Chapter 2 Recommendation for the Future Survey

Two areas, Area A-1 and D-1, can be recommended to further exploration because of their existence of relatively large alluvial basins containing placer deposits. To evaluate three-dimensional ore grade and precise ore reserve, it is necessary to obtain the vertical information of ore grade.

In Area A-1, the test pitting survey is preferable to the drilling. Because alluvial sediments contain many boulders in this area. It is desirable to investigate two points, where the anomaly of tin and rare earth overlap each other.

In Area D-1, the vertical drilling survey is suited. Because the sediments in a mangrove area reach 20 meters in thickness. The survey area is affected by a tide and is mostly submerged at high tide; thereby the 'Banka' drilling is preferable to the normal drilling at three or four sites to confirm ore deposits.

REFERENCE

Aranyakanon,P., 1961. The cassiterite deposit of Haad Som Pan, Ranong province, Thailand. Royal Department of Mines,Thailand,182pp.

Chappell,B.W. and White,A.J.R., 1974. Two contrasting granite types. Pacf. Geol.,no.8,p.173-174.
DMR, 1985. Geological map of Thailand,1:250,000,Changwat Chumphon and Amphoe Kra buri. Geological survey division,Department of Mineral Resources.

DMR, 1989. Geophysical series,1:50,000,Aeromagnetic map,survey A,sheet 4729-4730. Department of Mineral Resources.

DMR, 1989. Geophysical series,1:250,000,Airborne gamma-ray spectometric map, surveys B and C,sheet NC 47-6, 47-7,47-10.Department of Mineral Resources.

Garson,M.S.,Young,B.,Mitchell,A.H.G. and Tait,B.A.R., 1975. The geology of the tin belt in Peninsular Thailand around Phuket,Phangnga and Takua Pa. Overseas memoir No.1,Inst.Geol.Sci.,London.

Govett,G.J.S., 1983. Handbook of exploration geochemistry,Volume 2. Statistic and Data Analysis in Geochemical Prospecting. ELSEVIER SCIENTIFIC PUBLISHING COMPANY, 437p.

Hutchison,C.S., 1983. Multiple Mesozoic Sn-W-Sb granitoids of southeast Asia. Geol. Soc. of America, Memoir 159, 35-60.

Hutchison,C.S. and Taylor,D., 1978. Metallogenesis in SE Asia. Jour.Geol.Soc. London,135,407-428.

Ishihara,S., 1977. The magnetite-series and ilmenite-series granitic rocks. Mining Geol.,27,293-305.

Ishihara,S., 1981. The granitoid series and mineralization. Econ.Geol.75th Anniversary vol.,458-484.

Ishihara,S. and Mochizuki,T., 1980. Uranium and Thorium contents of Mesozoic granites from Peninsular Thailand. Bull.Geol.Surv.Japan,31(8),369-376.

Ishihara,S.,Sawata,H.,Shibata,K.,Terashima,S.,Arrykul,S. and Sato, K., 1980. Granites and Sn-W deposits of Peninsular Thailand. Mining Geol.Spec. Issue,8,223-241.

JICA and MMAJ, 1992. Report on the Cooperative Mineral Exploration in tne Kra Buri Area, the Kingdom of Thailand, Phase I. Japan International Cooperation Agency and Metal Mining Agency of Japan.

Lepeltier,C., 1969. A simplified statistical treatment of geochemical data by graphical representation. Econ.Geol.,64,538-550.

Sawata,H., 1971. Mineral resources around the lower Mekong, 4. Tin. Chishitu News,G.S.J.,199,52-63.(in Japanese)

Sinclair,A.J., 1976. Application of probability graphs in mineral exploration. Special volume No.4, The Association of Exploration Geochemists.

Sirinawin,S.,Putthapibann,P. and Mantajit,N., 1983. Some aspects of tin granite and its relationship to tectonic setting. Geol.Soc.America 159,77-85.
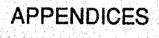
Suensilpong,T.,Tate,N.M.,Pollard,P.J. and Taylor,R.G., 1986. Resource evaluation of primary tin potential of the Phuket-Ranong region,southwestern Thailand - A district analysis. Project of the Southeast Asia tin research and development centre,ESCAP,United Nations,88p.

Taylor,S.R., 1964. Abundance of chemical elements in the continental crust: a new table. Geochim.Cosmochim. Acta,28,1273-1285.

Tischendorf,G., 1977. Geochemical and petrographic characteristics of silic magmatic rocks associated with rare element mineralization. G.S.of Czechoslovakia,2,41-96.

White,A.J.R., 1979. Mantle source type granite. G.S.A.,Abstr,11,539.

White,A.J.R. and Chappell,B.W., 1977. Ultrametamorphism and granitoid genesis. Tectonophy.,43,7-22.

APPENDICES

Appendix 1　Microscopic observation of rock thin sections

No.	Sample No.	Rock Name	Location	Texture	Principal Mineral										Accessory Mineral					Secondary Mineral							Remarks
					Qz	Pl	Kf	Bi	Ms	Am	Ga	Ch	Ca	Ti	Zr	Ap	Sp	Op	Al	Qz	Ms	Ca	Ep	Ch	Lc	Py	
1	92R-01	bi-ti granite	A-1 area, A40903	granitic	◎	○	◎	·	·						·	·	·	·	·		·			·	·		
2	92R-02	granite mylonite	A-1 area, A40903-A41007	mylonitic	◎	○	○	·						○	·	·		·	·		·			·			
3	92R-03	two mica granite	A-1 area, A41907	porphyritic	◎	○	◎	○	○					·	·		·	·									
4	92R-04	biotite granite	A-2 area, A42122	granitic	◎	○	◎	·							·	·		·			·			·			
5	92R-05	two mica granite	A-2 area, A41918	granitic	○	○	◎	○	·						·	·		·			·			○			
6	92R-06	two mica granite	B-2 area, B50611	granitic	◎	○	◎	○	○						·	·	·	·	·		·			·			
7	92R-07	biotite granite	B-3 area, B02810	granitic	○	○	◎	○							·	·	·	·	·		·			·			
8	92R-08	silicified granite	D-1 area, D40816	cataclastic	○	○	○	?·?												○	·			○		○
9	92R-09	granite mylonite	D-1 area, D42218	mylonitic	○	○	◎	·	·						·	·	·	·	·		·	·		·		
10	92R-10	two mica granite	D-1 area, D42311	cataclastic	○	○	◎	·							·	·		·			·			·			
11	92R-11	two mica granite	D-2 area, D60301-D60404	cataclastic	◎	○	◎	·	·						·	·	·	·	·		·			·			

Abbreviations : Qz:quartz, Pl:plagioclase, Kf:potassium feldspar, Bi:biotite, Ms:muscovite, Am:amphibole, Ga:garnet, Ch:chlorite, Al:allanite, Ti:tourmaline, Zr:zircon, Ap:apatite, Sp:sphene, Op:opaque mineral, Ca:calcite, Ep:epidote, Lc:leucoxene Py:pyrite

Symbols;　◎:abundant,　○:common,　·:rare

A-1

Appendix 2   Microscopic observation of ore polished sections   (1)

No	Sample Number	Locality	Cs	Mz	Xe	Pc	At	Zr	Il	Sp	Ga	Tl	Qz	Kf	Pl	Remarks
1	AAK-01	A-1 area, AA5111	◎	°					◎		○	°	○	°	°	
2	AAK-05	A-1 area, AA3413	°	°	?			°	◎			○	◎	°		
3	AAM-06	A-1 area, AA0904	°	°		°		○	◎	°		°	○	°	°	
4	AAM-07	A-1 area, AA1206	°	°		°		○	◎	°		○	○	°	°	well rounded
5	AAM-09	A-1 area, AA1812		°		○		○	◎	°		○	°	°	°	
6	ABM-03	A-2 area, AB2702	°	○		°		○	◎	°	°		°	°	°	
7	ABT-02	A-2 area, AB2511	○	○		○		◎	○				°	°	°	very fine-grained
8	ABT-04	A-2 area, AB3414	°	○		○		◎	○			°	°	°		fine-grained, well rounded
9	BAT-03	B-1 area, BA0606	°	○				○	○			°	°	°	°	
10	BBM-01	B-2 area, BB0705	°	°				°	◎				○	○	○	
11	BCP-03	B-3 area, BC0810	◎	°				○	○					○		
12	BDI-07	B-4 area, BD0107	°					○	◎				○	○	°	
13	BDI-09	B-4 area, BD0412	◎					○	◎				°			
14	CAI-12	C area, CA0315	○	○				◎	°			°	°	°		fine-grained, well rounded

Abbreviations;   Cs:cassiterite, Mz:monazite, Xe:xenotime, Pc:polycrase, At:anatase, Zr:zircon, Il:ilmenite, Sp:sphene, Ga:garnet, Tl:tourmaline, Qz:quartz, Kf:potassium feldspar, Pl:plagioclase

Symbols;   ◎:abundant,   ○:common,   °:rare

Appendix 2 Microscopic observation of ore polished sections

(2)

No	Sample Number	Locality	Cs	Mz	Xe	Pc	At	Zr	Il	Sp	Ga	Tl	Qz	Kf	Pl	Remarks
15	DAI-02	D-1 area, DA2302		◎				◎	◎				◦	◦	◦	
16	DAM-02	D-1 area, DA1113	◦	◎				○	○			◦	◦	◦		
17	DAM-03	D-1 area, DA1712	◦	◎				◎	◦			◦	◦	◦		
18	DBI-03	D-2 area, DB1001	◦	◦				◦	◎				○	◦		
19	DBI-04	D-2 area, DB1009		○				◎	○			○	○	◦		
20	DBI-06	D-2 area, DB0807		○				◦	◎			○	◦	◦		
21	DBM-05	D-2 area, DB0503		○				○	◎			○	◦	◦		
22	DBP-08	D-2 area, DB0601		◎					◎			◎	○	○	◦	

Abbreviations; Cs:cassiterite, Mz:monazite, Xe:xenotime, Pc:polycrase, At:anatase, Zr:zircon, Il:ilmenite, Sp:sphene,
Ga:garnet, Tl:tourmaline, Qz:quartz, Kf:potassium feldspar, Pl:plagioclase

Symbols: ◎:abundant,   ○:common,   ◦:rare

Appendix 3 Results of X-ray diffraction of panned samples

No.	Sample NO.	Location	Qz	Pl	Kf	Ms	Ka	Il	Remarks
1	X-01	A-2 area, AB0409-AB0508	○	○	○	○			
2	X-02	A-2 area, AB0507	◎	○	○	○			
3	X-03	A-2 area, AB0508	◎	○	○	○	○		
4	X-04	A-2 area, AB0409	◎	○	○	○	·	○	
5	X-05	A-2 area, AB1215	◎	○	○	○		○	
6	X-06	A-2 area, AB2910	◎		○	○			
7	X-07	A-2 area, AB2211	◎			○	○		
8	X-08	B-1 area, BA1501	◎			○	○		
9	X-09	C area, CA0713	◎			○	○		
10	X-10	D-1 area, DA1909	◎				○		
11	X-11	C area, CA1119	◎			○	○		

Abbreviations; Qz:quartz, Pl:plagioclase, Kf:potash feldspar, Ms:muscovite
Ka:kaolinite, Il:Illite

Symbols;　　　◎:abundant,　　○:common,　　○:rare,　　·:trace

Appendix 4 Chemical analysis data of soil samples (1)

NO	SP.No. unit	Sn ppm	W ppm	Ta ppm	Nb ppm	Ce ppm	Eu ppm	La ppm	Nd ppm	Sm ppm	Tb ppm	Th ppm	U ppm	Y ppm	Gd ppm	Dy ppm	Pr ppm	Yb ppm	Lu ppm
1	AA0601	30	8	6	42	300	0.7	130	91	16.0	2.4	120	16.0	67	14.9	11.0	<20	7.97	1.08
2	AA0602	28	8	5	38	240	0.5	100	61	13.0	1.7	110	14.0	50	10.6	8.3	<20	6.77	0.89
3	AA0603	8	<4	2	19	120	0.5	35	21	4.1	0.5	51	5.5	20	1.5	3.8	<20	3.32	0.50
4	AA0604	<5	<4	<1	17	65	0.3	28	15	3.5	<0.5	38	3.7	22	3.8	2.8	<20	3.24	0.49
5	AA0605	11	5	2	20	110	0.6	40	23	4.9	<0.5	44	5.1	18	3.9	4.4	<20	3.70	0.57
6	AA0606	<5	<4	2	19	150	1.0	42	26	5.3	0.8	34	2.6	21	5.1	4.4	<20	3.98	0.52
7	AA0701	26	11	5	38	270	0.9	140	82	19.0	2.2	120	16.0	66	16.0	13.0	20	6.81	0.94
8	AA0702	26	8	4	42	280	0.7	130	72	17.0	2.2	120	17.0	68	15.2	12.0	20	8.20	1.11
9	AA0703	<5	<4	2	19	94	0.6	33	20	4.1	0.6	41	5.4	19	3.1	3.3	<20	3.20	0.45
10	AA0704	6	<4	1	21	71	0.4	29	15	3.4	0.6	35	5.6	21	4.7	2.9	<20	3.32	0.43
11	AA0705	6	<4	2	24	170	0.7	63	39	7.8	0.9	56	9.2	34	6.2	5.5	<20	4.69	0.64
12	AA0706	9	<4	3	28	160	0.5	68	34	8.0	1.3	66	8.6	36	7.7	6.7	<20	5.80	0.75
13	AA0804	19	10	1	12	32	0.4	16	7	1.7	<0.5	14	2.4	14	2.8	2.1	<20	2.46	0.38
14	AA0805	<5	<4	2	18	120	0.7	39	23	5.1	0.7	35	4.0	24	3.4	3.3	<20	3.67	0.55
15	AA0806	18	<4	5	37	280	0.7	130	74	17.0	2.8	120	13.0	54	15.2	11.0	<20	8.12	1.07
16	AA0807	22	<4	4	37	250	0.6	110	53	14.0	1.8	110	14.0	56	13.2	11.0	<20	7.64	1.03
17	AA0808	28	<4	4	41	280	0.6	120	65	15.0	2.0	110	15.0	65	14.0	12.0	<20	7.23	1.04
18	AA0809	26	<4	6	41	290	0.7	140	85	18.0	3.0	110	17.0	77	16.3	13.0	<20	9.60	1.25
19	AA0810	35	9	4	42	280	0.9	130	78	17.0	2.7	120	17.0	65	14.6	13.0	<20	8.81	1.14
20	AA0901	15	<4	4	46	260	0.6	130	74	15.0	1.9	140	8.7	38	12.7	7.3	25	4.72	0.58
21	AA0902	19	<4	5	53	410	0.5	180	110	20.0	2.4	170	13.0	50	12.9	10.0	<20	6.38	0.74
22	AA0903	16	<4	4	46	370	0.6	170	100	21.0	2.3	160	14.0	59	15.2	13.0	25	6.70	0.87
23	AA0904	38	<4	4	47	330	0.6	140	73	17.0	2.2	130	13.0	70	14.4	10.0	27	6.03	0.76
24	AA0905	<5	<4	4	43	310	0.4	160	95	19.0	2.0	130	10.0	114	19.8	13.0	25	7.22	0.98
25	AA0906	<5	11	3	56	290	0.6	140	85	17.0	2.8	120	11.0	96	17.8	13.0	23	6.88	0.88
26	AA0907	130	8	4	28	270	0.7	120	62	15.0	2.3	110	15.0	53	13.0	11.0	27	7.83	1.06
27	AA0908	27	8	4	40	290	0.5	130	74	16.0	2.6	130	16.0	66	15.0	11.0	26	7.12	0.93
28	AA0909	27	8	4	40	280	0.6	130	68	17.0	2.6	120	16.0	61	15.4	12.0	22	8.43	1.14
29	AA1001	<5	9	1	49	360	0.9	190	120	23.0	2.8	150	12.0	96	16.2	12.0	26	7.01	0.92
30	AA1002	16	<4	4	44	330	0.8	170	89	20.0	2.5	130	12.0	56	15.1	10.0	25	5.53	0.69
31	AA1003	12	<4	3	44	430	0.8	210	130	26.0	3.2	170	13.0	69	22.9	14.0	25	7.09	0.86
32	AA1004	17	6	4	44	390	0.9	210	110	25.0	2.9	170	17.0	65	19.0	12.0	33	7.23	0.93
33	AA1005	13	6	4	46	400	0.4	200	120	23.0	2.0	180	18.0	58	16.7	11.0	<20	6.31	0.79
34	AA1006	23	<4	4	47	460	1.1	240	130	28.0	2.9	200	22.0	59	20.1	12.0	25	6.92	0.91
35	AA1007	15	<4	4	34	330	0.9	180	110	23.0	3.3	150	17.0	71	13.2	15.0	<20	8.75	1.19
36	AA1101	18	<4	4	42	280	0.8	130	74	16.0	2.1	120	11.0	49	11.1	10.0	<20	5.60	0.71
37	AA1102	10	<4	4	39	310	1.0	160	98	19.0	1.8	130	9.5	52	13.2	8.9	<20	5.74	0.72
38	AA1103	21	<4	3	29	210	0.8	120	70	15.0	1.7	88	9.3	52	9.1	11.0	<20	6.11	0.69
39	AA1104	9	<4	3	33	190	0.9	100	61	13.0	2.2	87	9.3	49	9.5	9.3	<20	5.61	0.74
40	AA1105	12	<4	4	44	390	0.4	210	130	26.0	2.0	180	16.0	63	17.6	12.0	<20	7.10	0.86
41	AA1106	17	<4	4	39	410	1.0	180	100	22.0	3.5	160	20.0	61	15.8	13.0	<20	8.69	1.15
42	AA1201	24	9	3	29	200	1.1	110	63	14.0	1.7	75	11.0	54	9.1	8.8	<20	5.72	0.83
43	AA1202	12	<4	3	32	210	0.7	110	65	14.0	1.8	92	10.0	46	9.6	11.0	<20	5.99	0.83
44	AA1203	23	7	4	45	310	0.6	150	85	18.0	2.1	130	13.0	58	13.0	9.9	<20	6.24	0.72
45	AA1204	25	<4	3	32	210	1.2	120	78	16.0	1.5	88	8.9	58	12.8	11.0	<20	7.15	0.95
46	AA1205	20	<4	3	43	290	1.3	160	100	22.0	2.8	130	15.0	62	18.7	13.0	<20	7.28	0.86
47	AA1206	21	9	4	37	240	0.6	110	58	13.0	1.3	100	14.0	47	6.5	8.4	<20	5.18	0.63
48	AA1301	19	9	3	40	210	0.8	91	49	12.0	0.8	82	14.0	58	9.5	10.0	<20	6.45	0.87
49	AA1302	12	8	4	43	180	0.3	88	55	11.0	1.1	95	12.0	42	9.8	6.7	<20	4.77	0.59
50	AA1303	17	<4	3	40	190	0.9	89	59	12.0	1.4	86	15.0	56	10.1	10.0	24	5.53	0.76
51	AA1304	21	<4	3	39	190	0.7	99	58	13.0	1.9	81	17.0	70	8.4	11.0	<20	6.46	0.82
52	AA1305	12	<4	3	35	210	1.0	110	67	15.0	1.8	86	15.0	59	10.9	11.0	<20	7.01	0.93
53	AA1306	7	<4	4	33	310	1.2	170	100	21.0	2.4	130	10.0	50	14.0	11.0	<20	8.89	1.11
54	AA1401	11	8	3	39	170	0.7	84	49	12.0	2.0	83	9.3	46	10.4	10.0	<20	5.98	0.75
55	AA1402	15	9	4	38	200	0.8	99	62	14.0	1.4	88	14.0	65	13.2	12.0	<20	7.34	1.00
56	AA1403	11	11	3	34	190	1.0	100	59	14.0	2.1	82	15.0	63	13.0	11.0	<20	7.18	0.93
57	AA1404	18	<4	3	40	200	0.7	90	61	12.0	2.0	80	15.0	56	9.6	10.0	<20	6.29	0.86
58	AA1501	32	7	7	51	200	1.3	110	64	16.0	2.1	110	12.0	57	11.0	13.0	28	7.59	0.92
59	AA1502	25	8	6	52	200	0.5	100	60	14.0	1.9	110	11.0	54	10.5	13.0	<20	9.42	1.30
60	AA1503	29	8	5	45	130	0.6	57	25	6.7	1.3	140	20.0	59	5.4	10.0	<20	8.26	1.02
61	AA1504	14	7	3	32	210	0.8	110	67	15.0	2.3	85	22.0	62	10.2	11.0	<20	7.93	1.11
62	AA1505	13	<4	3	37	290	1.1	160	95	22.0	3.5	120	15.0	88	18.3	15.0	<20	8.67	1.11
63	AA1601	33	12	7	54	290	0.7	120	74	16.0	3.1	120	19.0	111	15.5	16.0	<20	10.60	1.51
64	AA1602	34	9	7	51	310	0.8	160	96	21.0	4.0	140	29.0	112	19.9	21.0	<20	13.70	1.77
65	AA1603	31	12	6	49	290	0.8	150	87	20.0	3.6	130	25.0	214	17.5	20.0	25	13.40	1.67
66	AA1604	37	<4	6	51	270	0.9	140	80	19.0	3.5	120	24.0	138	17.3	14.0	<20	11.10	1.43
67	AA1605	9	8	4	32	200	1.1	100	63	14.0	1.8	82	11.0	55	9.8	9.5	<20	6.89	1.00
68	AA1606	<5	<4	1	24	140	1.1	67	37	9.2	0.9	46	5.1	46	7.1	7.4	<20	5.05	0.67
69	AA1701	36	11	6	52	250	0.8	120	74	17.0	3.3	110	12.0	99	14.0	14.0	25	8.87	1.19
70	AA1702	33	10	5	49	220	1.1	98	72	17.0	2.4	93	16.0	86	14.8	13.0	<20	8.06	1.18
71	AA1703	34	9	6	52	230	1.4	120	79	22.0	3.1	96	15.0	90	16.3	16.0	<20	9.80	1.33
72	AA1704	36	10	5	51	250	1.0	120	94	22.0	3.0	100	16.0	104	15.8	16.0	30	10.30	1.39
73	AA1705	36	10	5	52	280	1.1	110	65	18.0	2.5	110	19.0	89	15.1	13.0	20	9.51	1.31
74	AA1706	36	16	6	57	240	1.1	140	93	23.0	3.4	110	20.0	100	18.3	19.0	33	11.70	1.49
75	AA1707	35	<4	6	57	290	0.7	130	83	19.0	3.4	110	17.0	133	15.7	16.0	<20	10.60	1.48
76	AA1708	39	10	6	57	260	0.8	130	79	20.0	3.7	100	19.0	184	22.7	19.0	<20	11.30	1.41
77	AA1709	41	13	5	53	270	1.0	140	90	21.0	3.3	110	21.0	92	17.3	18.0	<20	9.29	1.27
78	AA1710	36	<4	7	53	300	1.2	150	100	26.0	3.5	110	27.0	242	22.4	21.0	<20	13.10	1.71
79	AA1711	24	16	7	49	330	0.8	160	110	25.0	4.7	140	29.0	136	20.8	20.0	<20	17.80	2.31
80	AA1712	7	<4	2	29	240	1.1	120	82	18.0	2.1	93	15.0	62	13.5	11.0	<20	8.54	1.18
81	AA1806	33	<4	5	50	220	1.0	100	72	17.0	2.6	84	13.0	94	12.9	15.0	<20	8.72	1.18
82	AA1807	32	11	6	50	220	1.0	97	67	17.0	2.8	80	12.0	84	15.6	13.0	<20	8.39	1.15
83	AA1808	33	10	5	53	240	1.2	120	81	19.0	2.9	91	14.0	98	19.2	16.0	<20	9.22	1.25
84	AA1809	39	13	5	50	260	0.9	120	70	18.0	2.0	100	19.0	113	15.6	15.0	22	9.53	1.24
85	AA1810	40	15	5	54	290	1.2	150	96	25.0	3.6	110	23.0	201	19.0	17.0	31	11.50	1.44
86	AA1811	41	<4	7	56	280	1.4	150	100	25.0	3.7	110	21.0	114	20.0	22.0	<20	12.30	1.58
87	AA1812	30	<4	5	49	240	0.7	120	74	18.0	2.5	97	18.0	98	15.3	14.0	<20	9.47	1.30
88	AA1904	19	<4	4	43	200	0.5	87	67	13.0	1.8	81	11.0	59	10.4	9.9	<20	6.60	0.87
89	AA1905	20	9	4	44	200	0.8	87	60	15.0	2.0	75	9.0	71	12.1	12.0	<20	7.99	1.03
90	AA1906	26	<4	4	47	210	0.7	83	59	14.0	2.1	77	9.1	71	11.3	11.0	<20	7.47	0.96
91	AA1907	33	9	4	50	250	1.1	120	88	22.0	2.4	90	13.0	94	17.2	16.0	20	10.60	1.40
92	AA1908	32	10	6	50	240	1.0	110	88	20.0	2.5	93	13.0	94	18.5	16.0	<20	11.20	1.38
93	AA1909	31	<4	6	50	240	1.0	110	76	19.0	3.1	87	12.0	98	19.2	17.0	<20	12.20	1.60

NO	SP.No. unit	Sn ppm	W ppm	Ta ppm	Nb ppm	Ce ppm	Eu ppm	La ppm	Nd ppm	Sm ppm	Tb ppm	Th ppm	U ppm	Y ppm	Gd ppm	Dy ppm	Pr ppm	Yb ppm	Lu ppm
94	AA1910	25	10	5	49	230	0.9	95	62	16.0	2.5	83	13.0	82	11.8	13.0	<20	9.00	1.23
95	AA1911	29	9	6	49	240	1.0	100	75	17.0	1.7	88	17.0	87	15.3	14.0	<20	9.40	1.21
96	AA1912	40	<4	8	62	270	0.9	130	84	19.0	2.8	110	22.0	94	16.4	17.0	<20	10.50	1.35
97	AA1913	20	<4	5	39	320	0.9	160	120	24.0	3.0	130	17.0	116	13.8	14.0	23	5.53	1.23
98	AA1914	7	<4	3	34	290	0.6	150	100	21.0	2.7	110	17.0	70	14.7	15.0	<20	10.80	1.40
99	AA2001	24	<4	2	27	72	0.2	20	<5	2.5	1.1	39	9.3	20	1.4	3.2	<20	3.43	0.44
100	AA2002	8	9	1	24	80	0.4	21	9	2.8	0.9	34	8.7	24	2.5	4.3	<20	3.52	0.55
101	AA2003	21	12	4	35	170	0.7	77	52	11.0	1.7	71	11.0	60	10.1	9.1	<20	7.35	1.02
102	AA2004	24	8	5	42	230	0.9	110	38	16.0	2.0	93	11.0	84	13.9	16.0	<20	10.40	1.47
103	AA2005	33	10	5	50	250	0.7	110	67	17.0	3.7	110	12.0	174	14.3	20.0	<20	13.10	1.75
104	AA2006	13	8	3	32	220	0.6	100	57	16.0	2.1	77	13.0	100	10.3	14.0	<20	11.10	1.49
105	AA2007	21	10	3	43	220	0.3	100	36	15.0	3.3	85	14.0	81	14.1	12.0	<20	9.74	1.33
106	AA2008	27	9	4	54	180	0.4	88	49	12.0	1.1	85	10.0	90	14.0	12.0	<20	8.62	1.19
107	AA2009	12	5	2	37	210	1.0	120	71	18.0	1.4	85	14.0	92	13.7	12.0	<20	7.75	0.99
108	AA2010	26	8	4	52	220	0.8	100	62	16.0	1.8	81	12.0	192	13.7	17.0	<20	9.29	1.13
109	AA2011	35	8	5	51	250	1.2	110	64	16.0	1.7	98	13.0	83	14.1	14.0	<20	8.54	1.09
110	AA2012	29	10	7	46	200	0.4	110	76	16.0	1.7	97	16.0	82	13.7	13.0	<20	8.49	1.10
111	AA2013	45	5	<1	28	220	0.7	100	60	15.0	1.0	70	11.0	53	14.1	12.0	<20	7.27	0.93
112	AA2014	<5	<4	<1	22	160	1.4	74	38	11.0	0.7	49	6.9	47	8.0	10.0	<20	5.86	0.80
113	AA2101	16	6	<1	34	170	0.7	56	39	8.0	1.1	52	9.6	43	5.8	6.5	<20	5.51	0.73
114	AA2102	15	8	4	33	120	0.3	46	31	6.4	1.1	51	8.8	63	5.8	7.5	<20	5.31	0.82
115	AA2103	22	8	2	31	110	0.3	48	39	6.7	1.2	43	6.8	43	7.3	8.4	<20	6.06	0.96
116	AA2104	30	10	5	46	140	0.3	64	38	9.3	1.1	81	7.1	59	9.7	9.8	<20	7.95	1.15
117	AA2105	31	14	7	45	140	0.3	62	28	9.0	1.1	83	9.5	54	7.6	9.1	<20	7.57	0.85
118	AA2106	22	8	<1	37	210	1.2	88	54	13.0	1.3	68	12.0	77	11.6	12.0	<20	7.67	1.03
119	AA2107	25	6	5	44	220	1.0	110	43	15.0	2.5	85	12.0	72	14.4	14.0	<20	8.07	1.14
120	AA2108	32	8	5	49	220	0.8	98	58	14.0	1.1	90	14.0	85	9.9	12.0	<20	8.67	1.14
121	AA2109	27	8	7	47	240	1.1	95	56	14.0	1.7	84	12.0	70	13.9	11.0	<20	8.52	1.05
122	AA2110	20	16	4	36	120	0.2	48	26	5.8	0.9	57	8.6	31	3.1	5.9	<20	4.28	0.56
123	AA2111	16	6	<1	37	200	1.5	130	76	20.0	1.8	97	13.0	69	15.3	14.0	<20	9.46	1.28
124	AA2112	<5	<4	<1	15	110	2.3	70	49	11.0	1.1	26	2.8	39	8.6	7.6	<20	5.52	0.83
125	AA2201	7	5	<1	31	100	0.2	22	16	2.8	0.7	39	7.1	22	2.5	3.6	<20	3.11	0.44
126	AA2202	16	7	4	35	180	0.3	87	65	13.0	1.8	63	11.0	74	14.5	14.0	<20	9.04	1.30
127	AA2203	16	11	<1	29	55	0.8	22	9	2.6	0.5	35	6.9	10	4.5	2.5	<20	2.86	0.39
128	AA2204	17	12	<1	37	100	<0.2	43	10	6.3	1.3	51	5.6	38	9.7	6.8	<20	5.87	0.82
129	AA2205	21	10	<1	43	180	0.6	68	51	10.0	2.9	70	7.4	96	8.5	12.0	<20	9.28	1.18
130	AA2206	24	9	4	44	220	0.9	100	59	15.0	1.8	85	8.1	92	12.9	11.0	<20	9.84	1.14
131	AA2207	14	8	<1	35	180	0.9	78	52	11.0	1.3	66	8.6	55	9.6	9.2	<20	6.20	0.86
132	AA2208	10	5	<1	34	250	1.0	120	58	18.0	3.3	90	14.0	74	15.7	12.0	<20	9.13	1.21
133	AA2209	42	9	4	53	270	0.8	120	65	18.0	1.8	100	16.0	89	16.5	16.0	<20	9.31	1.27
134	AA2210	<5	<4	<1	18	150	1.7	68	50	10.0	1.1	27	3.6	42	7.7	5.3	<20	4.68	0.62
135	AA2301	26	10	<1	42	250	1.1	110	94	18.0	2.8	87	15.0	172	16.1	15.0	<20	10.70	1.36
136	AA2302	26	10	<1	42	230	0.8	88	47	14.0	1.8	83	13.0	69	11.3	13.0	<20	9.28	1.14
137	AA2303	15	8	<1	35	120	0.5	52	37	8.0	1.7	68	9.6	58	6.5	9.4	<20	8.08	1.07
138	AA2304	27	11	5	43	150	0.5	73	27	11.0	2.5	78	11.0	66	7.4	9.4	<20	8.52	1.15
139	AA2305	13	9	<1	34	150	0.8	65	42	8.9	1.2	58	8.4	57	7.3	8.3	<20	6.34	0.81
140	AA2306	16	6	3	37	130	0.8	59	34	8.6	2.6	57	7.3	43	6.0	7.1	<20	5.23	0.78
141	AA2307	6	4	<1	34	150	1.1	70	45	10.0	1.3	58	7.5	49	7.8	7.7	<20	5.66	0.69
142	AA2308	13	5	2	35	170	0.8	74	39	11.0	1.1	61	7.4	49	8.8	7.3	<20	5.89	0.72
143	AA2309	12	5	4	35	190	1.0	74	40	10.0	1.1	67	8.0	43	8.4	6.0	<20	5.32	0.76
144	AA2310	<5	4	<1	28	110	1.0	45	34	7.3	0.8	30	4.2	53	5.6	5.4	<20	4.02	0.68
145	AA2401	<5	11	3	28	180	1.3	53	27	7.3	0.9	28	3.0	39	5.3	5.1	<20	4.54	0.65
146	AA2402	14	13	<1	22	190	1.9	59	41	9.4	1.0	32	4.8	59	5.4	6.2	<20	4.56	0.59
147	AA2403	33	10	7	46	250	0.5	100	40	17.0	2.1	99	19.0	176	17.5	17.0	<20	10.30	1.47
148	AA2404	20	6	3	36	190	1.2	80	64	12.0	1.1	63	10.0	52	9.6	8.6	<20	5.38	0.74
149	AA2405	15	7	4	35	140	0.7	66	48	9.0	1.3	64	7.3	45	7.5	8.2	<20	5.18	0.81
150	AA2406	11	6	<1	35	180	0.6	68	43	9.3	1.1	65	8.8	100	8.1	8.0	<20	5.52	0.67
151	AA2407	10	5	<1	40	210	0.9	95	61	14.0	1.3	80	11.0	144	12.5	8.8	<20	6.48	0.90
152	AA2501	9	23	<1	21	100	0.2	19	17	2.5	0.6	29	3.2	38	1.6	2.9	<20	2.55	0.42
153	AA2502	6	18	<1	22	97	0.4	18	14	2.6	0.7	27	3.5	41	1.5	2.6	<20	2.84	0.48
154	AA2503	14	<8	2	23	89	0.5	18	7	1.9	<0.5	28	3.8	30	1.5	2.5	<20	2.77	0.39
155	AA2504	19	31	<1	26	72	0.4	17	10	2.0	0.7	25	3.0	19	1.3	2.5	<20	2.68	0.40
156	AA2505	22	36	3	30	83	0.4	18	20	1.9	0.6	31	4.0	33	3.4	4.2	<20	3.15	0.45
157	AA2506	15	32	<1	27	81	0.4	26	14	3.3	0.8	40	4.8	36	1.0	2.5	<20	4.29	0.63
158	AA2507	20	11	<1	25	43	0.9	18	<5	1.9	0.6	34	3.8	54	5.6	5.9	<20	3.29	0.48
159	AA2508	33	8	<1	43	120	0.9	48	28	5.2	0.7	34	6.1	156	12.8	14.0	<20	3.45	0.48
160	AA2509	14	11	4	33	210	1.2	100	55	16.0	1.8	86	20.0	105	8.5	8.0	<20	9.13	1.18
161	AA2510	15	5	<1	36	190	0.8	75	37	11.0	1.1	62	9.1	56	7.1	7.8	<20	5.36	0.79
162	AA2601	44	6	5	55	180	1.1	87	51	12.0	1.2	71	9.2	107	21.2	19.0	<20	6.36	0.87
163	AA2602	50	10	10	56	340	1.1	150	72	23.0	3.1	120	18.0	77	16.2	15.0	25	12.60	1.63
164	AA2603	10	13	8	28	330	0.4	150	80	22.0	3.0	130	22.0	52	5.1	2.8	25	10.40	1.32
165	AA2604	7	29	<1	23	76	0.4	29	12	3.6	0.7	35	4.2	18	2.2	2.2	<20	3.46	0.52
166	AA2605	9	25	2	23	100	0.7	32	20	2.6	1.6	28	3.2	18	2.8	2.2	<20	2.84	0.45
167	AA2606	24	29	2	24	46	<0.2	13	11	1.5	0.9	26	2.4	14	1.5	2.0	<20	2.51	0.40
168	AA2607	17	17	2	26	44	<0.2	14	6	1.7	0.7	26	3.1	18	1.7	2.5	<20	2.83	0.41
169	AA2608	19	17	3	34	74	<0.2	31	10	4.0	1.2	44	4.1	42	3.0	4.4	<20	4.79	0.71
170	AA2609	12	9	<1	31	110	0.6	46	24	5.0	1.0	43	5.9	36	7.0	8.5	<20	4.92	0.78
171	AA2610	11	7	5	35	150	1.0	72	30	9.4	1.0	57	9.4	58	7.8	8.8	20	5.36	0.74
172	AA2611	17	5	<1	39	160	0.8	82	44	11.0	1.1	71	9.9	82	13.2	13.0	<20	5.16	0.70
173	AA2612	14	5	4	35	210	1.0	100	55	15.0	2.3	79	11.0	72	14.9	11.0	21	6.44	0.86
174	AA2701	50	9	10	61	260	<0.2	130	71	18.0	2.9	110	17.0	94	20.0	19.0	22	10.90	1.45
175	AA2702	51	8	8	57	230	<0.2	130	64	19.0	2.9	100	19.0	107	20.3	16.0	22	10.40	1.22
176	AA2703	52	9	8	57	220	0.7	110	57	19.0	1.7	91	14.0	97	19.0	19.0	<20	8.32	1.12
177	AA2704	15	29	<1	20	59	0.5	24	9	2.7	<0.5	21	2.3	20	1.6	3.0	<20	2.07	0.38
178	AA2705	<5	29	<1	18	67	<0.2	13	9	1.5	<0.5	22	2.1	21	2.7	1.8	<20	1.67	0.25
179	AA2706	9	20	<1	21	68	<0.2	22	10	2.2	<0.5	22	2.4	17	1.5	3.0	<20	2.05	0.36
180	AA2707	15	27	2	27	57	0.4	20	<5	2.2	<0.5	25	2.5	23	1.8	3.3	<20	3.49	0.53
181	AA2708	6	8	<1	23	67	0.8	31	<5	3.7	<0.5	24	3.0	26	4.4	5.0	<20	3.70	0.52
182	AA2709	20	9	5	37	150	0.8	81	47	11.0	2.1	67	11.0	65	11.7	11.0	<20	7.73	1.02
183	AA2710	7	<4	4	31	230	0.7	120	64	16.0	2.3	91	14.0	68	17.4	14.0	20	9.04	1.15
184	AA2711	14	5	<1	37	180	0.9	99	49	13.0	2.8	74	11.0	63	19.2	11.0	<20	5.57	0.72
185	AA2712	14	4	<1	32	130	<0.2	69	37	8.4	1.8	54	8.2	100	8.5	8.5	<20	4.16	0.63
186	AA2801	61	10	8	61	200	0.5	100	51	15.0	2.8	100	7.6	79	14.6	16.0	<20	10.20	1.40
187	AA2802	51	10	7	61	280	0.2	140	64	20.0	3.5	120	11.0	110	18.7	20.0	27	12.30	1.53

