<10	254
LK1SE	2	58	17	145	47	<2	15	32	58	3	8	35	70	22	17	<10	91
LK2SE	2	63	19	137	39	<2	16	34	57	<2	7	35	72	14	15	<10	88
LK3SE	2	60	15	118	33	<2	12	30	47	3	5	33	64	103	14	<10	84
LK4SE	<1	49	10	109	50	<2	14	24	33	7	5	23	40	25	11	<10	76
LK5SE	2	59	15	126	27	<2	17	30	50	<2	6	31	47	19	16	<10	69
LK6SE	2	66	19	138	41	<2	18	30	59	2	9	28	61	18	15	<10	83
LK7SE	2	70	22	129	49	<2	17	32	64	<2	8	35	54	18	16	<10	95
LK8SE	1	57	16	130	28	<2	16	27	53	<2	8	26	43	25	13	<10	75
LK9SE	1	77	24	120	204	<2	16	32	45	10	7	37	78	49	19	<10	150
LK10SE	2	71	36	126	215	2	16	26	53	18	6	34	120	39	24	<10	202
LK10SED2	2	72	37	127	216	2	16	27	54	18	7	33	120	39	24	<10	204
LK11SE	1	50	21	99	63	<2	13	24	52	5	6	25	56	29	12	<10	86
LK12SE	2	58	14	114	26	<2	14	32	46	<2	7	29	56	22	13	<10	80
LK13SE	2	60	12	156	68	<2	15	32	44	10	8	31	39	66	14	<10	156
LK14SE	2	62	19	156	108	<2	17	33	44	14	10	34	43	61	17	<10	203
LK15SE	<1	27	3	86	52	<2	6	14	27	17	5	17	13	366	6	<10	108
LK16SE	2	68	23	130	101	2	21	33	61	7	8	36	56	28	21	<10	115
LK17SE	2	46	15	154	35	<2	16	25	77	<2	8	24	93	45	16	<10	97
LK18SE	2	74	20	143	66	<2	18	36	64	3	12	36	65	35	19	<10	99
LK19SE	2	47	23	191	58	<2	24	24	98	<2	<4	29	134	192	21	<10	128
LK20SE	1	63	15	135	27	<2	18	31	51	3	11	28	39	35	14	<10	77
LK20SED2	1	62	15	136	28	<2	19	31	51	2	10	29	39	35	14	<10	76
LK21SE	2	56	11	142	34	<2	15	31	55	5	9	29	48	735	15	<10	104
LK22SE	1	54	16	127	35	<2	14	27	52	4	7	26	57	177	12	<10	77
LK23SE	<1	41	8	109	39	<2	11	21	28	29	6	21	31	19	9	<10	68
LK24SE	1	69	26	112	117	3	16	33	52	12	6	42	84	24	19	<10	140
LK25SE	1	56	18	135	78	<2	15	26	58	26	8	27	69	22	15	<10	152
LK26SE	1	58	15	136	33	<2	18	29	51	3	9	27	47	22	14	<10	76
LK27SE	1	57	15	148	35	<2	18	29	47	4	9	27	42	21	14	<10	83
LK28SE	2	63	22	161	56	<2	18	34	58	3	8	36	76	23	19	<10	107
LK29SE	2	64	24	149	51	2	17	36	57	4	8	38	80	41	19	<10	112
LK30SE	2	59	19	130	42	<2	15	32	46	3	8	34	66	22	15	<10	96
LK30SED2	2	60	20	131	43	<2	16	33	47	4	8	34	66	23	15	<10	98
LK31SE	1	53	12	124	27	<2	13	29	48	2	8	26	53	21	12	<10	78
LK32SE	2	59	15	137	39	<2	15	33	53	3	8	34	67	30	15	<10	92
LK33SE	2	56	13	145	25	<2	16	29	58	3	7	28	48	373	15	<10	92
LK34SE	2	47	11	151	108	<2	14	26	36	24	8	32	45	23	15	<10	260

Appendix 2. Analytical results of soil samples from the Lik deposit (Cont.)

Sample Number	Th	* V	* Y	* Yb	* Zn	Ag ⁺	As ⁺	Bi ⁺	Cd ⁺	Cu ⁺	Mo ⁺	Pb ⁺	Sb ⁺	Zn ⁺
LK96SC	10	151	25	2	194	0.17	8.3	N 0.60	0.70	25	2.8	19	0.78	140
LK97SC	10	206	31	3	216	0.95	7.8	N 0.60	0.97	51	4.4	52	1.4	180
LK99SC	8	236	26	3	872	1.2	25	N 0.60	1.9	57	12	120	1.5	650
LK100SC	10	180	24	3	137	0.29	10	N 0.60	0.34	48	2.5	25	1.0	110
LK101SC	8	134	44	3	171	0.25	6.0	N 0.60	0.73	25	2.4	16	0.81	140
LK102SC	8	141	37	3	196	0.31	8.6	N 0.60	1.3	20	3.7	18	0.74	130
LK103SC	10	171	40	4	550	1.9	29	N 0.60	1.6	57	7.9	24	1.2	450
LK104SC	9	175	63	6	1210	1.6	11	N 0.60	2.4	68	7.4	160	1.7	800
LK105SC	7	175	24	2	836	0.87	17	N 0.60	1.3	36	8.2	140	1.9	600
LK106SC	9	234	70	7	1970	1.3	22	N 0.60	5.2	81	9.3	120	1.7	1300
LK107SC	14	312	35	3	1450	0.057	72	N 0.60	2.7	74	3.2	37	N 0.60	1100
LK107SCD1	14	317	35	3	1620	N 0.045	76	N 0.60	2.9	77	3.7	38	N 0.60	1200
LK11SE	10	161	32	3	130	0.22	7.4	N 0.60	0.28	39	2.6	25	0.96	110
LK12SE	11	149	30	3	183	0.084	6.8	N 0.60	0.49	35	1.8	17	0.86	160
LK3SE	10	130	33	3	175	0.49	9.1	N 0.60	1.3	26	3.1	130	1.7	130
LK4SE	7	177	14	2	166	0.21	7.9	N 0.60	0.20	43	6.0	31	1.6	140
LK5SE	10	144	29	3	100	0.10	6.8	N 0.60	0.14	24	2.0	24	N 0.60	70
LK6SE	10	165	16	2	107	N 0.045	5.7	N 0.60	0.14	35	1.8	20	0.97	90
LK7SE	11	160	23	3	111	0.11	11	N 0.60	0.13	45	2.2	22	0.98	95
LK8SE	9	151	14	2	118	0.051	6.0	N 0.60	0.20	24	1.6	29	1.0	85
LK9SE	8	197	25	3	255	0.083	20	N 0.60	0.75	180	9.5	58	3.0	200
LK10SE	7	311	28	4	341	0.71	45	0.80	2.4	180	14	52	3.6	270
LK10SED2	8	314	28	4	343	0.73	45	1.1	2.4	180	14	53	3.5	270
LK11SE	7	169	14	2	201	0.087	7.7	0.62	0.31	51	4.1	35	1.2	130
LK12SE	10	141	20	2	154	0.093	4.0	N 0.60	0.29	22	1.2	25	0.89	120
LK13SE	10	294	20	3	172	1.2	11	N 0.60	0.36	60	8.8	82	2.6	130
LK14SE	11	329	24	3	217	1.5	14	N 0.60	0.66	97	12	77	3.5	170
LK15SE	5	178	15	2	97	3.9	16	N 0.60	0.35	45	11	430	35	77
LK16SE	11	169	24	3	139	0.097	7.5	N 0.60	0.11	91	7.3	33	1.7	110
LK17SE	8	154	22	2	305	0.45	1.8	N 0.60	1.2	31	1.1	52	0.75	180
LK18SE	12	174	26	3	141	0.26	4.9	N 0.60	0.082	55	2.6	41	1.3	110
LK19SE	12	239	23	3	490	2.5	0.93	N 0.60	1.5	51	0.80	240	2.3	330
LK20SE	9	178	15	2	94	N 0.045	5.5	N 0.60	0.11	24	2.3	42	0.80	75
LK20SED2	10	177	15	2	93	N 0.045	5.5	N 0.60	0.098	24	2.3	42	0.88	75
LK21SE	9	188	24	3	199	0.75	7.2	N 0.60	0.27	30	4.4	920	3.4	150
LK22SE	8	163	21	2	199	0.29	8.3	N 0.60	0.55	31	4.2	220	1.8	150
LK23SE	7	355	13	2	140	0.49	10	N 0.60	0.18	34	22	21	2.3	110
LK24SE	8	241	35	3	406	0.30	10	0.77	1.1	100	9.8	31	3.0	290
LK25SE	8	376	20	3	279	0.68	22	N 0.60	0.59	69	21	28	4.9	200
LK26SE	10	171	17	2	183	0.067	4.6	N 0.60	0.31	30	3.0	28	1.2	140
LK27SE	10	213	17	2	118	0.075	6.3	N 0.60	0.17	32	4.1	25	1.6	97
LK28SE	11	186	34	4	158	0.23	11	N 0.60	0.47	50	3.0	28	1.2	140
LK29SE	11	164	44	4	166	0.31	12	N 0.60	0.76	46	3.6	51	1.0	150
LK30SE	9	145	32	3	127	0.17	8.6	N 0.60	0.52	39	3.0	27	1.1	110
LK30SED2	10	147	32	3	127	0.17	8.9	N 0.60	0.52	39	3.0	27	0.94	110
LK31SE	8	134	20	2	125	0.048	5.7	N 0.60	0.22	34	2.1	24	0.74	97
LK32SE	9	143	33	3	231	0.10	5.1	N 0.60	0.49	34	2.0	37	0.89	180
LK33SE	9	161	20	3	407	0.31	6.7	N 0.60	0.30	23	3.4	470	1.9	290
LK34SE	9	422	32	3	171	1.7	27	N 0.60	1.3	99	20	43	1.7	140

Appendix 2. Analytical results of soil samples from the Lik deposit (Cont.)