NO	SP.No. unit	Sn ppm	W ppm	Ta ppm	Nb ppm	Ce ppm	Eu ppm	La ppm	Nd ppm	Sm ppm	Tb ppm	Th ppm	U ppm	Y ppm	Gd ppm	Dy ppm	Pr ppm	Yb ppm	Lu ppm
188	AA2803	45	8	6	58	200	0.9	150	56	20.0	3.9	120	16.0	170	20.8	19.0	25	11.10	1.48
189	AA2804	57	9	9	57	260	<0.2	110	50	15.0	1.7	98	15.0	88	15.5	13.0	26	8.09	0.95
190	AA2805	<5	7	<1	19	120	0.6	42	23	4.5	0.6	23	3.0	51	5.6	5.5	<20	3.08	0.47
191	AA2806	12	16	3	29	72	<0.2	28	19	3.4	0.6	37	4.6	25	3.5	3.9	<20	3.02	0.43
192	AA2807	7	10	<1	24	34	0.5	15	14	1.7	<0.5	29	2.0	22	2.8	3.5	<20	2.87	0.47
193	AA2808	14	17	<1	26	53	0.4	20	16	2.4	<0.5	29	3.0	22	4.7	2.4	<20	3.22	0.51
194	AA2809	29	33	2	12	69	<0.2	30	<5	3.2	<0.5	26	3.7	38	4.6	2.2	<20	2.26	0.42
195	AA2810	21	7	<1	39	230	1.1	130	81	18.0	3.0	95	15.0	75	16.6	12.0	<20	8.06	1.03
196	AA2811	16	9	4	31	210	0.9	68	68	13.0	1.6	81	12.0	131	13.2	12.0	<20	5.13	0.27
197	AA2812	22	6	3	39	200	0.5	100	40	14.0	1.9	84	12.0	151	14.0	11.0	<20	6.99	0.87
198	AA2813	<5	6	3	28	130	0.7	63	35	7.0	1.1	49	5.9	51	7.1	6.8	<20	5.68	0.81
199	AA2814	51	11	7	53	240	0.7	130	33	16.0	2.3	100	16.0	197	15.7	14.0	26	9.36	1.27
200	AA2901	67	10	8	56	270	1.0	150	59	20.0	4.6	120	17.0	162	22.1	18.0	21	9.24	1.21
201	AA2902	49	11	6	51	330	0.4	180	79	25.0	4.9	130	32.0	210	23.2	19.0	<20	17.10	2.20
202	AA2903	61	11	9	57	260	0.5	140	77	18.0	3.5	110	23.0	91	17.6	16.0	<20	8.88	1.11
203	AA2904	63	9	11	62	250	0.9	140	63	19.0	1.3	110	16.0	84	19.2	15.0	20	7.67	1.03
204	AA2905	54	7	10	51	310	0.9	160	55	20.0	4.9	120	20.0	251	21.7	20.0	30	11.40	1.60
205	AA2906	55	15	11	54	400	0.4	180	88	24.0	2.5	160	25.0	106	12.0	12.0	35	11.90	1.61
206	AA2907	49	9	9	52	260	0.6	150	78	20.0	2.0	110	18.0	239	16.1	16.0	20	9.98	1.36
207	AA2908	45	9	8	52	220	0.7	110	66	14.0	1.5	95	14.0	77	13.4	14.0	<20	7.72	1.16
208	AA2909	23	15	4	37	120	0.6	62	36	8.2	2.0	52	7.3	54	8.9	9.0	<20	5.57	0.72
209	AA2910	27	11	5	42	180	0.6	86	50	12.0	1.7	71	11.0	74	13.2	13.0	<20	8.05	1.06
210	AA2911	15	8	3	37	150	0.8	83	39	10.0	1.8	64	8.0	66	9.8	10.0	<20	6.17	0.96
211	AA2912	9	<4	4	29	190	0.7	93	74	13.0	2.1	70	13.0	63	10.2	10.0	<20	6.29	0.83
212	AA2913	13	6	<1	33	190	1.1	95	48	12.0	1.3	70	11.0	59	13.0	7.9	<20	6.31	0.82
213	AA2914	<5	5	2	21	160	1.2	60	37	6.4	0.5	34	4.9	50	4.6	6.2	<20	4.10	0.56
214	AA2915	<5	6	<1	20	79	0.7	28	10	2.6	0.5	21	2.0	19	5.5	3.1	<20	2.55	0.46
215	AA3001	44	7	6	51	180	0.6	80	38	10.0	1.2	75	10.0	133	8.8	10.0	<20	5.61	0.73
216	AA3002	24	9	3	27	77	0.4	40	25	5.2	0.7	39	5.4	39	2.1	5.2	<20	3.65	0.45
217	AA3003	53	6	6	51	170	0.4	85	39	11.0	1.0	76	11.0	167	12.9	11.0	<20	5.28	0.70
218	AA3004	40	11	8	47	360	1.0	200	110	28.0	5.6	150	29.0	258	27.3	24.0	21	14.30	1.93
219	AA3005	40	10	9	35	350	0.8	200	120	27.0	4.3	158	19.0	133	23.4	23.0	20	15.60	2.05
220	AA3006	36	9	6	49	180	0.7	89	47	11.0	2.1	85	11.0	59	10.5	11.0	<20	7.01	0.86
221	AA3007	18	8	4	39	170	0.3	89	44	11.0	1.3	73	8.7	62	11.1	10.0	<20	6.66	0.90
222	AA3008	44	9	7	53	270	0.9	130	80	18.0	3.3	110	16.6	213	16.6	17.0	<20	10.20	1.32
223	AA3009	31	7	1	49	220	0.7	110	58	15.0	1.4	93	12.0	71	14.2	14.0	<20	7.39	1.05
224	AA3010	5	4	1	27	210	0.9	120	64	15.0	2.0	84	13.0	78	14.4	13.0	<20	8.23	1.10
225	AA3101	60	8	11	65	180	0.5	98	45	13.0	2.7	100	8.4	101	10.5	11.0	<20	7.65	1.03
226	AA3102	39	10	7	42	150	0.5	66	33	9.8	1.2	79	7.4	47	8.6	8.3	<20	6.07	0.80
227	AA3103	29	7	5	39	71	0.3	35	14	4.6	0.8	47	4.3	26	5.4	5.5	<20	4.00	0.49
228	AA3104	5	<4	2	24	44	0.4	20	14	2.5	0.6	32	4.1	27	2.9	3.2	<20	3.00	0.49
229	AA3105	<5	5	1	15	38	0.3	15	10	1.8	0.5	27	3.0	11	1.6	2.3	<20	2.53	0.40
230	AA3106	12	29	2	18	38	0.4	17	<5	1.7	<0.5	22	2.9	11	1.5	2.5	<20	2.01	0.29
231	AA3107	12	10	3	30	58	0.4	25	18	3.1	1.1	38	4.3	44	3.8	3.0	<20	3.19	0.40
232	AA3108	18	9	3	35	93	0.4	43	30	5.5	<0.5	51	6.9	64	7.1	6.5	<20	4.11	0.54
233	AA3109	41	9	4	49	180	1.3	110	75	14.0	2.2	72	9.6	77	16.0	14.0	<20	6.22	0.81
234	AA3110	58	8	5	51	250	0.8	140	85	18.0	2.4	110	16.0	128	20.0	19.0	<20	9.18	1.14
235	AA3111	14	6	4	14	210	0.4	100	63	12.0	2.5	95	14.0	67	16.6	11.0	<20	6.66	0.94
236	AA3201	11	5	3	25	120	1.0	59	39	7.1	1.1	33	6.1	40	7.5	7.0	<20	3.84	0.50
237	AA3202	<5	<4	<1	19	99	1.1	56	43	6.8	0.9	25	2.9	31	6.6	5.7	<20	3.34	0.47
238	AA3203	<5	<4	1	17	49	0.3	13	3	1.5	0.5	21	2.6	20	1.5	1.4	<20	1.76	0.26
239	AA3204	<5	<4	<1	20	31	0.3	11	7	1.3	<0.5	22	2.5	16	1.5	2.0	<20	2.18	0.34
240	AA3205	13	28	2	17	56	0.4	29	18	2.9	<0.5	21	2.9	28	1.7	3.5	<20	1.98	0.28
241	AA3206	11	5	2	23	46	0.3	18	12	2.4	<0.5	20	3.0	26	5.3	7.9	<20	2.25	0.28
242	AA3207	26	8	4	34	91	0.5	43	31	5.3	0.7	58	6.8	44	7.9	4.6	<20	3.53	0.48
243	AA3208	19	5	3	42	140	0.6	59	38	7.3	0.7	53	7.8	48	10.1	6.5	<20	3.76	0.47
244	AA3209	16	5	3	36	130	0.4	68	41	7.6	0.7	57	7.6	48	8.1	8.9	<20	3.99	0.55
245	AA3301	14	13	1	16	94	1.5	54	38	7.2	0.7	19	2.3	42	7.6	7.8	<20	3.27	0.39
246	AA3302	5	10	1	19	110	1.9	87	66	11.0	1.1	19	2.2	60	10.8	6.4	<20	4.97	0.68
247	AA3303	<5	9	<1	17	33	0.3	11	<5	1.3	<0.5	15	2.0	11	3.7	9.2	<20	1.52	0.22
248	AA3304	5	7	<1	21	36	0.4	15	<5	1.9	<0.5	19	2.3	13	3.9	1.6	<20	1.96	0.31
249	AA3305	<5	5	1	26	42	0.3	21	16	2.5	<0.5	24	3.4	39	2.5	4.4	<20	2.27	0.31
250	AA3306	16	5	3	33	92	0.4	48	25	5.8	0.7	44	5.7	40	4.2	5.1	<20	3.94	0.46
251	AA3307	16	5	3	34	110	0.5	54	29	6.5	0.7	52	8.1	69	7.9	6.4	<20	3.97	0.53
252	AA3308	5	<4	3	34	100	0.5	56	26	6.5	0.8	48	5.4	43	6.0	6.7	<20	3.95	0.50
253	AA3309	19	5	4	39	160	0.8	80	55	10.0	1.0	65	8.6	76	11.6	10.0	<20	4.86	0.65
254	AA3310	36	8	6	51	280	0.8	160	100	20.0	3.3	120	15.0	128	27.6	29.0	<20	12.10	1.51
255	AA3401	56	6	6	52	200	0.5	110	71	13.0	2.0	86	16.0	143	14.1	10.0	<20	3.96	0.63
256	AA3402	56	6	7	53	240	0.5	130	80	16.0	2.6	100	23.0	80	16.5	12.0	<20	5.76	0.84
257	AA3403	50	8	6	52	260	0.7	120	80	15.0	2.4	100	14.0	75	15.6	12.0	23	5.72	0.83
258	AA3404	38	7	5	43	150	0.7	73	45	9.1	1.8	69	11.0	45	8.9	7.3	<20	4.79	0.54
259	AA3405	34	6	4	34	120	0.8	69	37	7.7	1.2	52	7.7	43	10.0	7.9	<20	4.01	0.52
260	AA3406	<5	5	1	17	51	0.4	13	12	1.5	<0.5	22	3.2	16	1.3	2.1	<20	2.16	0.26
261	AA3407	<5	7	1	20	41	0.4	15	12	1.9	<0.5	24	3.3	20	2.5	2.4	<20	2.22	0.35
262	AA3408	17	8	3	31	120	0.9	48	31	6.3	1.0	53	7.9	34	6.4	9.2	<20	3.18	0.56
263	AA3409	17	7	4	39	180	0.9	86	62	11.0	1.3	70	9.9	60	10.2	10.0	<20	5.22	0.81
264	AA3410	10	7	3	34	170	0.6	84	56	11.0	1.8	75	8.6	59	12.6	8.5	<20	7.16	0.92
265	AA3411	22	<4	4	44	190	0.6	92	56	10.0	1.2	76	12.0	59	9.5	14.0	<20	6.19	0.88
266	AA3412	30	8	6	47	250	0.7	130	76	17.0	1.8	110	16.0	76	14.9	13.0	<20	8.24	1.19
267	AA3413	12	5	3	32	190	0.6	99	63	13.0	2.2	73	16.0	72	14.9	4.1	<20	6.96	0.89
268	AA3414	10	26	1	19	84	0.5	33	16	3.0	<0.5	25	5.0	24	3.4	9.2	<20	2.74	0.39
269	AA3501	28	6	5	40	120	0.5	62	37	7.7	1.0	60	7.6	40	8.8	2.5	<20	4.07	0.64
270	AA3502	8	6	1	15	60	0.4	21	16	2.1	<0.5	20	3.3	17	3.2	3.5	<20	2.01	0.33
271	AA3503	15	7	3	16	92	0.9	39	34	4.3	0.7	19	2.2	40	2.5	3.5	<20	2.74	0.35
272	AA3504	<5	4	1	26	230	1.3	68	56	8.9	<0.5	31	2.3	37	6.7	6.0	<20	3.32	0.51
273	AA3505	5	5	1	20	140	1.2	49	48	7.2	0.6	25	2.2	31	8.4	3.6	<20	3.05	0.42
274	AA3506	7	5	1	21	120	0.5	23	16	3.4	0.6	28	2.8	23	3.3	4.2	<20	2.76	0.41
275	AA3507	<5	<4	2	20	75	0.3	18	15	2.6	0.5	26	3.5	24	3.2	13.0	<20	2.69	0.37
276	AA3508	56	8	6	53	230	0.6	110	74	14.0	2.3	100	14.0	76	11.0	10.0	<20	6.09	0.89
277	AA3509	22	9	3	40	180	0.6	81	54	10.0	1.4	78	11.0	59	9.2	9.2	<20	5.11	0.79
278	AA3510	11	<4	3	33	190	0.8	86	59	11.0	1.8	69	9.9	99	12.2	9.5	<20	5.97	0.77
279	AA3511	19	<4	3	39	170	0.8	82	49	10.0	1.9	66	8.4	54	8.7	11.0	<20	4.96	0.72
280	AA3512	23	9	4	45	180	0.6	93	54	11.0	1.3	77	12.0	72	9.7	15.0	<20	6.03	0.84
281	AA3513	33	8	4	42	240	0.9	130	84	17.0	2.7	100	16.0	93	17.8	15.0	<20	7.82	1.07

Appendix 4 Chemical analysis data of soil samples

(4)

NO	SP.No. unit	Sn ppm	W ppm	Ta ppm	Nb ppm	Ce ppm	Eu ppm	La ppm	Nd ppm	Sm ppm	Tb ppm	Th ppm	U ppm	Y ppm	Gd ppm	Dy ppm	Pr ppm	Yb ppm	Lu ppm
282	AA3514	19	5	3	39	220	0.8	110	82	15.0	2.5	89	14.0	84	16.0	15.0	<20	7.63	0.97
283	AA3001	76	10	13	74	310	1.0	160	110	20.0	3.4	130	21.0	91	18.9	14.0	25	7.05	0.90
284	AA3002	89	10	11	69	300	0.8	140	100	19.0	2.6	120	15.0	171	15.7	14.0	27	7.47	0.88
285	AA3003	18	8	3	23	66	0.4	35	22	3.0	<0.5	30	3.1	55	1.7	3.5	<20	2.18	0.30
286	AA3004	19	7	4	30	50	0.5	26	11	2.9	<0.5	43	5.5	24	2.6	5.7	<20	2.99	0.40
287	AA3005	31	7	4	36	77	0.3	31	17	3.0	0.8	48	7.5	32	2.6	7.5	<20	3.91	0.49
288	AA3006	41	8	5	54	130	0.4	65	49	8.1	0.8	79	8.2	50	7.3	8.7	<20	4.47	0.57
289	AA3007	<5	6	2	22	130	0.5	29	22	3.5	<0.5	29	3.7	26	3.9	4.2	<20	3.36	0.49
290	AA3008	<5	<4	2	20	83	0.4	21	14	2.5	<0.5	26	3.5	23	3.1	3.4	<20	3.24	0.44
291	AA3009	<5	5	1	21	130	0.7	27	21	3.6	<0.5	26	3.0	37	5.5	4.1	<20	3.24	0.51
292	AA3010	<5	6	2	20	87	0.5	22	14	2.7	0.8	25	3.0	25	2.0	4.0	<20	3.05	0.48
293	AA3011	<5	4	2	20	140	0.4	22	16	3.3	<0.5	25	2.7	29	3.4	3.4	<20	3.05	0.46
294	AA3012	<5	<4	1	18	120	0.8	30	15	4.4	<0.5	23	2.7	30	6.2	4.9	<20	3.71	0.51
295	AA3013	54	8	7	54	260	0.7	140	78	18.0	3.0	110	15.0	79	15.8	13.0	<20	7.29	1.07
296	AA3014	13	6	1	34	190	1.0	97	35	11.0	2.4	71	11.0	47	9.5	8.7	<20	6.43	0.79
297	AA3015	30	7	4	44	180	0.7	88	48	12.0	1.4	84	11.0	62	8.7	9.5	<20	6.17	0.93
298	AA3016	12	6	3	29	170	1.2	87	47	12.0	1.9	68	15.0	61	11.0	10.0	<20	5.66	0.78
299	AA3017	17	6	4	38	240	1.1	120	70	16.0	2.4	96	12.0	74	14.3	13.0	<20	8.59	1.08
300	AA3701	58	7	7	61	160	0.4	70	36	9.6	1.0	80	7.3	52	8.8	9.0	<20	4.78	0.73
301	AA3702	73	10	14	75	280	0.8	150	71	19.0	2.5	130	14.0	88	19.9	17.0	<20	6.23	1.00
302	AA3703	71	8	15	75	320	0.4	160	90	20.0	1.7	130	18.0	92	18.7	16.0	<20	8.50	1.04
303	AA3704	44	16	1	20	51	0.4	20	13	2.4	0.5	29	3.6	19	1.4	2.5	<20	2.63	0.42
304	AA3705	18	12	3	30	46	0.3	23	12	2.5	<0.5	30	5.1	25	3.3	3.4	<20	2.95	0.45
305	AA3706	32	6	4	39	87	0.4	36	24	4.7	1.0	47	6.3	33	5.1	3.0	<20	4.20	0.56
306	AA3707	<5	<4	1	22	43	0.6	19	7	2.6	0.6	28	2.9	22	4.2	8.2	<20	3.16	0.44
307	AA3708	<5	<4	1	19	49	0.3	9	6	1.0	<0.5	22	3.0	15	2.3	4.5	<20	2.07	0.32
308	AA3709	<5	<4	1	19	54	0.2	10	7	1.2	<0.5	23	2.5	14	2.2	4.0	<20	2.65	0.40
309	AA3710	<5	6	1	21	55	0.5	12	7	1.5	<0.5	26	3.0	23	1.2	3.9	<20	3.16	0.52
310	AA3711	<5	<4	2	20	74	0.7	23	10	3.4	<0.5	24	3.6	27	2.9	5.5	<20	3.16	0.52
311	AA3712	<5	4	2	24	110	0.8	44	25	6.2	1.3	32	5.3	31	4.2	6.8	<20	3.80	0.53
312	AA3713	43	7	7	52	230	0.8	120	68	16.0	2.3	98	15.0	82	14.5	17.0	<20	6.27	0.93
313	AA3714	24	6	4	43	200	0.5	100	43	13.0	2.2	81	11.0	76	15.2	18.0	<20	7.44	0.94
314	AA3715	20	8	4	41	220	0.9	110	46	14.0	1.7	88	11.0	66	12.3	14.0	<20	7.67	1.05
315	AA3716	12	5	3	31	190	1.0	99	55	13.0	1.9	67	15.0	62	13.2	13.0	<20	6.73	0.91
316	AA3717	8	6	1	29	130	0.6	65	32	8.8	0.8	48	6.6	50	7.1	7.8	<20	4.11	0.64
317	AA3801	68	9	6	52	120	0.4	53	23	7.2	0.9	64	7.0	41	6.0	9.4	<20	4.52	0.60
318	AA3802	61	8	7	56	130	0.3	57	40	7.5	1.5	72	7.1	47	10.2	8.6	<20	4.20	0.65
319	AA3803	63	9	10	67	250	0.8	120	68	16.0	2.5	110	12.0	81	15.1	17.0	20	7.36	0.96
320	AA3804	68	8	11	65	270	0.7	130	60	17.0	1.4	110	18.0	65	14.8	17.0	22	7.03	0.94
321	AA3805	48	23	3	27	100	0.5	52	32	6.6	0.9	39	6.5	30	5.3	7.0	<20	3.49	0.54
322	AA3806	51	12	7	53	180	0.9	97	48	12.0	1.5	90	18.0	53	8.4	9.5	<20	5.09	0.71
323	AA3807	12	<4	1	15	28	0.3	12	8	1.2	<0.5	15	2.5	13	1.5	2.3	<20	2.12	0.31
324	AA3808	10	<4	1	15	73	0.5	16	7	2.1	<0.5	17	2.7	14	4.6	2.3	<20	2.38	0.36
325	AA3809	31	<4	1	15	27	0.3	9	<5	1.1	<0.5	17	1.6	16	5.2	2.1	<20	2.31	0.34
326	AA3810	23	<4	2	18	35	0.3	11	9	1.5	<0.5	18	2.1	16	4.8	3.1	<20	2.52	0.40
327	AA3811	10	5	1	22	57	0.6	18	11	2.6	<0.5	26	3.8	21	3.2	3.8	<20	2.92	0.47
328	AA3812	27	<4	4	40	160	0.8	85	48	11.0	1.7	71	11.6	59	12.8	12.0	<20	6.90	0.85
329	AA3813	17	7	5	42	240	0.8	120	84	18.0	1.8	97	16.0	76	18.9	17.0	20	9.24	1.15
330	AA3814	7	5	2	<2	170	1.0	96	62	13.0	1.5	64	12.0	62	13.1	13.0	<20	6.39	0.89
331	AA3901	105	30	3	29	45	0.4	23	8	2.4	<0.5	30	3.7	17	4.7	3.6	<20	2.16	0.38
332	AA3902	78	11	5	44	120	0.5	55	26	7.6	<0.5	56	7.5	37	9.2	9.0	<20	3.85	0.53
333	AA3903	64	9	9	64	210	0.5	110	65	14.0	2.1	93	11.0	74	13.8	14.0	<20	6.29	0.81
334	AA3904	69	7	10	67	220	0.6	110	60	14.0	2.7	100	11.0	61	14.2	13.0	<20	5.68	0.71
335	AA3905	52	<4	10	63	250	0.4	120	69	16.0	2.5	110	11.0	71	17.6	15.0	<20	7.51	0.91
336	AA3906	5	4	1	16	32	0.4	12	6	1.6	<0.5	15	2.5	12	3.2	3.3	<20	2.19	0.32
337	AA3907	<5	7	1	16	36	0.4	11	7	1.4	<0.5	15	2.8	17	2.3	2.4	<20	1.99	0.32
338	AA3908	14	6	1	15	47	0.2	8	8	1.8	<0.5	17	1.7	18	2.2	2.2	<20	1.74	0.27
339	AA3909	29	5	1	20	81	0.3	9	6	1.1	<0.5	23	2.4	15	2.4	3.4	<20	2.03	0.34
340	AA3910	14	8	1	22	73	0.4	21	12	3.0	0.6	28	4.3	19	4.1	4.2	<20	3.14	0.50
341	AA3911	16	7	4	34	220	0.9	120	70	16.0	2.7	93	12.0	67	13.6	15.0	<20	8.07	1.16
342	AA3912	22	6	4	41	190	0.6	98	44	13.0	1.7	83	11.0	65	10.2	14.0	<20	7.61	0.98
343	AA3913	21	7	4	38	180	0.7	84	44	11.0	2.0	72	9.3	61	10.3	13.0	<20	6.36	0.79
344	AA3914	<5	4	2	18	48	0.4	25	14	3.1	0.7	22	3.1	29	2.5	5.2	<20	3.38	0.44
345	AA4001	60	7	9	61	170	0.5	92	55	12.0	0.7	82	14.0	49	10.8	9.4	<20	3.95	0.50
346	AA4002	20	16	3	27	80	0.6	35	16	4.5	0.5	33	6.1	21	4.5	4.8	<20	2.87	0.40
347	AA4003	17	17	1	14	81	0.3	10	7	1.3	<0.5	16	1.6	9	2.5	1.3	<20	1.68	0.27
348	AA4004	5	24	2	16	140	0.5	18	13	2.7	<0.5	18	2.5	10	1.6	2.2	<20	1.72	0.31
349	AA4005	<5	<4	1	12	13	0.3	4	<5	0.4	<0.5	9.7	1.7	6	2.7	1.2	<20	1.40	0.22
350	AA4006	14	7	1	20	42	0.4	17	7	1.7	0.6	20	2.9	11	2.9	3.3	<20	2.01	0.35
351	AA4007	14	6	3	30	110	0.9	54	31	7.2	1.1	49	7.4	45	5.7	7.4	<20	4.95	0.67
352	AA4008	22	6	4	41	270	0.6	130	64	18.0	2.0	100	15.0	91	17.6	25.0	23	12.00	1.59
353	AA4009	25	<4	5	41	200	0.8	99	56	13.0	2.0	83	13.0	70	8.3	12.0	<20	7.81	0.99
354	AA4010	24	7	5	38	170	0.8	84	53	11.0	2.0	73	8.7	63	9.9	12.0	<20	7.04	0.91
355	AA4011	61	10	7	54	180	0.6	88	50	12.0	1.7	82	9.9	52	10.8	11.0	<20	6.26	0.74
356	AA4012	59	12	3	30	72	0.4	30	18	4.1	0.7	33	4.1	22	6.3	5.2	<20	3.45	0.45
357	AA4013	82	15	1	18	34	0.3	16	7	1.6	<0.5	19	2.5	18	1.7	2.3	<20	1.85	0.24
358	AA4014	46	8	2	17	33	0.3	13	10	1.1	<0.5	24	3.3	7	1.5	1.6	<20	1.62	0.34
359	AA4015	66	25	1	20	21	0.7	9	<5	0.6	<0.5	18	2.5	17	2.4	3.5	<20	1.56	0.23
360	AA4101	23	33	1	17	22	0.3	10	<5	0.9	<0.5	25	3.3	7	1.0	1.4	<20	2.35	0.33
361	AA4102	7	21	1	23	39	0.5	16	10	1.8	<0.5	31	4.2	12	1.7	2.5	<20	2.78	0.46
362	AA4103	20	18	3	23	97	0.5	45	34	4.9	<0.5	63	7.1	13	1.5	2.4	<20	3.40	0.56
363	AA4104	14	17	2	30	100	0.5	44	33	4.7	<0.5	60	7.4	22	5.0	5.3	<20	3.96	0.44
364	AA4105	32	6	7	45	230	0.8	130	76	15.0	2.6	110	16.0	84	20.3	26.0	20	9.69	1.39
365	AA4106	15	6	3	38	200	0.8	120	70	14.0	3.0	89	16.0	72	17.4	17.0	<20	8.18	1.17
366	AA4107	37	8	5	32	210	0.8	100	66	13.0	2.1	83	18.0	57	12.7	15.0	<20	7.16	1.13
367	AA4108	12	31	1	19	45	0.2	12	12	1.3	<0.5	21	3.0	9	3.2	2.1	<20	1.98	0.27
368	AA4109	71	31	1	19	53	0.4	18	10	1.6	<0.5	24	3.7	13	1.5	2.8	<20	2.16	0.29
369	AA4110	116	15	3	28	100	0.4	54	39	6.1	<0.5	49	6.3	32	6.2	6.7	<20	3.22	0.54
370	AA4201	77	16	3	27	67	0.4	27	18	3.2	0.9	35	5.5	27	4.1	5.4	<20	4.08	0.62
371	AA4202	66	11	3	29	110	0.6	50	39	6.3	0.7	51	7.5	34	6.3	7.5	<20	4.94	0.74
372	AA4203	37	8	4	41	260	0.8	130	89	16.0	2.2	110	18.0	70	14.2	18.0	22	8.07	1.24
373	AA4204	29	9	7	37	290	1.2	160	120	21.0	3.8	120	17.0	77	19.4	21.0	20	10.60	1.58
374	AA4205	25	8	6	34	400	0.9	230	140	27.0	5.1	180	24.0	134	27.0	40.0	27	21.40	3.13
375	AA4206	31	10	4	43	130	0.9	75	41	8.5	0.9	70	10.0	46	8.9	9.5	<20	4.50	0.60

Appendix 4　Chemical analysis data of soil samples

(5)

376	AA4301	28	14	4	30	72	0.2	32	28	4.0	1.1	47	5.2	33	3.9	7.4	<20	5.32	0.81
377	AA4302	26	12	4	33	89	0.3	35	31	4.5	1.0	52	5.9	38	4.8	6.5	<20	4.84	0.67
378	AA4303	18	17	3	27	83	0.6	41	23	4.4	0.7	49	9.7	25	3.9	5.3	<20	3.50	0.51
379	AA4304	30	8	5	41	250	0.7	120	73	14.0	2.8	110	17.0	71	13.5	15.0	<20	7.61	1.16
380	AA4305	32	8	6	40	260	1.0	130	94	16.0	2.6	110	18.0	71	13.9	14.0	20	7.32	1.11
381	AA4306	26	8	3	34	220	0.7	110	79	14.0	2.3	99	15.0	64	14.6	14.0	<20	7.33	1.21
382	AA4401	11	11	2	23	67	0.4	28	18	3.5	0.7	36	4.8	26	5.5	5.4	<20	3.37	0.47
383	AA4402	5	15	3	23	61	0.2	28	20	3.5	0.7	36	5.4	25	3.7	4.8	<20	3.49	0.52
384	AA4403	12	8	4	28	150	0.4	75	51	9.1	1.5	68	7.8	53	10.7	12.0	<20	6.74	1.03
385	AA4404	12	7	4	32	130	0.6	62	47	7.2	1.0	65	9.2	41	6.8	8.4	<20	4.87	0.76
386	AA4405	25	9	4	35	210	0.7	98	72	12.0	2.2	85	11.0	55	13.9	14.0	<20	7.48	1.10
387	AA4406	29	10	5	39	220	0.9	110	89	14.0	1.6	96	14.0	64	12.3	15.0	<20	7.03	1.21
388	AA5001	87	12	8	52	200	0.8	110	80	12.0	1.9	96	21.0	49	10.3	9.5	<20	4.58	0.75
389	AA5002	45	22	5	36	140	0.8	67	49	8.6	1.4	64	9.8	36	8.6	8.8	<20	5.07	0.76
390	AA5003	50	21	2	17	65	0.5	14	6	1.8	<0.5	19	3.3	13	1.3	2.5	<20	2.20	0.28
391	AA5004	112	13	2	22	37	<0.2	17	10	2.2	<0.5	24	3.3	13	2.3	2.6	<20	2.53	0.35
392	AA5005	39	14	2	23	20	0.3	10	<5	1.1	<0.5	23	3.0	12	1.5	1.8	<20	2.08	0.26
393	AA5006	76	12	2	18	26	0.3	18	6	1.6	<0.5	16	2.6	11	3.1	1.8	<20	1.94	0.27
394	AA5007	51	14	1	21	43	0.5	24	13	2.3	<0.5	19	2.8	15	1.7	3.2	<20	2.33	0.35
395	AA5008	76	14	3	29	74	0.5	35	12	4.6	<0.5	31	5.1	24	3.7	5.0	<20	3.17	0.47
396	AA5009	94	7	8	57	190	0.6	96	53	13.0	0.9	85	13.0	58	10.0	12.0	<20	4.73	0.69
397	AA5010	90	9	9	56	200	0.3	100	51	14.0	1.3	84	15.0	54	10.4	11.0	<20	5.08	0.70
398	AA5011	62	9	8	37	140	0.2	69	38	9.9	1.5	61	7.5	42	9.2	9.4	<20	5.03	0.65
399	AA5101	50	29	3	30	61	0.3	26	11	3.5	1.7	40	5.2	24	5.5	4.2	<20	3.52	0.51
400	AA5102	54	11	3	34	71	0.5	34	19	4.8	1.1	46	4.9	31	4.7	7.8	<20	5.10	0.69
401	AA5103	47	10	3	33	67	0.4	29	13	4.0	0.7	40	4.4	25	5.5	6.0	<20	3.89	0.49
402	AA5104	44	11	3	34	77	0.5	32	12	4.5	0.7	41	6.1	28	4.0	5.8	<20	3.62	0.51
403	AA5105	72	9	7	52	180	0.6	90	51	13.0	1.5	79	10.0	56	10.6	11.0	<20	5.44	0.63
404	AA5106	71	15	3	30	65	0.6	26	10	3.5	0.7	32	4.9	21	3.0	4.8	<20	3.45	0.47
405	AA5107	127	25	3	27	45	0.4	19	7	1.9	0.7	25	3.1	19	2.4	3.3	<20	3.17	0.46
406	AA5108	57	12	2	22	36	0.4	13	<5	1.5	0.5	24	2.8	17	3.9	2.7	<20	2.40	0.37
407	AA5109	27	7	3	35	130	0.8	60	35	8.7	1.1	53	7.0	50	8.4	9.2	<20	5.34	0.73
408	AA5110	16	6	4	36	150	0.7	71	45	10.0	1.4	63	9.7	49	10.9	10.0	<20	5.33	0.73
409	AA5111	88	10	8	53	130	0.3	66	29	9.1	1.3	66	21.0	41	6.3	9.0	<20	3.46	0.56
410	AA5112	61	7	3	24	56	0.4	31	14	2.9	0.6	24	3.5	21	3.1	4.0	<20	2.89	0.40
411	AA5113	37	6	1	22	48	0.3	24	8	1.9	0.7	28	4.4	15	3.1	3.0	<20	2.74	0.38
412	AA5201	19	5	2	36	140	0.3	62	42	9.0	1.6	59	8.3	48	8.5	10.0	<20	5.29	0.76
413	AA5202	23	7	4	36	160	0.6	63	39	9.5	1.3	58	8.2	48	8.9	10.0	<20	5.34	0.73
414	AA5203	21	7	3	36	110	0.4	49	26	7.1	1.0	50	7.8	41	6.6	8.0	<20	4.57	0.61
415	AA5204	28	9	3	36	130	0.6	58	39	8.3	1.0	54	8.3	41	5.8	9.0	<20	4.31	0.44
416	AA5205	77	13	3	29	57	0.3	25	15	3.4	0.7	31	4.2	24	4.8	4.8	<20	2.57	0.23
417	AA5206	78	15	3	31	61	0.3	25	16	3.3	1.0	32	4.2	24	2.6	6.2	<20	3.32	0.30
418	AA5207	116	18	3	31	59	0.5	27	13	3.3	1.1	36	4.1	27	3.6	5.2	<20	3.57	0.37
419	AA5208	16	5	2	32	140	0.6	66	44	9.5	1.1	56	7.3	48	9.4	9.2	<20	5.92	0.66
420	AA5209	24	<4	3	33	160	0.4	68	41	9.8	1.7	58	8.1	50	7.6	10.0	<20	4.71	0.29
421	AA5210	45	9	3	37	140	0.7	68	46	9.2	1.2	60	14.0	44	7.9	8.4	<20	3.85	0.28
422	AA5211	14	5	3	22	34	0.3	23	<5	1.7	<0.5	21	2.0	11	2.1	2.4	<20	1.67	0.21
423	AA5212	41	11	2	25	28	0.3	24	<5	1.8	<0.5	23	1.9	18	1.5	3.4	<20	2.56	0.30
424	AA5301	13	7	3	39	150	0.6	66	38	9.6	1.3	57	9.6	50	7.0	10.0	<20	5.25	0.75
425	AA5302	30	8	5	39	160	<0.2	69	50	10.0	0.9	66	13.0	48	7.4	10.0	<20	4.29	0.55
426	AA5303	28	9	6	41	150	<0.2	69	51	10.0	1.9	62	9.1	52	8.6	10.0	<20	4.63	0.59
427	AA5304	27	6	3	36	140	0.3	61	29	8.8	0.9	59	11.0	48	8.2	11.0	<20	4.62	0.60
428	AA5306	26	<4	5	35	170	0.2	83	51	12.0	1.1	61	8.6	61	11.0	13.0	<20	5.26	0.75
429	AA5306	27	7	4	40	150	0.2	66	40	9.8	1.3	63	10.0	49	6.9	10.0	<20	4.53	0.59
430	AA5307	29	5	5	40	170	0.8	71	48	11.0	1.7	61	11.0	52	10.4	10.0	<20	4.42	0.59
431	AA5308	29	7	5	39	150	0.6	71	38	11.0	1.5	60	9.3	50	11.0	11.0	<20	5.41	0.75
432	AA5309	24	<4	2	32	140	0.6	58	46	8.3	1.0	54	8.2	40	8.2	9.9	<20	4.42	0.75
433	AA5310	18	<4	3	28	140	0.3	59	39	8.7	1.5	54	6.2	49	7.8	7.5	<20	4.58	0.70
434	AA5311	31	6	5	33	160	0.7	77	54	11.0	1.7	62	10.0	57	9.7	11.0	<20	4.92	0.69
435	AA5312	163	52	3	26	120	0.3	62	31	7.3	<0.5	40	6.7	25	5.7	5.8	<20	2.89	0.44
436	AA5313	17	10	2	19	32	0.4	14	5	1.7	<0.5	20	2.5	18	1.3	2.5	<20	2.17	0.25
437	AA5401	<5	<4	1	14	88	0.8	19	7	3.8	<0.5	16	2.0	22	4.4	4.5	<20	2.44	0.27
438	AA5402	<5	<4	1	14	66	0.6	23	19	3.3	<0.5	19	1.6	20	3.1	3.9	<20	2.14	0.26
439	AA5403	13	<4	2	18	39	0.7	15	5	2.2	<0.5	24	2.7	19	2.0	3.5	<20	2.06	0.31
440	AA5404	42	7	5	38	180	1.1	80	57	12.0	1.0	66	15.0	56	11.6	12.0	<20	4.30	0.55
441	AA5405	31	6	4	35	160	0.3	66	54	10.9	1.1	59	8.6	49	8.0	10.0	<20	4.73	0.64
442	AA5406	31	<4	6	36	190	0.9	82	33	12.0	2.3	69	12.0	54	9.6	9.4	<20	5.70	0.71
443	AA5407	31	<4	4	40	180	0.9	71	57	11.0	2.0	70	11.0	50	8.8	10.0	<20	5.29	0.70
444	AA5408	18	<4	4	29	150	0.8	62	40	9.2	1.0	53	8.0	45	8.0	7.0	<20	4.92	0.60
445	AA5409	7	8	1	23	120	0.8	47	42	6.4	1.9	32	5.1	35	7.1	6.8	<20	2.89	0.35
446	AA5410	11	7	1	26	94	0.7	41	28	5.9	1.4	32	4.1	34	4.7	6.5	<20	3.60	0.45
447	AA5411	7	8	3	23	84	0.7	36	24	5.7	2.7	25	2.6	30	4.6	6.5	<20	3.14	0.53
448	AA5501	29	<4	<1	37	190	0.6	77	61	12.0	2.2	63	9.4	55	9.7	11.0	<20	5.95	0.79
449	AA5502	30	<4	4	40	170	0.9	71	52	11.0	1.2	64	11.0	52	8.1	10.0	<20	4.52	0.76
450	AA5503	19	5	4	34	140	0.3	52	29	7.7	1.2	40	8.0	39	5.7	6.0	<20	4.26	0.74
451	AA5504	<5	<4	2	25	82	0.7	19	<5	3.1	0.7	21	2.0	25	2.7	4.7	<20	2.74	0.32
452	AA5505	<5	<4	2	19	78	0.6	15	<5	2.8	0.7	18	2.3	19	2.4	4.0	<20	2.82	0.40
453	AA5506	<5	<4	2	21	90	0.7	16	<5	2.8	0.9	24	3.8	24	2.5	4.9	<20	2.82	0.40
454	AA5507	<5	<4	1	22	79	<0.5	30	3.9	0.7	1.0	32	4.9	29	3.2	5.5	<20	4.55	0.58
455	AA5508	<5	<4	2	18	84	2.0	26	3.8	1.1	2.0	28	3.8	29	4.7	5.0	<20	4.61	0.52
456	AA5509	41	12	3	42	210	2.7	96	13	0.9	2.7	100	21.0	51	11.7	11.0	<20	7.44	0.89
457	AA5510	<5	11	2	21	150	<0.5	66	7.4	1.8	1.4	31	5.1	38	5.7	7.8	<20	5.51	0.73
458	AA5511	<5	7	2	21	97	<0.5	31	4	1.8	1.5	29	4.8	28	5.4	5.6	<20	5.09	0.65
459	AA5512	22	10	5	39	170	1.8	69	9.4	0.6	1.8	75	13.0	47	8.8	9.4	<20	6.33	0.77
460	AB0101	<5	<4	2	15	73	0.8	36	22	4.6	<0.5	20	3.0	27	2.9	4.0	<20	3.69	0.52
461	AB0102	16	7	6	31	130	0.9	48	39	8.8	2.1	69	6.5	89	8.9	9.1	<20	12.10	1.56
462	AB0103	11	<4	5	26	120	0.8	42	19	5.7	2.1	59	8.0	71	8.7	8.9	<20	11.10	1.54
463	AB0104	53	11	11	48	140	0.5	32	11	6.6	2.7	89	10.0	122	8.0	8.2	<20	23.70	3.20
464	AB0105	41	10	8	43	130	0.7	32	20	6.4	3.2	74	12.0	135	10.1	10.0	<20	26.80	3.66
465	AB0106	36	10	12	51	110	0.3	27	14	5.7	2.7	75	8.8	125	7.2	6.5	<20	23.60	3.26
466	AB0107	39	10	13	56	100	0.9	42	18	8.5	1.6	72	12.0	141	10.4	10.0	<20	26.30	3.72
467	AB0108	51	9	10	46	160	0.7	36	17	7.5	2.9	82	9.3	140	10.2	10.0	<20	25.90	3.60
468	AB0109	26	18	10	63	74	0.3	13	16	2.8	2.1	73	9.8	96	6.3	5.7	<20	18.50	2.64
469	AB0110	49	16	13	60	87	0.5	19	10	3.9	2.1	77	9.1	126	6.5	4.3	<20	24.00	3.14
470	AB0201	<5	<4	1	16	110	1.6	63	39	8.7	<0.5	23	2.5	32	6.0	7.1	<20	4.10	0.54
471	AB0202	<5	<4	1	17	70	0.3	24	10	3.4	<0.5	18	1.9	26	3.4	3.9	<20	3.04	0.49

Appendix 4 Chemical analysis data of soil samples

NO	SP.No. unit	Sn ppm	W ppm	Ta ppm	Nb ppm	Ce ppm	Eu ppm	La ppm	Nd ppm	Sm ppm	Tb ppm	Th ppm	U ppm	Y ppm	Gd ppm	Dy ppm	Pr ppm	Yb ppm	Lu ppm
472	AB0203	<5	<4	1	14	92	1.1	45	31	5.0	<0.5	18	3.1	25	4.2	4.3	<20	2.99	0.47
473	AB0204	40	8	5	32	110	0.5	22	10	4.3	1.7	90	9.6	64	3.2	3.5	<20	11.50	1.56
474	AB0205	24	11	7	48	82	0.8	32	22	5.9	1.7	80	11.0	99	7.2	7.5	<20	17.40	2.30
475	AB0206	18	15	7	35	170	0.7	43	18	6.0	1.7	79	11.0	87	7.3	7.7	<20	15.80	2.13
476	AB0207	35	8	8	43	120	0.3	18	9	4.1	1.6	75	8.7	91	4.6	4.2	<20	15.80	2.19
477	AB0208	37	11	11	48	140	0.7	36	25	7.9	2.7	78	8.7	135	8.2	9.0	<20	25.70	3.28
478	AB0209	49	9	11	49	95	0.6	24	12	4.5	1.6	65	9.5	135	7.6	7.3	<20	23.20	3.14
479	AC0301	<5	<4	1	16	99	1.2	45	25	5.2	<0.5	19	2.1	24	5.0	4.5	<20	3.20	0.53
480	AB0302	<5	<4	1	14	65	0.7	26	17	3.4	<0.5	17	1.9	24	0.5	3.0	<20	3.32	0.50
481	AB0303	<5	<4	1	14	130	1.2	66	37	6.6	<0.5	19	2.3	26	4.5	4.7	<20	3.77	0.48
482	AB0304	26	8	4	29	130	0.4	21	12	5.0	1.0	78	6.7	57	4.4	4.5	<20	10.40	1.36
483	AB0305	36	12	8	42	70	0.3	8	5	2.2	1.4	83	7.7	72	3.8	3.9	<20	13.80	1.90
484	AB0306	42	10	8	41	78	0.3	3	6	1.7	1.1	100	5.8	63	4.4	4.7	<20	11.20	1.66
485	AC0307	37	8	11	47	91	<0.3	7	11	2.6	2.0	90	9.0	82	4.8	5.5	<20	17.90	2.49
486	AB0308	45	9	10	45	110	0.6	22	15	4.8	1.2	79	11.0	94	6.9	7.0	<20	17.40	2.43
487	AB0309	33	<4	8	48	110	0.9	45	23	9.4	2.9	78	14.0	122	9.3	10.0	<20	22.40	3.07
488	AB0401	<5	<4	1	15	65	0.9	24	11	3.0	<0.5	21	2.4	25	1.5	2.5	<20	3.51	0.49
489	AB0402	<5	<4	2	14	79	0.9	28	22	3.8	<0.6	21	2.6	25	3.8	4.2	<20	3.76	0.55
490	AB0403	20	7	6	31	110	0.7	29	22	5.3	1.3	74	5.8	66	6.9	7.9	<20	11.10	1.50
491	AB0404	20	12	9	36	120	0.8	16	16	4.8	1.7	73	8.1	78	5.9	5.9	<20	15.40	2.14
492	AB0405	26	<4	5	36	120	1.5	140	90	29.0	9.9	59	12.0	307	36.2	33.0	<20	45.20	5.76
493	AB0406	46	11	9	44	84	0.5	6	10	1.6	1.2	86	7.9	58	1.8	2.7	<20	11.50	1.67
494	AB0407	31	14	6	41	130	0.3	18	15	4.0	1.0	89	7.3	71	6.1	6.5	<20	13.40	1.85
495	AB0408	45	9	9	42	85	0.6	19	11	5.3	2.3	70	8.8	110	9.0	10.0	<20	19.90	2.70
496	AB0409	44	12	12	60	66	0.8	18	6	4.4	2.5	66	13.0	165	10.0	10.0	<20	32.30	4.33
497	AB0410	53	9	11	57	88	0.5	26	10	5.4	1.8	71	9.3	139	9.6	10.0	<20	26.50	3.57
498	AB0501	<5	<4	2	16	87	1.1	42	33	5.9	0.8	23	4.7	37	2.9	2.7	<20	4.67	0.64
499	AB0502	20	7	4	26	130	1.2	69	44	11.0	1.7	66	11.0	92	9.9	11.0	<20	12.50	1.72
500	AB0503	48	6	10	37	110	1.1	130	66	18.0	4.7	51	12.0	218	22.5	20.0	30	35.10	4.71
501	AB0504	43	8	5	31	170	1.7	120	81	28.0	5.3	85	17.0	197	26.7	24.0	<20	32.30	4.27
502	AB0505	36	7	8	40	140	0.3	19	8	4.1	1.7	83	7.5	84	2.7	2.9	<20	14.90	2.00
503	AB0506	32	10	7	43	130	0.7	27	13	6.2	2.9	79	8.3	113	11.5	11.0	<20	18.10	2.56
504	AB0507	24	11	9	43	45	0.3	13	14	3.6	2.0	32	8.2	117	6.2	6.7	<20	21.60	2.98
505	AB0508	48	13	12	64	66	0.3	8	9	2.8	2.2	57	11.0	136	4.9	5.0	<20	25.80	3.64
506	AB0509	48	11	13	64	44	0.4	6	7	2.8	2.3	69	10.0	126	8.0	8.8	<20	27.10	3.67
507	AB0510	34	13	12	60	58	0.5	15	7	3.7	2.4	74	13.0	129	8.2	7.9	<20	28.70	3.92
508	AB0511	<5	<4	1	18	80	0.5	9	10	1.7	<0.5	25	2.8	20	2.0	3.4	<20	3.42	0.51
509	AB0512	<5	<4	1	17	67	0.3	8	9	1.5	<0.5	19	2.2	15	1.5	2.7	<20	3.15	0.39
510	AB0513	<5	<4	2	14	94	0.3	7	10	1.3	<0.5	23	1.9	17	1.1	2.6	<20	2.94	0.45
511	AB0514	154	<4	1	20	140	1.2	45	36	6.2	<0.5	28	3.1	24	4.8	5.0	<20	4.39	0.67
512	AB0515	<5	<4	1	17	110	0.9	27	17	3.8	<0.5	25	4.0	26	3.5	4.7	<20	3.59	0.59
513	AB0516	<5	<4	2	22	110	1.3	40	34	6.5	<0.5	26	2.6	32	7.4	8.0	<20	4.35	0.65
514	AB0601	36	8	7	31	170	0.8	65	33	11.0	2.6	84	11.0	118	11.0	10.0	<20	17.20	2.37
515	AB0602	30	7	7	30	140	1.0	71	47	12.0	3.0	78	13.0	100	13.3	12.0	<20	16.20	2.20
516	AB0603	19	7	5	25	110	0.9	44	32	7.7	1.1	41	5.8	63	5.3	5.5	<20	9.42	1.34
517	AB0604	40	11	7	38	140	0.7	48	21	9.6	2.9	85	11.0	126	14.9	14.0	<20	19.20	2.58
518	AB0605	28	11	7	45	140	0.6	24	14	5.5	2.6	82	10.0	116	8.9	9.2	<20	18.60	2.56
519	AB0606	33	8	6	35	100	0.3	35	7	4.7	1.5	100	6.6	90	5.5	5.7	<20	13.80	1.96
520	AB0607	39	8	9	45	120	0.4	28	9	4.7	1.8	80	8.6	114	8.9	9.3	<20	19.20	2.54
521	AB0608	44	10	9	44	100	0.6	26	10	7.1	2.1	73	9.8	113	7.6	8.2	<20	20.50	2.81
522	AB0609	51	11	9	42	110	0.6	18	15	4.9	1.8	69	9.0	110	7.1	8.0	<20	21.20	2.80
523	AB0610	32	8	10	41	130	0.5	40	21	6.4	2.2	83	8.5	98	7.6	7.9	<20	16.80	2.24
524	AB0611	37	10	9	53	94	0.9	28	24	7.3	2.8	68	15.0	138	9.3	10.0	<20	21.40	2.80
525	AB0612	<5	4	1	16	110	0.5	11	10	1.9	<0.5	28	3.8	21	1.9	2.7	<20	3.44	0.45
526	AB0613	<5	6	2	16	82	0.5	8	9	1.5	<0.5	24	3.6	18	1.6	2.6	<20	3.06	0.40
527	AB0614	<5	<4	2	17	120	0.9	16	14	2.9	<0.5	31	3.8	16	1.9	3.2	<20	3.32	0.39
528	AB0615	<5	5	2	18	140	1.1	38	40	5.7	<0.5	24	3.7	23	5.1	3.8	<20	3.39	0.45
529	AB0616	7	<4	3	24	120	1.1	44	33	5.6	<0.5	33	6.6	34	4.4	5.8	<20	4.39	0.60
530	AB0617	15	<4	3	24	86	0.7	22	18	3.3	1.1	35	8.1	27	4.0	4.6	<20	3.85	0.50
531	AB0701	24	7	7	37	180	1.5	40	33	8.2	2.1	55	11.0	107	12.8	15.0	<20	17.50	2.15
532	AB0702	23	9	5	29	120	1.1	52	37	8.8	1.6	77	12.0	85	7.4	11.0	<20	12.00	1.45
533	AB0703	27	8	5	32	120	0.6	42	29	7.2	2.0	74	12.0	95	6.3	12.0	<20	14.30	1.95
534	AB0704	31	9	8	38	110	0.5	21	11	5.3	2.0	63	9.9	107	9.4	17.0	<20	16.50	1.99
535	AB0705	38	14	8	50	170	1.3	72	65	16.0	3.6	99	15.0	131	18.3	22.0	<20	17.80	2.20
536	AB0706	38	10	7	39	170	1.5	120	85	23.0	5.4	67	17.0	211	27.8	36.0	<20	31.00	4.25
537	AB0707	35	10	8	38	110	1.0	38	29	9.2	2.9	85	13.0	110	15.4	15.0	<20	17.50	1.95
538	AB0708	35	10	8	44	95	0.9	29	27	9.1	2.8	71	15.0	135	13.1	19.0	<20	21.50	2.92
539	AB0709	39	8	9	47	100	0.8	44	38	13.0	4.5	68	20.0	198	19.3	27.0	<20	28.50	3.45
540	AB0710	28	11	7	41	140	0.9	45	27	5.9	1.5	57	16.0	66	7.3	9.2	<20	9.80	1.46
541	AB0711	<5	4	1	15	81	0.5	10	10	1.7	<0.5	22	3.4	19	1.4	2.7	<20	2.71	0.32
542	AB0712	<5	<4	1	18	120	0.8	18	18	3.1	<0.5	28	2.3	21	1.6	3.7	<20	3.46	0.45
543	AB0713	<5	<4	2	18	63	0.8	14	13	2.4	<0.5	20	3.4	21	4.3	3.5	<20	3.52	0.48
544	AB0714	<5	4	3	21	67	1.0	34	24	4.8	<0.5	19	7.1	30	4.4	5.4	<20	3.65	0.47
545	AB0715	12	<4	5	38	88	0.9	44	30	6.2	1.2	30	6.7	47	6.6	8.0	<20	5.56	0.65
546	AB0716	22	<4	5	36	88	0.8	36	26	5.3	1.3	44	10.0	48	6.6	7.5	<20	5.50	0.75
547	AB0801	5	5	1	19	72	0.8	18	16	2.7	<0.5	21	3.6	21	5.0	4.3	<20	3.56	0.50
548	AB0802	<5	5	2	16	130	1.1	26	32	4.9	<0.5	29	3.4	25	5.0	4.6	<20	3.81	0.47
549	AB0803	<5	<4	1	17	120	1.0	23	23	4.3	<0.5	30	3.4	21	1.7	3.9	<20	3.88	0.47
550	AB0804	8	6	3	25	99	1.4	43	35	6.4	1.7	32	9.6	41	7.5	6.4	<20	5.49	0.75
551	AB0805	14	10	7	42	110	1.0	49	32	7.0	2.1	67	11.0	76	7.5	11.0	<20	11.80	1.43
552	AB0806	22	12	7	46	80	0.9	37	27	5.5	1.7	58	11.0	74	7.8	12.0	<20	11.70	1.39
553	AB0807	22	10	7	41	96	0.8	42	28	6.1	1.8	65	9.6	72	7.0	11.0	<20	11.00	1.37
554	AB0808	21	11	6	34	100	0.9	51	39	7.6	1.7	76	13.0	78	10.4	11.0	<20	12.20	1.60
555	AB0809	11	<4	6	34	100	1.0	49	35	6.5	1.4	44	8.0	58	9.1	8.6	<20	7.25	0.99
556	AB0810	22	<4	6	39	180	1.4	92	63	13.0	2.6	53	7.4	108	14.8	18.0	27	15.60	2.13
557	AB0811	24	5	7	43	170	1.2	85	61	12.0	2.3	66	7.2	95	11.5	15.0	<20	13.50	1.80
558	AB0812	26	6	6	40	150	1.1	72	58	10.0	2.4	51	7.8	106	12.4	15.0	<20	14.10	1.94
559	AB0813	44	<4	7	41	160	0.6	45	33	7.0	2.0	67	9.6	101	9.0	14.0	<20	14.80	1.98
560	AB0814	34	7	8	37	140	0.8	46	29	7.9	2.0	57	9.0	111	9.8	14.0	<20	15.80	2.09
561	AB0815	36	8	6	37	130	0.6	48	32	7.1	1.9	61	9.1	100	8.8	14.0	<20	14.40	1.89
562	AB0816	41	8	6	34	170	0.5	33	17	4.7	1.5	64	5.7	70	7.2	9.9	<20	9.70	1.33
563	AB0817	44	10	7	39	130	0.8	50	33	8.1	1.8	57	9.3	100	8.4	13.0	<20	14.20	1.84
564	AB0818	40	10	7	34	130	0.9	62	46	11.0	2.2	66	12.0	96	13.9	15.0	<20	13.50	1.84
565	AB0819	28	9	6	36	130	0.7	29	19	6.7	2.8	79	11.0	113	12.0	18.0	<20	17.60	2.30

Appendix 4　Chemical analysis data of soil samples

NO	SP.No. unit	Sn ppm	W ppm	Ta ppm	Nb ppm	Ce ppm	Eu ppm	La ppm	Nd ppm	Sm ppm	Tb ppm	Th ppm	U ppm	Y ppm	Gd ppm	Dy ppm	Pr ppm	Yb ppm	Lu ppm
566	AB0820	41	7	8	42	110	0.6	43	40	10.0	3.1	64	11.0	130	15.5	20.0	<20	21.00	2.78
567	AB0821	40	10	6	41	130	0.6	27	22	6.4	2.5	79	9.9	120	7.4	17.0	<20	17.30	2.34
568	AB0822	39	7	8	41	110	0.7	33	33	8.2	2.0	69	9.2	125	11.1	18.0	<20	18.40	2.55
569	AB0903	12	9	5	37	86	0.7	37	28	4.9	1.2	40	6.9	60	4.9	8.1	<20	8.42	1.21
570	AB0904	16	8	6	38	100	0.7	35	25	5.0	1.3	40	6.7	60	6.1	8.5	<20	9.21	1.31
571	AB0905	25	9	5	32	160	1.3	72	55	11.0	2.0	74	14.0	87	13.0	14.0	<20	11.90	1.55
572	AB0906	32	6	6	31	100	1.1	49	43	7.9	1.0	39	11.0	55	8.0	8.1	<20	7.79	1.09
573	AB0907	34	<4	6	30	130	1.3	59	49	8.1	1.4	33	15.0	39	8.1	7.4	<20	5.27	0.71
574	AB0908	15	4	4	32	140	0.9	59	38	8.6	2.0	65	9.5	70	11.0	10.0	<20	7.30	0.98
575	AB0909	16	7	6	35	160	1.0	72	58	9.8	1.0	85	7.9	80	6.6	11.0	<20	9.53	1.31
576	AB0910	20	<4	5	32	300	1.9	120	97	20.0	3.8	99	17.0	126	20.0	20.0	35	16.30	2.14
577	AB0911	23	<4	6	34	170	1.3	77	59	13.0	3.0	84	11.0	109	16.9	16.0	<20	16.60	2.24
578	AB0912	20	7	6	37	160	1.3	78	56	12.0	2.6	65	13.0	100	14.5	14.0	<20	14.60	2.01
579	AB0913	16	7	6	38	160	0.9	65	45	9.8	2.3	50	16.0	91	13.0	13.0	30	13.80	1.87
580	AB0914	41	7	6	36	150	1.3	74	59	13.0	3.2	71	11.0	107	14.5	14.0	<20	15.00	1.99
581	AB0915	25	8	6	39	150	0.9	60	46	8.5	1.7	61	8.3	87	8.9	13.0	<20	12.60	1.69
582	AB0916	27	9	6	37	160	1.0	62	50	11.0	2.6	70	7.6	98	12.6	15.0	<20	15.60	2.07
583	AB0917	42	8	8	41	130	0.9	52	40	8.0	2.2	65	7.4	91	6.1	13.0	<20	14.70	1.99
584	AB0918	46	11	7	39	140	1.0	66	48	10.0	2.4	65	11.0	106	9.0	13.0	<20	15.40	2.12
585	AB0919	26	9	5	27	230	1.7	81	64	12.0	0.7	81	10.0	57	7.5	10.0	<20	6.94	0.95
586	AB0920	22	<4	3	25	230	1.4	72	52	9.6	0.6	80	8.2	46	8.9	6.8	22	4.85	0.63
587	AB0921	24	11	4	32	120	1.3	59	44	8.4	1.6	61	9.3	63	6.8	8.9	<20	7.56	1.08
588	AB0922	32	10	4	25	170	1.5	77	53	11.0	2.9	61	8.4	77	9.5	11.0	<20	8.62	1.14
589	AB0923	46	9	6	30	160	1.6	85	57	13.0	2.5	57	15.0	84	13.8	14.0	<20	9.54	1.31
590	AB1002	<5	4	1	18	43	<0.2	5	8	0.9	<0.5	21	2.8	15	0.9	2.1	<20	3.20	0.43
591	AB1003	<5	<4	2	18	150	0.6	11	30	1.9	<0.5	27	3.7	20	2.1	3.6	<20	3.39	0.45
592	AB1004	13	8	4	37	91	0.8	39	13	4.9	<0.5	40	8.1	59	4.4	7.7	<20	9.56	1.39
593	AB1005	13	7	6	39	110	0.7	38	23	5.7	1.1	42	7.8	71	6.6	8.8	<20	10.70	1.55
594	AB1006	21	8	5	36	130	1.0	51	33	7.3	1.3	40	11.0	86	12.8	11.0	25	12.30	1.72
595	AB1007	34	<4	7	38	100	1.3	53	28	7.2	<0.5	27	11.0	45	8.0	7.7	<20	5.73	0.73
596	AB1008	24	6	7	41	120	0.9	33	17	4.8	<0.5	35	11.0	36	5.1	5.4	<20	4.94	0.65
597	AB1009	25	<4	4	25	130	1.1	53	27	8.2	<0.5	42	10.0	50	5.5	8.4	<20	6.11	0.93
598	AB1010	13	7	6	39	180	1.0	64	28	9.2	2.0	73	11.0	85	10.1	13.0	<20	12.20	1.67
599	AB1011	11	<4	6	40	170	1.0	72	42	12.0	3.1	65	9.7	114	13.5	15.0	<20	16.40	2.18
600	AB1012	27	<4	5	39	130	0.8	56	26	9.4	2.2	69	7.7	117	13.3	15.0	<20	16.50	2.30
601	AB1013	31	<4	8	42	120	0.6	34	14	6.4	1.7	71	6.0	110	13.0	15.0	<20	16.60	2.24
602	AB1014	25	7	6	30	150	1.0	74	44	11.0	2.4	80	9.3	76	9.8	11.0	<20	11.40	1.54
603	AB1015	31	9	8	38	130	0.9	48	26	11.0	2.5	84	12.0	130	12.5	17.0	<20	21.20	2.79
604	AB1016	15	6	4	35	190	0.9	57	30	7.8	1.0	91	7.9	68	9.7	8.2	20	9.80	1.31
605	AB1017	17	10	7	52	120	0.7	43	22	5.5	1.3	62	8.7	73	6.0	9.3	<20	11.20	1.57
606	AB1018	27	7	7	36	93	0.9	42	11	6.1	1.4	39	13.0	74	7.9	10.0	<20	11.70	1.55
607	AB1019	27	8	4	32	150	1.2	64	39	11.0	1.0	65	7.9	60	7.9	9.7	<20	8.37	1.11
608	AB1020	22	5	2	29	170	1.7	85	46	13.0	2.3	73	9.3	71	12.7	19.0	<20	9.22	1.20
609	AB1021	25	11	6	29	200	2.3	140	78	18.0	3.5	67	17.0	77	15.3	12.0	33	8.09	1.15
610	AB1022	21	7	4	31	170	1.0	58	40	8.0	0.7	60	7.2	50	7.3	6.9	<20	6.32	0.97
611	AB1023	22	8	4	34	150	1.4	77	47	10.0	1.2	67	9.8	70	10.9	10.0	<20	8.25	1.11
612	AB1024	26	10	6	34	160	1.2	72	34	10.0	1.8	55	9.8	59	9.2	8.0	20	7.08	1.01
613	AB1102	<5	<4	1	15	70	0.2	9	8	1.5	<0.5	25	3.8	20	0.9	3.0	<20	2.94	0.46
614	AB1103	<5	<4	2	22	65	0.4	17	10	2.6	<0.5	29	4.1	26	4.0	4.0	<20	4.36	0.63
615	AB1104	31	11	6	38	160	1.7	96	61	16.0	3.7	74	14.0	107	14.1	16.0	<20	16.10	2.21
616	AB1105	28	9	8	37	140	1.8	97	73	17.0	3.8	70	14.0	102	18.9	16.0	<20	15.10	2.04
617	AB1106	28	<4	5	30	150	1.6	85	48	13.0	2.2	61	16.0	92	13.9	13.0	<20	12.30	1.75
618	AB1107	47	<4	4	28	120	1.5	52	35	8.8	1.9	34	13.0	43	8.6	8.0	<20	7.05	0.94
619	AB1108	21	<4	4	25	120	1.0	57	25	7.4	1.7	36	7.4	49	8.9	8.0	<20	6.11	0.84
620	AB1109	15	<4	3	25	120	1.0	58	32	6.3	1.7	50	6.0	52	9.2	7.0	<20	6.02	0.89
621	AB1110	20	9	6	37	200	1.1	72	38	9.7	2.2	83	9.9	84	12.3	12.0	21	12.20	1.73
622	AB1111	16	8	9	57	150	0.9	75	44	11.0	2.5	55	7.0	137	14.6	18.0	<20	21.60	2.83
623	AB1112	28	<4	7	39	99	0.7	36	21	6.6	3.3	58	5.7	145	10.9	18.0	<20	23.50	3.15
624	AB1113	27	<4	5	29	160	1.0	64	50	12.0	2.4	92	8.8	75	13.2	13.0	<20	11.30	1.46
625	AB1114	20	8	5	35	160	1.1	68	33	9.2	2.0	92	8.9	74	9.0	10.0	<20	10.30	1.49
626	AB1115	28	6	5	32	170	3.1	120	83	24.0	5.0	94	14.0	142	27.8	25.0	<20	17.60	2.29
627	AB1116	26	10	5	37	160	1.1	58	30	8.8	1.2	63	7.8	70	10.6	11.0	<20	11.10	1.39
628	AB1117	14	8	4	32	210	0.9	45	28	6.5	2.1	73	7.8	70	6.9	9.0	<20	11.10	1.46
629	AB1118	11	10	4	27	220	2.0	110	73	18.0	3.4	66	22.0	97	18.0	15.0	<20	13.10	1.80
630	AB1119	20	9	4	31	120	1.0	41	12	6.4	1.0	73	7.7	61	7.3	8.5	<20	8.99	1.21
631	AB1120	25	7	4	34	170	1.0	59	35	9.0	1.3	71	7.3	90	8.0	12.0	<20	12.30	1.65
632	AB1121	25	8	4	25	130	2.1	88	63	15.0	1.0	64	11.0	80	12.8	11.0	<20	8.86	1.11
633	AB1122	25	15	5	33	160	1.8	88	52	12.0	1.0	66	9.6	67	11.0	11.0	<20	9.18	1.15
634	AB1123	22	10	3	25	180	1.1	59	16	6.9	1.5	71	14.0	53	7.9	8.0	<20	6.26	0.80
635	AB1124	16	9	5	31	180	3.1	110	85	20.0	2.7	63	11.0	94	21.1	14.0	<20	9.81	1.22
636	AB1201	14	11	7	37	220	1.6	130	67	18.0	3.6	78	19.0	126	16.2	23.0	<20	27.10	3.45
637	AB1202	19	8	6	36	170	1.1	64	41	8.7	1.3	67	13.0	70	10.7	10.0	<20	11.90	1.58
638	AB1203	9	<4	2	20	110	0.6	24	17	3.4	<0.5	28	3.7	26	2.2	4.4	<20	3.90	0.55
639	AB1204	16	7	4	39	130	1.1	62	33	8.1	1.9	48	11.0	88	9.1	10.0	<20	11.30	1.56
640	AB1205	18	<4	3	32	81	0.6	28	10	4.3	0.9	29	7.4	41	2.4	6.8	<20	5.06	0.74
641	AB1206	32	9	4	25	170	1.4	96	69	13.0	0.9	89	11.0	69	14.0	12.0	<20	8.57	1.05
642	AB1207	22	10	6	53	170	0.9	65	31	7.5	1.2	61	7.2	73	7.2	9.6	<20	11.00	1.57
643	AB1208	19	7	4	43	180	1.3	66	38	9.9	1.3	70	7.5	105	10.2	15.0	<20	15.10	1.88
644	AB1209	33	<4	4	30	190	1.5	110	62	16.0	2.9	88	11.0	99	13.3	17.0	<20	13.60	1.83
645	AB1210	24	<4	6	42	150	1.2	64	46	9.8	2.2	66	8.7	106	11.1	15.0	<20	15.50	2.03
646	AB1211	24	10	5	37	160	1.1	87	63	11.0	2.1	60	11.0	89	12.6	12.0	<20	11.60	1.56
647	AB1212	25	8	4	34	150	1.5	34	67	14.0	1.3	110	6.8	77	15.7	13.0	<20	10.90	1.54
648	AB1213	45	10	6	41	190	1.8	140	92	22.0	4.2	110	13.0	114	17.7	19.0	<20	16.20	2.27
649	AB1214	17	7	4	31	180	1.0	77	47	10.0	1.2	82	8.9	68	9.8	10.0	<20	9.34	1.27
650	AB1215	18	<4	5	30	97	0.8	43	23	5.6	1.8	39	7.6	43	8.6	6.0	<20	5.73	0.76
651	AB1216	28	<4	5	30	170	1.5	96	57	16.0	3.3	91	9.7	87	14.8	15.0	<20	12.60	1.73
652	AB1217	27	9	5	32	190	1.1	64	43	11.0	1.5	66	7.7	82	10.9	12.0	20	12.40	1.66
653	AB1218	18	9	1	20	200	3.7	200	120	30.0	5.0	56	13.0	103	19.8	18.0	<20	11.60	1.46
654	AB1219	22	12	7	19	270	4.2	230	160	37.0	6.0	78	12.0	191	34.2	31.0	50	22.40	2.95
655	AB1220	13	8	4	26	210	2.3	140	74	18.0	1.7	79	12.0	95	18.2	15.0	<20	10.80	1.47
656	AB1221	15	6	4	24	150	1.0	62	47	6.6	1.6	55	9.7	47	7.8	0.5	<20	5.48	0.85
657	AB1222	22	8	4	27	140	1.5	73	41	11.0	1.6	62	9.2	58	9.0	8.0	<20	6.36	0.80
658	AB1223	21	8	4	29	130	1.0	52	24	7.2	0.9	45	5.8	51	5.2	6.5	<20	6.07	0.91
659	AB1303	<5	<4	2	18	130	0.7	24	17	3.6	0.7	27	5.3	24	5.2	4.4	<20	4.57	0.64