Sample Number	Eastings	Northing	Type	Line	Al %	Ca %	Fe %	K %	Mg %	Na %	P %	Ti %	Mn %	Ba %
LK36SE	537295	5181344	4	2	6.14	0.19	4.51	1.16	0.61	0.69	0.07	0.42	483	993
LK37SE	536512	5181388	4	2	7.31	0.66	4.63	1.91	0.95	0.77	0.06	0.42	912	945
LK38SE	536707	5181470	4	2	7.80	0.54	4.62	1.84	1.06	0.82	0.05	0.44	610	1480
LK38SED1	536707	5181503	4	2	8.11	0.53	4.53	1.93	1.08	0.82	0.05	0.46	639	1500
LK39SE	537004	5181503	4	2	6.48	0.19	4.04	1.20	0.65	0.79	0.07	0.41	1440	692
LK40SE	538275	5181441	4	2	6.22	0.94	4.00	1.27	0.80	0.64	0.09	0.33	560	629
LK40SED1	538275	5181217	4	2	6.04	0.96	3.80	1.27	0.80	0.63	0.09	0.34	534	627
LK41SE	538182	5181217	4	2	6.64	0.39	4.66	1.29	0.82	0.63	0.10	0.36	637	680
LK41SED2	538182	5181233	4	2	6.68	0.39	4.69	1.30	0.82	0.63	0.10	0.36	640	684
LK42SE	537979	5181233	4	2	7.29	0.28	4.63	1.59	0.86	0.75	0.07	0.44	367	2630
LK43SE	537880	5181270	4	2	7.11	0.33	4.57	1.61	0.90	0.74	0.10	0.42	529	2770
LK44SE	537741	5181285	4	2	6.24	0.23	3.94	1.33	0.68	0.56	0.20	0.38	171	1750
LK45SE	537639	5181307	4	2	6.01	0.12	5.64	1.40	0.63	0.63	0.17	0.35	144	1600
LK46SE	535760	5181327	4	3	7.31	0.13	4.68	1.90	0.83	0.55	0.07	0.42	795	2720
LK46SED1	535760	5179911	4	3	7.34	0.13	4.69	1.91	0.82	0.53	0.07	0.42	731	2660
LK47SE	535862	5179911	4	3	7.41	0.13	4.15	1.91	0.89	0.67	0.06	0.46	538	4270
LK48SE	536158	5179909	4	3	5.88	0.17	3.54	1.14	0.74	0.84	0.05	0.47	639	1690
LK49SE	536455	5179908	4	3	7.34	0.16	3.93	1.69	0.82	0.72	0.11	0.39	668	1950
LK49SED2	536455	5179904	4	3	7.32	0.16	3.92	1.69	0.81	0.72	0.11	0.38	661	1920
LK50SE	536654	5179904	4	3	6.27	0.08	5.71	1.81	0.97	0.75	0.13	0.42	137	1420
LK51SE	536857	5179906	4	3	7.65	0.37	4.88	1.51	0.97	1.00	0.13	0.46	1370	2750
LK64SE	536113	5179906	4	2	7.38	1.04	4.54	1.81	1.02	0.76	0.09	0.45	676	721
LK65SE	536422	5181400	4	2	7.99	0.61	4.79	1.92	1.10	0.81	0.07	0.49	813	844
LK66SE	538378	5181453	4	2	7.08	0.71	4.16	1.42	0.95	0.78	0.08	0.41	347	970
LK67SE	538675	5181196	4	2	6.77	0.66	3.90	1.23	0.89	0.76	0.07	0.39	374	966
LK68SE	538770	5181145	4	2	6.52	0.60	3.54	1.33	0.80	0.84	0.07	0.40	260	1060
LK69SE	539709	5181129	4	4	8.54	0.58	4.51	2.11	1.00	0.66	0.11	0.41	552	2030
LK69SED1	539709	5184493	4	4	8.42	0.54	4.54	2.07	1.01	0.71	0.11	0.44	592	2040
LK70SE	536553	5184493	4	3	4.86	0.10	3.86	1.19	0.41	0.57	0.07	0.42	433	1290
LK71SE	536752	5179903	4	3	7.70	0.17	5.76	1.74	0.79	0.67	0.13	0.38	493	1610
LK72SE	538073	5179904	4	3	6.56	0.57	3.94	1.30	0.82	0.71	0.07	0.39	491	1370
LK72SED2	538073	5180104	4	3	6.56	0.58	3.95	1.29	0.82	0.71	0.07	0.38	493	1360
LK73SE	537964	5180104	4	3	6.85	0.27	4.46	1.39	0.84	0.76	0.09	0.41	507	1060
LK73SED1	537964	5180081	4	3	6.71	0.26	4.49	1.37	0.81	0.75	0.09	0.40	493	1070
LK74SE	537868	5180081	4	3	6.36	0.32	5.61	1.37	0.77	0.66	0.11	0.39	630	1140
LK75SE	537766	5180065	4	3	6.67	0.56	6.35	1.31	0.71	0.68	0.09	0.41	315	1970
LK76SE	537668	5180046	4	3	3.87	0.63	20.40	0.98	0.33	0.36	0.32	0.21	568	1070
LK77SE	537571	5180030	4	3	7.26	0.34	6.80	1.68	0.74	0.71	0.10	0.46	163	1120
LK78SE	537476	5180010	4	3	7.82	0.48	3.04	1.62	0.82	0.78	0.06	0.42	171	2020
LK79SE	537379	5179993	4	3	7.24	0.30	4.13	1.64	0.79	0.69	0.08	0.39	1710	2260
LK80SE	537290	5179977	4	3	6.06	0.09	4.59	1.26	0.61	0.50	0.10	0.34	468	989
LK81SE	537160	5179963	4	3	7.36	0.10	6.78	1.89	0.81	0.64	0.09	0.42	168	2510
LK82SE	537061	5179936	4	3	7.04	0.30	6.99	1.42	0.71	0.59	0.13	0.38	351	3210
LK83SE	536961	5179919	4	3	7.31	0.25	3.96	1.45	0.93	1.03	0.07	0.47	269	2440
LK89SE	536219	5179904	4	2	6.64	0.56	4.24	1.61	0.96	0.82	0.04	0.41	1820	2070
LK89SED1	536219	5181417	4	2	6.63	0.54	4.22	1.62	0.96	0.79	0.04	0.41	1950	2490
LK90SE	536316	5181417	4	2	7.03	0.83	4.03	1.74	0.95	0.63	0.09	0.40	538	1960
LK90SED2	536316	5181436	4	2	7.04	0.83	4.01	1.74	0.95	0.63	0.09	0.38	527	1950
LK91SE	538475	5181436	4	2	5.71	0.19	3.71	1.07	0.59	0.67	0.05	0.36	333	518

Appendix 2. Analytical result5181178s of soil samples from the Lik deposit (Cont.)

Sample Number	Be	Ce	Co	Cr	Cu	Eu	Ga	La	Li	Mo	Nb	Nd	Ni	Pb	Sc	Sn	Sr
LK36SE	1	52	15	125	49	<2	16	26	39	6	9	25	48	36	13	<10	92
LK37SE	2	68	20	150	40	2	18	37	46	4	9	39	60	23	18	<10	81
LK38SE	2	67	19	144	39	<2	19	37	56	<2	8	37	60	15	18	<10	83
LK38SED1	2	74	19	133	45	2	18	42	57	<2	11	38	63	16	18	<10	87
LK39SE	1	59	16	106	35	<2	16	29	41	<2	9	26	46	16	13	<10	75
LK40SE	2	62	14	126	25	<2	13	42	47	<2	8	35	68	20	14	<10	87
LK40SED1	2	58	14	126	26	<2	12	42	44	4	9	35	66	20	15	<10	89
LK41SE	2	68	18	131	25	<2	13	40	53	3	9	33	119	21	14	<10	76
LK41SED2	2	69	18	132	25	<2	14	40	53	2	8	34	119	21	14	<10	76
LK42SE	2	74	18	132	75	<2	16	38	49	6	10	35	52	31	18	<10	115
LK43SE	2	68	16	137	62	<2	16	35	49	6	10	32	44	60	15	<10	125
LK44SE	2	62	8	172	49	<2	15	36	43	11	10	31	29	69	13	<10	146
LK45SE	2	52	7	130	91	<2	15	29	32	20	8	28	28	51	14	<10	201
LK46SE	2	71	17	117	91	<2	18	35	52	10	11	30	62	16	17	<10	158
LK46SED1	2	70	16	124	91	<2	18	35	51	10	11	31	62	15	17	<10	158
LK47SE	2	73	18	99	75	<2	18	37	57	5	11	33	72	17	17	<10	171
LK48SE	2	62	14	109	41	<2	13	33	51	3	10	30	59	84	12	<10	89
LK49SE	2	62	16	140	41	<2	16	33	58	3	10	30	51	42	16	<10	84
LK49SED2	2	63	16	135	41	<2	17	33	58	2	9	30	51	42	16	<10	83
LK50SE	2	51	8	108	99	<2	15	25	26	28	11	31	26	13	15	<10	218
LK51SE	2	59	27	133	30	<2	18	32	73	5	11	28	54	26	15	<10	100
LK64SE	2	74	18	128	24	<2	17	34	54	2	11	29	54	21	15	<10	85
LK65SE	2	76	21	132	31	<2	19	38	52	2	12	35	61	22	16	<10	85
LK66SE	2	68	15	125	36	<2	15	40	49	<2	9	36	67	38	16	<10	100
LK67SE	2	66	14	126	26	<2	14	39	49	<2	9	33	63	31	14	<10	88
LK68SE	2	62	12	124	28	<2	15	39	45	<2	10	34	58	24	14	<10	91
LK69SE	2	66	18	161	56	<2	19	35	70	4	10	33	71	18	20	<10	105
LK69SED1	2	69	18	159	57	<2	19	36	70	3	10	34	69	18	20	<10	106
LK70SE	1	57	9	87	63	<2	14	28	26	13	10	24	29	31	10	<10	184
LK71SE	2	58	16	138	96	<2	18	30	42	18	9	29	48	51	17	<10	90
LK72SE	2	63	15	130	42	<2	14	41	49	3	9	36	73	30	16	<10	88
LK72SED2	2	64	16	130	43	2	14	41	49	<2	7	38	72	30	16	<10	90
LK73SE	2	66	18	132	42	<2	14	36	47	4	9	32	54	39	14	<10	90
LK73SED1	2	67	17	132	45	<2	14	36	46	6	10	31	49	48	14	<10	91
LK74SE	2	55	17	144	28	<2	15	31	48	9	10	25	44	58	11	<10	100
LK75SE	2	63	11	171	85	<2	16	35	51	10	11	34	55	42	17	<10	112
LK76SE	<1	31	10	194	20	<2	12	19	21	10	5	15	21	93	8	<10	135
LK77SE	1	70	9	148	28	<2	18	36	35	9	12	30	25	1440	17	<10	96
LK78SE	2	71	14	131	51	<2	18	35	58	2	11	32	61	3890	18	<10	102
LK79SE	2	70	29	140	80	2	17	41	59	3	9	39	108	76	18	<10	93
LK80SE	2	51	16	134	67	<2	12	30	54	5	8	26	93	70	13	<10	76
LK81SE	2	65	11	139	45	<2	17	33	41	7	11	28	36	57	16	<10	102
LK82SE	2	60	12	131	50	<2	17	31	51	7	10	27	36	63	16	<10	98
LK83SE	2	72	12	123	40	<2	16	36	54	3	10	31	49	18	15	<10	93
LK89SE	2	73	48	116	113	2	17	39	50	5	7	36	142	22	18	<10	89
LK89SED1	2	71	51	116	120	2	18	39	51	6	9	37	152	23	19	<10	91
LK90SE	2	62	17	125	70	<2	17	34	52	<2	8	32	76	17	18	<10	72
LK90SED2	2	61	16	125	71	<2	16	34	52	<2	7	30	73	18	18	<10	71
LK91SE	1	61	12	95	20	<2	13	30	43	2	8	25	47	30	11	<10	69

Appendix 2. Analytical results of soil samples from the Lik deposit (Cont.)

Sample Number	Th	* V	* Y	* Yb	* Zn	Ag ⁺	As ⁺	Bi ⁺	Cd ⁺	Cu ⁺	Mo ⁺	Pb ⁺	Sb ⁺	Zn ⁺
LK36SE	9	203	14	2	161	0.12	9.1	N 0.60	0.26	41	4.9	43	1.8	110
LK37SE	13	161	36	3	122	0.33	17	N 0.60	0.32	36	3.0	25	1.1	93
LK38SE	11	159	32	3	110	0.087	8.1	N 0.60	0.14	32	1.5	17	0.80	87
LK38SED1	11	161	34	4	118	0.077	7.1	N 0.60	0.14	36	1.6	18	0.90	94
LK39SE	9	148	15	2	110	N 0.045	3.9	N 0.60	0.11	30	1.8	22	0.71	76
LK40SE	9	142	43	3	188	0.43	9.4	N 0.60	1.2	23	2.3	25	0.64	130
LK40SED1	9	139	46	3	185	0.44	9.2	N 0.60	1.2	24	2.2	24	0.76	140
LK41SE	11	145	35	3	1120	0.29	8.1	N 0.60	2.0	24	2.7	28	0.74	600
LK41SED2	10	146	36	3	1130	0.30	7.5	N 0.60	2.0	23	2.7	28	0.76	600
LK42SE	9	225	26	3	223	0.41	6.8	N 0.60	0.32	58	5.6	40	1.8	150
LK43SE	11	229	21	3	179	0.65	9.8	N 0.60	0.41	49	6.1	78	2.0	120
LK44SE	9	267	22	3	188	2.5	11	N 0.60	0.34	45	9.0	91	2.5	130
LK45SE	8	375	21	2	149	1.3	18	N 0.60	0.56	83	17	80	4.5	110
LK46SE	9	173	18	2	142	0.40	7.9	N 0.60	0.15	80	8.3	20	2.1	100
LK46SED1	10	172	19	3	140	0.41	7.8	N 0.60	0.14	80	8.4	20	2.2	100
LK47SE	10	168	20	3	144	0.19	6.1	N 0.60	0.090	68	4.3	20	1.2	110
LK48SE	8	134	22	3	188	0.14	5.7	N 0.60	0.16	37	2.6	110	1.5	140
LK49SE	10	175	22	2	166	0.16	7.8	N 0.60	0.25	37	2.9	54	1.2	120
LK49SED2	10	175	22	2	166	0.17	7.9	N 0.60	0.27	36	2.8	54	1.2	120
LK50SE	6	380	19	3	122	0.78	31	N 0.60	0.27	90	24	36	5.2	95
LK51SE	11	185	20	3	247	0.097	6.5	N 0.60	0.38	26	4.0	35	1.1	140
LK64SE	10	166	26	3	126	0.077	12	N 0.60	0.41	20	2.2	26	0.91	83
LK65SE	12	169	27	3	117	0.064	9.8	N 0.60	0.18	27	2.0	26	0.82	87
LK66SE	11	161	36	3	186	0.43	5.0	N 0.60	0.37	29	1.5	46	0.91	130
LK67SE	9	153	34	3	194	0.44	4.7	N 0.60	0.41	18	1.4	35	0.79	130
LK68SE	9	139	35	3	248	0.29	4.2	N 0.60	0.44	23	1.1	26	0.76	180
LK69SE	11	201	30	3	159	0.55	10	N 0.60	0.23	50	3.0	21	1.3	120
LK69SED1	10	199	29	3	159	0.53	10	N 0.60	0.24	50	3.0	21	1.8	120
LK70SE	7	215	14	2	120	0.13	18	N 0.60	0.17	54	11	36	3.3	88
LK71SE	9	409	20	3	232	0.94	18	N 0.60	0.55	82	17	87	4.4	160
LK72SE	10	168	42	4	241	0.43	5.3	N 0.60	1.2	31	2.5	35	1.1	160
LK72SED2	11	167	42	4	243	0.42	5.1	N 0.60	1.1	30	2.5	35	1.2	160
LK73SE	9	183	23	3	214	0.51	7.7	N 0.60	0.40	31	3.8	48	1.5	140
LK73SED1	10	187	23	2	201	0.49	8.2	N 0.60	0.39	30	4.7	53	1.6	130
LK74SE	9	223	15	2	273	0.37	14	N 0.60	0.39	23	7.4	60	2.3	170
LK75SE	10	283	33	4	311	1.0	11	N 0.60	1.3	67	8.4	52	2.8	190
LK76SE	8	397	10	1	1530	0.38	83	N 0.60	1.9	16	7.5	120	2.6	810
LK77SE	10	255	20	3	221	1.0	18	N 0.60	0.083	24	7.2	2000	7.1	170
LK78SE	8	243	22	3	3570	N 0.045	N 0.60	N 0.60	12	38	3.1	4900	N 0.60	> 1400
LK79SE	11	205	49	4	956	0.42	8.5	N 0.60	2.1	67	3.8	70	1.4	610
LK80SE	9	180	23	3	560	0.78	8.0	N 0.60	0.69	54	4.6	85	1.6	340
LK81SE	10	244	19	3	135	0.46	9.6	N 0.60	0.095	38	5.6	72	1.8	96
LK82SE	10	234	20	3	180	0.44	6.8	N 0.60	0.14	37	6.3	77	1.8	120
LK83SE	10	176	22	3	116	0.31	3.4	N 0.60	0.13	30	2.8	19	1.3	83
LK89SE	12	155	34	3	251	0.22	12	N 0.60	0.27	96	4.9	26	2.4	190
LK89SED1	12	157	35	3	269	0.20	11	N 0.60	0.26	100	5.2	26	2.5	210
LK90SE	11	155	33	3	167	0.27	7.9	N 0.60	0.23	55	1.9	21	1.2	110
LK90SED2	10	154	33	3	166	0.28	6.9	N 0.60	0.23	55	1.9	21	1.2	110
LK91SE	8	137	18	2	140	0.078	4.7	N 0.60	0.38	15	1.8	34	1.0	100