Appendix 4 Chemical analysis data of soil samples

NO	SP.No. unit	Sn ppm	W ppm	Ta ppm	Nb ppm	Co ppm	Eu ppm	La ppm	Nd ppm	Sm ppm	Tb ppm	Th ppm	U ppm	Y ppm	Gd ppm	Dy ppm	Pr ppm	Yb ppm	Lu ppm
660	AB1304	30	5	3	37	65	0.6	30	22	5.0	1.0	28	5.6	87	8.6	11.0	<20	8.01	1.11
661	AB1305	<5	<4	2	22	110	0.9	32	23	4.6	0.9	28	5.1	30	3.7	5.0	<20	4.89	0.65
662	AB1306	<5	<4	1	22	130	0.8	23	14	3.8	0.7	32	3.5	27	2.1	4.0	<20	4.23	0.56
663	AB1307	<5	<4	2	22	83	0.6	12	18	2.1	<0.5	30	3.5	20	5.1	3.0	<20	3.57	0.54
664	AB1308	22	<4	5	33	93	0.6	32	13	4.4	0.7	28	7.9	38	3.5	5.0	<20	5.71	0.74
665	AB1309	24	<4	5	42	87	0.5	35	21	4.8	0.7	30	6.2	43	5.3	6.3	<20	5.57	0.74
666	AB1310	9	8	5	40	190	0.9	71	34	8.6	2.3	72	6.8	71	7.1	10.0	28	10.50	1.49
667	AB1311	19	6	6	40	150	1.0	56	34	7.3	1.6	81	7.2	89	7.5	10.0	<20	13.70	1.83
668	AB1312	18	<4	5	39	200	0.8	65	29	8.6	2.2	86	9.1	95	9.2	12.0	<20	14.80	2.09
669	AB1313	20	<4	7	39	190	1.1	75	41	10.0	2.9	78	6.5	95	9.8	13.0	<20	15.20	1.99
670	AB1314	32	<4	6	36	160	0.7	68	30	7.5	2.1	75	6.7	86	8.4	12.0	<20	13.20	1.62
671	AB1315	31	<4	5	32	160	1.2	77	45	11.0	2.7	80	10.0	88	9.9	12.0	<20	12.80	1.62
672	AB1316	42	<4	7	38	140	0.8	59	25	8.3	1.3	65	16.0	85	9.0	8.0	<20	12.20	1.69
673	AB1317	30	<4	5	33	200	1.4	130	84	17.0	2.5	100	10.0	93	14.6	14.0	<20	12.80	1.70
674	AB1318	17	7	4	29	190	0.8	57	33	7.5	1.3	82	7.6	64	10.6	8.7	<20	9.08	1.17
675	AB1319	25	10	4	31	180	0.8	41	25	5.9	0.9	66	8.4	46	6.7	6.3	<20	6.12	0.81
676	AB1320	24	11	4	29	180	1.1	61	40	10.0	1.4	68	8.5	63	9.8	9.0	<20	8.38	1.07
677	AB1321	16	8	4	31	170	1.1	44	24	6.7	1.4	66	8.4	53	7.1	7.6	<20	7.72	1.04
678	AB1322	19	10	5	36	160	0.8	42	28	5.8	1.4	68	6.2	70	4.7	9.0	<20	10.10	1.44
679	AB1323	22	9	4	31	190	1.6	98	53	12.0	1.8	75	11.0	65	11.6	8.7	22	8.46	1.06
680	AB1324	23	9	5	32	170	0.7	48	18	5.5	1.0	71	6.4	63	6.5	8.0	<20	8.53	1.16
681	AB1325	27	6	4	29	190	1.3	77	52	11.0	1.8	69	8.7	56	9.7	11.0	<20	8.59	1.11
682	AB1326	27	14	4	27	190	1.2	71	41	9.5	1.4	72	8.6	53	8.9	9.0	<20	5.29	0.70
683	AB1403	<5	7	1	21	110	0.7	22	15	3.0	0.7	29	4.0	25	4.3	4.2	<20	4.71	0.63
684	AB1404	26	<4	6	33	190	1.7	96	74	19.0	3.6	53	12.0	130	19.6	19.0	<20	23.10	3.10
685	AB1405	25	7	7	32	170	1.6	75	56	15.0	2.7	53	11.0	114	16.8	17.0	<20	18.70	2.52
686	AB1406	8	<4	3	27	70	0.8	30	17	4.1	0.7	24	4.1	34	4.8	4.2	<20	4.91	0.78
687	AB1407	<5	7	3	26	85	0.6	15	10	2.5	<0.5	28	3.8	24	2.4	3.5	<20	4.39	0.60
688	AB1408	<5	<4	1	19	120	0.6	12	10	2.2	<0.5	26	3.4	20	3.7	3.5	<20	3.22	0.46
689	AB1409	8	<4	3	24	100	0.8	35	21	4.5	<0.5	26	4.5	31	3.6	4.7	<20	4.33	0.59
690	AB1410	12	<4	2	23	120	0.9	43	29	6.1	1.0	28	6.3	55	7.3	6.9	<20	5.22	0.68
691	AB1411	24	13	5	39	140	1.0	59	43	8.7	1.5	75	7.3	84	7.9	11.0	<20	10.70	1.44
692	AB1412	19	9	6	45	160	0.9	70	50	10.0	1.9	76	6.7	96	9.4	13.0	<20	14.50	1.90
693	AB1413	26	<4	7	47	160	0.8	62	40	9.6	1.9	74	7.6	101	11.5	16.0	<20	15.60	2.10
694	AB1414	29	<4	6	41	130	0.8	61	30	9.8	1.5	58	7.3	94	10.2	12.0	23	14.70	1.90
695	AB1415	28	<4	6	37	160	0.9	56	35	9.9	1.9	75	7.4	98	13.1	15.0	<20	14.80	1.97
696	AB1416	38	6	6	42	160	1.8	100	72	21.0	4.5	94	12.0	162	20.5	25.0	<20	21.60	2.83
697	AB1417	36	6	5	37	200	1.1	67	38	12.0	2.3	79	7.6	107	12.2	16.0	<20	15.40	1.96
698	AB1418	41	14	7	39	260	2.4	150	110	27.0	3.6	110	23.0	134	25.8	20.0	<20	18.00	2.46
699	AB1419	27	8	5	34	180	0.7	56	36	7.6	1.5	77	7.3	74	7.5	10.0	28	10.70	1.48
700	AB1420	25	11	5	31	170	1.0	45	33	8.2	1.9	65	6.2	67	5.1	8.4	<20	9.42	1.27
701	AB1421	26	10	4	31	180	1.1	41	29	8.1	1.7	66	9.5	54	9.6	9.4	21	7.61	1.06
702	AB1422	26	9	3	27	220	2.7	130	90	22.0	1.1	67	7.3	89	17.4	13.0	<20	8.04	1.02
703	AB1423	36	11	4	29	190	0.9	37	19	5.1	1.2	61	6.5	47	4.5	6.2	<20	5.86	0.78
704	AB1424	23	10	4	32	180	0.7	39	21	5.9	1.1	63	6.9	57	6.5	7.8	<20	7.63	1.04
705	AB1425	21	9	3	26	210	1.0	53	35	8.5	2.0	69	8.8	49	5.8	6.5	<20	6.60	0.80
706	AB1426	27	6	5	31	180	0.9	45	24	5.7	1.4	47	10.0	68	8.4	8.8	<20	8.58	1.19
707	AB1427	22	11	3	32	190	1.1	48	30	7.6	1.4	54	7.7	64	7.1	8.7	<20	8.16	1.06
708	AB1501	<5	<4	1	21	89	0.9	30	20	4.3	0.9	26	3.5	27	4.9	5.0	<20	4.52	0.58
709	AB1502	27	8	5	33	110	1.0	64	30	7.8	1.9	37	8.3	91	11.2	12.0	<20	13.60	1.82
710	AB1503	26	7	5	36	130	1.3	59	46	12.0	2.1	47	9.8	87	11.8	13.0	<20	13.40	1.76
711	AB1504	<5	9	1	17	93	0.6	16	14	2.4	<0.5	23	4.0	21	1.2	3.2	<20	3.70	0.52
712	AB1505	<5	<4	1	19	99	0.4	14	10	2.2	0.8	25	3.2	24	2.2	3.4	<20	3.21	0.53
713	AB1506	<5	<4	2	22	100	0.7	21	19	3.3	<0.5	27	2.4	25	3.3	3.7	<20	3.54	0.54
714	AB1507	<5	9	1	21	110	0.9	23	22	3.6	<0.5	24	3.3	24	2.6	3.2	<20	3.48	0.53
715	AB1508	<5	8	1	16	140	1.1	40	32	5.8	<0.5	32	5.6	29	5.7	5.0	29	3.84	0.61
716	AB1509	30	4	3	26	97	1.0	45	28	8.0	1.5	29	7.7	50	5.7	7.9	<20	5.80	0.75
717	AB1510	42	10	6	33	170	1.1	56	43	9.3	2.3	64	7.7	78	10.9	12.0	<20	10.30	1.47
718	AB1511	30	<4	7	43	140	1.2	52	42	9.0	2.7	60	9.1	108	18.6	14.0	<20	18.40	2.33
719	AB1512	26	<4	4	31	190	1.2	75	58	12.0	1.7	78	10.0	82	11.4	12.0	<20	11.90	1.57
720	AB1513	9	<4	3	24	140	1.1	64	45	10.0	1.6	45	6.6	76	9.2	12.0	<20	8.81	1.18
721	AB1514	25	10	6	41	130	1.0	50	38	9.2	2.5	54	7.1	112	10.1	17.0	<20	17.60	2.37
722	AB1515	39	<4	5	33	170	0.8	51	35	9.5	2.7	79	5.6	91	7.9	13.0	<20	14.80	1.84
723	AB1516	23	8	6	38	140	0.9	49	34	9.1	2.5	62	7.9	96	9.8	12.0	<20	14.20	1.89
724	AB1517	32	7	6	37	160	0.6	50	28	9.2	2.0	73	7.0	91	9.1	12.0	<20	13.10	1.74
725	AB1518	34	<4	5	42	170	0.5	46	25	7.8	1.5	68	7.5	92	8.3	14.0	<20	12.80	1.60
726	AB1519	14	11	6	30	170	0.9	47	26	8.5	1.6	68	6.3	89	12.1	15.0	<20	12.60	1.66
727	AB1520	27	<4	4	29	200	1.4	57	36	10.0	1.1	69	9.7	63	12.0	9.1	<20	7.87	1.06
728	AB1521	29	<4	4	28	200	0.7	48	25	7.8	1.3	70	5.8	70	9.2	10.0	<20	10.60	1.42
729	AB1522	26	<4	3	22	220	1.4	77	56	13.0	0.9	89	9.0	62	12.2	11.0	<20	7.89	1.06
730	AB1523	26	11	5	30	160	1.8	89	64	17.0	1.9	66	8.4	81	12.5	11.0	<20	10.20	1.30
731	AB1524	31	10	3	25	230	1.4	70	48	9.4	0.9	66	5.8	53	6.8	6.5	20	5.86	0.82
732	AB1525	21	8	4	29	190	<0.2	39	21	5.2	0.7	62	5.9	51	4.1	3.7	<20	6.90	0.90
733	AB1601	20	5	3	19	110	1.4	54	38	8.1	1.4	28	6.1	44	6.0	6.2	<20	4.94	0.65
734	AB1602	<5	<4	1	22	110	1.0	41	27	5.9	0.7	23	3.2	32	3.8	4.0	27	4.14	0.64
735	AB1603	<5	7	1	26	87	0.9	36	25	4.8	0.7	24	5.0	30	4.3	4.5	<20	4.93	0.68
736	AB1604	34	8	6	36	140	1.3	63	50	12.0	2.9	49	9.3	96	11.9	11.0	20	13.60	1.83
737	AB1605	<5	<4	2	20	110	1.2	37	30	6.3	0.7	25	5.2	37	6.0	6.0	<20	5.45	0.88
738	AB1606	<5	<4	1	17	90	0.6	19	16	3.4	1.1	20	3.0	22	1.1	3.0	<20	3.50	0.47
739	AB1607	<5	8	1	18	89	0.7	16	13	2.7	<0.5	25	3.4	24	5.3	4.0	<20	3.48	0.47
740	AB1608	<5	<4	1	16	66	0.7	12	13	2.3	1.0	20	1.8	23	2.8	3.3	<20	2.87	0.47
741	AB1609	28	<4	4	29	120	1.1	51	33	8.6	1.5	49	7.5	68	8.3	8.7	<20	9.88	1.31
742	AB1610	<5	<4	3	27	110	1.1	45	31	6.5	0.7	24	6.9	37	4.9	5.2	<20	4.65	0.68
743	AB1611	40	<4	5	24	110	1.3	58	41	9.5	0.7	32	9.6	57	11.3	8.3	<20	6.72	0.94
744	AB1612	23	<4	4	27	150	1.1	90	59	13.0	1.9	75	15.0	96	15.2	12.0	<20	11.70	1.56
745	AB1613	29	<4	4	36	150	1.1	68	47	12.0	1.8	70	9.4	106	11.6	14.0	<20	13.90	1.87
746	AB1614	32	6	5	31	200	2.3	150	100	24.0	2.9	71	10.0	114	19.2	15.0	<20	14.30	1.91
747	AB1615	53	11	6	33	180	1.5	96	61	15.0	2.3	79	9.6	97	13.0	13.0	<20	11.70	1.65
748	AB1616	44	7	5	27	160	1.4	90	79	16.0	2.7	72	10.0	114	14.8	17.0	25	15.70	2.01
749	AB1617	23	11	5	34	190	0.8	47	34	5.8	1.0	74	8.0	51	6.9	6.8	<20	6.03	0.86
750	AB1618	44	8	5	29	170	1.3	82	73	15.0	2.6	70	9.7	110	14.0	17.0	<20	15.00	2.11
751	AB1619	37	8	5	36	190	0.9	54	35	8.5	2.7	58	8.3	110	11.6	14.0	<20	15.40	2.06
752	AB1620	39	8	5	33	140	1.0	63	50	10.0	2.3	58	7.6	102	12.2	15.0	<20	14.80	1.96
753	AB1621	27	6	4	31	180	1.4	96	72	15.0	2.4	74	10.0	105	16.8	14.0	<20	12.10	1.64

A—12

Appendix 4　Chemical analysis data of soil samples

NO	SP.No. unit	Sn ppm	W ppm	Ta ppm	Nb ppm	Ce ppm	Eu ppm	La ppm	Nd ppm	Sm ppm	Tb ppm	Th ppm	U ppm	Y ppm	Gd ppm	Dy ppm	Pr ppm	Yb ppm	Lu ppm
754	AD1622	23	<4	3	16	240	0.6	99	36	6.2	0.9	81	8.2	47	5.9	5.2	20	5.01	0.68
755	AB1623	25	7	4	30	180	1.0	57	35	6.9	1.0	72	8.1	71	3.3	9.4	<20	8.23	1.14
756	AB1624	18	10	4	26	160	1.5	78	56	11.0	1.7	67	16.0	64	9.7	9.5	<20	7.76	0.99
757	AB1625	22	12	3	29	230	1.0	61	38	7.6	1.0	77	9.4	64	5.0	6.2	<20	5.98	0.83
758	AB1626	18	<4	4	23	180	1.3	86	62	10.0	2.1	72	9.7	78	9.3	10.0	<20	8.13	1.00
759	AD1627	25	11	4	30	200	1.5	90	62	12.0	2.1	69	8.4	66	11.1	10.0	<20	6.93	0.91
760	AD1628	26	11	4	29	190	1.2	62	40	7.5	1.3	66	8.8	55	6.3	7.0	<20	5.93	0.91
761	AB1629	25	<4	5	32	170	0.7	50	29	5.3	1.0	64	6.4	48	8.5	6.0	<20	5.86	0.83
762	AB1630	21	8	4	36	120	0.6	47	19	4.7	0.9	60	5.7	63	4.3	6.5	<20	5.51	0.76
763	AB1701	<5	<4	3	24	72	0.7	33	25	4.1	0.6	25	4.7	34	4.7	4.5	<20	4.89	0.71
764	AD1702	22	9	7	40	140	1.4	81	57	12.0	3.1	54	12.0	126	17.6	17.0	<20	17.00	2.34
765	AB1703	30	<4	8	35	130	1.2	66	50	10.0	2.1	65	11.0	92	12.3	12.0	<20	11.10	1.51
766	AB1704	<5	6	1	18	41	0.6	17	11	2.3	<0.5	19	3.8	24	3.4	3.5	<20	3.03	0.44
767	AB1705	<5	5	1	17	75	0.6	17	17	2.8	<0.5	26	3.8	23	2.4	3.3	<20	3.21	0.47
768	AB1706	8	7	2	20	110	0.6	17	10	2.5	0.6	29	5.1	21	2.5	3.1	<20	3.44	0.50
769	AB1707	35	10	7	35	160	1.3	76	51	11.0	2.0	61	13.0	95	13.1	11.0	<20	12.10	1.64
770	AB1708	<5	7	1	20	140	1.1	59	43	7.1	1.1	30	12.0	37	6.2	6.1	<20	4.48	0.57
771	AB1709	41	4	4	29	91	0.8	52	35	6.4	1.2	28	9.1	47	7.1	7.8	<20	5.26	0.68
772	AB1710	30	8	6	65	150	1.1	72	44	9.0	1.3	45	6.4	131	9.8	12.0	<20	10.20	1.34
773	AB1711	70	<4	8	79	130	0.9	63	43	9.7	2.6	69	8.0	200	13.1	16.0	<20	18.00	2.40
774	AB1712	51	<4	5	61	170	0.9	81	33	8.9	2.4	75	7.6	167	10.7	16.0	<20	14.00	1.91
775	AB1713	44	9	6	37	220	1.6	98	73	15.0	2.9	76	13.0	122	16.0	16.0	<20	13.10	1.81
776	AB1714	57	<4	4	34	260	2.3	170	140	28.0	2.9	97	9.5	129	20.5	20.0	<20	12.70	1.76
777	AB1715	<5	7	7	92	93	0.8	45	28	7.1	1.5	42	6.2	161	9.8	13.0	<20	11.70	1.61
778	AB1716	180	10	5	26	160	1.0	61	44	9.3	2.2	61	7.4	118	11.3	12.0	20	12.90	1.64
779	AB1717	<5	<4	5	43	120	0.7	42	29	7.3	1.7	53	7.2	134	9.2	11.0	<20	11.80	1.38
780	AB1718	31	5	5	40	120	0.5	33	19	4.9	2.3	43	5.4	123	7.2	13.0	<20	12.50	1.64
781	AB1719	100	7	6	60	130	0.6	31	17	4.8	1.2	64	8.6	113	6.9	10.0	<20	11.00	1.52
782	AB1720	68	6	4	66	180	1.3	76	45	9.4	1.9	64	11.0	85	9.8	10.0	<20	7.50	0.98
783	AB1721	199	7	3	<2	160	0.8	47	31	5.5	0.7	57	9.1	108	6.0	5.8	<20	4.96	0.66
784	AB1722	15	26	13	111	530	5.3	360	240	49.0	7.5	210	30.0	46	16.0	13.0	<20	26.80	3.50
785	AB1723	501	10	4	<2	190	0.7	43	21	5.8	1.3	71	6.7	268	5.5	6.3	<20	6.95	1.05
786	AB1724	5	5	3	51	120	0.7	55	33	7.4	1.3	70	7.2	<2	10.3	8.7	<20	5.79	0.78
787	AB1725	<5	6	4	98	160	1.1	65	46	9.7	1.7	57	6.8	220	9.0	8.2	<20	5.05	0.70
788	AB1726	55	10	5	125	140	1.0	50	33	5.8	1.3	55	9.2	59	6.5	6.5	<20	7.73	1.02
789	AB1801	65	7	4	34	120	0.8	54	36	7.2	1.2	40	6.5	121	5.3	6.9	<20	6.13	0.84
790	AS1802	<5	7	5	111	120	0.9	66	48	11.0	2.7	55	9.6	256	12.0	12.0	<20	9.33	1.28
791	AB1803	145	<4	4	114	110	1.0	60	41	9.0	1.8	55	8.4	655	9.8	11.0	<20	8.79	1.13
792	AB1804	41	5	2	31	140	0.9	29	25	4.4	1.2	23	4.9	71	3.2	4.6	<20	3.63	0.48
793	AB1805	207	<4	1	30	66	0.6	20	14	2.6	0.7	22	3.3	79	2.9	3.3	<20	3.07	0.40
794	AB1806	37	<4	2	27	84	0.9	43	26	5.2	<0.5	25	4.8	25	3.6	5.3	<20	4.04	0.55
795	AB1807	<5	7	2	18	100	0.9	32	26	4.2	<0.5	27	3.1	43	2.8	4.3	<20	3.50	0.52
796	AB1808	79	10	1	30	85	1.1	50	37	6.3	<0.5	31	4.0	44	5.6	6.2	<20	4.03	0.58
797	AB1809	<5	<4	2	18	99	0.6	22	12	3.0	<0.5	29	5.9	28	2.5	4.4	<20	3.42	0.47
798	AB1810	29	<4	3	25	60	0.5	18	11	2.5	<0.5	28	5.3	33	5.0	4.9	<20	2.75	0.39
799	AB1811	17	<4	2	23	110	0.8	54	27	6.9	0.9	73	4.9	52	8.1	8.3	<20	5.31	0.72
800	AB1812	30	<4	5	37	140	1.0	72	53	11.0	2.4	78	7.2	105	13.4	14.0	<20	11.30	1.54
801	AB1813	35	<4	6	36	140	1.0	76	50	11.0	2.5	80	7.9	105	12.10	16.0	<20	12.10	1.61
802	AB1814	42	10	6	36	180	0.9	64	41	10.0	2.7	79	8.5	127	12.9	15.0	<20	16.50	2.19
803	AB1815	35	8	5	34	170	1.0	56	42	9.4	2.2	75	11.0	94	10.9	13.0	<20	11.70	1.59
804	AB1816	53	6	4	32	170	1.4	84	65	13.0	2.5	77	10.0	101	14.9	21.0	<20	13.30	1.79
805	AB1817	53	6	7	35	150	1.3	95	63	14.0	2.6	61	10.0	107	18.7	21.0	<20	12.60	1.63
806	AB1818	183	7	6	17	130	0.9	50	36	7.0	1.7	50	5.6	166	6.3	13.0	<20	11.10	1.54
807	AB1819	48	<4	5	32	160	1.1	60	52	11.0	2.4	67	8.8	91	12.4	11.0	<20	10.90	1.54
808	AB1820	50	8	6	28	170	1.2	77	57	12.0	2.1	62	11.0	95	11.6	13.0	<20	13.30	1.75
809	AB1821	32	<4	3	26	190	1.6	87	74	17.0	2.4	86	9.2	89	16.3	13.0	<20	9.66	1.26
810	AB1822	19	<4	3	24	140	1.2	62	46	9.3	1.8	63	9.5	80	10.1	12.0	<20	8.81	1.05
811	AB1823	21	8	3	36	160	1.4	67	48	10.0	1.7	62	8.3	77	10.8	11.0	<20	8.11	1.08
812	AB1824	27	10	4	30	180	1.6	78	53	12.0	1.6	77	6.4	66	10.5	9.8	<20	6.54	0.10
813	AB1825	33	8	4	30	190	2.1	130	86	19.0	2.3	79	8.7	90	15.4	15.0	<20	10.80	1.46
814	AB1826	20	12	4	29	200	1.2	73	48	10.0	1.3	86	9.3	45	9.3	8.0	<20	6.54	0.87
815	AB1827	21	<4	5	29	160	1.3	72	43	11.0	1.3	68	10.0	61	10.3	11.0	<20	7.38	1.00
816	AB1901	<5	6	2	17	69	0.5	16	16	2.4	0.7	22	3.2	22	3.2	4.4	<20	3.81	0.59
817	AB1902	<5	8	1	17	100	0.8	22	18	3.5	0.5	27	3.5	30	4.6	4.2	<20	3.72	0.55
818	AB1903	<5	9	2	18	120	0.7	19	13	2.9	1.3	31	4.4	28	3.5	4.1	<20	3.89	0.54
819	AB1904	<5	8	2	14	120	1.1	57	36	6.5	0.7	29	9.3	31	7.8	5.2	<20	4.08	0.53
820	AB1905	34	<4	4	21	100	0.9	38	22	4.6	0.7	40	6.4	31	4.2	5.6	<20	4.22	0.54
821	AB1906	18	6	5	34	120	1.0	67	37	7.7	1.7	43	9.1	66	7.2	9.5	<20	8.47	1.14
822	AB1907	18	8	7	54	140	1.1	69	43	9.4	2.2	41	9.0	95	10.3	14.0	<20	15.20	1.97
823	AB1908	21	8	10	70	140	1.2	65	46	10.0	2.5	50	11.0	153	11.8	20.0	<20	23.80	3.04
824	AB1909	23	<4	8	59	150	0.9	51	28	8.7	2.8	51	8.2	158	14.7	19.0	<20	23.10	2.97
825	AB1910	44	7	6	39	140	1.2	70	47	11.0	2.4	58	9.6	114	13.2	17.0	<20	17.40	2.33
826	AB1911	42	<4	6	39	140	1.0	56	32	8.0	1.7	73	6.7	82	8.9	12.0	<20	12.20	1.71
827	AB1912	38	8	6	37	160	0.9	56	32	7.8	1.7	76	7.7	86	7.8	13.0	<20	13.70	1.88
828	AB1913	38	11	7	40	130	0.6	36	19	4.9	1.5	67	6.9	83	8.8	11.0	<20	12.50	1.65
829	AB1914	23	11	5	38	120	0.4	26	7	4.0	1.5	50	5.3	70	5.2	8.5	<20	10.60	1.51
830	AB1915	38	6	5	30	200	0.5	37	24	5.1	1.3	66	7.4	61	5.6	8.9	<20	9.93	1.22
831	AB1916	41	8	8	33	170	0.7	42	25	6.5	1.8	73	8.8	73	7.5	11.0	<20	11.50	1.50
832	AB1917	34	<4	6	33	150	1.0	54	34	8.0	2.1	57	8.0	84	6.1	10.0	<20	12.60	1.62
833	AB1918	27	<4	5	32	170	1.2	65	47	9.9	1.7	69	18.0	73	9.3	9.3	<20	9.73	1.35
834	AB1919	16	8	6	32	160	0.9	57	35	8.6	1.9	59	8.1	71	10.8	11.0	<20	13.10	1.70
835	AB1920	18	6	4	39	180	1.6	97	60	13.0	2.3	87	14.0	57	6.8	7.0	<20	8.70	1.27
836	AB1921	23	9	4	26	190	2.2	120	66	15.0	2.4	67	10.0	72	13.7	11.0	<20	7.16	0.94
837	AB1922	24	10	3	30	180	1.2	58	35	8.6	1.2	66	6.3	53	6.5	7.6	<20	7.27	1.04
838	AB1923	9	<4	3	22	190	1.0	63	41	7.5	<0.5	58	3.5	39	5.2	5.3	<20	3.51	0.51
839	AB2001	23	6	4	31	140	0.9	65	46	7.7	1.6	66	6.7	66	6.3	5.7	<20	7.34	1.14
840	AB2002	34	8	3	16	140	1.1	67	47	8.5	1.6	99	9.0	64	7.9	9.2	<20	6.49	1.05
841	AB2003	52	7	5	33	100	0.9	47	34	5.5	1.0	48	5.6	49	6.8	8.1	<20	5.63	0.87
842	AB2004	33	8	3	32	120	0.9	55	41	6.2	0.9	67	6.9	60	7.1	9.1	<20	6.38	1.02
843	AB2005	30	<4	5	38	100	0.8	58	31	6.3	1.6	82	7.3	69	5.9	10.9	<20	9.00	1.38
844	AB2006	31	12	6	50	130	0.9	59	35	7.1	1.6	63	9.0	90	6.6	12.6	<20	11.40	1.89
845	AB2007	26	7	7	47	110	0.7	56	45	7.2	1.6	48	7.2	103	7.7	13.4	<20	12.90	2.07
846	AB2008	44	7	8	60	130	0.8	62	46	7.6	2.3	75	7.9	122	7.9	17.1	<20	17.50	2.68
847	AB2009	45	11	6	49	100	0.6	36	22	5.6	2.0	63	8.1	109	9.2	19.0	<20	17.80	2.60

Appendix 4　Chemical analysis data of soil samples

NO	SP.No. unit	Sn ppm	W ppm	Ta ppm	Nb ppm	Ce ppm	Eu ppm	La ppm	Nd ppm	Sm ppm	Tb ppm	Th ppm	U ppm	Y ppm	Gd ppm	Dy ppm	Pr ppm	Yb ppm	Lu ppm
848	AB2010	56	12	7	48	150	0.9	58	46	8.3	2.3	80	8.3	135	9.2	20.9	<20	19.90	2.97
849	AB2011	55	8	6	40	140	0.8	46	36	6.1	2.4	69	7.8	88	9.6	14.5	<20	13.00	1.88
850	AB2012	36	10	7	51	96	0.8	43	29	6.0	2.1	42	13.0	137	7.6	21.6	<20	21.10	2.98
851	AB2013	57	9	6	38	110	0.8	43	36	6.3	1.5	56	7.9	97	9.6	14.6	20	11.70	1.90
852	AB2014	58	9	6	44	120	0.8	46	28	5.7	1.0	51	7.5	90	9.0	13.0	<20	12.50	1.84
853	AB2015	50	4	6	35	100	0.7	31	26	4.8	1.6	52	5.3	73	5.9	10.3	<20	9.55	1.47
854	AB2016	51	9	5	38	120	0.7	34	30	5.5	1.8	56	9.3	77	5.5	11.8	<20	11.10	1.72
855	AB2017	43	<4	6	38	140	0.8	56	39	7.9	2.0	64	7.3	96	7.4	13.6	<20	12.90	1.86
856	AB2018	42	5	5	32	170	1.1	71	51	8.8	0.7	73	11.0	72	8.8	11.8	<20	7.75	1.15
857	AB2019	36	6	5	39	96	0.7	32	19	3.5	1.1	53	7.1	64	8.7	10.7	<20	8.54	1.37
858	AB2020	37	9	5	31	160	1.0	64	40	6.3	0.7	67	9.2	54	6.6	8.7	<20	5.82	0.94
859	AB2021	36	10	4	36	130	0.9	52	28	5.6	1.3	52	7.1	52	6.4	8.1	<20	6.24	1.01
860	AB2101	12	8	3	21	78	0.6	36	23	3.8	0.8	28	4.6	34	6.3	5.2	<20	3.63	0.61
861	AB2102	27	6	4	30	180	1.0	66	50	8.3	1.9	90	8.1	77	2.6	11.8	<20	8.04	1.30
862	AB2103	33	10	5	31	160	1.0	58	44	7.3	2.3	92	9.6	79	7.4	11.6	<20	8.33	1.34
863	AB2104	43	7	6	30	180	1.1	95	62	11.0	2.3	82	9.5	118	7.7	18.3	<20	13.80	2.00
864	AB2105	37	13	6	50	120	0.7	53	35	6.5	2.0	60	9.5	101	11.2	16.2	28	14.30	2.15
865	AB2106	48	<4	4	44	140	0.6	52	33	6.4	1.8	83	6.9	99	7.8	13.4	<20	12.10	1.95
866	AB2107	54	8	7	42	160	0.6	59	46	7.4	1.6	83	7.7	91	7.8	12.8	<20	11.70	1.82
867	AB2108	55	7	7	42	130	0.7	47	39	6.6	2.0	76	8.2	114	8.3	16.3	<20	17.10	2.56
868	AB2109	57	8	6	40	140	0.7	50	30	7.2	2.1	79	7.7	108	8.0	14.8	<20	14.40	2.11
869	AB2110	44	9	7	50	120	0.6	50	40	6.0	1.8	70	9.6	101	7.6	15.3	<20	14.80	2.25
870	AB2111	56	10	6	42	120	0.7	38	23	4.8	2.3	67	7.7	94	7.9	13.7	<20	13.20	2.00
871	AB2112	43	10	6	41	120	0.6	37	29	5.0	1.6	66	7.1	100	9.5	14.6	<20	12.70	2.00
872	AB2113	47	8	6	41	120	0.4	27	14	3.8	1.7	62	6.2	99	5.1	13.1	<20	11.90	1.92
873	AB2114	50	10	6	41	120	0.5	32	21	4.3	1.6	64	7.7	93	6.1	13.4	<20	12.30	1.89
874	AB2115	52	9	6	32	150	0.6	38	33	4.5	1.4	61	6.4	79	4.3	10.6	<20	10.10	1.56
875	AB2116	55	<4	5	31	130	0.8	46	40	6.4	1.5	51	9.7	78	6.7	11.3	<20	9.78	1.57
876	AB2117	39	11	6	36	180	0.8	47	28	5.8	1.2	59	11.0	72	5.8	11.2	<20	8.96	1.43
877	AB2118	34	9	5	42	110	0.7	33	21	4.2	1.0	41	9.2	72	4.4	11.1	<20	10.00	1.53
878	AB2119	41	8	4	35	160	0.7	39	26	4.5	1.0	67	5.5	66	5.9	9.3	<20	6.66	1.18
879	AB2120	24	6	4	35	89	0.7	49	36	4.7	1.2	36	5.7	51	5.4	7.1	<20	4.70	0.74
880	AB2121	21	9	4	39	120	0.8	59	40	8.7	1.1	33	5.9	56	11.6	8.7	<20	6.11	0.94
881	AB2122	45	<4	6	38	180	1.2	100	91	11.0	2.0	100	15.0	85	2.3	15.1	<20	10.20	1.56
882	AB2201	8	<4	3	22	76	0.7	26	19	3.0	<0.5	27	4.2	31	5.3	4.2	<20	3.38	0.61
883	AB2202	21	5	3	25	96	0.7	47	28	5.1	0.9	37	5.1	46	8.5	7.4	<20	4.73	0.74
884	AB2203	28	9	4	42	140	1.0	58	44	7.7	1.6	73	8.0	81	6.8	12.4	<20	7.76	1.31
885	AB2204	38	11	4	31	140	0.7	52	35	6.9	1.6	80	7.9	82	10.5	12.5	<20	8.33	1.34
886	AB2205	31	<4	5	40	140	0.9	59	46	7.9	1.9	83	9.1	95	8.3	14.7	<20	13.10	2.04
887	AB2206	42	8	6	37	110	0.6	41	33	6.1	1.5	45	8.5	105	11.6	15.0	<20	15.00	2.17
888	AB2207	59	<4	6	38	140	0.8	57	41	9.3	2.0	61	7.4	115	6.1	16.5	<20	13.80	2.21
889	AB2208	65	<4	6	36	130	0.4	35	25	4.4	1.4	65	6.0	100	9.2	13.7	<20	11.80	1.92
890	AB2209	59	<4	5	38	110	0.4	36	29	5.2	1.5	65	6.8	110	6.3	15.7	<20	13.40	1.92
891	AB2210	50	<4	7	43	140	0.4	38	21	4.7	1.5	73	6.8	91	6.5	13.9	<20	12.70	2.01
892	AB2211	51	13	5	41	100	0.5	44	32	5.1	1.3	78	10.0	82	5.1	12.0	<20	10.60	1.59
893	AB2212	54	<4	5	41	150	0.5	38	27	4.8	1.4	78	8.2	88	6.1	13.3	<20	12.60	1.81
894	AB2213	37	12	5	38	100	0.5	40	26	4.6	1.4	61	7.3	71	4.7	10.3	<20	8.71	1.35
895	AB2214	38	10	4	37	130	0.7	50	35	6.2	1.4	72	6.3	72	3.8	10.5	<20	7.43	1.25
896	AB2215	40	7	5	40	93	0.7	36	31	4.5	1.2	49	6.2	69	6.9	10.3	<20	9.02	1.32
897	AB2216	44	11	5	39	94	0.6	35	23	4.2	1.4	51	7.6	72	8.3	10.4	<20	9.66	1.45
898	AB2217	36	10	5	33	160	1.1	84	55	8.1	1.2	71	12.0	81	7.1	11.7	<20	8.45	1.31
899	AB2218	37	9	5	37	120	0.8	50	38	6.4	1.2	58	10.0	66	4.5	9.7	<20	6.23	1.25
900	AB2219	26	7	4	36	53	0.5	30	21	3.3	0.7	21	4.5	44	6.1	6.0	<20	4.79	0.73
901	AB2220	30	<4	5	41	110	0.8	59	35	6.6	1.1	49	7.7	69	5.5	9.7	<20	6.82	1.09
902	AB2221	33	<4	4	37	140	0.7	62	45	6.6	1.0	72	13.0	61	6.0	9.2	30	6.30	1.22
903	AB2301	30	10	5	34	130	0.9	50	33	6.1	1.0	59	8.9	69	6.3	12.5	<20	10.10	1.59
904	AB2302	31	12	6	37	110	0.8	52	27	6.0	1.0	89	9.6	82	8.1	12.8	<20	10.30	1.52
905	AB2303	59	<4	5	38	130	0.8	51	38	7.0	2.0	67	7.0	118	10.0	16.2	20	14.30	2.21
906	AB2304	61	<4	6	38	130	0.6	49	31	6.6	1.9	66	7.6	110	10.1	16.1	<20	14.70	2.16
907	AB2305	48	<4	5	27	110	0.8	56	48	9.3	2.4	54	7.5	126	8.8	18.0	<20	16.90	2.50
908	AB2306	67	6	7	40	130	0.6	37	28	6.3	2.4	60	7.7	117	7.0	16.1	<20	18.40	2.68
909	AB2307	45	<4	9	51	76	0.5	18	24	3.7	1.9	44	6.8	142	7.2	18.7	<20	20.80	3.13
910	AB2308	60	8	7	47	91	0.4	21	17	4.2	2.0	56	7.2	142	8.4	18.9	<20	21.10	3.06
911	AB2309	42	6	6	38	110	0.5	30	25	5.4	2.4	59	7.5	134	9.3	18.4	20	19.00	2.78
912	AB2310	57	9	7	36	100	0.6	41	36	6.4	2.0	78	8.9	112	8.4	16.9	<20	16.90	2.50
913	AB2311	48	10	7	49	150	0.5	40	37	6.4	1.9	81	9.2	118	9.3	18.4	<20	18.60	2.78
914	AB2312	48	15	6	40	170	0.6	50	30	6.6	1.6	81	8.1	87	8.2	15.2	<20	12.30	1.84
915	AB2313	48	11	6	41	170	0.7	63	47	7.4	1.5	83	8.9	69	5.3	11.5	<20	8.18	1.33
916	AB2314	31	8	5	40	100	0.5	38	25	4.1	1.1	51	8.1	61	10.0	9.2	<20	8.29	1.24
917	AB2315	37	<4	4	30	170	1.3	76	62	10.0	1.0	77	12.0	81	7.3	12.1	<20	8.87	1.29
918	AB2316	39	11	5	43	110	0.9	50	31	5.7	1.4	42	8.0	74	4.2	9.4	<20	9.26	1.34
919	AB2317	33	6	4	33	96	0.7	41	31	4.8	0.8	49	4.6	54	8.6	11.0	<20	6.07	0.91
920	AB2318	29	<4	4	40	120	0.8	58	47	7.1	1.4	68	5.9	71	4.3	10.3	<20	7.51	1.17
921	AB2319	34	9	4	42	170	0.7	57	41	6.6	1.4	81	9.3	61	6.0	8.1	<20	7.36	1.19
922	AB2320	34	7	4	36	190	0.9	59	44	7.2	0.7	91	15.0	53	3.8	4.0	<20	5.78	0.93
923	AB2321	<5	<4	1	20	62	<0.2	24	18	2.8	<0.5	19	2.2	26	2.4	5.5	<20	3.18	0.50
924	AB2322	13	<4	2	21	73	0.7	33	26	3.7	0.7	25	3.8	34	6.8	5.9	<20	3.99	0.68
925	AB2323	25	<4	3	28	71	0.6	38	26	4.4	0.9	37	6.9	42	7.7	11.2	<20	4.90	0.75
926	AB2324	29	9	4	27	120	0.8	58	41	7.6	1.2	47	9.0	63	7.8	7.7	26	7.97	1.19
927	AB2325	26	6	3	19	96	0.8	49	39	6.1	1.1	34	6.9	50	7.1	6.5	<20	6.22	0.95
928	AB2326	18	9	2	19	130	1.5	58	40	7.6	0.9	26	2.7	34	8.0	13.1	<20	4.05	0.73
929	AB2401	29	13	5	45	160	0.8	68	50	7.1	1.4	90	7.0	82	11.0	12.3	<20	9.87	1.46
930	AB2402	18	12	3	31	170	1.1	85	62	9.6	1.7	110	11.0	84	9.1	11.1	<20	8.53	1.48
931	AB2403	28	8	5	37	140	0.7	47	38	6.1	1.0	91	9.6	68	6.5	15.3	<20	8.08	1.31
932	AB2404	36	10	5	37	160	1.3	96	69	11.0	2.0	89	19.0	92	13.2	15.1	<20	11.10	1.69
933	AB2405	49	<4	6	45	120	0.7	52	41	7.9	2.4	53	7.1	124	10.1	18.2	<20	16.80	2.48
934	AB2406	66	6	7	45	120	0.7	36	23	5.6	1.7	53	6.9	133	8.2	17.7	<20	16.50	2.52
935	AB2407	56	<4	7	43	140	0.6	41	19	8.0	2.3	47	6.8	147	8.3	19.9	<20	19.90	2.70
936	AB2408	48	6	7	38	110	0.6	30	16	7.6	3.0	44	6.5	165	11.3	23.0	<20	25.10	3.28
937	AB2409	59	<4	7	39	100	0.6	34	25	7.5	2.1	60	6.2	136	8.8	21.9	<20	21.30	2.84
938	AB2410	18	<4	3	14	140	1.1	66	46	11.0	1.0	38	32.0	75	11.4	12.6	24	8.73	1.32
939	AB2411	40	13	6	46	180	0.8	69	48	9.8	2.3	77	7.0	88	10.8	13.3	<20	13.90	1.88
940	AB2412	40	<4	5	31	170	1.1	67	50	8.9	0.7	56	7.5	59	6.7	8.0	<20	6.46	1.01
941	AB2413	42	<4	4	29	160	1.6	93	67	13.0	2.2	68	12.0	79	9.0	12.7	<20	7.75	1.17

Appendix 4 Chemical analysis data of soil samples

NO	SP.No. unit	Sn ppm	W ppm	Ta ppm	Nb ppm	Ce ppm	Eu ppm	La ppm	Nd ppm	Sm ppm	Tb ppm	Th ppm	U ppm	Y ppm	Gd ppm	Dy ppm	Pr ppm	Yb ppm	Lu ppm
942	A82414	34	4	4	31	90	0.8	46	33	6.1	0.9	51	5.0	51	4.3	8.0	<20	5.26	0.86
943	A82415	33	<4	4	27	93	0.9	43	32	5.7	0.6	53	3.9	40	4.9	7.5	<20	4.34	0.73
944	A82416	18	<4	2	21	49	0.6	25	13	3.8	<0.5	22	2.0	37	2.7	5.3	<20	4.34	0.43
945	A82417	17	<4	3	27	67	0.6	38	32	5.0	1.3	25	2.6	53	4.2	7.4	<20	5.39	0.78
946	A82418	28	<4	5	44	160	1.2	66	36	10.0	1.8	60	6.5	84	6.8	13.4	<20	10.50	1.51
947	A82419	34	10	4	41	210	1.0	65	57	9.3	1.5	77	9.4	82	8.5	10.0	<20	10.70	1.40
948	A82420	0	6	2	19	74	0.5	11	12	2.3	<0.5	20	2.2	26	2.5	4.3	<20	3.19	0.44
949	A82421	10	<4	<1	23	47	0.7	23	20	3.6	<0.5	19	2.3	35	2.3	4.8	<20	4.02	0.55
950	A82422	18	<4	2	25	84	0.7	31	21	4.8	<0.5	30	4.6	34	2.2	5.7	<20	4.81	0.68
951	A82423	30	7	2	28	120	0.6	48	43	7.3	0.7	50	7.1	50	6.6	8.0	<20	6.00	0.90
952	A82424	59	<4	5	24	130	0.9	62	43	9.6	2.1	44	7.9	58	9.2	7.9	<20	8.26	1.11
953	A82425	28	<4	3	24	100	1.0	51	23	7.7	0.7	33	5.6	50	7.5	6.4	<20	5.48	0.80
954	A82501	11	<4	2	23	100	0.9	47	28	6.5	0.7	24	3.9	45	6.7	6.1	<20	4.86	0.68
955	A82502	29	9	3	28	150	1.2	75	53	11.0	1.4	82	8.7	81	7.6	12.0	<20	8.66	1.24
956	A82503	37	14	4	36	190	1.1	65	44	11.0	1.3	100	8.1	90	9.9	13.7	<20	11.70	1.65
957	A82504	40	<4	4	44	150	0.7	48	29	7.0	2.3	73	6.0	106	8.2	14.9	<20	13.10	1.96
958	A82505	49	<4	6	43	150	0.6	30	19	5.5	1.5	75	6.9	71	5.6	11.9	<20	10.90	1.56
959	A82506	59	<4	6	39	120	<0.2	24	26	5.7	1.2	61	6.5	104	7.6	14.8	<20	13.90	2.02
960	A82507	38	7	8	53	62	0.8	28	22	5.8	2.4	40	11.0	147	7.4	20.7	<20	22.70	3.12
961	A82508	49	7	5	38	120	0.4	18	12	4.2	2.4	47	4.3	128	8.5	18.0	<20	16.70	2.20
962	A82509	51	<4	6	44	93	0.6	23	14	5.1	2.8	39	5.6	144	7.2	18.8	24	21.10	2.81
963	A82510	47	9	6	51	89	0.7	38	30	6.1	1.5	57	6.8	112	6.4	15.6	<20	15.20	1.97
964	A82511	49	12	6	49	200	0.7	70	57	9.5	1.0	68	9.3	78	8.0	10.8	<20	8.82	1.12
965	A82512	36	6	5	38	100	1.0	42	29	5.5	1.0	55	6.7	61	4.5	8.3	<20	7.10	0.98
966	A82513	37	9	5	41	96	0.8	43	32	5.8	1.4	53	8.1	64	5.2	9.2	<20	8.00	1.04
967	A82514	35	<4	6	44	100	0.8	47	30	6.9	1.1	37	7.5	66	5.6	9.4	<20	8.53	1.23
968	A82515	27	<4	4	33	97	0.9	45	30	6.2	0.7	35	4.6	53	5.1	6.9	<20	6.40	0.83
969	A82516	<5	<4	2	31	99	0.8	50	38	7.5	0.7	32	3.6	58	5.9	7.7	<20	6.47	0.85
970	A82517	29	<4	3	36	150	1.2	65	41	9.7	0.9	71	6.8	65	7.3	9.9	<20	7.86	1.07
971	A82518	26	<4	5	41	170	1.1	70	43	10.0	0.9	62	8.2	81	8.3	12.5	<20	8.90	1.35
972	A82519	29	<4	5	44	200	1.2	76	41	11.0	1.0	54	6.9	86	9.3	12.3	<20	9.88	1.49
973	A82520	14	<4	<1	18	87	0.9	18	20	2.7	1.4	28	2.8	27	2.8	4.1	<20	2.99	0.43
974	A82521	21	<4	2	24	62	0.6	27	17	4.1	1.4	25	5.0	35	3.8	5.1	<20	4.45	0.62
975	A82522	22	6	3	27	93	0.7	43	29	6.8	0.6	36	5.8	43	5.1	7.3	<20	5.36	0.92
976	A82523	24	<4	3	23	96	0.9	47	34	7.2	1.6	32	6.7	52	5.8	8.1	<20	6.03	0.96
977	A82524	17	<4	3	21	140	1.4	55	51	9.2	0.6	27	3.9	43	7.7	8.0	<20	5.10	0.77
978	A82525	9	6	<1	21	100	0.6	22	22	3.3	<0.5	16	3.4	28	5.8	4.3	<20	2.54	0.35
979	A82526	15	<4	1	19	96	0.7	32	21	4.4	1.8	22	3.8	31	4.7	4.7	<20	3.03	0.48
980	A82601	13	<4	2	19	110	1.0	43	30	5.9	<0.5	24	3.4	34	4.6	5.6	<20	3.92	0.56
981	A82602	23	<4	4	28	100	0.7	46	25	6.6	0.6	38	6.8	44	5.8	6.7	<20	5.39	0.71
982	A82603	23	<4	2	26	99	0.9	46	27	6.8	0.6	38	5.3	47	5.2	7.3	<20	5.24	0.80
983	A82604	43	<4	4	23	100	0.9	51	30	7.9	1.2	33	6.5	44	8.5	7.6	<20	6.00	0.90
984	A82605	13	6	<1	19	120	0.7	28	21	4.4	1.3	21	3.0	27	4.7	4.5	<20	3.50	0.50
985	A82606	11	<4	1	20	110	0.7	25	21	4.4	<0.5	26	3.5	29	3.4	3.5	<20	3.67	0.42
986	A82607	13	<4	2	17	110	1.0	39	30	5.7	<0.5	22	4.0	28	3.3	4.4	<20	2.77	0.47
987	A82608	16	6	2	19	130	0.8	35	31	5.8	<0.5	23	2.8	29	5.8	4.7	<20	3.00	0.49
988	A82609	6	6	4	30	180	1.3	66	49	9.0	1.0	72	7.0	69	7.4	4.9	<20	8.37	1.17
989	A82610	27	12	5	39	170	1.1	74	60	11.0	1.2	68	7.5	90	11.9	10.4	<20	10.90	1.66
990	A82611	39	12	7	47	170	0.9	51	30	7.6	1.8	77	9.7	88	8.5	12.7	<20	11.10	1.63
991	A82612	34	<4	6	41	140	0.8	51	32	7.8	1.3	81	8.0	95	8.1	12.3	<20	12.10	1.81
992	A82613	47	5	7	54	120	0.4	44	24	6.9	2.3	71	7.2	104	6.2	13.9	<20	14.30	1.81
993	A82614	61	<4	10	63	130	1.0	40	32	7.1	2.6	57	9.0	146	8.3	16.1	<20	22.50	3.28
994	A82615	52	<4	5	46	67	0.6	20	14	4.1	1.7	54	4.9	109	6.3	21.1	<20	15.10	2.07
995	A82616	49	<4	9	61	120	0.7	38	28	7.3	2.9	50	10.0	161	10.4	13.1	<20	21.80	3.09
996	A82617	31	10	9	60	130	1.0	49	39	7.7	2.1	48	9.8	138	10.4	21.3	<20	18.20	2.69
997	A82618	29	18	7	61	120	0.8	43	34	7.0	<0.5	48	8.4	116	10.1	14.0	<20	16.50	2.19
998	A82619	35	10	6	44	120	0.9	39	28	6.2	1.9	46	9.6	89	6.9	10.8	<20	12.20	1.56
999	A82620	37	6	6	39	130	<0.2	63	40	10.0	2.5	54	16.0	82	10.3	11.6	<20	10.50	1.49
1000	A82621	24	<4	3	50	140	1.2	59	37	9.1	1.1	52	7.9	88	10.7	12.4	<20	10.10	1.39
1001	A82622	46	<4	5	35	170	0.8	62	44	8.9	1.4	89	8.1	83	10.8	12.9	<20	11.70	1.66
1002	A82623	44	<4	5	34	160	0.7	42	33	6.1	1.4	89	9.1	68	6.2	9.2	<20	6.91	1.01
1003	A82624	40	12	4	36	150	0.6	34	11	4.3	<0.5	96	7.3	47	3.9	7.1	<20	6.77	0.98
1004	A82625	29	<4	3	33	130	0.4	33	22	4.2	<0.5	83	7.5	40	2.5	6.2	<20	6.16	0.87
1005	A82626	34	<4	4	42	180	1.1	90	54	12.0	2.5	78	16.0	84	12.5	12.9	<20	11.00	1.47
1006	A82627	34	<4	6	35	230	0.7	64	40	8.4	<0.5	99	14.0	43	7.9	6.9	<20	8.73	0.77
1007	A82701	30	<4	4	27	110	0.8	58	39	8.4	1.7	44	6.4	48	7.4	8.0	<20	6.69	0.94
1008	A82702	41	<4	5	24	150	0.9	76	51	11.0	<0.5	60	10.0	64	9.4	14.2	50	10.90	1.52
1009	A82703	29	<4	3	27	120	0.9	54	24	7.2	<0.5	39	6.9	55	6.3	8.1	26	6.64	0.92
1010	A82704	20	<4	1	21	100	<0.2	39	25	4.9	<0.5	26	3.6	35	5.0	5.3	<20	4.24	0.59
1011	A82705	16	<4	<1	19	91	1.0	35	28	4.6	<0.5	22	2.8	26	4.3	4.3	<20	3.65	0.54
1012	A82706	17	<4	2	29	120	0.9	53	28	6.5	<0.5	64	5.7	57	6.9	7.6	<20	6.66	0.91
1013	A82707	18	<4	3	29	170	1.0	60	39	8.1	<0.5	110	7.6	71	8.2	9.4	<20	8.31	0.96
1014	A82708	30	<4	4	28	160	0.9	65	31	8.0	<0.5	95	11.0	71	8.8	10.6	<20	8.78	1.11
1015	A82709	32	13	7	51	190	1.1	61	33	7.8	1.3	78	12.0	100	8.4	15.3	21	14.10	1.75
1016	A82710	33	<4	4	43	160	1.1	62	45	10.0	1.2	67	6.3	100	10.1	13.9	<20	11.70	1.70
1017	A82711	38	6	6	44	140	0.7	55	34	8.0	2.3	72	5.1	97	8.2	13.8	<20	11.40	1.70
1018	A82712	44	<4	5	37	100	0.6	30	17	5.0	1.7	72	5.9	79	7.4	11.1	<20	9.00	1.30
1019	A82713	54	9	5	39	88	0.6	19	9	3.9	1.6	55	5.2	102	5.9	9.2	<20	13.70	1.95
1020	A82714	45	<4	5	43	120	0.7	39	17	6.6	1.8	77	7.1	85	6.1	12.4	<20	11.40	1.73
1021	A82715	36	11	8	59	150	1.0	63	39	9.0	2.6	48	11.0	117	7.1	15.6	<20	16.90	2.43
1022	A82716	39	8	5	46	88	0.8	45	23	5.9	1.7	47	8.5	93	7.8	13.1	<20	11.70	1.78
1023	A82717	31	<4	3	35	77	0.6	33	20	4.6	1.0	44	7.3	56	2.6	6.6	<20	6.15	0.88
1024	A82718	28	7	3	36	120	1.0	63	30	7.5	1.1	34	8.1	64	8.3	9.4	<20	8.20	1.09
1025	A82719	33	8	3	34	140	1.4	71	52	12.0	1.0	53	10.0	75	10.3	13.1	<20	9.02	1.25
1026	A82720	29	<4	4	39	150	1.1	71	49	9.7	1.5	66	7.3	69	9.1	10.5	<20	7.77	1.16
1027	A82721	26	<4	5	43	180	1.0	68	47	10.0	2.2	81	7.9	84	10.1	14.4	<20	10.80	1.55
1028	A82722	33	8	4	38	150	1.2	60	46	10.0	2.2	71	8.3	80	11.4	13.9	<20	9.35	1.38
1029	A82723	36	<4	3	34	190	0.8	52	41	9.5	1.0	83	7.9	74	7.2	12.3	<20	9.37	1.20
1030	A82724	35	<4	3	31	200	1.1	90	56	12.0	1.9	92	9.9	62	8.5	10.6	<20	6.61	0.97
1031	A82725	37	14	6	37	170	1.5	79	52	11.0	2.4	78	24.0	79	7.5	13.3	<20	10.50	1.64
1032	A82726	32	6	4	36	190	0.8	44	24	7.0	0.7	80	12.0	44	5.7	8.4	<20	6.02	0.87
1033	A82727	36	<4	4	38	200	0.7	53	44	7.8	0.9	89	14.0	46	6.8	7.1	<20	6.72	0.90
1034	A82801	25	<4	2	23	110	1.0	52	44	7.6	0.7	29	5.8	46	7.0	7.9	<20	5.37	0.72
1035	A82802	18	<4	1	23	110	1.1	55	40	8.1	0.8	32	5.6	44	7.8	7.8	<20	5.35	0.70

Appendix 4 Chemical analysis data of soil samples

NO	SP.No. unit	Sn ppm	U ppm	Ta ppm	Nb ppm	Ce ppm	Eu ppm	La ppm	Nd ppm	Sm ppm	Tb ppm	Th ppm	U ppm	Y ppm	Gd ppm	Dy ppm	Pr ppm	Yb ppm	Lu ppm
1036	AB2803	20	8	4	33	130	1.0	65	49	8.6	1.1	52	7.4	64	7.8	10.5	<20	6.72	0.89
1037	AB2804	29	<4	5	42	170	1.2	85	60	12.0	1.6	82	7.8	81	10.5	13.3	<20	9.49	1.34
1038	AB2805	30	7	4	41	160	1.0	75	50	11.0	1.6	86	6.8	85	9.5	13.8	<20	9.56	1.34
1039	AB2806	27	<4	4	40	160	0.9	57	38	9.2	1.9	91	7.6	84	7.6	13.6	<20	10.00	1.44
1040	AB2807	36	11	6	45	170	1.0	61	41	9.7	2.4	86	8.3	96	7.8	14.8	<20	12.70	1.69
1041	AB2808	28	9	5	37	140	0.8	60	40	9.1	1.7	73	6.1	85	9.2	13.4	<20	10.50	1.57
1042	AB2809	19	<4	4	39	110	0.7	40	27	6.3	1.3	71	4.8	73	7.8	11.6	<20	9.96	1.43
1043	AB2810	40	<4	6	42	110	0.6	41	29	5.9	1.4	68	11.0	78	7.5	11.7	<20	9.73	1.39
1044	AB2811	49	<4	6	55	110	<0.2	43	30	6.6	1.6	72	7.1	114	8.4	17.3	<20	15.70	2.22
1045	AB2812	51	5	6	45	95	0.7	34	17	6.0	2.1	56	5.9	104	7.8	15.3	<20	15.20	2.08
1046	AB2813	41	<4	7	50	83	0.7	32	17	5.8	1.8	50	7.8	105	8.0	16.8	<20	15.40	2.15
1047	AB2814	43	10	5	40	93	0.6	34	17	4.3	1.2	61	6.5	77	5.7	11.2	<20	10.00	1.45
1048	AB2815	41	9	4	37	82	0.7	33	16	4.0	1.2	55	5.5	64	3.8	9.6	<20	9.85	1.29
1049	AB2816	12	<4	2	20	80	0.9	34	29	5.1	0.7	22	6.1	36	3.4	6.1	<20	4.77	0.71
1050	AB2817	8	<4	1	15	87	1.0	37	28	6.7	0.9	21	5.3	35	4.6	6.1	<20	4.15	0.65
1051	AB2818	7	<4	1	17	87	0.8	30	10	4.1	0.9	24	3.5	28	2.9	4.5	<20	3.08	0.47
1052	AB2819	10	<4	2	21	91	0.9	34	22	5.6	0.9	24	6.2	31	2.2	5.3	<20	4.03	0.55
1053	AB2820	7	7	2	19	97	0.7	33	19	4.6	0.7	27	4.9	29	2.9	4.8	<20	3.71	0.53
1054	AB2821	13	<4	2	21	73	0.9	30	23	4.3	0.5	20	4.5	31	6.5	4.5	<20	3.46	0.57
1055	AB2822	17	7	2	24	90	0.8	38	22	5.2	0.8	31	6.3	40	5.4	6.0	<20	4.96	0.73
1056	AB2823	17	7	2	22	93	1.0	37	24	5.6	0.8	31	7.5	38	5.6	5.9	<20	4.28	0.69
1057	AB2824	9	<4	2	20	100	0.9	44	32	6.4	1.3	30	9.3	46	6.2	6.7	<20	5.43	0.83
1058	AB2825	20	<4	3	25	120	1.0	42	28	7.3	0.7	46	10.0	43	5.4	7.0	<20	6.08	0.84
1059	AB2826	27	<4	3	33	140	0.7	52	37	7.2	0.7	59	8.9	44	5.9	7.6	<20	5.84	0.94
1060	AB2901	23	<4	3	25	96	0.7	44	36	6.4	1.5	31	6.3	51	6.2	6.7	<20	5.79	0.81
1061	AB2902	24	<4	3	27	130	0.9	53	35	7.6	1.0	40	7.2	53	5.7	8.3	<20	6.57	0.95
1062	AB2903	30	<4	4	33	150	0.9	65	47	9.7	0.9	70	7.8	69	6.5	12.0	27	8.09	1.19
1063	AB2904	30	10	4	43	120	1.0	60	41	7.1	1.4	72	7.9	75	9.9	11.1	<20	8.47	1.19
1064	AB2905	30	8	4	42	84	0.7	32	27	4.8	1.5	79	6.7	75	5.3	11.7	<20	9.02	1.29
1065	AB2906	31	16	7	62	120	1.2	60	34	8.2	2.3	60	15.0	114	9.2	16.8	<20	14.80	1.97
1066	AB2907	33	7	5	39	150	0.7	63	37	8.2	1.8	82	5.3	84	9.4	14.1	<20	11.20	1.47
1067	AB2908	42	7	7	47	120	0.7	47	29	6.8	2.0	96	7.1	94	8.3	14.0	<20	13.40	1.76
1068	AB2909	37	9	7	50	81	0.5	38	27	5.5	2.0	81	6.6	100	7.2	15.9	<20	13.90	1.97
1069	AB2910	34	10	5	47	91	0.6	31	24	4.6	1.8	71	6.5	85	6.7	13.0	<20	12.20	1.67
1070	AB2911	38	12	7	57	90	0.8	41	25	6.1	2.0	53	11.0	116	8.3	16.6	<20	16.60	2.28
1071	AB2912	50	9	7	48	59	0.6	36	11	3.7	1.7	58	8.2	81	3.6	11.5	<20	11.10	1.53
1072	AB2913	51	11	6	49	63	0.7	39	19	4.2	1.6	66	5.7	86	7.3	10.9	<20	12.10	1.70
1073	AB2914	46	9	4	36	82	0.7	45	22	4.8	1.5	66	5.7	65	5.4	10.1	<20	8.36	1.17
1074	AB2915	45	7	4	29	200	1.1	73	45	9.4	1.8	62	7.6	73	7.9	11.9	<20	8.57	1.22
1075	AB2916	15	7	2	20	110	0.8	31	22	3.7	0.6	35	5.6	28	5.1	5.5	<20	3.78	0.54
1076	AB2917	10	7	3	20	66	0.7	31	21	3.6	0.5	23	5.7	31	2.9	4.4	<20	3.83	0.53
1077	AB2918	12	7	2	21	70	0.7	38	22	3.8	0.9	25	5.3	34	2.5	4.5	<20	3.85	0.55
1078	AB3001	35	5	3	25	120	1.2	57	40	7.6	0.7	33	7.4	50	9.2	7.8	<20	5.74	0.76
1079	AB3002	42	5	3	27	120	0.9	55	35	7.4	1.3	41	7.2	48	6.6	8.9	<20	6.18	0.86
1080	AB3003	41	7	3	30	110	0.9	52	39	7.0	1.4	46	9.3	50	7.9	8.9	<20	5.96	0.82
1081	AB3004	41	7	4	39	120	0.6	36	27	5.2	1.0	66	7.4	60	6.9	9.2	<20	7.29	1.03
1082	AB3005	44	6	4	37	100	0.9	30	27	5.9	1.2	98	5.5	65	6.4	11.5	<20	8.12	1.10
1083	AB3006	44	5	3	33	73	0.7	27	22	3.9	0.9	100	5.7	50	5.6	9.2	<20	7.44	1.02
1084	AB3007	39	10	5	43	120	1.0	60	40	7.8	1.6	54	7.1	84	6.5	12.3	<20	10.70	1.45
1085	AB3008	61	7	5	44	120	0.6	52	40	7.1	2.0	86	5.5	86	9.1	14.6	<20	12.60	1.65
1086	AB3009	59	8	5	43	91	0.6	41	25	6.2	1.7	68	6.6	91	7.4	14.0	<20	13.40	1.86
1087	AB3010	71	8	6	43	57	0.6	25	11	3.7	1.3	62	5.7	79	4.8	12.2	<20	10.90	1.58
1088	AB3011	66	10	7	47	71	0.7	30	22	4.3	1.8	55	9.7	92	3.6	14.3	<20	13.00	1.78
1089	AB3012	67	9	5	42	74	0.7	31	20	4.2	1.3	56	7.9	61	6.2	10.5	<20	9.09	1.38
1090	AB3013	53	11	6	39	65	0.5	25	13	3.2	1.2	50	4.8	59	3.4	8.7	<20	8.57	1.23
1091	AB3014	68	7	5	35	98	0.8	46	20	5.4	1.4	71	7.9	77	5.8	11.9	<20	10.50	1.50
1092	AB3015	37	9	3	37	66	0.6	36	15	4.4	1.3	37	6.2	67	7.9	10.8	<20	8.05	1.09
1093	AB3016	28	6	2	19	93	0.9	33	25	4.4	1.0	28	8.3	32	2.7	5.3	<20	4.66	0.62
1094	AB3017	39	6	3	26	95	0.5	26	14	3.4	1.0	60	6.7	33	5.6	5.6	<20	4.40	0.62
1095	AB3101	36	<4	3	23	93	1.0	49	32	6.3	1.3	31	6.3	48	5.9	8.2	<20	4.76	0.72
1096	AB3102	36	7	3	24	120	1.1	62	45	7.8	1.8	42	7.4	50	7.5	9.0	<20	6.47	0.85
1097	AB3103	25	<4	3	27	140	0.9	52	31	6.8	1.6	47	8.3	46	7.4	7.1	<20	5.77	0.83
1098	AB3104	31	6	3	30	100	0.7	51	36	6.7	1.0	39	7.2	52	6.5	8.3	<20	5.98	0.80
1099	AB3105	40	6	3	33	93	0.7	42	25	5.9	1.0	53	8.2	50	7.3	9.3	<20	6.95	0.91
1100	AB3106	52	<4	5	38	140	0.9	60	48	7.6	2.1	93	6.8	71	7.3	11.4	<20	9.10	1.31
1101	AB3107	30	6	5	38	96	0.7	45	28	6.0	1.6	82	9.7	71	5.6	11.4	<20	8.81	1.29
1102	AB3108	57	7	6	43	100	0.7	40	30	5.9	1.7	84	6.2	82	6.6	12.0	<20	12.20	1.71
1103	AB3109	61	9	7	44	83	0.7	40	27	5.7	1.7	68	7.2	90	9.3	13.2	<20	13.20	1.73
1104	AB3110	79	10	6	39	42	<0.2	20	10	2.6	1.6	69	5.7	52	6.1	8.0	<20	9.06	1.21
1105	AB3111	68	9	6	43	68	<0.2	31	10	4.0	1.2	50	7.3	67	4.6	9.6	<20	9.61	1.35
1106	AB3112	82	10	6	41	38	<0.2	22	15	2.6	1.4	62	5.6	70	6.0	9.9	<20	10.50	1.45
1107	AB3113	80	8	5	36	54	0.3	16	7	1.9	0.7	63	3.7	39	5.6	6.1	<20	5.61	0.77
1108	AB3114	76	<4	6	37	77	0.3	14	10	1.9	0.7	75	5.1	56	4.4	7.1	<20	7.09	1.03
1109	AB3115	56	7	5	36	150	0.4	13	20	2.2	1.5	74	6.3	48	1.6	8.3	<20	6.09	1.12
1110	AB3116	64	<4	5	34	240	0.8	48	25	5.7	2.2	70	8.7	63	4.1	10.0	<20	9.64	1.31
1111	AB3117	25	7	2	19	100	1.1	59	38	6.3	1.0	34	5.8	46	5.8	7.3	<20	5.92	0.73
1112	AB3118	37	<4	4	37	110	0.8	37	24	5.1	1.2	59	7.4	54	6.1	8.4	<20	7.33	1.07
1113	AB3201	38	<4	3	25	120	0.9	53	35	6.9	1.4	39	8.0	49	8.1	8.5	<20	5.70	0.84
1114	AB3202	48	6	3	28	100	1.1	48	36	6.5	1.3	33	7.4	49	6.2	8.4	<20	5.55	0.77
1115	AB3203	32	8	4	33	100	1.0	46	31	6.1	0.8	40	7.8	56	5.5	7.9	<20	6.97	0.94
1116	AB3204	56	9	5	37	120	0.4	43	36	6.3	1.6	78	6.2	67	5.4	10.4	<20	9.48	1.32
1117	AB3205	52	10	6	39	87	0.6	39	27	5.4	1.5	83	5.9	68	5.6	10.6	<20	9.76	1.37
1118	AB3206	62	9	5	38	110	0.6	38	27	4.9	1.7	79	7.2	62	4.2	10.2	<20	8.69	1.25
1119	AB3207	58	9	4	40	110	0.8	42	25	5.9	1.7	70	7.9	84	9.4	13.8	<20	12.30	1.67
1120	AB3208	34	<4	4	28	71	0.6	34	26	3.9	0.9	37	7.3	41	6.6	5.3	<20	5.13	0.71
1121	AB3209	33	10	4	39	65	0.8	18	14	4.0	1.0	34	8.6	55	3.9	7.3	<20	7.88	0.99
1122	AB3210	53	9	6	39	69	0.6	29	19	3.7	1.1	50	7.3	54	3.5	8.1	<20	7.89	1.07
1123	AB3211	70	12	5	37	54	0.5	25	12	2.7	1.2	57	5.2	48	3.6	6.3	<20	6.25	0.86
1124	AB3212	61	9	4	33	56	0.4	24	19	2.7	0.7	50	3.8	40	3.1	6.0	<20	5.75	0.79
1125	AB3213	73	8	5	32	44	0.5	24	18	2.5	1.6	52	3.4	50	4.3	8.1	<20	7.30	0.98
1126	AB3214	74	5	4	29	51	0.3	27	15	2.7	0.7	67	3.5	39	2.9	6.0	<20	5.26	0.76
1127	AB3215	80	10	6	40	150	0.8	36	13	4.4	1.0	77	7.4	54	3.2	6.3	<20	6.64	0.96
1128	AB3216	30	<4	3	21	120	1.3	59	44	8.0	1.0	32	8.8	50	7.5	6.1	<20	6.31	0.85
1129	AB3217	29	5	2	17	81	0.8	39	25	4.7	0.7	31	7.2	32	4.9	5.6	<20	4.16	0.63