Appendix 2. Analytical results of soil samples from the Lik deposit (Cont.)

Sample Number	Easting	Northing	Type	Line	Al %	Ca %	Fe %	K %	Mg %	Na %	P %	Ti %	Mn %	Ba %
LK92SE	538574	5181161	4	2	6.37	0.58	3.73	1.27	0.84	0.82	0.06	0.38	354	855
LK93SE	538926	5181099	4	2	6.04	0.78	2.59	1.03	0.76	0.74	0.06	0.34	153	975
LK94SE	539809	5184469	4	4	8.55	0.44	4.74	2.12	0.99	0.66	0.10	0.46	660	1880
LK95SE	540143	5184373	4	4	6.05	0.56	3.44	1.41	0.71	0.53	0.08	0.33	194	1010
LK96SE	540238	5184348	4	4	5.80	0.58	3.73	1.35	0.65	0.50	0.10	0.30	373	759
LK97SE	540607	5184249	4	4	7.83	0.30	4.04	1.74	0.83	0.65	0.15	0.39	561	1660
LK99SE	539065	5182439	4	1	5.38	0.25	8.18	1.21	0.46	0.37	0.16	0.33	276	907
LK100SE	539904	5184441	4	4	7.14	0.45	4.32	1.71	1.01	1.04	0.09	0.46	979	1170
LK101SE	540333	5184321	4	4	5.23	0.81	3.37	1.11	0.56	0.45	0.11	0.26	320	991
LK102SE	540438	5184294	4	4	5.04	1.69	3.79	0.99	0.63	0.46	0.11	0.20	420	901
LK103SE	540698	5184227	4	4	5.23	0.58	5.87	1.05	0.18	0.13	0.12	0.20	1270	666
LK104SE	538971	5182467	4	1	6.48	0.11	4.88	1.34	0.65	0.48	0.10	0.35	268	822
LK105SE	538773	5182511	4	1	5.72	0.11	5.56	1.31	0.67	0.61	0.12	0.36	671	303
LK106SE	538871	5182490	4	1	6.79	0.10	9.71	1.27	0.67	0.45	0.19	0.29	738	1030
LK107SE	538680	5182529	4	1	8.69	0.08	11.70	2.09	0.80	0.69	0.31	0.41	260	647
LK107SED1	538680	5182529	4	1	8.63	0.08	12.10	2.08	0.79	0.69	0.34	0.39	243	576

Appendix 2. Analytical results of soil samples from the Lik deposit (Cont.)

Sample Number	Be	Ce	Co	Cr	Cu	Eu	Ga	La	Li	Mo	Nb	Nd	Ni	Pb	Sc	Sn	Sr
LK92SE	2	64	12	117	26	<2	14	37	43	<2	7	33	54	25	15	<10	90
LK93SE	2	59	17	127	34	<2	13	34	47	<2	5	29	102	39	14	<10	88
LK94SE	2	77	18	164	51	<2	20	37	73	2	10	33	68	18	20	<10	103
LK95SE	2	60	12	128	39	3	13	39	50	3	6	41	70	13	19	<10	85
LK96SE	2	66	13	125	31	<2	13	33	55	4	6	32	70	15	15	<10	76
LK97SE	2	68	18	214	60	<2	19	35	67	5	10	35	70	43	20	<10	114
LK99SE	2	53	8	207	63	<2	13	31	39	14	8	29	47	95	13	<10	127
LK100SE	2	77	25	144	50	<2	16	36	60	<2	8	35	70	23	17	<10	110
LK101SE	2	56	11	125	36	<2	12	42	40	3	5	37	76	14	15	<10	81
LK102SE	2	54	15	114	26	2	11	36	45	4	<4	34	69	17	15	<10	94
LK103SE	2	45	26	215	66	<2	11	32	47	10	6	31	202	24	16	<10	82
LK104SE	3	60	12	224	81	3	14	35	58	10	7	38	130	135	16	<10	130
LK105SE	2	55	12	154	39	<2	16	31	48	10	7	27	59	110	13	<10	182
LK106SE	3	54	16	237	94	3	15	31	58	15	12	35	147	111	18	<10	113
LK107SE	3	69	17	401	86	<2	19	31	75	10	16	28	100	45	30	<10	287
LK107SED1	3	66	17	390	89	<2	20	29	73	11	16	28	103	44	29	<10	274

Appendix 2. Analytical results of soil samples from the Lik deposit (Cont.)

Sample Number	Th *	V *	Y *	Yb *	Zn *	Ag +	As +	Bi +	Cd +	Cu +	Mo +	Pb +	Sb +	Zn +
LK92SE	10	138	29	3	155	0.25	3.9	N 0.60	0.31	22	1.3	28	1.0	120
LK93SE	9	138	29	2	654	0.34	2.3	N 0.60	2.7	29	0.68	45	0.69	420
LK94SE	13	202	24	3	154	0.26	9.8	N 0.60	0.26	46	2.9	22	1.4	120
LK95SE	11	152	51	4	156	0.56	7.7	N 0.60	0.63	33	2.0	15	0.94	120
LK96SE	10	149	31	3	208	0.27	9.1	N 0.60	0.77	26	3.1	19	1.0	140
LK97SE	12	214	35	4	225	1.2	6.1	N 0.60	0.99	53	4.3	55	1.4	170
LK99SE	9	227	28	3	873	1.4	21	N 0.60	1.7	53	11	120	2.0	620
LK100SE	12	163	25	3	135	0.34	12	N 0.60	0.32	45	2.5	27	1.3	110
LK101SE	9	137	55	3	183	0.34	8.0	N 0.60	0.81	29	2.6	15	1.1	140
LK102SE	8	132	46	3	209	0.40	8.2	N 0.60	1.2	17	2.9	17	0.72	110
LK103SE	10	172	44	4	599	2.6	33	N 0.60	1.7	59	8.4	30	1.5	470
LK104SE	11	190	63	6	1480	2.1	9.7	N 0.60	2.2	67	8.5	170	1.8	880
LK105SE	8	172	24	2	839	0.96	15	N 0.60	1.2	33	8.9	150	1.6	580
LK106SE	7	234	74	7	2060	1.6	20	N 0.60	5.0	82	9.6	130	2.1	1200
LK107SE	13	325	39	4	1470	0.16	89	N 0.60	3.2	75	4.8	52	0.98	1000
LK107SED1	12	332	39	4	1620	0.15	91	N 0.60	3.3	78	5.4	53	1.1	1100

Samples were also analyzed for Au, Ho, Ta, and U but all values were below the detection limits (Tables 1 and 2 list lower detection limits).

Appendix 3. Analytical results of stream sediment samples from the Lik deposit (all values in ppm unless otherwise noted).