NO	SP.No. unit	Sn ppm	W ppm	Ta ppm	Nb ppm	Ce ppm	Eu ppm	La ppm	Nd ppm	Sm ppm	Tb ppm	Th ppm	U ppm	Y ppm	Gd ppm	Dy ppm	Pr ppm	Yb ppm	Lu ppm
1130	AB3218	33	<4	1	18	96	1.0	44	36	5.6	0.7	34	4.8	35	5.0	6.8	<20	4.29	0.65
1131	AB3219	38	<4	5	41	130	0.5	43	36	6.3	0.7	65	8.6	48	6.9	8.6	<20	6.87	0.91
1132	AB3220	40	6	4	39	130	0.6	41	34	5.2	0.9	68	9.1	50	4.8	7.4	<20	6.45	0.93
1133	AB3221	49	6	3	33	140	0.5	34	28	4.6	0.9	76	9.2	38	6.9	21.5	<20	4.76	0.65
1134	AB3222	38	7	4	35	120	0.6	36	26	4.7	0.9	66	9.8	39	5.4	7.0	<20	4.99	0.70
1135	AB3223	35	<4	3	28	100	0.6	32	23	4.1	0.9	55	6.9	34	4.4	6.6	<20	4.47	0.62
1136	AB3224	34	<4	4	33	76	0.6	39	25	4.8	1.2	39	9.4	48	6.2	7.3	<20	7.07	1.04
1137	AB3301	30	<4	2	20	120	1.0	46	37	6.0	0.9	36	5.7	39	6.5	5.9	<20	4.98	0.70
1138	AB3302	30	<4	3	18	110	1.0	44	26	5.9	0.7	31	4.5	37	3.8	6.4	<20	4.49	0.60
1139	AB3303	30	<4	2	18	91	0.7	33	20	4.3	0.7	20	4.6	30	4.2	5.6	<20	3.71	0.52
1140	AB3304	35	<4	3	20	120	0.7	38	29	5.0	0.7	43	8.1	38	5.3	6.4	<20	4.95	0.76
1141	AB3305	31	7	3	25	130	1.2	57	48	7.8	1.1	34	7.4	47	7.6	9.1	<20	5.68	0.74
1142	AB3306	31	<4	3	23	110	1.0	48	35	6.5	1.0	32	8.2	43	6.2	7.3	<20	5.76	0.80
1143	AB3307	97	<4	7	31	200	1.0	100	68	13.0	3.3	81	15.0	90	17.1	23.6	<20	15.30	2.12
1144	AB3308	37	<4	2	26	120	0.9	46	32	6.1	1.0	37	7.4	44	7.0	6.8	<20	5.31	0.77
1145	AB3309	39	8	2	22	90	0.8	40	28	5.3	1.4	30	6.1	41	4.8	8.6	<20	4.70	0.67
1146	AB3310	29	9	2	24	64	0.7	32	22	4.8	0.7	28	6.4	36	3.5	5.5	<20	4.75	0.61
1147	AB3311	26	7	3	23	80	0.8	32	24	3.9	0.7	29	8.1	35	4.7	5.4	<20	4.32	0.59
1148	AB3312	32	7	2	23	67	0.7	32	22	3.9	0.9	28	7.3	34	4.3	5.3	<20	4.27	0.67
1149	AB3313	31	7	3	21	71	0.7	31	21	4.1	0.9	29	6.5	34	4.4	5.3	<20	4.72	0.63
1150	AB3314	30	<4	2	23	72	0.8	32	22	4.1	0.9	29	6.6	36	3.7	4.8	<20	4.42	0.64
1151	AB3315	22	<4	2	19	100	1.1	44	36	5.8	0.9	28	5.5	40	4.3	6.2	<20	4.69	0.60
1152	AB3316	29	<4	3	23	86	0.8	39	28	5.4	1.2	30	11.0	45	4.8	6.4	<20	5.05	0.84
1153	AB3317	28	<4	3	20	88	0.8	41	30	5.4	1.0	30	8.9	42	4.7	5.9	<20	6.15	0.89
1154	AB3318	33	<4	2	18	93	0.8	43	27	5.5	0.9	29	11.0	39	4.4	5.8	<20	5.75	0.82
1155	AB3319	22	9	2	18	110	1.0	43	34	5.6	0.9	32	6.0	34	4.9	5.7	<20	4.55	0.61
1156	AB3320	29	8	3	23	77	0.9	36	19	4.0	0.7	35	7.0	34	4.4	5.1	<20	4.05	0.51
1157	AB3321	25	7	2	22	51	0.6	24	16	2.9	0.6	24	4.3	29	2.6	3.4	<20	3.37	0.47
1158	AB3322	27	<4	2	21	85	0.7	37	23	4.7	0.7	26	6.8	32	4.4	5.4	<20	4.17	0.64
1159	AB3323	33	5	3	29	68	0.4	25	20	3.2	0.9	35	6.2	44	3.7	6.7	<20	5.26	0.90
1160	AB3401	35	5	3	25	79	0.6	37	28	4.4	0.8	36	6.4	39	5.8	7.0	<20	4.37	0.85
1161	AB3402	26	7	2	19	99	0.8	35	26	4.6	0.7	33	3.6	36	4.9	6.9	<20	3.91	0.66
1162	AB3403	33	8	3	24	98	0.8	37	35	4.7	0.7	33	5.8	40	6.0	7.0	<20	4.63	0.71
1163	AB3404	27	7	3	24	78	0.7	34	28	4.3	0.7	26	5.5	37	6.5	7.3	<20	4.57	0.71
1164	AB3405	35	7	<1	20	88	0.7	37	30	4.9	0.7	31	4.5	37	5.9	6.5	<20	3.90	0.66
1165	AB3406	40	8	3	29	140	1.1	70	46	8.4	1.2	71	9.2	68	10.2	12.6	<20	7.57	1.24
1166	AB3407	40	7	3	24	92	0.8	40	27	5.5	0.6	33	8.0	44	6.4	8.4	<20	5.58	0.89
1167	AB3408	34	7	2	23	93	0.8	44	38	5.7	0.7	29	7.5	47	6.6	7.6	<20	4.84	0.75
1168	AB3409	27	6	2	19	97	0.8	36	26	4.5	0.7	33	4.9	36	7.0	6.0	<20	4.11	0.69
1169	AB3410	24	7	2	19	78	0.7	28	27	3.5	0.7	24	5.5	32	5.3	4.4	<20	3.60	0.55
1170	AB3411	34	6	2	22	76	0.8	33	31	4.5	0.8	29	8.1	43	4.5	6.2	<20	4.42	0.77
1171	AB3412	29	<4	3	22	93	0.8	38	27	4.8	0.8	28	8.5	45	5.6	7.2	<20	5.20	0.87
1172	AB3413	26	9	3	21	72	0.8	34	31	4.4	0.8	24	7.7	44	5.5	6.7	<20	4.73	0.72
1173	AB3414	29	<4	2	22	69	0.7	33	21	4.1	0.8	26	6.4	38	3.6	6.2	<20	4.35	0.74
1174	AB3415	25	5	<1	21	100	0.8	36	30	4.5	1.0	30	5.5	34	6.1	6.1	<20	4.07	0.67
1175	AB3416	29	7	3	20	86	0.6	38	35	5.0	1.0	30	8.8	44	6.3	6.5	<20	5.39	0.94
1176	AB3417	25	7	2	22	70	0.6	25	21	3.1	0.7	26	4.9	32	2.9	4.8	<20	3.38	0.61
1177	AB3418	24	6	2	22	79	0.6	37	34	4.6	0.7	25	8.2	42	4.3	5.6	<20	4.21	0.64
1178	AB3419	29	6	2	22	47	0.5	21	23	2.6	0.5	18	4.9	31	2.2	3.5	<20	3.41	0.59
1179	AB3420	26	7	2	21	64	0.6	29	17	3.5	0.7	25	5.5	34	4.4	5.5	<20	4.17	0.67
1180	AB3421	32	5	3	21	58	0.5	29	21	3.5	0.6	31	8.2	32	4.7	5.1	<20	3.72	0.58
1181	AB3422	30	<4	2	24	53	0.5	25	11	3.0	<0.5	29	5.4	36	4.6	5.6	<20	3.95	0.65
1182	AB3423	14	<4	3	29	45	0.5	22	12	2.6	0.7	29	6.0	41	3.6	5.6	<20	4.33	0.78
1183	AB3501	51	7	5	37	140	0.8	47	38	6.4	1.4	78	7.6	78	8.5	13.2	<20	9.68	1.62
1184	AB3502	50	<4	6	44	74	0.6	30	23	4.5	1.3	44	6.7	79	6.5	11.7	<20	10.50	1.56
1185	AB3503	31	8	3	25	52	0.4	25	14	2.9	0.7	30	6.0	39	3.9	5.4	<20	4.28	0.72
1186	AB3504	35	7	3	28	61	0.6	32	19	3.5	0.8	30	6.9	40	5.0	7.4	<20	5.05	0.87
1187	AB3505	34	9	3	34	55	0.6	28	22	3.3	0.9	27	6.6	49	3.7	6.4	<20	6.47	0.98
1188	AB3506	32	8	3	25	56	0.6	23	16	3.0	0.8	31	5.4	32	4.5	5.9	<20	4.36	0.73
1189	AB3507	28	<4	2	21	98	0.8	37	28	5.3	0.9	31	6.1	39	4.6	6.2	<20	4.59	0.79
1190	AB3508	32	7	3	24	76	0.7	33	28	4.4	0.9	28	5.2	47	3.2	7.3	<20	5.74	0.98
1191	AB3509	17	10	4	33	69	0.6	31	13	4.1	1.2	33	6.0	57	5.1	8.8	<20	8.39	1.22
1192	AB3510	60	9	5	41	70	0.6	35	11	3.9	1.7	55	5.6	62	5.3	8.4	<20	9.82	1.21
1193	AB3511	88	6	7	45	100	0.8	41	32	6.5	2.9	60	5.8	105	8.7	17.3	<20	16.70	2.31
1194	AB3512	71	9	8	37	150	0.5	25	18	3.6	1.1	64	4.4	66	3.8	8.9	<20	9.67	1.26
1195	AB3601	62	7	6	38	57	0.4	24	10	3.2	1.7	61	4.4	68	5.1	9.2	<20	10.20	1.37
1196	AB3602	59	5	6	38	66	<0.2	24	14	3.8	1.7	62	4.0	72	6.1	10.8	<20	11.90	1.61
1197	AB3603	66	5	4	37	77	0.6	34	26	4.8	1.5	80	4.3	74	2.3	10.8	<20	10.50	1.47
1198	AB3604	62	10	7	39	100	<0.2	41	26	5.3	1.7	76	6.8	65	7.4	10.6	<20	12.10	1.64
1199	AB3605	57	9	7	42	79	0.6	38	21	4.9	1.7	65	5.5	72	5.3	10.3	<20	11.00	1.54
1200	AB3606	52	10	7	46	100	0.9	36	24	5.2	1.8	61	6.3	81	5.3	12.7	<20	13.30	1.78
1201	AB3607	50	12	6	46	100	0.9	52	25	5.8	1.4	48	9.6	74	4.7	11.0	<20	11.10	1.50
1202	AB3608	66	10	6	39	51	0.5	34	12	3.5	1.6	63	6.2	69	5.6	9.6	<20	11.20	1.45
1203	AB3609	73	11	7	37	70	<0.2	40	18	3.8	2.2	64	6.6	63	4.7	10.8	<20	10.70	1.26
1204	AB3610	68	12	6	44	82	0.7	45	15	4.8	1.3	55	5.0	67	6.7	10.0	<20	9.10	1.16
1205	BA0101	<5	<4	<1	16	66	0.4	28	9	1.6	<0.5	20	2.3	15	0.9	1.3	<20	2.18	0.34
1206	BA0102	<5	<4	<1	18	43	0.5	14	8	1.5	<0.5	19	1.9	17	2.0	1.3	<20	1.96	0.32
1207	BA0103	<5	<4	1	19	53	0.5	15	8	1.7	<0.5	21	3.4	13	1.4	2.4	<20	2.91	0.33
1208	BA0201	<5	<4	<1	16	100	0.9	28	26	4.3	<0.5	27	3.3	15	4.6	3.6	<20	2.81	0.47
1209	BA0202	<5	7	<1	16	130	1.2	52	33	6.1	<0.5	27	3.2	30	3.2	4.5	<20	3.16	0.46
1210	BA0203	<5	<4	1	18	82	0.4	9	8	1.2	<0.5	22	3.5	<2	<0.5	1.6	<20	2.44	0.31
1211	BA0204	<5	<4	3	20	140	0.5	11	8	1.5	<0.5	25	4.1	12	3.1	2.2	<20	2.91	0.44
1212	BA0205	<5	<4	<1	18	90	0.5	53	7	3.8	<0.5	24	4.1	10	3.6	3.1	<20	2.34	0.42
1213	BA0206	11	6	4	35	320	1.4	160	91	22.0	4.0	110	24.0	114	20.0	21.6	20	15.50	2.00
1214	BA0207	24	8	7	50	220	1.7	110	54	17.0	1.9	96	22.0	88	16.0	18.5	<20	14.90	2.13
1215	BA0301	<6	5	<1	17	40	0.6	13	7	1.1	<0.5	23	2.8	8	2.4	1.5	<20	2.75	0.39
1216	BA0302	16	6	8	40	190	1.2	100	49	14.0	2.7	75	15.0	80	11.1	13.9	22	11.00	1.46
1217	BA0303	<5	<4	<1	13	82	<0.2	14	6	2.0	<0.5	30	4.8	12	1.6	1.4	<20	2.37	0.36
1218	BA0304	<5	<4	<1	19	87	<0.2	13	14	2.0	<0.5	28	2.9	7	2.8	1.9	<20	2.45	0.39
1219	BA0305	12	<4	<1	34	310	1.3	170	110	23.0	1.9	110	19.0	78	17.8	19.6	<20	14.50	1.98
1220	BA0306	12	5	<1	50	220	1.3	120	77	16.0	2.4	78	17.0	90	15.3	15.7	<20	12.20	1.66
1221	BA0307	17	9	6	48	150	0.8	67	27	8.8	1.1	86	16.0	70	8.9	8.3	<20	8.83	1.14
1222	BA0308	8	<4	5	35	370	1.6	220	130	28.0	5.0	130	22.0	102	20.5	24.1	<20	16.40	2.33
1223	BA0309	15	<4	4	37	150	<0.2	78	43	10.0	1.1	62	12.0	55	7.1	10.4	<20	9.31	1.33

NO	SP.No. unit	Sn ppm	W ppm	Ta ppm	Nb ppm	Ce ppm	Eu ppm	La ppm	Nd ppm	Sm ppm	Tb ppm	Th ppm	U ppm	Y ppm	Gd ppm	Dy ppm	Pr ppm	Yb ppm	Lu ppm
1224	BA0310	28	8	7	49	210	1.3	86	50	13.0	1.7	95	19.0	98	11.7	14.9	28	11.80	1.68
1225	BA0311	26	9	7	44	200	1.7	88	45	12.0	1.2	87	17.0	89	10.2	13.8	<20	10.50	1.51
1226	BA0312	24	9	8	43	190	1.3	85	58	14.0	1.9	95	18.0	89	13.5	16.4	<20	12.30	1.72
1227	BA0313	28	8	6	43	210	1.3	82	51	12.0	1.3	88	17.0	92	9.6	12.2	<20	11.30	1.49
1228	BA0314	28	7	7	67	190	1.7	86	42	14.0	1.3	85	14.0	89	13.5	13.6	<20	11.20	1.44
1229	BA0401	10	5	3	32	160	0.9	80	46	11.0	1.2	58	15.0	67	8.9	10.9	<20	9.10	1.24
1230	BA0402	<5	5	3	30	38	0.3	22	<5	2.6	0.7	42	6.8	28	2.9	2.8	<20	4.83	0.66
1231	BA0403	<5	5	3	28	70	0.7	20	12	3.5	<0.5	28	6.8	39	3.2	4.5	<20	3.93	0.55
1232	BA0404	8	7	5	44	130	0.7	49	25	6.4	0.7	49	8.9	76	3.7	7.1	<20	5.99	0.87
1233	BA0406	<5	6	<1	17	130	<0.2	9	5	1.3	<0.5	24	4.1	11	0.8	1.7	<20	2.45	0.35
1234	BA0407	12	7	5	39	87	<0.2	40	25	5.4	0.8	61	5.6	65	5.4	6.6	<20	6.21	0.86
1235	BA0408	11	6	5	37	72	0.6	36	22	4.6	0.8	44	6.2	7	4.8	6.4	<20	6.86	0.94
1236	BA0501	<5	<4	<1	21	63	0.9	26	10	3.4	0.8	29	4.4	36	4.0	4.8	<20	4.29	0.61
1237	BA0502	10	7	5	37	170	0.8	61	36	9.0	2.0	75	15.0	66	11.1	10.4	<20	7.63	1.10
1238	BA0503	<5	<4	3	19	93	1.0	41	27	5.7	1.1	25	6.5	34	5.1	6.4	<20	5.09	0.69
1239	BA0504	<5	<4	<1	18	93	1.2	38	17	5.2	0.7	20	1.4	44	5.9	4.4	<20	3.33	0.48
1240	BA0505	<5	5	1	18	100	0.8	19	12	3.0	0.7	27	4.4	39	4.0	4.0	<20	4.39	0.68
1241	BA0601	<5	<4	<1	47	28	<0.2	14	<5	1.7	0.5	25	3.0	35	2.3	4.3	<20	4.04	0.57
1242	BA0602	<5	<4	<1	18	36	0.6	13	<5	1.9	0.5	25	2.9	36	2.5	3.9	<20	4.26	0.58
1243	BA0603	<5	<4	1	22	46	0.5	19	<5	2.3	<0.5	23	3.5	32	3.1	4.6	<20	3.53	0.52
1244	BA0604	<5	5	2	29	110	1.4	57	34	8.1	1.1	37	12.0	60	7.2	8.7	<20	7.54	1.07
1245	BA0605	7	<4	4	36	160	0.9	86	50	12.0	2.0	62	14.0	74	10.4	12.3	<20	10.70	1.51
1246	BA0606	6	5	4	35	180	1.1	87	49	12.0	2.2	59	12.0	126	9.1	11.6	<20	10.70	1.43
1247	BA0701	<5	<4	<1	20	42	0.6	16	8	1.9	0.7	26	3.1	32	3.7	4.3	<20	4.54	0.53
1248	BA0702	<5	4	<1	20	48	0.8	23	12	3.1	0.6	21	2.3	23	3.5	5.0	<20	3.61	0.54
1249	BA0703	<5	<4	<1	20	69	0.8	40	19	4.4	0.5	21	3.5	36	5.3	5.2	<20	4.17	0.62
1250	BA0704	<5	5	2	22	70	<0.2	25	10	3.0	0.5	35	2.7	35	1.6	3.9	<20	4.09	0.59
1251	BA0705	5	7	<1	28	95	0.9	42	20	5.1	0.7	49	6.6	22	3.4	5.7	<20	5.02	0.71
1252	BA0706	<5	6	3	26	110	1.0	51	28	6.2	0.7	38	7.7	9	8.0	7.2	<20	5.36	0.85
1253	BA0707	<5	6	3	32	150	0.9	71	39	9.9	1.1	55	14.0	70	8.2	11.6	<20	9.09	1.18
1254	BA0708	37	<4	3	154	140	1.1	75	63	10.0	1.2	54	17.0	498	9.8	11.5	<20	8.90	1.29
1255	BA0709	<5	<4	<1	23	73	0.6	25	12	2.4	0.9	22	2.7	19	3.6	4.9	<20	3.45	0.51
1256	BA0901	<5	<4	<1	19	44	0.8	26	16	2.9	<0.5	15	2.1	27	1.1	4.5	<20	3.79	0.49
1257	BA0902	31	10	7	53	150	1.2	72	41	11.0	1.5	60	12.0	111	12.4	13.9	<20	11.20	1.45
1258	BA0903	8	6	1	27	73	<0.2	31	17	4.0	0.7	37	5.6	34	4.8	6.5	<20	4.37	0.61
1259	BA0904	<5	<4	2	19	60	0.6	17	11	2.2	<0.5	23	3.5	24	1.9	2.5	<20	2.47	0.35
1260	BA0905	<5	<4	<1	18	21	<0.2	7	7	0.8	<0.5	21	2.1	<2	0.8	2.1	<20	1.85	0.36
1261	BA0906	<5	9	2	25	24	0.4	11	6	1.6	<0.5	27	3.6	28	2.6	3.2	<20	3.37	0.52
1262	BA0907	<5	6	3	42	69	0.9	40	18	5.1	0.7	39	5.9	36	3.5	6.6	<20	5.01	0.80
1263	BA0908	<5	<4	5	32	240	3.0	130	81	21.0	3.5	43	28.0	163	20.5	26.4	<20	16.30	2.02
1264	BA0909	16	8	3	39	110	0.8	52	20	6.3	1.0	58	11.0	47	5.3	7.7	<20	6.28	0.90
1265	BA0910	<5	4	4	28	61	0.2	25	7	2.3	0.5	30	4.0	17	3.7	2.7	<20	2.97	0.51
1266	BA0911	<5	<4	<1	22	95	0.6	24	13	1.7	<0.5	30	3.0	14	4.1	1.8	<20	2.23	0.40
1267	BA1001	15	6	5	38	93	0.9	45	26	6.3	0.7	42	8.5	48	4.1	7.8	<20	6.71	0.93
1268	BA1002	24	8	6	48	150	0.9	72	39	11.0	2.3	59	11.0	94	11.1	13.3	<20	10.60	1.54
1269	BA1003	<5	<4	3	24	32	<0.2	17	<5	2.3	<0.5	26	3.2	20	3.2	3.8	<20	3.10	0.45
1270	BA1004	<5	<4	2	24	20	<0.2	11	<5	1.5	<0.5	25	3.6	15	2.2	3.3	<20	3.37	0.50
1271	BA1005	6	6	2	31	42	<0.2	28	13	2.6	<0.5	36	4.3	27	1.6	4.2	<20	4.28	0.59
1272	BA1006	<5	5	2	24	53	0.5	28	16	2.7	<0.5	27	4.7	19	2.9	4.1	<20	3.57	0.51
1273	BA1007	5	6	6	36	110	<0.2	49	23	6.0	1.0	59	10.0	44	5.9	6.5	<20	6.27	0.87
1274	BA1008	10	5	4	<2	87	0.6	45	27	5.3	1.3	49	8.0	37	4.0	6.4	<20	5.34	0.85
1275	BA1009	<5	<4	5	48	98	<0.2	47	23	5.3	0.7	39	6.2	34	5.3	5.3	<20	5.18	0.83
1276	BA1010	<5	5	<1	23	69	<0.2	20	11	1.5	<0.5	28	3.0	12	0.7	2.6	<20	2.12	0.38
1277	BA1011	<5	<4	<1	26	93	0.3	30	9	2.0	<0.5	34	4.1	16	4.2	2.3	<20	2.33	0.40
1278	BA1101	<5	<4	2	28	64	1.0	30	20	5.1	0.7	29	5.1	48	6.9	7.0	<20	4.82	0.63
1279	BA1102	10	<4	6	41	140	1.3	80	44	12.0	1.9	43	14.0	97	12.2	13.5	<20	11.50	1.59
1280	BA1103	7	<4	4	34	100	0.9	43	31	6.4	1.7	37	8.5	48	7.9	8.2	<20	6.98	0.97
1281	BA1104	25	10	8	58	150	1.3	83	48	12.0	2.2	56	12.0	104	10.5	15.7	<20	12.70	1.78
1282	BA1105	10	7	5	41	130	1.0	58	36	7.7	2.2	61	13.0	48	8.4	8.1	20	6.31	1.02
1283	BA1106	12	4	6	38	110	<0.2	58	26	7.0	0.9	46	6.1	48	8.6	9.1	<20	6.32	0.83
1284	BA1107	17	5	7	60	120	0.7	60	45	6.8	0.8	49	7.9	61	7.3	7.3	<20	6.25	1.00
1285	BA1108	16	<4	6	46	99	<0.2	48	35	5.2	0.9	65	9.4	46	7.4	9.1	<20	5.14	0.86
1286	BA1109	14	4	8	60	110	0.7	58	39	6.8	0.7	48	7.5	60	7.8	8.7	<20	6.51	1.13
1287	BA1110	13	4	7	69	100	0.7	56	37	6.2	1.3	43	6.2	71	5.8	14.8	<20	6.70	1.09
1288	BA1201	15	8	5	42	140	1.2	72	59	9.5	2.0	48	15.0	103	11.9	12.3	<20	9.52	1.40
1289	BA1202	12	8	4	49	110	0.9	57	47	6.9	1.0	41	10.0	73	8.0	8.0	<20	7.33	1.16
1290	BA1203	28	7	5	40	100	0.6	40	5.4	2.7	<0.5	47	5.1	49	5.9	4.9	<20	6.10	0.94
1291	BA1204	14	<4	3	36	54	0.6	23	12	2.7	<0.5	29	5.8	39	1.6	2.3	<20	3.85	0.68
1292	BA1205	9	<4	2	23	29	0.3	11	5	1.3	<0.5	26	5.4	13	2.1	3.9	<20	2.29	0.47
1293	BA1206	20	5	3	30	51	0.5	19	13	2.2	0.8	38	7.5	22	1.6	3.9	<20	3.33	0.55
1294	BA1207	15	<4	2	24	56	0.5	24	21	2.8	<0.5	23	5.5	24	0.8	15.2	<20	2.97	0.45
1295	BA1301	43	7	6	44	130	1.0	68	57	9.1	1.6	58	14.0	88	11.2	7.2	20	10.20	1.49
1296	BA1302	23	6	3	30	76	0.5	35	24	4.2	0.7	36	8.1	39	4.3	7.0	<20	5.08	0.86
1297	BA1303	9	<4	2	25	54	0.3	10	10	1.4	0.8	32	4.2	16	2.3	3.4	<20	2.63	0.47
1298	BA1304	12	4	2	24	32	<0.2	5	<5	0.8	0.5	29	3.6	13	0.8	2.3	<20	2.42	0.41
1299	BA1401	59	5	6	38	160	0.9	61	46	8.1	1.5	75	11.0	78	8.5	12.2	<20	8.94	1.44
1300	BA1402	50	5	6	41	160	0.9	63	47	8.2	1.9	67	11.0	76	8.0	12.8	<20	9.09	1.34
1301	BA1403	13	<4	2	26	56	0.3	5	8	0.6	<0.5	31	5.7	13	1.4	2.5	<20	1.97	0.34
1302	BA1404	7	8	2	25	52	<0.5	18	11	2.2	<0.5	28	4.3	25	1.5	3.4	<20	3.06	0.57
1303	BA1501	12	4	2	22	56	0.6	21	14	2.6	<0.5	19	3.5	28	3.9	4.6	<20	3.07	0.46
1304	BA1502	42	7	8	41	200	1.5	91	73	13.0	2.4	78	13.0	116	15.9	18.2	<20	13.50	1.85
1305	BA1503	47	9	8	37	140	0.8	63	42	7.9	1.8	59	11.0	85	10.0	12.6	<20	10.80	1.63
1306	BA1504	58	7	5	39	150	0.9	63	43	8.3	1.3	73	13.0	73	9.4	11.5	<20	9.36	1.37
1307	BA1505	56	5	6	37	160	1.0	74	59	9.5	1.7	74	12.0	89	9.4	14.3	<20	10.20	1.52
1308	BB0101	9	<4	1	16	54	0.6	20	11	2.2	<0.5	20	2.2	29	2.0	4.8	<20	2.82	0.49
1309	BB0102	9	<4	1	16	54	0.5	15	11	1.9	<0.5	20	3.1	26	1.0	4.3	<20	3.28	0.52
1310	BB0103	<5	<4	1	19	74	0.7	21	13	2.4	<0.5	22	2.9	28	1.7	4.8	<20	3.13	0.55
1311	BB0104	<5	<4	1	22	65	0.7	21	19	2.7	<0.5	26	2.9	30	3.8	5.4	<20	3.51	0.66
1312	BB0105	<5	<4	1	19	67	0.6	26	10	3.2	<0.5	21	3.1	27	4.6	4.8	<20	3.24	0.51
1313	BB0106	10	5	1	23	52	0.7	25	26	2.9	<0.5	23	4.4	37	2.1	5.7	<20	4.25	0.68
1314	BB0201	7	<4	1	19	56	0.4	19	<5	1.5	<0.5	21	2.6	31	2.2	4.3	<20	3.20	0.53
1315	BB0202	<5	<4	1	18	37	0.5	28	<5	1.8	<0.5	20	2.9	15	1.7	4.2	<20	2.98	0.45
1316	BB0203	<5	<4	1	17	35	0.7	22	16	2.4	<0.5	18	2.7	31	3.3	3.4	<20	4.02	0.47
1317	BB0204	<5	6	1	26	71	1.2	35	25	4.5	<0.5	30	6.7	21	4.1	6.9	<20	3.53	0.70

Appendix 4　Chemical analysis data of soil samples

NO	SP.No. unit	Sn ppm	W ppm	Ta ppm	Nb ppm	Ce ppm	Eu ppm	La ppm	Nd ppm	Sm ppm	Tb ppm	Th ppm	U ppm	Y ppm	Gd ppm	Dy ppm	Pr ppm	Yb ppm	Lu ppm
1318	BB0205	<5	8	1	39	93	1.0	47	38	6.2	<0.5	38	9.2	65	5.2	7.5	<20	6.51	0.98
1319	BB0206	15	11	1	66	140	1.1	58	43	7.6	<0.5	86	14.0	54	6.6	9.6	<20	7.88	1.03
1320	BB0207	18	12	1	42	60	0.9	37	28	5.1	1.4	55	12.0	91	4.3	9.8	<20	8.62	1.09
1321	BB0301	<5	<4	1	17	97	1.0	31	20	3.7	<0.5	24	4.0	27	2.1	4.4	<20	3.69	0.57
1322	BB0302	<5	5	1	20	47	<0.2	22	17	2.6	1.0	26	4.9	29	3.1	4.8	<20	3.93	0.58
1323	BB0303	<5	4	1	19	74	<0.2	31	16	2.3	<0.5	23	3.1	26	3.0	4.2	<20	3.66	0.46
1324	BB0304	<5	<4	1	17	110	1.1	33	23	4.0	<0.5	39	4.3	72	4.1	4.4	<20	3.86	0.47
1325	BB0305	11	8	1	39	120	1.3	59	39	8.7	0.2	40	13.0	74	8.1	11.3	<20	10.40	1.42
1326	BB0306	<5	9	1	24	39	0.7	17	13	2.4	1.1	31	4.4	28	1.7	5.0	<20	4.13	0.57
1327	BB0307	<5	10	1	41	47	0.7	22	13	2.8	1.8	36	6.4	47	1.6	6.1	<20	6.05	0.76
1328	BB0401	11	14	1	33	90	1.1	43	29	5.9	1.3	41	11.0	51	8.1	9.6	<20	7.53	0.93
1329	BB0402	<5	<4	1	18	38	0.6	15	10	1.6	0.6	24	3.1	28	2.9	3.6	<20	3.37	0.47
1330	BB0403	<5	4	1	23	39	0.3	23	15	2.5	0.7	25	5.2	31	3.5	4.6	<20	4.37	0.59
1331	BB0404	12	8	1	44	120	1.3	65	38	9.3	2.3	43	13.0	85	8.1	11.6	<20	11.30	1.44
1332	BB0405	<5	7	1	21	61	0.7	29	12	2.7	<0.5	20	3.6	30	3.4	3.3	<20	2.66	0.38
1333	BB0501	<5	<4	1	16	44	0.7	18	10	2.2	0.5	21	3.9	31	3.2	3.6	<20	3.25	0.48
1334	BB0502	<5	<4	1	18	31	<0.2	14	10	1.5	0.6	25	3.2	58	0.8	3.9	<20	3.55	0.43
1335	BB0503	<5	6	1	15	60	<0.2	21	15	2.1	0.5	25	2.4	28	0.9	3.6	<20	3.37	0.43
1336	BB0504	<5	5	1	<2	57	<0.2	21	15	2.4	<0.5	27	4.5	6	1.5	3.0	<20	3.76	0.47
1337	BB0601	<5	7	1	21	140	0.8	29	30	3.5	<0.5	30	5.0	31	2.7	4.8	<20	4.26	0.59
1338	BB0602	<5	5	1	21	38	0.8	20	18	2.4	0.8	29	4.3	46	2.3	4.5	<20	4.63	0.59
1339	BB0603	<5	5	1	17	25	0.6	14	7	1.7	<0.5	25	5.1	18	4.4	3.6	<20	3.80	0.41
1340	BB0604	<5	6	1	18	31	0.6	18	9	2.0	<0.5	29	3.9	21	2.4	3.6	<20	3.79	0.49
1341	BB0605	<5	11	1	27	74	1.2	30	19	4.2	1.0	44	8.9	37	3.1	5.6	<20	6.01	0.74
1342	BB0606	9	6	1	28	110	1.0	62	44	9.0	1.8	42	12.0	51	8.3	13.6	<20	12.30	1.55
1343	BB0607	6	10	1	24	74	0.9	24	15	3.4	0.9	36	8.1	75	2.5	4.8	<20	5.68	0.92
1344	BB0701	14	12	1	37	110	<0.2	41	21	5.9	1.0	62	13.0	46	3.4	8.7	<20	7.98	1.05
1345	BB0702	<5	8	1	23	43	0.9	27	18	3.2	0.9	36	5.6	31	3.7	4.6	<20	4.98	0.63
1346	BB0703	<5	6	1	27	41	0.9	24	17	3.1	0.8	41	7.2	42	2.1	5.0	<20	5.52	0.73
1347	BB0704	<5	8	1	24	58	0.8	31	20	4.2	0.8	39	5.2	39	2.5	6.0	<20	5.88	0.73
1348	BB0705	14	10	5	38	150	1.2	74	48	11.0	1.7	50	11.0	42	9.4	12.3	<20	11.90	1.61
1349	BB0706	9	9	3	32	160	0.8	33	14	4.9	1.0	47	7.6	32	0.8	6.2	<20	7.57	1.06
1350	BB0707	<5	<4	2	24	96	0.7	18	10	1.8	1.1	34	2.8	<2	1.1	4.2	<20	5.20	0.54
1351	BB0708	<5	<4	2	26	110	0.7	15	10	2.4	1.0	41	3.6	2	1.5	4.4	<20	5.49	0.75
1352	BB0801	<5	<4	3	27	120	1.1	64	26	7.2	0.9	39	8.7	61	9.9	10.6	<20	7.03	0.95
1353	BB0802	13	14	5	34	160	1.1	56	22	7.5	1.3	54	11.0	123	6.6	5.3	<20	9.18	1.22
1354	BB0803	14	12	4	37	150	1.0	80	50	12.0	1.5	58	19.0	175	12.9	9.2	<20	12.70	1.78
1355	BB0804	17	12	6	31	160	1.2	85	52	12.0	2.3	60	21.0	<2	15.6	8.8	<20	15.90	2.21
1356	BB0805	<5	8	2	17	120	0.7	20	9	2.8	0.9	45	6.1	7	3.5	5.3	<20	5.66	0.87
1357	BB0806	<5	<4	2	22	160	0.4	9	9	1.7	0.9	46	3.8	<2	0.8	4.1	<20	5.41	0.77
1358	BB0807	<5	<4	1	24	89	<0.2	8	5	1.3	0.7	48	4.2	27	1.1	4.5	<20	5.27	0.74
1359	BB0901	<5	<4	2	22	53	0.7	31	9	2.9	0.7	33	4.6	<2	3.4	4.7	<20	5.00	0.75
1360	BB0902	12	9	5	38	230	0.9	62	39	9.3	1.4	80	11.0	<2	9.9	12.0	<20	10.40	1.45
1361	BB0903	15	<4	7	32	230	1.1	120	78	16.0	3.7	96	26.0	93	16.9	17.2	<20	19.20	2.52
1362	BB0904	<5	7	3	16	120	1.4	46	27	5.8	1.2	55	7.0	<2	3.6	6.1	<20	6.11	0.87
1363	BB0905	<5	<4	2	29	43	<0.2	22	16	2.8	0.5	40	4.0	<1	4.6	3.9	<20	3.77	0.61
1364	BB1001	7	13	4	<2	62	0.6	22	19	3.1	0.9	42	6.1	28	5.3	6.8	<20	6.35	0.98
1365	BB1002	9	17	6	65	85	0.6	35	17	5.0	1.4	57	8.5	130	2.9	6.9	<20	10.50	1.53
1366	BB1003	23	12	8	40	80	0.6	35	17	5.2	1.5	67	7.9	12	5.4	9.6	<20	11.10	1.50
1367	BB1004	22	8	6	55	62	<0.2	29	18	4.3	1.4	69	11.0	71	6.1	10.5	<20	11.80	1.56
1368	BB1005	25	7	6	53	73	<0.2	38	27	5.5	1.4	63	13.0	133	8.4	11.7	<20	11.70	1.53
1369	BB1101	14	14	4	39	74	0.8	29	19	4.1	1.0	47	10.0	<2	4.7	8.0	<20	7.06	0.93
1370	BB1102	9	14	4	39	78	0.6	32	16	4.5	1.2	42	8.7	129	5.6	6.7	<20	7.26	0.94
1371	BB1103	17	17	5	44	84	0.8	37	24	5.1	1.2	48	10.0	65	6.6	8.1	<20	7.49	1.06
1372	BB1104	17	15	5	48	91	0.7	38	29	5.5	1.2	47	11.0	179	6.9	9.7	<20	8.26	1.09
1373	BB1105	15	13	5	47	100	0.7	37	24	5.2	1.0	51	11.0	152	6.3	6.9	<20	7.77	1.11
1374	BB1106	20	14	4	44	100	0.8	38	30	5.3	1.4	58	12.0	170	8.0	8.1	<20	8.93	1.07
1375	BB1107	15	14	6	59	140	1.3	70	47	11.0	2.8	57	19.0	124	13.3	18.0	<20	16.40	2.15
1376	BB1108	19	12	4	42	130	1.0	43	38	6.6	2.0	63	15.0	<2	8.1	9.6	<20	8.05	0.91
1377	BB1109	23	18	6	49	77	0.8	39	25	5.4	1.5	56	10.0	<2	9.8	9.1	<20	9.10	1.19
1378	BB1110	22	11	6	53	99	0.4	43	26	5.8	1.4	66	13.0	97	9.0	11.5	<20	11.10	1.49
1379	BB1111	28	8	6	52	98	0.6	48	34	6.3	1.2	86	15.0	68	5.1	9.6	<20	9.71	1.39
1380	BB1112	31	8	5	45	150	0.7	39	34	6.2	1.3	84	17.0	66	5.9	10.8	<20	9.11	1.24
1381	BB1113	38	9	6	24	130	0.3	22	16	2.8	0.6	73	8.9	89	<0.5	4.2	<20	3.97	0.50
1382	BB1114	31	9	5	45	49	0.2	22	10	2.6	0.5	61	8.5	73	1.1	3.9	<20	3.55	0.43
1383	BB1115	38	14	5	42	86	0.5	18	13	2.2	0.9	67	6.8	<2	2.2	3.9	<20	3.28	0.47
1384	BB1201	<5	10	3	35	48	0.3	17	13	2.6	0.9	35	7.1	43	3.7	5.2	<20	5.65	0.79
1385	BB1202	16	13	5	39	110	0.9	37	24	5.6	1.0	53	13.0	83	4.5	8.4	<20	7.35	1.00
1386	BB1203	24	14	5	44	100	0.8	47	31	7.0	1.4	60	16.0	69	6.9	10.8	<20	9.59	1.24
1387	BB1204	22	13	5	43	120	1.0	48	38	7.4	1.8	61	19.0	175	7.8	14.7	<20	12.10	1.49
1388	BB1205	23	12	4	42	99	0.8	59	30	7.6	1.3	54	18.0	93	10.0	13.2	<20	10.90	1.34
1389	BB1206	22	12	4	39	110	1.1	62	40	9.5	2.1	55	21.0	91	7.9	14.5	20	13.00	1.67
1390	BB1207	23	15	5	41	120	1.0	58	44	9.0	2.1	59	22.0	53	11.1	13.6	<20	12.10	1.47
1391	BB1208	18	15	5	38	110	1.1	64	38	9.5	1.7	57	22.0	95	8.2	16.5	<20	15.00	1.91
1392	BB1209	24	8	5	49	150	0.7	37	25	6.6	1.7	68	16.0	74	8.3	11.5	<20	9.24	1.26
1393	BB1210	18	12	5	48	110	1.0	51	22	7.4	1.7	54	17.0	98	10.0	13.4	<20	11.30	1.46
1394	BB1211	19	12	6	40	110	0.9	54	34	8.1	1.6	59	19.0	92	11.2	14.5	<20	11.90	1.64
1395	BB1212	17	13	4	40	100	0.8	47	30	7.0	1.4	54	16.0	188	6.3	14.4	<20	11.30	1.43
1396	BB1213	21	13	6	49	98	0.8	40	19	5.7	1.5	51	14.0	73	2.4	11.1	<20	9.41	1.26
1397	BB1214	23	12	6	48	110	0.8	38	21	5.6	1.1	77	15.0	61	6.1	8.9	<20	7.84	1.10
1398	BB1215	20	7	5	46	130	0.9	36	25	5.1	1.0	85	18.0	57	5.9	7.2	<20	6.98	1.01
1399	BB1216	28	6	4	47	110	0.6	39	27	5.3	1.2	84	18.0	63	5.5	7.8	<20	6.91	0.99
1400	BB1217	20	<4	6	49	150	0.8	63	44	8.0	1.5	92	20.0	88	5.1	8.5	<20	6.86	0.94
1401	BB1218	23	6	4	47	120	0.6	34	27	4.9	1.1	88	17.0	47	9.9	7.1	<20	5.64	0.74
1402	BB1219	25	12	5	40	100	0.5	61	33	5.9	1.5	52	13.0	102	6.5	10.8	<20	10.80	1.38
1403	BB1220	25	9	5	50	94	0.5	31	28	4.7	1.0	84	9.0	68	0.5	9.3	<20	9.12	1.11
1404	BB1221	31	14	7	59	100	<0.2	24	19	3.9	1.4	69	8.6	114	5.5	9.3	<20	6.81	1.29
1405	BB1222	29	15	6	44	96	<0.2	22	19	3.3	1.3	74	10.0	45	3.4	6.9	<20	7.16	0.92
1406	BB1223	33	23	5	45	52	0.5	17	11	2.4	0.9	65	6.0	35	2.9	5.0	<20	4.86	0.65
1407	BB1224	20	15	6	45	46	0.5	21	20	2.3	0.9	64	8.7	29	1.4	4.7	<20	4.47	0.58
1408	BB1225	29	13	6	42	64	0.6	25	20	3.2	0.8	64	9.0	58	0.8	5.9	<20	4.55	0.60
1409	BB1301	9	10	4	40	82	0.7	36	18	5.2	1.2	44	11.0	28	4.7	10.0	<20	7.94	1.04
1410	BB1302	19	13	5	40	120	0.9	61	38	9.0	1.5	58	21.0	137	11.2	16.4	<20	13.20	1.65
1411	BB1303	21	11	5	18	100	1.0	55	36	8.5	1.2	52	20.0	90	10.6	12.8	<20	11.00	1.38