Sample Number	Easting	Northing	Latitude	Longitude	Type	Al %	Ca %	Fe %	K %	Mg %	Na %
LK52SSA	540456	5182629	68 10 24	163 10 29	1	5.58	5.39	2.67	1.51	0.79	0.34
LK53SSA	539860	5181477	68 10 14	163 10 45	1	4.79	6.69	3.27	1.24	0.93	0.29
LK54SSA	540954	5180645	68 10 07	163 10 15	1	5.45	6.47	2.56	1.47	0.77	0.34
LK55SSA	540473	5181244	68 10 12	163 10 28	1	5.39	6.77	2.61	1.45	0.86	0.35
LK56SSA	539391	5182028	68 10 19	163 10 57	1	4.74	6.72	3.47	1.25	1.20	0.28
LK57SSA	539264	5182331	68 10 21	163 11 01	1	5.70	0.29	6.84	1.04	0.20	0.16
LK58SSA	536993	5183133	68 10 29	163 12 01	1	3.91	11.1	2.21	1.09	2.01	0.30
LK60SSA	537010	5182663	68 10 24	163 12 01	1	3.73	12.3	2.11	1.04	2.37	0.29
LK61SSA	538678	5182440	68 10 22	163 11 16	1	6.13	0.79	4.47	1.39	0.87	0.58
LK62SSA	538376	5182252	68 10 21	163 11 24	1	4.13	11.7	2.33	1.15	2.12	0.36
LK63SSA	540731	5178655	68 09 49	163 10 21	1	5.52	4.67	4.09	1.40	1.55	0.64
LK84SSA	535690	5179018	68 09 52	163 12 36	1	5.35	7.97	2.89	1.42	1.96	0.53
LK85SSA	536733	5179349	68 09 55	163 12 08	1	8.01	0.54	3.95	2.26	0.86	0.60
LK86SSA	536627	5179915	68 10 01	163 12 11	1	7.66	0.79	4.14	2.01	0.96	0.70
LK88SSA	538311	5178772	68 09 50	163 11 26	1	6.15	3.29	4.13	2.05	1.15	0.65
LK52SSB	540456	5182629	68 10 24	163 10 29	2	5.38	6.88	2.80	1.49	0.80	0.42
LK53SSB	539860	5181477	68 10 14	163 10 45	2	4.65	6.95	3.74	1.24	0.63	0.33
LK54SSB	540954	5180645	68 10 07	163 10 15	2	5.17	7.43	2.98	1.43	0.84	0.44
LK55SSB	540473	5181244	68 10 12	163 10 28	2	5.11	7.65	2.95	1.41	0.86	0.44
LK56SSB	539391	5182028	68 10 19	163 10 57	2	4.86	5.88	3.88	1.29	0.62	0.33
LK57SSB	539264	5182331	68 10 21	163 11 01	2	5.51	0.24	6.93	1.08	0.20	0.14
LK58SSB	536993	5183133	68 10 29	163 12 01	2	1.55	7.29	0.90	0.43	0.39	0.12
LK60SSB	537010	5182663	68 10 24	163 12 01	2	3.27	14.6	1.90	0.92	0.82	0.28
LK61SSB	538678	5182440	68 10 22	163 11 16	2	6.35	0.65	4.99	1.55	0.99	0.61
LK62SSB	538376	5182252	68 10 21	163 11 24	2	3.93	12.7	2.29	1.11	0.88	0.36
LK63SSB	540731	5178655	68 09 49	163 10 21	2	6.37	2.97	4.71	1.67	1.05	0.69
LK84SSB	535690	5179018	68 09 52	163 12 36	2	6.99	2.88	4.18	1.89	1.10	0.69
LK85SSB	536733	5179349	68 09 55	163 12 08	2	7.61	0.38	4.14	2.22	0.87	0.57
LK86SSB	536627	5179915	68 10 01	163 12 11	2	7.62	0.50	4.53	2.13	1.00	0.71
LK87SSB	536887	5179203	68 09 54	163 12 04	2	7.47	1.46	4.52	2.09	1.04	0.68
LK88SSB	538311	5178772	68 09 50	163 11 26	2	6.84	1.94	4.75	1.84	1.07	0.70
LK52SSC	540456	5182629	68 10 24	163 10 29	3	5.49	5.72	2.60	1.48	0.86	0.34
LK53SSC	539860	5181477	68 10 14	163 10 45	3	4.49	7.04	3.23	1.18	0.99	0.25
LK54SSC	540954	5180645	68 10 07	163 10 15	3	5.29	6.74	2.52	1.44	0.85	0.33
LK55SSC	540473	5181244	68 10 12	163 10 28	3	5.23	6.96	2.56	1.44	0.95	0.35
LK56SSC	539391	5182028	68 10 19	163 10 57	3	4.64	6.91	3.42	1.24	1.27	0.27
LK57SSC	539264	5182331	68 10 21	163 11 01	3	5.59	0.27	6.87	1.07	0.20	0.15
LK58SSC	536993	5183133	68 10 29	163 12 01	3	3.57	12.0	2.03	1.03	2.20	0.27
LK60SSC	537010	5182663	68 10 24	163 12 01	3	3.42	13.1	1.93	0.98	2.47	0.26
LK61SSC	538678	5182440	68 10 22	163 11 16	3	5.97	0.78	4.40	1.40	0.86	0.54
LK62SSC	538376	5182252	68 10 21	163 11 24	3	3.90	12.1	2.21	1.12	2.19	0.33
LK63SSC	540731	5178655	68 09 49	163 10 21	3	5.44	4.86	4.06	1.43	1.68	0.62
LK84SSC	535690	5179018	68 09 52	163 12 36	3	5.38	8.04	2.88	1.48	2.04	0.52
LK85SSC	536733	5179349	68 09 55	163 12 08	3	7.75	0.49	3.84	2.25	0.84	0.55
LK86SSC	536627	5179915	68 10 01	163 12 11	3	7.35	0.71	3.99	1.99	0.94	0.64
LK87SSC	536887	5179203	68 09 54	163 12 04	3	7.30	1.99	3.99	2.09	1.21	0.62
LK88SSC	538311	5178772	68 09 50	163 11 26	3	6.22	3.32	4.19	1.73	1.57	0.62

Appendix 3. Analytical results of stream sediment samples from the Lik deposit (Cont.)

Sample Number	P %	Ti %	Mn	Ba	Ba *	Ce *	Co *	Cr *	Cu *	Eu *	Ga *	La *	Li *	Nb *	Nd *
LK52SSA	0.08	0.25	271	1240	2	46	13	136	47	<2	13	31	46	7	24
LK53SSA	0.09	0.18	569	518	2	39	14	119	33	<2	12	26	39	<4	22
LK54SSA	0.07	0.22	229	922	2	42	12	125	29	<2	12	29	44	5	24
LK55SSA	0.07	0.21	233	633	2	42	12	122	29	<2	12	28	44	<4	23
LK56SSA	0.10	0.17	551	406	2	37	14	130	38	<2	12	25	40	<4	22
LK57SSA	0.14	0.18	4240	540	4	45	41	201	128	2	15	28	46	<4	28
LK58SSA	0.04	0.18	215	918	1	33	11	74	19	<2	8	24	35	<4	18
LK60SSA	0.04	0.16	177	1010	1	31	10	72	15	<2	8	23	33	<4	17
LK61SSA	0.11	0.29	617	2490	2	41	17	149	47	<2	14	26	54	5	26
LK62SSA	0.04	0.18	253	1450	1	36	12	76	26	<2	10	23	36	<4	18
LK63SSA	0.07	0.26	832	2240	2	43	18	107	36	<2	12	26	50	5	21
LK84SSA	0.05	0.23	396	805	2	43	14	93	26	<2	12	27	47	4	21
LK85SSA	0.08	0.37	802	2510	2	66	20	170	64	<2	19	34	62	8	33
LK86SSA	0.09	0.35	1240	2920	2	60	24	151	61	<2	20	32	68	7	31
LK87SSA	0.08	0.34	757	3220	2	59	21	146	53	<2	17	33	61	7	30
LK88SSA	0.08	0.30	809	1680	2	50	19	115	47	<2	15	29	55	5	25
LK52SSB	0.07	0.23	256	522	2	43	14	119	39	<2	12	28	47	<4	24
LK53SSB	0.09	0.19	769	593	2	38	17	94	39	<2	11	25	42	<4	21
LK54SSB	0.07	0.22	292	598	2	40	15	84	36	<2	12	26	45	<4	22
LK55SSB	0.07	0.22	264	442	2	41	14	82	36	<2	13	25	46	<4	24
LK56SSB	0.10	0.21	659	330	2	39	16	130	47	<2	11	25	44	<4	21
LK57SSB	0.12	0.17	3610	329	4	42	43	204	129	<2	14	27	49	<4	28
LK58SSB	0.01	0.07	80	327	<1	14	5	18	8	<2	<4	11	14	<4	6
LK60SSB	0.03	0.15	181	1340	<1	28	10	43	15	<2	8	21	30	<4	15
LK61SSB	0.10	0.33	1060	1890	2	45	23	157	57	<2	16	26	57	6	26
LK62SSB	0.04	0.17	303	1450	1	33	12	70	20	<2	10	22	35	<4	16
LK63SSB	0.08	0.30	1010	1700	2	49	23	118	37	<2	16	28	60	7	24
LK84SSB	0.07	0.32	756	1020	2	53	22	125	38	<2	17	30	63	7	28
LK85SSB	0.08	0.34	1180	2090	2	60	26	159	58	<2	18	30	59	7	29
LK86SSB	0.08	0.38	1550	2930	2	63	31	147	61	<2	18	31	66	9	30
LK87SSB	0.08	0.34	1010	3320	2	59	26	139	53	<2	17	32	64	7	29
LK88SSB	0.08	0.32	856	2110	2	54	23	126	44	<2	17	30	63	6	29
LK52SSC	0.08	0.23	269	576	2	44	13	139	37	<2	12	30	45	5	25
LK53SSC	0.08	0.16	596	439	1	34	14	118	32	<2	11	24	37	<4	19
LK54SSC	0.07	0.20	230	320	2	39	12	125	30	<2	12	27	44	<4	22
LK55SSC	0.07	0.20	236	279	1	37	12	121	29	<2	12	24	44	<4	22
LK56SSC	0.10	0.17	535	182	1	33	14	127	42	<2	12	22	40	<4	20
LK57SSC	0.13	0.17	3880	212	4	42	41	205	131	2	14	26	47	<4	29
LK58SSC	0.03	0.16	203	829	<1	31	9	69	18	<2	8	22	33	<4	17
LK60SSC	0.03	0.14	172	1030	<1	29	9	65	14	<2	8	21	31	<4	15
LK61SSC	0.10	0.28	629	370	2	41	15	151	50	<2	15	25	54	4	25
LK62SSC	0.04	0.16	245	1630	1	32	11	71	20	<2	9	22	35	<4	16
LK63SSC	0.07	0.25	803	1480	2	43	18	104	35	<2	14	25	51	<4	22
LK84SSC	0.05	0.21	400	826	1	42	14	93	25	<2	13	26	48	<4	22
LK85SSC	0.08	0.35	807	868	2	63	19	171	63	<2	19	33	59	4	32
LK86SSC	0.09	0.34	1160	1120	2	59	22	146	63	<2	18	31	66	8	30
LK87SSC	0.07	0.33	769	1620	2	60	20	123	54	<2	18	32	60	<4	31
LK88SSC	0.07	0.30	821	445	2	49	19	121	49	<2	15	28	58	7	26

Appendix 3. Analytical results of stream sediment samples from the Lik deposit (Cont.)

Sample Number	Ni	Pb	Sc	Sr	Th	V	Y	Yb	Zn	Ag ⁺	As ⁺
LK52SSA	79	20	11	297	8	138	22	2	279	0.550	10
LK53SSA	94	173	9	297	7	109	22	2	2180	0.400	12
LK54SSA	71	25	11	330	8	128	20	2	439	0.360	8.6
LK55SSA	68	18	11	356	7	126	20	2	244	0.350	9.2
LK56SSA	91	204	10	311	8	116	24	2	2570	N 0.045	11
LK57SSA	238	132	14	126	7	145	51	4	5000	0.340	16
LK58SSA	48	11	7	256	7	81	16	2	137	0.070	6.0
LK60SSA	41	11	7	265	6	77	15	2	116	0.075	5.7
LK61SSA	78	234	14	132	9	151	25	2	777	0.410	8.0
LK62SSA	46	156	8	267	6	87	16	2	1290	0.086	6.2
LK63SSA	77	74	11	150	7	125	18	2	1200	0.180	10
LK84SSA	57	16	11	219	8	111	16	2	120	0.086	7.4
LK85SSA	85	59	18	143	11	217	22	2	231	0.370	12
LK86SSA	101	73	18	114	10	183	22	2	258	0.270	8.9
LK87SSA	75	54	16	144	10	188	21	3	236	0.240	11
LK88SSA	70	94	13	157	8	155	19	2	720	0.300	11
LK52SSB	74	14	11	327	8	140	21	2	225	0.380	11
LK53SSB	96	197	10	309	6	120	21	2	2520	0.450	15
LK54SSB	72	18	11	375	7	134	20	2	407	0.310	11
LK55SSB	69	11	11	422	8	132	20	2	214	0.310	11
LK56SSB	102	252	10	372	6	130	24	2	2790	N 0.045	14
LK57SSB	223	100	13	128	8	148	47	4	4320	0.130	19
LK58SSB	18	5	3	186	<4	33	7	<1	60	0.059	5.6
LK60SSB	36	7	7	385	6	70	14	1	89	0.075	6.2
LK61SSB	87	244	14	187	9	166	23	2	730	0.330	11
LK62SSB	46	189	8	336	6	86	16	1	1140	0.053	7.0
LK63SSB	91	78	13	137	8	144	20	2	1110	0.088	13
LK84SSB	81	21	14	134	10	156	19	2	142	0.089	12
LK85SSB	86	60	16	131	9	208	18	2	204	0.240	15
LK86SSB	111	81	16	101	10	189	19	2	238	0.170	15
LK87SSB	84	59	15	135	9	186	20	2	201	0.160	16
LK88SSB	85	86	14	146	9	165	19	2	690	0.140	16
LK52SSC	78	18	11	304	9	139	22	2	254	0.540	12
LK53SSC	94	176	9	309	6	109	21	2	2150	0.460	13
LK54SSC	68	14	10	331	7	129	19	2	407	0.390	10
LK55SSC	64	4	10	363	6	127	19	2	227	0.370	10
LK56SSC	91	104	9	304	4	119	23	2	2450	0.520	14
LK57SSC	228	83	13	122	8	148	48	4	4670	0.170	17
LK58SSC	41	11	7	266	6	76	15	1	124	0.077	6.6
LK60SSC	40	8	7	280	5	72	14	2	102	0.072	6.6
LK61SSC	76	172	14	133	8	151	24	3	749	0.480	10
LK62SSC	43	193	8	279	4	84	15	1	1140	0.078	7.0
LK63SSC	74	69	11	147	7	126	17	2	1170	0.190	12
LK84SSC	55	16	11	220	7	111	16	2	118	0.080	8.4
LK85SSC	82	48	18	135	11	216	21	2	213	0.390	14
LK86SSC	97	63	17	108	10	181	21	2	239	0.280	12
LK87SSC	75	48	15	142	10	191	19	2	207	0.240	14
LK88SSC	73	68	13	154	8	163	18	2	694	0.300	14

Appendix 3. Analytical results of stream sediment samples from the Lik deposit (Cont.)

Sample Number	Bi ⁺	Cd ⁺	Cu ⁺	Mo ⁺	Pb ⁺	Sb ⁺	Zn ⁺
LK52SSA	0.70	0.79	39	2.7	22	1.5	200
LK53SSA	N 0.60	4.5	25	3.3	180	1.5	1200
LK54SSA	N 0.60	1.4	22	2.1	27	2.7	310
LK55SSA	N 0.60	0.68	22	2.2	19	1.6	170
LK56SSA	N 0.60	4.9	28	4.0	250	2.0	> 1300
LK57SSA	N 0.60	19	98	8.4	130	N 0.60	> 1300
LK58SSA	0.69	0.47	12	1.4	12	0.75	90
LK60SSA	0.67	0.44	10	1.1	11	1.5	84
LK61SSA	0.67	2.6	36	3.0	250	2.6	480
LK62SSA	N 0.60	2.4	14	1.5	170	2.1	780
LK63SSA	N 0.60	1.6	24	2.2	74	3.4	770
LK84SSA	0.70	0.40	17	1.1	16	1.0	86
LK85SSA	0.63	0.56	48	2.9	61	2.2	160
LK86SSA	0.64	0.62	44	2.9	77	1.6	170
LK87SSA	0.73	0.63	39	3.0	55	1.9	160
LK88SSA	N 0.60	1.1	34	3.1	100	1.9	480
LK52SSB	0.68	0.70	34	2.9	18	1.3	190
LK53SSB	N 0.60	5.0	33	4.5	240	1.8	> 1600
LK54SSB	N 0.60	1.1	31	2.9	26	1.4	370
LK55SSB	N 0.60	0.68	31	2.8	20	1.3	180
LK56SSB	N 0.60	5.5	41	5.4	380	N 0.60	> 1600
LK57SSB	N 0.60	19	120	11	120	N 0.60	> 1600
LK58SSB	N 0.60	0.39	10	1.1	8.5	N 0.60	76
LK60SSB	0.60	0.39	13	1.1	8.5	0.87	75
LK61SSB	0.72	3.1	44	3.5	260	1.8	530
LK62SSB	N 0.60	2.2	18	1.6	180	1.1	840
LK63SSB	N 0.60	1.4	31	2.1	85	1.4	850
LK84SSB	N 0.60	0.47	33	1.8	23	1.2	120
LK85SSB	0.70	0.62	53	3.3	71	2.5	170
LK86SSB	0.76	0.56	55	4.0	94	1.6	190
LK87SSB	0.69	0.63	47	3.2	65	1.7	170
LK88SSB	N 0.60	0.89	40	2.8	99	1.5	550
LK52SSC	N 0.60	0.76	32	3.0	22	1.8	210
LK53SSC	N 0.60	4.9	28	3.9	230	1.5	1500
LK54SSC	N 0.60	1.2	26	2.6	27	2.2	330
LK55SSC	0.67	0.66	26	2.5	20	1.2	180
LK56SSC	N 0.60	5.4	33	4.4	320	2.9	1600
LK57SSC	N 0.60	20	110	9.8	130	N 0.60	> 1600
LK58SSC	N 0.60	0.49	14	1.5	11	0.73	93
LK60SSC	N 0.60	0.45	12	1.1	10	0.71	87
LK61SSC	N 0.60	2.9	43	3.6	260	2.4	520
LK62SSC	N 0.60	2.5	16	1.7	200	1.1	850
LK63SSC	N 0.60	1.7	28	2.4	79	1.6	870
LK84SSC	N 0.60	0.43	22	1.3	16	0.66	97
LK85SSC	N 0.60	0.58	57	3.5	67	2.2	170
LK86SSC	N 0.60	0.61	51	3.4	78	1.6	180
LK87SSC	0.72	0.64	47	3.5	60	2.0	160
LK88SSC	N 0.60	1.1	43	3.6	110	1.7	540