NO	SP.No. unit	Sn ppm	W ppm	Ta ppm	Nb ppm	Ce ppm	Eu ppm	La ppm	Nd ppm	Sm ppm	Tb ppm	Th ppm	U ppm	Y ppm	Gd ppm	Dy ppm	Pr ppm	Yb ppm	Lu ppm
1412	BB1304	23	6	4	41	130	0.9	48	32	7.2	1.4	72	14.0	<2	6.2	10.4	<20	9.65	1.29
1413	BB1305	18	10	6	46	95	0.6	37	24	4.9	1.4	62	11.0	56	5.0	8.7	<20	7.94	0.97
1414	BB1306	32	7	6	48	88	0.5	38	23	3.9	1.2	84	11.0	41	5.3	6.7	<20	6.32	0.88
1415	BB1307	19	10	5	41	91	0.9	48	32	7.2	1.6	48	15.0	83	9.7	12.4	<20	10.40	1.32
1416	BB1308	21	11	5	41	56	0.6	35	27	4.3	0.7	38	14.0	46	4.4	5.4	<20	4.34	0.58
1417	BB1309	25	15	4	40	110	0.8	42	26	5.8	<0.5	53	13.0	43	8.6	6.6	<20	4.61	0.62
1418	BB1310	24	14	5	41	110	0.9	40	21	5.6	1.2	57	15.0	56	6.9	7.7	<20	7.22	1.00
1419	BB1311	28	22	5	41	130	1.0	55	39	7.8	1.7	61	16.0	58	6.5	10.5	<20	7.48	1.01
1420	BB1312	23	17	5	41	90	0.7	43	34	6.6	<0.5	69	16.0	54	7.3	9.3	<20	8.32	1.06
1421	BB1313	22	14	6	41	89	1.1	44	29	6.6	1.5	48	16.0	72	6.6	11.4	<20	9.27	1.24
1422	BC0101	26	4	<1	23	38	0.7	15	10	1.9	0.5	25	3.3	26	1.0	4.2	<20	3.12	0.53
1423	BC0102	25	4	2	24	45	0.6	17	12	2.2	<0.5	27	4.3	27	2.6	4.8	<20	3.64	0.50
1424	BC0103	27	6	3	26	44	0.9	31	20	3.5	0.5	42	9.2	34	5.3	5.2	<20	4.96	0.64
1425	BC0104	26	4	2	22	42	0.8	32	18	3.3	<0.5	31	7.6	28	4.6	4.3	<20	3.86	0.57
1426	BC0105	35	7	2	20	33	0.5	15	12	1.9	<0.5	31	6.3	18	2.8	2.6	<20	3.25	0.42
1427	BC0106	49	7	3	29	41	<0.2	16	9	2.1	0.5	43	7.1	23	0.9	3.6	<20	4.18	0.56
1428	BC0107	42	9	4	37	61	0.7	25	17	3.2	0.8	57	13.0	41	4.4	5.9	<20	6.41	0.94
1429	BC0108	57	9	5	43	82	1.5	53	29	6.5	1.2	75	26.0	68	7.5	9.3	<20	9.57	1.24
1430	BC0109	42	10	4	36	62	0.7	23	21	3.2	1.6	52	11.0	44	3.4	6.1	<20	6.31	0.84
1431	BC0110	34	10	4	33	50	0.7	22	15	2.8	0.7	51	8.8	33	3.4	4.6	<20	5.00	0.76
1432	BC0111	22	8	3	36	40	0.7	18	12	2.1	0.6	46	8.6	25	0.6	3.5	<20	4.20	0.53
1433	BC0112	34	10	3	31	43	0.5	19	13	2.3	0.5	40	7.3	25	1.2	4.0	<20	4.01	0.56
1434	BC0113	48	<4	5	39	49	0.6	28	18	3.4	0.7	42	14.0	34	5.7	5.1	<20	6.46	0.87
1435	BC0201	24	<4	2	18	37	0.7	11	9	1.4	0.5	23	4.4	31	2.9	4.4	<20	4.25	0.60
1436	BC0202	24	5	1	23	53	0.6	15	17	2.0	0.7	29	3.9	33	4.6	4.4	<20	5.17	0.55
1437	BC0203	59	12	6	41	73	0.7	35	26	5.1	1.2	57	16.0	62	7.8	8.5	<20	6.42	1.08
1438	BC0204	22	6	2	25	57	0.6	19	13	2.6	0.7	30	5.1	34	4.4	4.9	<20	4.98	0.65
1439	BC0205	26	8	3	30	42	0.6	22	12	2.6	1.4	39	6.7	38	4.5	5.1	<20	5.73	0.70
1440	BC0206	36	9	4	33	54	0.7	26	11	3.1	1.2	44	11.0	42	2.6	6.1	<20	6.60	0.94
1441	BC0207	35	6	5	29	110	0.7	29	17	3.8	1.1	45	11.0	37	2.9	6.3	<20	5.64	0.81
1442	BC0208	50	12	5	34	100	1.1	46	38	7.6	1.6	63	29.0	88	11.2	13.7	<20	11.70	1.55
1443	BC0209	46	12	6	40	100	1.5	54	33	7.4	1.4	74	28.0	74	8.1	11.6	<20	11.70	1.58
1444	BC0210	51	13	6	38	97	0.8	44	35	6.8	1.7	65	23.0	72	8.3	11.4	<20	11.40	1.48
1445	BC0211	52	23	7	36	120	0.7	69	46	8.9	2.3	82	26.0	69	10.3	10.4	<20	10.30	1.44
1446	BC0212	57	12	7	39	100	0.9	31	23	5.5	1.4	65	17.0	61	6.3	9.7	<20	10.20	1.33
1447	BC0213	45	11	5	40	96	0.7	32	33	5.2	1.0	60	17.0	58	4.3	8.4	<20	10.10	1.32
1448	BC0214	21	5	2	27	49	0.7	14	17	2.1	1.1	30	4.3	36	2.5	5.5	<20	4.76	0.65
1449	BC0215	48	7	5	41	68	0.9	36	20	4.9	1.5	48	19.0	53	4.1	7.1	<20	7.35	0.89
1450	BC0216	45	13	5	39	86	0.9	32	18	4.6	1.2	54	14.0	54	7.8	7.9	<20	8.23	1.00
1451	BC0217	39	13	5	38	80	0.6	32	26	4.4	1.2	50	12.0	47	4.6	6.2	<20	7.29	0.93
1452	BC0218	44	15	6	40	110	1.0	44	28	6.2	1.3	65	13.0	53	4.6	7.7	<20	8.85	1.13
1453	BC0219	44	17	4	38	85	0.7	41	25	5.7	1.0	60	13.0	46	4.7	8.2	<20	7.76	1.02
1454	BC0220	40	20	5	39	130	0.8	48	29	6.6	1.5	67	14.0	54	6.2	9.2	<20	8.19	1.10
1455	BC0221	57	14	6	44	75	1.0	49	37	7.5	1.2	65	19.0	89	9.8	12.4	<20	12.40	1.55
1456	BC0301	26	<4	2	21	78	0.9	32	17	3.2	0.7	29	3.2	32	3.3	5.7	<20	4.47	0.68
1457	BC0302	25	8	2	22	80	0.8	23	12	2.6	0.7	30	4.2	32	4.5	5.2	<20	4.52	0.67
1458	BC0303	24	<4	2	21	96	1.2	49	36	6.0	0.7	26	5.0	34	5.2	6.3	<20	5.15	0.70
1459	BC0304	26	<4	2	19	110	1.0	25	16	3.4	0.7	29	3.6	33	1.5	5.7	<20	4.52	0.62
1460	BC0305	51	14	5	38	100	0.9	36	23	5.9	1.5	66	23.0	67	5.7	10.8	<20	10.40	1.37
1461	BC0306	52	16	5	39	120	1.0	65	43	8.9	1.5	88	29.0	88	9.6	14.7	<20	12.10	1.54
1462	BC0307	44	12	6	38	110	1.1	49	36	7.7	1.5	68	27.0	73	7.1	12.1	<20	11.90	1.62
1463	BC0308	43	11	6	29	130	1.3	68	49	10.0	2.3	56	29.0	99	13.1	13.5	<20	13.90	1.95
1464	BC0309	49	11	6	39	120	0.9	37	28	6.6	1.3	70	19.0	62	5.7	10.1	21	9.38	1.33
1465	BC0310	64	9	6	40	99	0.6	32	26	4.9	1.2	57	12.0	50	3.9	7.8	<20	7.29	1.06
1466	BC0311	41	7	4	38	71	0.7	31	20	3.9	1.4	47	8.8	35	4.6	5.4	<20	5.40	0.78
1467	BC0312	28	5	4	30	40	0.4	25	8	2.6	0.7	32	6.1	25	3.9	4.4	<20	4.56	0.69
1468	BC0313	24	<4	<1	26	52	0.5	21	14	2.1	0.6	25	4.9	17	0.4	2.8	<20	3.17	0.46
1469	BC0314	24	<4	2	23	63	0.5	23	9	1.9	<0.5	24	4.1	14	1.1	2.5	<20	2.24	0.42
1470	BC0315	32	<4	3	32	51	0.5	22	14	2.3	0.6	34	5.8	23	1.6	3.3	<20	4.11	0.60
1471	BC0316	38	12	5	33	110	1.1	50	43	7.7	1.5	53	22.0	71	9.5	10.8	<20	12.10	1.72
1472	BC0317	60	10	7	38	120	0.8	40	32	6.3	1.9	67	19.0	65	6.4	9.9	<20	10.40	1.45
1473	BC0318	53	17	5	38	120	0.9	63	46	8.6	1.4	73	22.0	80	8.2	12.9	<20	10.40	1.43
1474	BC0319	59	20	6	33	240	1.1	130	92	16.0	2.7	100	27.0	91	15.3	15.1	<20	12.90	1.78
1475	BC0320	49	20	4	34	140	0.6	40	40	6.6	1.2	71	14.0	46	6.3	7.8	<20	6.77	0.97
1476	BC0321	38	11	3	28	52	0.5	41	26	5.1	0.7	48	10.0	36	4.0	5.9	<20	5.65	0.77
1477	BC0322	26	10	<1	21	12	0.6	20	11	2.4	0.5	30	5.3	16	1.9	3.3	<20	3.13	0.44
1478	BC0323	27	14	<1	20	18	0.4	18	7	1.4	<0.5	28	6.5	12	0.5	1.6	<20	2.34	0.37
1479	BC0401	40	8	3	34	36	0.6	23	13	3.2	0.7	42	9.2	36	5.8	4.9	<20	5.25	0.68
1480	BC0402	56	10	7	39	120	0.7	38	33	6.5	1.3	63	18.0	71	7.0	10.8	<20	9.95	1.57
1481	BC0403	42	11	7	38	110	1.4	56	42	8.7	2.3	48	5.0	103	9.1	14.6	<20	16.20	2.82
1482	BC0404	37	11	5	34	95	0.6	37	19	4.9	0.9	52	8.6	39	1.8	6.3	<20	6.06	0.91
1483	BC0405	35	6	2	24	87	0.4	18	9	1.4	<0.5	33	4.5	8	1.9	1.7	<20	2.42	0.34
1484	BC0406	27	8	3	29	100	0.3	26	11	1.9	<0.5	32	4.0	9	3.5	1.6	<20	2.12	0.35
1485	BC0501	29	<4	2	32	44	0.4	25	7	2.0	<0.5	34	5.1	15	2.2	2.6	<20	3.15	0.50
1486	BC0502	32	6	3	30	48	0.8	23	10	2.5	0.6	37	6.8	29	4.2	4.6	<20	4.49	0.70
1487	BC0503	45	9	5	36	97	0.9	26	28	4.2	1.1	51	13.0	48	3.0	6.6	<20	7.43	1.11
1488	BC0504	49	10	6	34	100	1.0	37	29	6.2	1.3	54	22.0	71	7.3	10.6	<20	11.30	1.70
1489	BC0505	35	<4	3	26	30	0.5	14	7	1.3	<0.5	38	7.4	14	1.7	2.5	<20	3.00	0.41
1490	BC0506	34	6	3	29	42	0.5	19	9	1.6	<0.5	45	7.3	19	1.7	2.6	<20	3.14	0.54
1491	BC0507	35	8	3	27	43	0.5	23	12	2.4	<0.5	41	9.7	22	2.6	2.9	<20	3.99	0.58
1492	BC0508	40	11	5	33	87	0.9	39	31	4.7	0.6	63	13.0	33	2.6	5.9	<20	4.96	0.77
1493	BC0601	26	<4	2	22	67	0.5	19	10	2.6	<0.5	29	3.3	14	2.5	2.6	<20	2.74	0.45
1494	BC0602	38	<4	3	28	74	0.6	30	13	3.3	0.6	42	9.6	30	1.8	4.5	<20	4.58	0.76
1495	BC0603	42	10	5	32	61	1.0	44	29	5.7	1.0	51	17.0	60	6.5	6.9	<20	9.56	1.53
1496	BC0604	35	11	3	28	30	0.5	16	7	1.4	<0.5	33	4.6	15	0.3	3.4	<20	2.96	0.46
1497	BC0605	36	9	4	33	39	0.6	17	7	2.0	0.7	39	5.4	27	2.0	3.8	<20	4.31	0.54
1498	BC0606	39	11	5	35	39	0.6	18	10	2.3	0.7	44	7.2	30	1.2	4.0	<20	5.21	0.71
1499	BC0607	48	10	4	38	45	0.4	20	15	2.5	0.7	52	6.1	37	1.3	5.3	<20	5.46	0.70
1500	BC0608	34	7	3	38	34	0.6	19	14	1.9	<0.5	44	6.0	21	3.1	4.1	<20	3.92	0.61
1501	BC0609	34	7	2	38	25	0.3	17	12	1.5	<0.5	37	5.1	21	1.8	3.3	<20	2.52	0.34
1502	BC0610	29	10	<1	28	25	0.3	12	12	1.1	<0.5	39	7.4	17	3.1	2.3	<20	2.44	0.35
1503	BC0611	31	10	5	24	84	0.4	38	24	4.4	0.9	100	6.7	13	0.2	5.7	<20	5.73	0.67
1504	BC0612	52	11	4	42	100	0.4	22	20	2.3	<0.5	140	9.7	31	3.6	3.7	<20	3.23	0.51
1505	BC0613	57	17	5	40	110	0.5	16	11	1.6	0.6	130	15.0	22	1.1	3.6	<20	4.10	0.56

Appendix 4　Chemical analysis data of soil samples

NO	SP.No. unit	Sn ppm	W ppm	Ta ppm	Nb ppm	Ce ppm	Eu ppm	La ppm	Nd ppm	Sm ppm	Tb ppm	Th ppm	U ppm	Y ppm	Gd ppm	Dy ppm	Pr ppm	Yb ppm	Lu ppm
1506	BC0614	56	31	5	43	120	0.9	26	24	3.6	1.2	96	17.0	19	1.4	4.7	<20	4.94	0.69
1507	BC0615	53	41	2	40	160	1.1	31	34	4.7	0.7	98	25.0	32	4.6	5.5	<20	4.99	0.68
1508	BC0701	42	8	<1	32	170	3.5	110	120	18.0	2.3	26	3.8	30	11.9	12.8	<20	9.25	1.04
1509	BC0702	28	12	6	18	120	1.1	45	31	7.0	2.1	63	16.0	49	7.1	10.7	<20	12.10	1.75
1510	BC0703	49	9	4	39	140	0.7	29	16	4.1	1.2	49	9.8	78	4.2	6.5	<20	7.04	1.08
1511	BC0704	46	8	5	35	67	0.6	28	14	3.3	0.7	49	7.1	33	2.7	4.5	<20	5.32	0.68
1512	BC0705	41	8	5	37	42	0.4	17	9	2.1	0.7	39	5.7	27	4.5	4.6	<20	5.31	0.68
1513	BC0706	31	6	3	28	26	0.4	12	13	1.4	0.5	34	5.7	24	2.5	3.3	<20	3.61	0.60
1514	BC0707	28	5	3	28	28	0.5	103	15	1.3	<0.5	36	4.5	22	0.3	2.8	<20	3.35	0.47
1515	BC0708	37	7	4	34	38	0.4	16	17	2.0	0.5	46	5.1	26	1.1	4.4	<20	4.35	0.59
1516	BC0709	32	7	3	36	36	0.5	19	10	2.1	0.9	37	5.6	28	2.9	4.4	<20	4.63	0.61
1517	BC0710	39	10	4	36	49	0.6	24	14	2.8	0.7	68	6.3	31	1.5	4.7	<20	4.60	0.65
1518	BC0711	52	8	5	40	49	0.4	15	9	1.7	<0.5	110	11.0	23	0.7	3.6	<20	3.61	0.40
1519	BC0712	59	11	5	42	110	0.3	19	15	1.6	<0.5	120	14.0	18	1.3	3.6	<20	3.38	0.39
1520	BC0713	59	17	6	43	110	0.7	14	16	1.4	<0.5	120	16.0	22	1.0	3.6	<20	3.44	0.48
1521	BC0801	56	7	7	38	110	2.3	41	28	7.2	2.3	59	17.0	89	8.9	12.4	<20	13.20	1.68
1522	BC0802	47	12	6	24	170	1.0	40	23	6.0	1.0	63	11.0	58	4.4	8.1	<20	8.05	1.08
1523	BC0803	49	9	5	28	150	0.9	30	17	4.7	1.0	52	9.6	45	4.4	6.3	<20	6.79	0.96
1524	BC0804	40	8	5	38	120	0.9	25	17	3.7	0.9	48	7.6	36	2.7	5.4	<20	5.51	0.86
1525	BC0805	40	9	4	37	100	0.6	22	13	3.3	0.6	43	7.2	34	1.7	5.5	20	5.53	0.81
1526	BC0806	45	10	6	39	120	0.7	27	23	3.7	1.0	54	10.0	48	5.8	6.9	<20	7.19	1.08
1527	BC0807	43	8	4	36	50	0.6	20	17	2.7	0.6	46	6.8	33	4.1	5.3	<20	4.80	0.73
1528	BC0808	36	7	3	33	44	0.6	21	13	2.4	0.6	39	6.6	30	3.1	3.7	<20	4.07	0.66
1529	BC0809	41	8	5	45	55	0.7	24	20	2.9	0.7	66	7.9	38	4.6	5.4	<20	5.54	0.75
1530	BC0810	40	10	5	38	81	0.6	24	21	3.1	0.7	100	13.0	35	1.3	5.1	<20	5.05	0.72
1531	BC0811	51	17	7	50	120	0.8	61	42	7.3	1.5	70	20.0	74	6.2	9.7	<20	10.30	1.47
1532	BC0812	50	13	5	40	89	0.3	27	21	3.3	0.7	95	14.0	36	3.7	5.2	<20	5.36	0.80
1533	BC0901	40	9	4	32	87	0.6	26	19	3.8	0.9	47	10.0	44	5.0	6.6	<20	6.39	0.93
1534	BC0902	35	9	4	25	80	0.8	37	19	4.5	0.7	32	13.0	48	4.3	7.7	<20	7.15	1.08
1535	BC0903	47	10	5	37	100	0.6	26	19	3.9	1.2	51	8.4	49	2.5	6.1	<20	6.83	1.02
1536	BC0904	39	7	4	16	83	0.5	20	16	3.0	0.9	41	6.1	35	2.3	5.8	<20	5.49	0.88
1537	BC0905	46	7	4	12	110	0.6	20	24	4.0	0.8	58	13.0	43	3.7	6.7	<20	6.94	0.99
1538	BC0906	66	13	5	15	130	1.1	80	66	12.0	2.0	87	23.0	86	12.6	15.4	<20	14.40	2.03
1539	BC0907	19	<4	2	23	70	0.8	45	31	5.9	0.7	42	10.0	47	5.7	7.7	<20	5.86	0.76
1540	BC0908	37	7	3	32	85	0.9	42	30	4.4	1.4	48	7.7	42	4.9	5.6	<20	5.67	0.80
1541	BC0909	46	8	5	41	74	0.6	24	16	3.2	0.8	57	11.0	43	3.9	6.4	<20	6.64	0.97
1542	BC0910	47	11	5	38	55	0.6	22	16	2.6	0.8	60	9.3	36	6.3	5.5	<20	6.09	0.90
1543	BC0911	46	10	5	39	97	0.3	19	14	2.5	0.7	61	9.8	37	2.1	4.6	<20	5.76	0.76
1544	BC0912	44	6	4	48	78	0.5	19	14	2.6	0.7	58	10.0	39	2.5	5.4	<20	5.84	0.87
1545	BC0913	44	8	4	40	43	0.5	18	10	2.2	1.2	54	9.4	38	0.8	5.2	<20	6.13	0.97
1546	BC0914	43	9	6	40	69	0.4	17	7	2.0	0.6	75	11.0	30	3.7	3.8	<20	4.34	0.67
1547	BC1001	19	<4	<1	16	53	0.4	12	9	1.4	0.6	15	2.7	19	2.2	3.8	<20	2.31	0.30
1548	BC1002	41	10	4	34	69	0.6	30	19	4.0	1.1	42	12.0	48	6.6	6.8	<20	7.42	1.08
1549	BC1003	45	10	8	45	100	0.7	23	16	4.2	1.1	68	15.0	61	3.6	8.9	<20	9.68	1.31
1550	BC1004	51	8	7	39	130	0.8	30	30	5.0	1.3	63	16.0	71	4.3	10.5	<20	10.40	1.43
1551	BC1005	43	7	7	40	96	0.9	32	24	5.8	2.0	65	20.0	85	9.5	12.9	<20	13.40	1.72
1552	BC1006	63	8	8	43	100	0.7	28	31	5.1	1.5	62	13.0	71	5.9	10.0	<20	10.80	1.47
1553	BC1007	63	8	8	40	110	0.6	38	24	5.7	1.7	59	15.0	63	8.9	12.1	<20	13.60	1.88
1554	BC1008	52	<4	6	45	170	0.6	16	16	2.2	0.8	120	14.0	27	4.9	4.9	<20	4.63	0.59
1555	BC1009	52	<4	5	44	160	0.6	25	12	2.3	0.7	120	11.0	27	2.5	3.7	<20	4.57	0.68
1556	BC1010	51	8	5	45	130	0.3	30	10	2.4	0.7	110	13.0	26	4.9	4.5	<20	4.46	0.65
1557	BC1011	60	6	6	43	110	0.3	26	20	3.0	0.7	97	18.0	33	6.5	4.6	<20	5.35	0.63
1558	BC1012	60	9	8	46	100	0.7	38	38	7.3	1.8	64	19.0	91	8.0	13.3	<20	14.40	1.99
1559	BC1013	55	8	5	41	49	0.3	12	9	1.5	<0.5	110	15.0	22	2.2	3.5	<20	3.87	0.63
1560	BC1101	38	10	5	31	90	1.2	46	35	6.3	1.2	37	14.0	62	5.3	9.3	<20	9.33	1.38
1561	BC1102	57	13	7	42	190	1.6	68	65	17.0	3.9	71	35.0	156	19.7	28.0	<20	20.10	2.38
1562	BC1103	49	9	5	45	73	0.6	23	13	2.8	0.7	68	11.0	33	1.3	4.8	<20	5.54	0.89
1563	BC1104	32	7	5	41	110	0.6	26	18	3.2	0.9	65	8.8	31	5.8	4.2	<20	5.10	0.70
1564	BC1105	44	6	5	39	110	0.5	21	17	2.4	0.5	93	8.4	25	5.5	3.7	<20	3.74	0.52
1565	BD0101	42	10	4	31	120	1.1	54	41	7.4	0.9	41	11.0	59	11.9	10.9	<20	7.44	0.99
1566	BD0102	46	11	4	34	120	1.0	48	34	6.7	1.6	48	12.0	59	7.9	9.4	<20	8.34	1.06
1567	BD0103	45	11	4	33	110	0.9	49	30	6.3	0.9	45	11.0	60	7.6	6.8	<20	7.56	1.03
1568	BD0104	48	12	4	31	130	1.2	64	43	9.0	1.7	47	14.0	74	10.0	12.0	<20	9.30	1.35
1569	BD0105	38	11	3	27	110	0.9	58	45	7.6	1.8	35	9.8	71	10.4	11.8	<20	8.53	1.30
1570	BD0106	47	9	3	33	120	1.0	58	38	7.8	1.4	50	15.0	66	8.9	11.6	<20	8.04	1.10
1571	BD0107	37	8	4	28	100	1.0	53	38	7.1	1.3	35	12.0	63	8.9	10.6	<20	8.58	1.06
1572	BD0108	47	10	4	30	130	1.0	58	43	8.3	1.8	51	13.0	70	10.0	11.9	<20	9.52	1.19
1573	BD0109	44	37	5	40	110	1.0	57	41	7.7	1.7	51	12.0	72	7.4	10.7	<20	9.25	1.12
1574	BD0201	29	7	<1	20	130	1.3	64	45	6.8	0.7	32	7.2	46	8.0	8.0	<20	5.41	0.73
1575	BD0202	34	9	<1	23	100	0.9	53	41	7.0	1.6	32	9.3	61	9.6	9.7	<20	8.12	1.08
1576	BD0203	44	11	3	29	99	0.9	45	33	5.7	1.1	38	7.6	53	6.1	8.6	<20	6.28	0.85
1577	BD0204	32	7	<1	23	58	0.7	23	14	2.9	0.7	23	4.5	36	2.6	5.8	<20	4.09	0.56
1578	BD0205	30	7	1	19	41	0.6	20	15	2.4	0.5	24	2.3	33	5.0	5.2	<20	3.62	0.53
1579	BD0206	51	9	5	24	110	0.9	55	28	7.0	1.4	54	14.0	74	6.7	10.2	<20	7.76	0.98
1580	BD0207	49	11	5	38	120	0.8	48	36	6.3	1.2	52	11.0	61	7.8	10.9	<20	8.35	1.17
1581	BD0208	51	9	4	35	120	0.9	51	34	7.1	1.1	52	13.0	62	7.4	10.1	<20	8.54	1.08
1582	BD0209	44	<16	3	29	95	0.8	41	29	5.2	0.6	38	8.4	47	4.9	7.2	<20	6.03	0.80
1583	BD0210	59	12	1	<2	240	<0.2	29	25	3.2	<0.5	24	5.0	16	4.9	5.2	<20	3.17	0.43
1584	BD0211	51	12	<1	16	60	0.6	20	22	2.2	<0.5	19	3.2	27	1.8	4.4	<20	3.11	0.42
1585	BD0212	34	13	1	20	59	0.5	19	22	2.2	<0.5	20	2.6	28	5.0	4.6	<20	3.50	0.50
1586	BD0301	35	6	4	23	100	0.7	52	27	6.8	1.5	33	8.2	65	9.8	9.6	<20	8.99	1.17
1587	BD0302	38	10	4	28	110	0.9	55	40	7.0	1.6	40	12.0	61	7.8	9.6	<20	6.11	1.02
1588	BD0303	46	10	4	37	120	1.0	53	35	6.9	1.2	51	12.0	59	9.4	10.2	<20	7.85	1.09
1589	BD0304	27	7	2	28	68	0.8	34	21	4.2	1.0	30	5.5	43	4.9	6.4	<20	5.87	0.76
1590	BD0305	27	6	1	18	52	0.6	27	14	3.1	<5.0	27	3.1	30	2.5	4.9	<20	3.68	0.56
1591	BD0306	24	7	<1	19	51	0.8	28	13	2.7	<0.5	22	2.4	30	5.7	5.2	<20	3.37	0.46
1592	BD0307	41	8	3	28	120	1.0	62	42	7.3	1.7	46	12.0	81	8.4	12.3	<20	10.10	1.50
1593	BD0308	44	11	5	32	130	1.3	64	52	9.6	2.0	41	9.9	92	14.3	15.5	<20	9.41	1.48
1594	BD0309	39	12	<1	35	97	0.8	47	34	5.3	1.5	42	9.1	64	11.4	9.6	<20	8.86	1.10
1595	BD0310	28	25	2	22	56	0.5	24	17	2.9	0.8	29	5.7	35	4.1	6.0	<20	4.47	0.66
1596	BD0311	43	28	<1	30	76	0.5	29	13	3.1	0.8	37	7.4	42	4.6	7.1	<20	5.42	0.79
1597	BD0312	47	18	<1	34	100	0.9	56	44	6.8	1.0	44	10.0	68	8.8	11.2	<20	7.69	1.20
1598	BD0313	43	11	<1	33	130	0.9	62	41	7.0	1.3	49	13.0	75	8.5	12.6	<20	9.07	1.26
1599	BD0314	49	12	6	39	110	0.8	53	35	6.0	1.6	53	11.0	66	10.5	10.2	<20	8.90	1.21