Appendix 3. Analytical results of stream sediment samples from the Lik deposit (Cont.)

Sample Number	Easting	Northing	Latitude	Longitude	Type	Al %	Ca %	Fe %	K %	Mg %	Na %
LK52SSE	540456	5182629	68 10 24	163 10 29	4	5.88	4.29	2.78	1.52	0.61	0.35
LK53SSE	539860	5181477	68 10 14	163 10 45	4	5.06	5.80	3.20	1.26	0.76	0.33
LK54SSE	540954	5180645	68 10 07	163 10 15	4	5.61	5.67	2.58	1.48	0.57	0.34
LK55SSE	540473	5181244	68 10 12	163 10 28	4	5.50	5.89	2.55	1.45	0.62	0.35
LK56SSE	539391	5182028	68 10 19	163 10 57	4	4.86	6.06	3.40	1.25	1.06	0.30
LK57SSE	539264	5182331	68 10 21	163 11 01	4	6.28	0.38	6.81	1.05	0.25	0.21
LK58SSE	536993	5183133	68 10 29	163 12 01	4	4.58	6.56	2.56	1.25	1.36	0.38
LK60SSE	537010	5182663	68 10 24	163 12 01	4	4.51	7.97	2.43	1.23	1.74	0.38
LK61SSE	538678	5182440	68 10 22	163 11 16	4	6.15	0.77	4.17	1.33	0.85	0.66
LK62SSE	538376	5182252	68 10 21	163 11 24	4	4.61	8.53	2.56	1.25	1.63	0.43
LK63SSE	540731	5178655	68 09 49	163 10 21	4	5.64	4.23	4.13	1.40	1.24	0.69
LK84SSE	535690	5179018	68 09 52	163 12 36	4	5.29	6.62	2.82	1.37	1.49	0.55
LK85SSE	536733	5179349	68 09 55	163 12 08	4	7.95	0.64	3.87	2.14	0.85	0.68
LK86SSE	536627	5179915	68 10 01	163 12 11	4	7.49	0.89	3.89	1.88	0.92	0.76
LK87SSE	536887	5179203	68 09 54	163 12 04	4	7.26	1.76	3.88	1.92	1.00	0.71
LK88SSE	538311	5178772	68 09 50	163 11 26	4	6.13	2.94	4.05	1.57	1.18	0.70

Appendix 3. Analytical results of stream sediment samples from the Lik deposit (Cont.)

Sample Number	P %	Ti %	Mn	Ba	Be	Ce	Co	Cr	Cu	Eu	Ga	La	Li	Nb	Nd
LK52SSE	0.08	0.26	285	1770	2	47	14	163	45	<2	13	32	46	4	27
LK53SSE	0.10	0.22	522	1910	2	41	15	143	37	<2	12	28	41	5	23
LK54SSE	0.07	0.24	245	1960	2	46	13	128	30	<2	13	30	45	5	24
LK55SSE	0.07	0.23	229	2070	2	45	13	122	29	<2	12	30	44	<4	22
LK56SSE	0.10	0.22	585	869	2	41	13	126	37	<2	11	28	40	4	23
LK57SSE	0.17	0.20	5390	2460	4	44	42	195	136	2	15	29	47	5	31
LK58SSE	0.05	0.25	237	957	1	43	11	69	20	<2	10	29	40	5	22
LK60SSE	0.05	0.23	208	708	1	38	10	86	19	<2	10	27	39	<4	19
LK61SSE	0.11	0.31	538	2120	2	45	16	147	46	<2	14	27	54	5	25
LK62SSE	0.05	0.21	290	1010	1	37	12	88	24	<2	11	26	39	<4	20
LK63SSE	0.08	0.25	871	2030	2	42	18	112	35	<2	12	26	49	5	22
LK84SSE	0.05	0.23	408	648	1	41	14	98	24	<2	12	27	45	4	21
LK85SSE	0.09	0.35	706	2790	2	59	19	173	67	<2	19	32	63	8	32
LK86SSE	0.10	0.34	1370	2300	2	57	23	144	62	<2	17	31	68	5	29
LK87SSE	0.08	0.33	709	1920	2	57	18	150	54	<2	17	33	60	7	29
LK88SSE	0.08	0.28	802	2040	2	48	19	121	46	<2	14	29	52	5	25

Appendix 3. Analytical results of stream sediment samples from the Lik deposit (Cont.)

Sample Number	Ni	Pb	Sc	Sr	Th	V	Y	Yb	Zn	Ag ⁺	As ⁺
LK52SSE	87	29	11	252	9	141	22	2	338	0.620	12
LK53SSE	94	156	10	252	8	113	23	2	2140	0.400	11
LK54SSE	75	28	11	279	8	130	21	2	516	0.380	9.5
LK55SSE	72	25	11	287	8	126	20	2	280	0.350	9.3
LK56SSE	96	134	10	262	7	115	25	2	2690	N 0.045	11
LK57SSE	260	187	14	125	9	147	58	4	6010	0.660	16
LK58SSE	51	19	8	192	8	97	19	2	175	N 0.045	7.6
LK60SSE	50	18	8	200	7	92	18	2	159	N 0.045	7.0
LK61SSE	75	251	14	119	9	144	25	2	775	0.400	7.2
LK62SSE	54	190	9	213	8	97	19	2	1630	N 0.045	7.0
LK63SSE	76	82	11	155	8	127	19	2	1300	0.180	11
LK84SSE	57	19	11	194	7	108	17	2	134	N 0.045	7.3
LK85SSE	83	61	19	146	11	211	24	3	257	0.610	11
LK86SSE	101	74	18	114	10	174	23	2	272	0.280	10
LK87SSE	75	62	16	140	10	182	23	2	293	0.280	10
LK88SSE	71	111	13	153	8	151	20	2	810	0.350	12

Appendix 3. Analytical results of stream sediment samples from the Lik deposit (Cont.)

Sample Number	Bi ⁺	Cd ⁺	Cu ⁺	Mo ⁺	Pb ⁺	Sb ⁺	Zn ⁺
LK52SSE	N 0.60	0.89	36	3.3	270	1.5	270
LK53SSE	N 0.60	4.9	29	3.6	170	1.8	1300
LK54SSE	N 0.60	2.2	26	2.8	29	1.8	390
LK55SSE	N 0.60	0.81	25	2.5	25	3.1	220
LK56SSE	N 0.60	5.6	32	4.3	140	15	1400
LK57SSE	N 0.60	23	110	8.3	180	N 0.6	1400
LK58SSE	N 0.60	0.54	17	2.0	19	1.2	130
LK60SSE	N 0.60	0.53	16	1.6	18	1.1	120
LK61SSE	N 0.60	2.7	40	3.3	280	4.3	510
LK62SSE	N 0.60	3.6	19	2.1	200	5.1	1100
LK63SSE	N 0.60	2.1	30	2.9	87	10	880
LK84SSE	N 0.60	0.41	21	1.4	19	0.6	110
LK85SSE	N 0.60	0.63	60	3.5	68	2.3	190
LK86SSE	N 0.60	0.81	53	3.4	82	1.6	200
LK87SSE	N 0.60	0.81	47	3.6	62	2.5	220
LK88SSE	N 0.60	1.4	40	3.9	120	2.4	600

Samples were also analyzed for Bi, Ho, Sn, Ta, and U but all values were below the detection limits (Tables 1 and 2 list lower detection limits)

Appendix 4. Analytical results of nonmagnetic heavy mineral concentrate samples from the Lik deposit [all values in ppm unless otherwise noted].

Sample Number	Easting	Northing	Ca-S%	Fe-S%	Mg-S%	P-S%	Ti-S%	Mn-S	Ag-S	Ba-S	Be-S	Cd-S	Co-S
LK52C	540456	5182629	0.5	5	0.3	0.5	0.05	70	1	>10000	N 2	50	<20
LK53C	539860	5181477	0.7	3	0.5	<0.5	0.05	200	<1	>10000	N 2	N 50	N 20
LK54C	540954	5180645	0.3	3	0.2	<0.5	0.02	50	N 1	>10000	N 2	N 50	<20
LK55C	540473	5181244	0.3	3	0.2	<0.5	0.05	100	<1	>10000	N 2	N 50	N 20
LK56C	539391	5182028	0.3	7	0.2	<0.5	0.05	500	5	>10000	< 2	N 50	<20
LK57C	539264	5182331	0.3	7	0.2	<0.5	0.1	500	N 1	>10000	2	<50	<20
LK58C	536993	5183133	15	10	7	<0.5	0.07	100	N 1	>10000	N 2	N 50	<20
LK60C	537010	5182663	10	7	7	0.7	0.05	70	N 1	>10000	N 2	N 50	N 20
LK61C	538678	5182440	0.5	3	0.3	0.5	0.1	200	<1	>10000	N 2	N 50	N 20
LK62C	538376	5182252	2	7	5	0.7	0.03	300	3	>10000	N 2	N 50	<20
LK63C	540731	5178655	2	2	3	1.5	0.3	200	N 1	>10000	N 2	N 50	N 20
LK84C	535690	5179018	1	3	2	0.5	0.3	100	N 1	>10000	N 2	N 50	<20
LK85C	536733	5179349	0.2	2	0.1	<0.5	0.05	500	N 1	>10000	N 2	N 50	N 20
LK86C	536627	5179915	0.3	3	0.1	<0.5	0.05	1000	N 1	>10000	N 2	N 50	<20
LK87C	536887	5179203	0.5	2	0.3	0.7	0.1	700	N 1	>10000	N 2	N 50	N 20
LK88C	538311	5178772	0.5	3	0.3	<0.5	0.05	1500	N 1	>10000	N 2	N 50	<20

Appendix 4. Analytical results of nonmagnetic heavy mineral concentrate samples from the Lik deposit (Cont.)

Sample Number	Cr-S	Cu-S	La-S	Ni-S	Pb-S	Sn-S	Sr-S	V-S	Y-S	Zn-S	Zr-S
LK52C	20	20	N 100	30	N 20	N 20	2000	20	20	5000	100
LK53C	100	15	N 100	30	1500	N 20	3000	20	<20	700	50
LK54C	150	15	N 100	30	N 20	N 20	2000	<20	30	N 500	30
LK55C	70	20	N 100	20	N 20	N 20	2000	20	<20	N 500	50
LK56C	200	20	N 100	50	10000	70	5000	50	20	1000	50
LK57C	70	30	N 100	30	50	N 20	2000	50	30	1000	200
LK58C	<20	20	N 100	50	70	N 20	2000	30	50	700	150
LK60C	<20	10	N 100	20	70	20	3000	20	50	N 500	70
LK61C	300	20	N 100	15	3000	N 20	10000	50	30	N 500	500
LK62C	300	20	N 100	50	10000	N 20	3000	20	50	700	100
LK63C	300	30	N 100	20	30	N 20	3000	30	70	700	1000
LK84C	150	15	100	N 10	70	N 20	3000	20	30	N 500	500
LK85C	1000	15	N 100	N 10	20	N 20	1500	<20	N 20	N 500	70
LK86C	1500	20	N 100	20	50	N 20	1500	20	<20	N 500	30
LK87C	300	15	N 100	N 10	100	N 20	3000	20	50	N 500	500
LK88C	500	20	N 100	N 10	150	N 20	3000	20	<20	500	100

Samples were also analyzed for As, Au, B, Bi, Ga, Ge, Mo, Na, Nb, Pd, Pt, Sb, Sc, Th, and W but all values were below the detection limits (Table 3 lists lower detection limits).

Appendix 5. Analytical results of water samples from the Lik deposit [Cl⁻, F⁻, SO₄²⁻, NO₃⁻, Al, Ca, Fe, K, Mg, Na, and Si in ppm; all other elements in ppb; alkalinity in ppm; conductivity in μ mhos/cm].

Sample Number	Easting	Northing	T (°C)	pH	Alkalinity	Conductivity	Cl ⁻	F ⁻	SO ₄ ²⁻	NO ₃ ⁻	Al ³⁺	B ³⁺
LK52W	540456	5182629	10	7.75	148	380	0.6	0.14	110	0.4	<0.1	<10
LK53W	539860	5181477	8	6.85	118	320	0.4	0.12	64	0.2	<0.1	<10
LK54W	540954	5180645	11	7.65	134	390	0.4	0.15	59	0.1	<0.1	<10
LK55W	540473	5181244	7	7.95	143	380	0.4	0.16	46	0.1	<0.1	<10
LK56W	539391	5182028	11	7.65	115	270	0.4	0.11	56	0.1	0.1	<10
LK57W	539264	5182331	5	6.20	7	210	0.6	0.19	127	1.2	0.2	20
LK58W	536993	5183133	10	7.70	118	300	0.4	0.26	50	0.1	<0.1	<10
LK59W	536835	5183079	10	7.75	161	320	0.5	0.23	30	0.3	<0.1	<10
LK60W	537010	5182663	10	7.45	125	290	0.4	0.33	33	0.1	<0.1	<10
LK61W	53678	5182440	6	6.75	73	190	0.4	0.24	26	0.2	0.2	<10
LK62W	538376	5182252	5	7.55	123	320	0.4	0.29	60	0.1	<0.1	<10
LK63W	540731	5178655	9	8.05	169	380	0.4	0.24	64	0.1	<0.1	<10
LK84W	535690	5179018	12	8.20	163	400	0.4	0.28	80	0.1	0.2	<10
LK85W	536733	5179349	11	7.75	79	180	0.4	0.27	37	0.1	<0.1	10
LK86W	536627	5179915	7	7.78	85	190	0.4	0.18	42	0.1	<0.1	10
LK87W	536887	5179203	9	8.30	163	380	0.4	0.10	74	0.1	<0.1	<10
LK88W	538311	5178772	10	8.09	161	370	0.4	0.28	67	0.1	<0.1	<10

Appendix 5. Analytical results of water samples from the Lik deposit (Cont.).

Sample Number	Ba	Ca	Cd	Fe	Li	Mg	Mn	Na	Ni	Si	Sr	Ti	Zn
LK52W	74	61.9	<1	<0.05	5	8.71	<1	2.9	<5	1.13	441	<1	6
LK53W	84	53.2	<1	<0.05	<4	5.60	9	1.6	7	2.67	203	1	383
LK54W	72	57.9	<1	<0.05	<4	7.47	<1	2.0	<5	1.46	340	1	88
LK55W	65	58.3	<1	<0.05	5	8.37	<1	2.3	<5	0.96	409	<1	4
LK56W	93	51.7	<1	<0.05	<4	5.47	27	1.7	7	2.31	200	<1	501
LK57W	63	26.5	5	0.15	7	4.41	329	1.6	51	7.93	215	<1	1950
LK58W	53	47.2	<1	<0.05	<4	8.56	1	0.8	<5	0.73	255	<1	12
LK59W	186	52.9	<1	<0.05	<4	7.00	<1	1.6	<5	0.85	184	3	4
LK60W	78	46.3	<1	<0.05	<4	7.23	<1	1.1	<5	0.69	193	<1	3
LK61W	274	32.1	<1	<0.05	<4	2.34	<1	1.1	<5	1.07	123	<1	14
LK62W	260	52.8	<1	<0.05	<4	5.88	<1	1.8	<5	1.37	188	1	781
LK63W	103	60.2	<1	<0.05	<4	9.29	<1	3.2	<5	0.99	237	1	14
LK84W	71	62.8	<1	0.15	<4	10.6	<1	3.0	<5	0.81	256	1	7
LK85W	175	26.5	<1	<0.05	5	3.08	<1	5.0	<5	1.47	132	1	<3
LK86W	176	30.8	<1	<0.05	5	2.70	<1	4.8	<5	1.34	109	3	<3
LK87W	77	60.1	<1	<0.05	<4	10.2	<1	3.4	<5	0.90	249	<1	<3
LK88W	88	58.9	<1	<0.05	<4	9.52	<1	3.3	<5	0.99	237	<1	7

Samples were also analyzed for Ag, Be, Bi, Co, Cr, Cu, Ga, K, Mo, Pb, Sn, V, and Zr but all values were below the detection limits (Table 1 lists lower detection limits)