Appendix 4 Chemical analysis data of soil samples

NO	SP.No. unit	Sn ppm	W ppm	Ta ppm	Nb ppm	Ce ppm	Eu ppm	La ppm	Nd ppm	Sm ppm	Tb ppm	Th ppm	U ppm	Y ppm	Gd ppm	Dy ppm	Pr ppm	Yb ppm	Lu ppm
1600	BD0315	47	12	5	35	100	0.8	45	36	5.8	1.0	51	13.0	65	11.1	9.6	<20	7.33	1.10
1601	BD0316	49	11	4	37	100	0.7	45	33	5.6	1.2	46	10.0	65	8.3	9.6	<20	7.85	1.24
1602	BD0317	51	10	3	36	110	1.2	61	39	6.9	1.3	46	10.0	84	9.8	12.3	<20	7.31	1.16
1603	BD0318	50	13	4	31	120	0.8	50	40	7.2	1.4	48	13.0	72	11.0	10.6	<20	8.24	1.38
1604	BD0319	57	12	5	37	10	0.8	51	43	6.9	1.6	51	13.0	73	10.3	12.6	<20	7.39	1.21
1605	BD0320	34	6	4	26	99	0.8	52	36	6.5	1.3	34	12.0	64	4.9	11.5	<20	8.09	1.28
1606	BD0321	43	9	3	29	110	0.8	54	39	6.0	1.3	42	13.0	69	11.4	10.7	<20	8.11	1.33
1607	BD0322	42	10	3	26	110	1.0	57	39	7.2	1.3	40	13.0	68	12.9	10.1	<20	7.50	1.17
1608	BD0401	37	8	3	27	93	0.9	48	41	6.1	1.5	33	9.4	65	7.9	11.0	<20	7.02	1.05
1609	BD0402	44	12	4	41	66	0.7	38	37	4.4	1.2	48	11.0	53	8.3	8.9	<20	5.54	0.95
1610	BD0403	50	11	3	35	97	0.7	38	33	4.8	1.2	40	9.8	57	9.1	9.1	<20	6.04	0.95
1611	BD0404	39	13	3	32	66	0.8	37	24	4.1	1.3	39	6.3	51	3.5	8.2	<20	5.53	0.88
1612	BD0405	47	10	3	30	93	0.8	49	51	5.9	1.4	40	12.0	63	10.4	10.3	<20	5.77	0.86
1613	BD0406	36	10	3	29	120	0.8	56	36	7.5	1.5	47	12.0	74	11.9	12.5	<20	8.67	1.44
1614	BD0407	40	9	3	28	110	0.9	53	44	6.9	1.1	42	12.0	66	7.6	10.7	<20	8.10	1.12
1615	BD0408	58	10	3	33	110	0.8	51	33	6.5	1.2	45	12.0	67	10.9	10.9	<20	7.40	1.13
1616	BD0409	46	9	4	34	90	0.7	49	37	6.0	1.4	35	10.0	76	9.2	11.6	<20	7.54	1.21
1617	BD0410	53	6	3	25	72	0.7	37	25	4.2	1.2	27	7.2	52	6.1	8.2	<20	5.56	0.83
1618	BD0411	62	<4	1	21	86	0.6	43	20	3.3	<0.5	25	4.2	36	3.3	4.7	<20	3.49	0.58
1619	BD0412	51	5	<1	22	130	0.5	63	37	5.2	0.7	30	4.4	36	5.3	5.8	<20	4.52	0.78
1620	BD0413	53	8	3	30	61	0.6	30	25	3.5	0.9	30	6.7	53	4.8	6.3	<20	5.85	0.55
1621	BD0414	41	8	4	35	83	0.7	34	26	4.4	1.0	36	7.9	54	5.3	8.2	<20	7.10	1.11
1622	BD0415	51	11	4	35	110	0.5	40	30	5.6	1.0	46	9.6	61	7.2	9.4	<20	6.75	1.11
1623	BD0416	50	12	5	37	65	0.7	44	36	5.6	0.9	46	12.0	62	9.7	9.4	<20	7.45	1.11
1624	BD0417	45	10	4	29	110	0.9	54	41	6.9	1.2	47	12.0	67	8.1	10.6	<20	8.37	1.32
1625	BD0418	45	11	4	33	110	0.9	53	41	7.2	1.4	47	15.0	70	8.3	12.0	<20	8.23	1.36
1626	BD0501	20	9	1	19	97	0.6	22	19	2.9	1.0	23	1.9	26	3.3	5.1	<20	3.21	0.50
1627	BD0502	22	7	1	17	93	0.7	31	26	3.9	<0.5	20	1.6	29	3.6	4.5	<20	2.86	0.53
1628	BD0503	20	9	<1	18	67	0.7	27	21	3.0	<0.5	17	1.8	27	3.7	4.4	<20	2.95	0.45
1629	BD0504	22	7	<1	20	36	0.5	17	15	2.0	<0.5	20	2.3	28	3.3	4.1	<20	2.78	0.47
1630	BD0505	22	6	1	19	50	0.6	16	12	2.3	<0.5	21	2.2	28	5.1	4.3	<20	2.76	0.49
1631	BD0506	25	<4	1	18	49	0.6	23	13	2.6	<0.5	19	2.0	26	2.6	3.9	<20	2.78	0.46
1632	BD0601	20	8	<1	19	95	0.6	16	18	2.3	<0.5	26	3.2	27	2.2	5.1	<20	3.33	0.54
1633	BD0602	20	9	2	19	72	0.6	16	13	2.1	0.6	24	2.9	27	4.1	4.2	<20	3.10	0.51
1634	BD0603	25	6	<1	19	46	0.4	12	11	1.7	<0.5	23	2.8	29	3.0	4.4	<20	3.06	0.53
1635	BD0604	19	6	2	19	59	0.7	19	17	2.4	<0.5	18	2.6	29	4.1	5.1	<20	3.01	0.52
1636	BD0605	22	5	1	15	92	0.7	26	20	3.1	<0.5	18	2.5	27	4.5	5.2	<20	2.82	0.49
1637	BD0606	23	4	<1	15	46	0.6	19	11	2.0	<0.5	15	2.5	27	4.0	4.1	<20	2.90	0.45
1638	BD0607	20	4	<1	16	50	0.6	19	14	2.3	0.6	18	2.0	26	3.3	3.9	<20	2.90	0.46
1639	BD0608	19	5	<1	17	69	0.7	25	19	3.0	<0.5	15	1.7	26	0.9	4.1	<20	2.63	0.44
1640	BD0609	21	7	1	18	61	0.6	21	18	2.7	0.6	19	1.6	25	1.5	4.1	<20	2.37	0.50
1641	BD0610	26	6	<1	18	46	0.8	19	16	2.3	<0.5	19	2.0	25	3.4	3.5	<20	2.57	0.43
1642	BD0611	20	4	1	20	34	0.4	14	8	1.6	<0.5	19	2.1	25	1.0	3.4	<20	3.41	0.48
1643	BD0612	20	8	2	23	37	0.5	15	12	1.9	<0.5	19	2.5	28	3.6	4.1	<20	3.13	0.50
1644	BD0701	30	6	1	19	66	0.9	36	30	3.8	<0.5	15	2.4	32	7.0	5.7	<20	3.68	0.57
1645	BD0702	24	6	<1	20	49	1.0	29	20	3.0	0.7	14	2.4	30	3.0	5.2	<20	3.53	0.58
1646	BD0703	23	6	1	19	65	0.8	38	23	3.9	0.7	15	2.6	36	6.1	5.8	<20	3.74	0.57
1647	BD0704	28	5	1	16	56	0.9	29	19	3.2	0.7	13	1.9	31	5.6	5.6	<20	3.10	0.46
1648	BD0705	28	<4	1	19	59	0.8	33	22	3.2	<0.5	12	2.0	34	2.5	5.6	<20	3.17	0.51
1649	BD0706	22	6	2	22	66	0.8	40	25	3.8	<0.5	15	3.0	33	6.0	6.1	<20	3.44	0.52
1650	BD0707	23	5	1	17	58	0.8	32	26	3.4	0.8	15	2.0	33	3.7	5.8	<20	3.16	0.51
1651	BD0708	27	8	1	21	52	0.6	30	21	3.0	0.7	15	2.4	32	4.3	5.3	<20	3.57	0.54
1652	BD0709	23	30	1	14	41	0.6	23	19	2.4	0.6	14	1.4	28	1.0	4.2	<20	2.89	0.46
1653	BD0710	30	18	<1	16	46	0.6	25	16	2.6	<0.5	10	1.6	28	0.2	4.4	<20	3.13	0.49
1654	BD0711	35	7	<1	19	37	0.5	18	12	2.2	<0.5	15	2.0	26	2.6	4.1	<20	3.15	0.48
1655	BD0712	25	11	1	18	51	0.7	29	19	3.1	<0.5	15	2.8	28	6.4	4.3	<20	3.60	0.60
1656	BD0713	25	8	1	17	45	0.6	27	24	2.9	0.6	11	2.2	27	0.7	4.2	<20	3.47	0.54
1657	BD0714	22	9	1	21	39	0.6	23	19	2.9	0.6	16	3.3	28	3.3	4.4	<20	3.38	0.54
1658	BD0801	19	8	1	24	41	0.8	21	18	3.0	0.7	16	2.8	40	6.1	4.3	<20	4.35	0.69
1659	BD0802	23	8	1	22	3	0.5	14	11	1.7	<0.5	23	2.4	29	1.2	5.5	<20	3.66	0.59
1660	BD0803	24	5	2	22	31	0.5	12	12	1.6	<0.5	21	2.4	31	5.5	6.8	<20	3.59	0.58
1661	BD0804	23	5	1	20	28	0.5	12	9	1.6	<0.5	20	2.2	27	1.1	4.5	<20	3.53	0.59
1662	BD0805	20	4	<1	18	64	0.9	32	20	3.9	0.7	16	2.1	31	3.3	4.4	<20	3.46	0.56
1663	BD0806	25	6	1	16	52	0.7	29	21	3.1	0.6	12	1.4	30	4.9	5.0	<20	3.32	0.54
1664	BD0807	26	7	1	18	50	0.7	30	17	3.2	0.8	11	2.1	31	1.1	4.9	<20	3.51	0.55
1665	BD0808	33	6	2	16	51	0.7	30	18	3.1	0.7	11	1.8	29	4.8	4.2	<20	3.03	0.50
1666	BD0809	30	7	<1	20	54	0.8	34	20	3.6	<0.5	16	2.1	33	3.6	5.3	<20	3.40	0.55
1667	BD0810	28	5	<1	20	58	0.7	28	22	3.0	0.6	9.9	1.9	32	5.6	5.0	<20	3.29	0.57
1668	BD0811	34	6	1	18	53	0.7	30	20	3.2	0.7	16	2.3	31	3.1	5.0	<20	3.17	0.51
1669	BD0812	31	7	<1	16	65	1.0	37	28	4.2	0.8	14	2.2	37	5.9	5.6	<20	3.66	0.59
1670	BD0813	40	6	<1	17	79	1.2	44	31	5.1	0.8	14	2.5	35	6.2	6.2	<20	4.00	0.60
1671	BD0814	37	11	1	16	52	0.6	31	20	2.6	<0.5	14	1.9	25	2.5	3.7	<20	2.46	0.43
1672	BD0815	25	20	<1	17	41	0.5	13	8	1.6	<0.5	16	2.9	25	1.9	3.4	<20	2.71	0.49
1673	BD0816	27	18	2	17	17	0.3	10	<5	0.8	<0.5	21	2.9	21	0.9	3.0	<20	2.87	0.48
1674	BD0817	26	9	<1	20	22	0.3	15	6	1.1	<0.5	22	2.4	24	0.9	4.1	<20	2.91	0.49
1675	BD0818	34	6	1	20	15	0.3	9	<5	0.8	<0.5	21	3.3	21	0.6	3.1	<20	2.80	0.49
1676	BD0819	30	5	1	20	16	0.4	6	7	0.8	<0.5	23	2.9	22	0.6	3.3	<20	3.15	0.50
1677	BD0820	23	4	<1	23	18	0.3	6	<5	0.7	<0.5	24	2.7	23	3.9	3.6	<20	3.38	0.56
1678	BD0821	21	<4	1	20	26	0.4	12	12	1.5	0.7	19	2.5	27	1.8	4.8	<20	3.29	0.55
1679	BD0901	18	6	1	17	45	0.7	25	15	2.6	0.6	11	1.9	31	3.0	4.0	<20	3.40	0.55
1680	BD0902	23	11	1	26	59	0.7	30	25	3.2	0.7	19	2.9	37	4.7	5.6	<20	4.23	0.67
1681	BD0903	20	32	<1	24	110	2.0	72	55	10.0	1.5	28	3.1	48	13.9	9.5	<20	5.29	0.80
1682	BD0904	28	6	2	19	47	0.6	30	22	2.9	0.9	17	2.1	30	3.6	4.8	<20	3.23	0.53
1683	BD0905	25	5	<1	18	59	0.9	36	21	4.0	0.6	15	1.7	34	2.8	5.4	<20	3.55	0.57
1684	BD0906	22	<4	1	19	55	0.7	32	20	3.2	<0.5	17	2.0	30	4.6	5.6	<20	3.49	0.50
1685	BD0907	34	5	<1	20	62	0.8	35	24	3.7	<0.6	16	2.7	36	5.7	5.6	<20	3.98	0.56
1686	BD0908	31	<4	1	17	82	0.8	37	9	4.0	<0.5	19	2.2	32	6.2	5.2	<20	3.71	0.59
1687	BD0909	30	43	<1	21	67	0.7	24	12	2.8	0.7	23	3.0	31	2.2	4.6	<20	4.24	0.65
1688	BD0910	26	12	<1	25	37	0.5	17	<5	1.9	0.7	25	3.4	31	1.5	4.8	<20	4.97	0.67
1689	BD0911	28	<4	<1	26	28	<0.2	13	<5	1.5	0.7	26	4.0	30	2.0	3.9	<20	4.92	0.72
1690	BD0912	24	<4	<1	23	19	<0.2	9	<5	1.2	<0.5	24	3.2	26	0.7	4.0	<20	3.90	0.61
1691	BD0913	23	<4	2	18	14	<0.2	8	<5	0.9	<0.5	30	3.4	20	0.9	3.2	<20	3.16	0.59
1692	BD0914	24	<4	<1	18	11	<0.2	5	<5	0.8	<0.5	21	<0.5	25	1.5	3.4	<20	2.97	0.50
1693	BD0915	22	<4	2	16	14	<0.2	5	<5	0.7	<0.5	23	2.7	25	1.0	3.4	<20	2.89	0.49

NO	SP.No. unit	Sn ppm	W ppm	Ta ppm	Nb ppm	Ce ppm	Eu ppm	La ppm	Nd ppm	Sm ppm	Tb ppm	Th ppm	U ppm	Y ppm	Gd ppm	Dy ppm	Pr ppm	Yb ppm	Lu ppm
1788	CA0414	17	5	<1	21	67	0.9	37	25	3.9	0.9	19	3.1	34	3.9	5.8	<20	3.86	0.57
1789	CA0415	15	<4	2	15	72	0.9	38	27	4.1	0.7	15	2.3	30	3.2	5.8	<20	3.15	0.51
1790	CA0416	18	<4	1	15	81	1.1	43	31	4.9	0.6	16	3.2	30	4.1	5.3	<20	3.57	0.47
1791	CA0417	14	5	<1	18	85	1.2	51	36	5.7	0.7	18	1.6	37	5.4	5.8	<20	3.77	0.57
1792	CA0418	24	<4	1	23	48	0.7	19	13	2.6	0.8	27	1.8	32	3.3	5.7	<20	4.26	0.54
1793	CA0419	17	<4	2	20	74	0.9	42	20	4.6	0.6	19	2.3	39	4.7	6.4	<20	3.85	0.54
1794	CA0420	17	<4	1	17	66	1.0	40	23	4.2	1.1	18	2.6	40	4.3	6.3	<20	3.61	0.52
1795	CA0421	16	<4	2	19	48	0.7	31	17	3.1	<0.5	19	2.3	33	3.4	5.1	<20	3.53	0.46
1796	CA0501	33	27	<1	22	75	0.9	37	24	3.7	<0.5	23	2.5	24	9.3	3.9	<20	2.81	0.39
1797	CA0502	30	18	2	21	96	1.0	44	22	4.6	<0.5	27	2.6	28	5.1	5.6	<20	3.51	0.49
1798	CA0503	16	10	1	16	100	1.4	47	37	5.9	<0.5	23	2.5	32	6.0	6.0	<20	3.60	0.55
1799	CA0504	22	8	<1	15	87	0.9	42	31	4.9	<0.5	21	1.7	29	5.4	5.4	<20	3.37	0.46
1800	CA0505	13	9	<1	18	88	1.3	47	39	5.5	0.9	28	2.1	31	2.8	5.9	<20	3.27	0.58
1801	CA0506	19	10	1	19	69	0.6	28	18	2.8	<0.5	23	2.5	29	3.9	5.2	<20	3.58	0.51
1802	CA0507	19	7	2	21	48	0.7	24	9	2.5	<0.5	24	2.6	30	1.8	4.9	<20	3.50	0.51
1803	CA0508	25	<4	2	22	59	0.8	29	19	4.4	5.6	24	1.5	34	0.9	0.9	<20	4.43	0.60
1804	CA0509	19	10	2	24	69	0.9	27	22	3.9	0.8	25	4.0	35	3.2	5.7	<20	4.44	0.60
1805	CA0510	15	<4	1	24	62	1.0	29	20	4.2	0.7	26	3.1	36	5.4	6.1	<20	4.31	0.59
1806	CA0511	17	5	2	26	66	0.6	27	22	3.7	0.6	22	2.8	38	1.7	6.8	<20	4.57	0.68
1807	CA0512	19	<4	1	25	58	0.8	25	16	3.2	0.5	20	2.7	36	4.6	5.7	<20	4.11	0.54
1808	CA0513	18	<4	2	24	52	0.8	24	16	2.9	0.9	20	2.4	34	4.4	4.9	<20	4.15	0.54
1809	CA0514	22	5	<1	11	62	0.8	36	25	4.1	0.6	11	2.0	24	8.0	3.8	<20	2.92	0.39
1810	CA0515	18	<4	2	18	89	1.2	53	38	5.8	0.9	19	1.9	36	5.6	6.2	<20	3.76	0.51
1811	CA0516	19	<4	<1	15	100	1.6	56	30	6.4	0.6	20	3.2	39	4.9	6.4	<20	4.13	0.56
1812	CA0517	16	<4	<1	17	79	1.0	47	37	5.8	0.9	19	3.1	41	5.9	6.4	<20	3.90	0.52
1813	CA0518	18	<4	<1	16	77	1.0	46	35	4.6	0.7	18	2.4	39	4.5	5.2	<20	3.67	0.45
1814	CA0519	12	<4	<1	17	77	1.2	46	30	5.0	0.7	18	2.1	37	5.4	6.6	<20	3.91	0.52
1815	CA0520	14	<4	1	16	89	1.2	50	30	5.2	0.9	20	2.4	41	4.4	6.6	<20	4.13	0.52
1816	CA0601	21	21	2	21	110	1.4	53	38	5.8	1.1	29	3.1	32	6.3	6.2	<20	4.11	0.55
1817	CA0602	15	27	1	19	99	1.2	43	37	5.4	0.9	26	2.3	31	6.4	6.0	<20	3.99	0.53
1818	CA0603	18	7	<1	17	93	1.2	48	38	5.8	0.6	26	2.0	33	9.2	5.8	<20	4.08	0.48
1819	CA0604	17	8	<1	20	75	0.9	37	25	4.6	0.7	24	<0.5	33	5.8	6.2	<20	4.32	0.56
1820	CA0605	17	<4	2	21	83	0.6	25	13	3.3	<0.5	24	3.3	30	5.1	4.4	<20	3.64	0.56
1821	CA0606	23	8	1	24	73	0.8	24	18	3.2	0.6	26	2.6	37	4.7	5.8	<20	4.58	0.61
1822	CA0607	21	9	2	22	75	0.9	30	20	3.9	0.6	24	2.6	37	5.6	5.9	25	4.35	0.56
1823	CA0608	24	12	<1	27	81	0.9	32	22	4.0	0.8	27	3.2	40	6.4	6.1	<20	4.96	0.64
1824	CA0609	22	<4	2	22	53	0.7	24	22	2.9	0.6	27	2.4	35	3.9	5.5	<20	4.22	0.60
1825	CA0610	15	<4	<1	20	73	0.7	22	13	2.7	0.5	26	2.7	30	2.5	5.1	<20	3.80	0.52
1826	CA0611	20	12	2	23	68	0.8	24	16	3.2	0.8	25	3.1	33	3.0	4.8	<20	4.38	0.59
1827	CA0612	17	<4	1	21	45	0.6	25	14	2.7	0.9	24	2.0	32	2.9	5.5	<20	3.85	0.57
1828	CA0613	14	<4	<1	22	150	1.4	65	41	7.1	1.1	24	4.0	45	3.7	5.1	<20	5.09	0.68
1829	CA0614	15	<4	1	16	82	1.3	47	36	5.5	1.1	16	3.1	32	5.7	5.2	<20	3.70	0.52
1830	CA0615	16	<4	<1	11	83	1.1	47	28	5.5	0.9	15	1.8	32	3.1	4.5	<20	3.46	0.46
1831	CA0616	19	<4	1	17	92	1.1	49	30	5.3	1.1	20	2.9	35	6.7	5.8	<20	3.90	0.56
1832	CA0617	14	<4	1	15	85	1.1	47	31	5.2	0.5	19	2.2	37	5.5	5.8	<20	3.72	0.54
1833	CA0618	18	<4	1	17	81	1.0	48	34	5.1	1.0	20	3.3	40	4.9	6.0	<20	3.93	0.53
1834	CA0619	9	<4	1	19	84	1.2	50	37	5.3	0.7	19	2.2	40	5.9	6.3	<20	4.27	0.60
1835	CA0701	18	12	1	16	100	1.3	46	37	5.5	<0.5	23	2.6	31	5.3	5.9	<20	3.46	0.50
1836	CA0702	16	12	1	19	81	1.0	39	27	4.9	0.5	21	2.2	29	7.6	5.1	<20	3.96	0.53
1837	CA0703	27	12	2	19	75	1.0	33	22	4.3	0.7	28	2.2	37	1.9	5.9	<20	4.52	0.60
1838	CA0704	18	10	1	21	67	0.8	25	19	3.4	0.5	24	2.3	33	2.6	5.8	<20	4.03	0.60
1839	CA0705	21	7	1	29	50	0.6	22	14	3.0	0.7	28	3.3	39	5.1	6.5	<20	4.92	0.65
1840	CA0706	19	7	2	26	61	0.9	26	20	3.3	0.9	27	2.4	36	5.2	5.9	<20	4.22	0.61
1841	CA0707	22	10	2	23	88	1.0	36	23	4.5	1.1	28	3.6	37	5.5	6.2	<20	4.52	0.57
1842	CA0708	20	7	1	21	150	0.8	21	16	3.0	0.6	30	3.3	34	3.7	5.6	<20	4.24	0.61
1843	CA0709	20	<4	1	18	71	0.6	26	18	2.4	<0.5	27	3.7	32	1.8	5.2	<20	3.83	0.55
1844	CA0710	18	<4	1	21	56	0.7	20	13	2.8	0.7	22	2.5	35	3.5	5.3	<20	4.37	0.60
1845	CA0711	19	6	<1	19	79	0.7	31	26	3.9	0.7	27	3.3	36	4.4	5.4	<20	4.44	0.67
1846	CA0712	23	<4	1	13	73	1.0	43	28	4.7	0.8	14	1.9	27	5.4	5.2	<20	3.57	0.43
1847	CA0713	16	<4	1	12	62	0.9	37	23	4.0	<0.5	12	1.8	30	2.7	5.0	<20	2.85	0.43
1848	CA0714	16	<4	<1	17	78	0.9	42	30	4.6	<0.5	19	2.6	37	6.5	5.9	<20	3.46	0.59
1849	CA0715	13	<4	1	19	65	0.8	35	24	3.5	<0.5	13	2.4	34	3.7	5.6	<20	3.17	0.55
1850	CA0716	18	5	<1	18	61	0.9	37	37	3.9	0.6	15	2.0	33	3.7	5.4	<20	3.48	0.54
1851	CA0717	14	<4	<1	19	50	0.7	27	22	2.9	0.9	18	1.6	35	5.0	5.3	<20	3.70	0.56
1852	CA0718	18	<4	1	19	53	0.6	21	16	2.5	<0.5	18	2.3	33	2.4	5.0	<20	3.04	0.46
1853	CA0801	21	15	2	20	83	1.0	42	34	4.7	<0.5	18	2.3	33	6.2	6.0	<20	3.01	0.47
1854	CA0802	27	15	1	21	82	1.0	42	29	4.6	<0.5	23	2.4	35	5.7	6.2	<20	3.63	0.55
1855	CA0803	18	11	2	19	75	1.0	33	24	4.0	<0.5	24	2.3	34	4.7	5.9	<20	3.66	0.60
1856	CA0804	16	15	<1	22	67	0.8	26	20	3.4	0.8	25	2.2	31	4.9	5.8	<20	3.78	0.57
1857	CA0805	20	13	2	25	50	0.8	24	19	3.0	<0.5	22	2.0	37	4.1	7.2	<20	3.43	0.59
1858	CA0806	20	10	<1	23	56	0.6	22	17	2.8	<0.5	22	2.0	34	4.2	5.6	<20	3.66	0.57
1859	CA0807	23	9	2	20	62	0.8	27	22	3.4	<0.5	21	2.5	31	2.1	5.3	<20	3.44	0.55
1860	CA0808	21	6	1	23	42	0.4	15	9	2.1	<0.5	25	2.2	34	1.5	6.0	20	3.88	0.64
1861	CA0809	31	<4	2	20	91	0.6	17	7	2.5	<0.5	23	2.8	33	2.8	5.7	<20	3.59	0.57
1862	CA0810	18	<4	<1	19	120	0.6	14	11	2.2	<0.5	25	3.1	31	2.3	5.4	<20	3.45	0.60
1863	CA0811	10	<4	<1	19	100	0.8	21	20	3.0	<0.5	20	1.6	34	2.2	5.6	<20	3.58	0.59
1864	CA0812	17	6	1	15	57	0.8	36	23	3.7	<0.5	13	2.1	32	3.2	4.9	<20	2.99	0.47
1865	CA0813	18	5	1	19	69	1.0	38	24	4.0	0.5	15	2.0	32	4.5	5.8	<20	3.15	0.50
1866	CA0814	13	<4	1	21	58	0.7	34	24	3.4	1.0	17	2.3	35	2.9	5.4	<20	3.24	0.47
1867	CA0815	16	<4	2	18	50	0.6	30	15	3.0	<0.5	16	2.5	33	2.6	5.1	<20	3.10	0.51
1868	CA0816	18	5	<1	20	62	0.8	34	27	3.4	<0.5	13	2.1	36	4.1	6.1	<20	3.57	0.55
1869	CA0817	16	<4	2	22	53	0.6	23	18	2.6	<0.5	19	2.3	30	5.3	5.1	<20	3.09	0.55
1870	CA0818	18	<4	1	20	48	0.5	17	11	2.0	<0.5	19	2.3	29	1.3	3.8	<20	3.11	0.53
1871	CA0819	21	6	1	19	83	0.6	22	15	2.6	<0.5	22	2.3	31	2.2	4.9	<20	3.45	0.52
1872	CA0901	29	16	2	22	85	0.9	39	30	4.3	<0.5	24	1.9	33	7.4	6.0	<20	3.33	0.52
1873	CA0902	28	16	2	21	84	0.9	34	30	3.9	<0.5	25	2.4	32	6.0	5.3	<20	3.31	0.54
1874	CA0903	19	10	1	22	67	0.8	23	22	3.0	<0.5	24	2.0	38	6.6	6.3	<20	3.40	0.59
1875	CA0904	23	9	<1	25	38	0.6	14	9	2.0	0.6	25	2.4	38	1.8	6.0	<20	4.01	0.59
1876	CA0905	16	<4	<1	14	44	0.5	17	9	1.8	<0.5	30	1.0	26	2.7	4.4	<20	2.72	0.51
1877	CA0906	15	10	1	24	58	0.6	28	18	2.7	0.7	25	2.1	33	3.8	5.7	<20	3.56	0.59
1878	CA0907	20	6	1	22	63	0.7	21	15	2.6	<0.5	26	2.3	32	2.2	5.0	<20	3.61	0.58
1879	CA0908	19	11	<1	26	60	1.2	44	40	6.0	0.7	22	2.2	38	6.8	6.0	<20	4.09	0.71
1880	CA0909	17	<4	1	20	120	1.1	32	26	4.1	0.7	36	3.0	34	5.2	5.3	<20	4.10	0.67
1881	CA0910	25	<4	<1	20	110	1.2	42	42	5.1	0.6	24	<0.5	36	6.6	6.8	<20	4.21	0.74

NO	SP.No. unit	Sn ppm	W ppm	Ta ppm	Nb ppm	Ce ppm	Eu ppm	La ppm	Nd ppm	Sa ppm	Tb ppm	Th ppm	U ppm	Y ppm	Gd ppm	Dy ppm	Pr ppm	Yb ppm	Lu ppm
1882	CA0911	23	8	<1	20	90	0.8	44	39	5.0	<0.5	20	0.9	36	3.3	5.3	<20	3.62	0.60
1883	CA0912	26	<4	2	16	78	1.1	42	28	4.8	1.0	14	<0.5	32	4.5	5.3	<20	3.33	0.56
1884	CA0913	20	5	<1	20	69	1.0	43	35	4.6	0.7	21	2.5	39	5.9	6.1	<20	3.42	0.58
1885	CA0914	20	<4	<1	18	55	0.8	32	22	3.5	<0.5	18	<0.5	33	4.1	5.7	<20	3.03	0.56
1886	CA0915	17	<4	2	19	60	0.7	35	28	3.5	<0.5	21	2.7	34	4.3	5.3	<20	3.66	0.55
1887	CA0916	18	<4	<1	27	54	0.7	25	20	2.8	0.7	20	3.0	37	3.7	6.0	<20	4.15	0.62
1888	CA0917	19	<4	3	22	74	0.6	19	14	2.4	0.5	23	3.0	30	2.6	4.6	<20	3.88	0.52
1889	CA0918	12	<4	2	24	84	0.5	17	12	2.0	<0.5	23	2.3	27	3.2	4.3	<20	3.33	0.50
1890	CA1001	37	25	1	10	55	0.3	16	10	1.0	<0.5	18	1.1	9	0.8	1.4	<20	1.29	0.25
1891	CA1002	21	<4	<1	21	76	0.8	22	21	2.9	1.5	23	2.1	33	4.7	5.5	<20	3.70	0.63
1892	CA1003	47	32	3	22	47	0.5	22	9	1.9	<0.5	19	2.3	16	3.7	2.6	<20	2.10	0.28
1893	CA1004	28	28	<1	22	53	0.7	24	6	2.7	<0.5	24	<0.5	27	7.3	3.7	<20	3.01	0.53
1894	CA1005	16	19	<1	21	86	0.9	34	21	3.9	<0.5	27	<0.5	32	3.1	5.0	<20	3.47	0.53
1895	CA1006	26	22	3	21	71	0.8	29	18	3.3	<0.5	26	2.1	31	4.8	5.4	<20	3.17	0.59
1896	CA1007	30	20	3	23	74	0.8	27	36	3.4	<0.5	25	<0.5	34	5.6	5.9	<20	3.22	0.49
1897	CA1008	22	13	<1	24	75	0.5	22	<5	2.9	<0.5	26	3.9	34	3.9	6.0	<20	3.47	0.53
1898	CA1009	23	9	2	23	56	0.7	21	15	2.6	<0.5	26	2.4	34	2.0	5.7	<20	3.54	0.54
1899	CA1010	17	10	<1	26	65	0.8	25	15	2.9	0.7	26	2.6	35	4.5	6.0	<20	4.01	0.65
1900	CA1011	13	<4	<1	19	60	0.8	35	24	3.6	0.7	11	1.6	31	1.6	4.8	<20	3.08	0.54
1901	CA1012	15	5	2	22	68	0.7	37	18	3.7	0.5	12	2.4	32	5.6	5.5	<20	3.30	0.58
1902	CA1013	<5	<4	<1	25	58	0.7	33	17	3.5	0.5	11	2.0	32	3.6	5.7	<20	3.32	0.48
1903	CA1014	8	6	<1	22	75	0.9	42	30	4.4	0.7	17	2.2	33	6.8	6.4	<20	3.10	0.56
1904	CA1015	9	6	3	25	86	1.4	48	40	5.4	0.6	20	2.8	38	1.6	7.1	<20	3.82	0.60
1905	CA1016	13	<4	<1	16	70	1.0	41	32	4.6	0.8	13	2.0	30	6.0	5.1	<20	2.91	0.46
1906	CA1017	9	<4	<1	18	81	1.0	43	28	4.7	0.9	19	2.6	30	7.0	5.8	<20	3.46	0.62
1907	CA1018	8	<4	<1	21	63	0.8	39	10	4.1	0.1	19	2.6	30	4.6	5.7	<20	4.02	0.54
1908	CA1019	16	<4	1	33	90	0.3	34	20	4.2	0.9	23	2.4	37	6.0	6.3	<20	4.38	0.63
1909	CA1020	29	26	2	21	46	0.3	21	9	1.4	<0.5	19	2.0	10	3.9	2.2	<20	1.61	0.20
1910	CA1101	22	29	2	21	49	0.4	18	9	1.5	<0.5	24	1.7	12	3.2	2.9	<20	1.97	0.32
1911	CA1102	20	24	1	19	47	0.6	23	9	2.2	<0.5	19	1.8	11	1.7	2.9	<20	2.38	0.39
1912	CA1103	17	15	2	18	55	0.6	30	21	2.8	<0.5	17	<0.5	11	1.7	2.4	<20	2.05	0.29
1913	CA1104	39	26	4	28	67	0.7	29	15	2.6	<0.5	23	2.6	17	2.2	3.2	<20	3.31	0.45
1914	CA1105	25	21	2	28	68	0.7	28	21	3.4	<0.5	23	2.3	24	3.5	3.7	<20	3.64	0.50
1915	CA1106	19	21	<1	27	91	1.9	54	42	8.2	1.9	23	1.8	40	7.2	9.0	<20	5.76	0.65
1916	CA1107	<5	<4	<1	24	58	0.9	37	16	4.0	<0.5	15	2.5	28	6.1	4.9	<20	3.52	0.41
1917	CA1108	11	7	<1	26	120	2.3	79	55	9.9	1.1	22	6.8	49	9.5	9.4	<20	5.14	0.64
1918	CA1109	9	<4	<1	22	76	1.3	46	26	5.1	<0.5	16	1.4	32	4.8	6.2	<20	3.99	0.54
1919	CA1110	11	<4	2	25	85	1.4	51	26	5.7	0.8	25	3.0	35	4.0	6.5	<20	4.90	0.62
1920	CA1111	7	<4	2	21	58	0.8	29	15	3.5	0.8	19	2.2	27	3.5	5.2	<20	4.24	0.49
1921	CA1112	14	<4	1	22	39	0.6	18	8	2.3	0.8	24	2.3	28	3.0	5.1	<20	4.59	0.56
1922	CA1113	8	<4	2	26	36	0.7	19	15	2.5	1.1	22	2.8	32	2.7	5.6	<20	4.76	0.66
1923	CA1114	13	<4	2	26	42	0.8	16	8	2.5	0.8	21	1.6	30	1.6	6.3	<20	4.52	0.57
1924	CA1115	7	9	<1	27	53	0.9	28	19	3.6	0.8	22	1.9	35	6.3	5.8	<20	4.60	0.61
1925	CA1116	12	5	<1	18	75	1.1	47	29	5.0	0.8	19	3.2	31	7.8	5.8	<20	4.04	0.61
1926	CA1117	8	<4	<1	21	86	1.1	48	36	5.3	1.0	20	2.1	31	5.1	5.9	<20	3.58	0.54
1927	CA1118	5	<4	<1	20	79	1.0	46	25	5.1	<0.5	15	<0.5	31	3.2	5.5	<20	3.69	0.54
1928	CA1119	18	<4	2	18	98	1.4	58	46	7.1	0.8	18	3.2	37	4.6	6.3	<20	4.79	0.61
1929	CA1120	14	<4	2	20	75	1.8	45	34	4.8	0.5	17	2.6	32	1.7	5.5	<20	3.69	0.56
1930	CA1201	26	12	2	21	110	0.7	23	18	3.0	<0.5	28	2.5	23	1.6	4.3	<20	3.37	0.55
1931	CA1202	10	<4	2	22	200	0.6	22	9	2.8	1.1	31	2.4	30	4.9	6.1	<20	4.52	0.69
1932	CA1203	9	<4	2	21	120	0.9	27	13	3.6	0.7	27	2.8	31	1.9	5.4	<20	4.31	0.64
1933	CA1204	11	<4	2	24	99	1.3	47	27	5.7	0.9	25	2.1	36	6.3	6.6	<20	4.50	0.61
1934	CA1205	19	12	1	27	60	1.0	26	14	3.3	0.9	27	3.3	35	2.1	6.2	<20	4.66	0.58
1935	CA1206	14	<4	2	27	52	0.9	29	<5	3.2	<0.5	23	3.1	31	4.7	4.6	<20	3.76	0.45
1936	CA1207	17	<4	2	26	68	1.1	30	27	4.1	<0.5	23	2.6	35	6.9	5.3	<20	3.61	0.60
1937	CA1208	11	<4	<1	20	70	1.2	42	28	4.7	<0.5	14	1.8	27	4.7	5.1	<20	3.44	0.49
1938	CA1209	12	4	2	18	98	1.0	31	24	4.2	<0.5	24	3.4	26	3.9	5.5	<20	3.77	0.67
1939	CA1210	10	<4	2	21	79	0.7	16	9	2.5	0.7	27	2.8	32	4.2	5.7	<20	4.57	0.63
1940	CA1211	5	<4	2	19	48	0.6	13	8	1.7	0.8	28	2.8	27	1.6	4.9	<20	4.36	0.56
1941	CA1212	11	<4	<1	25	43	0.7	16	10	2.0	1.2	30	3.9	28	3.4	5.5	<20	4.53	0.66
1942	CA1213	7	<4	<1	19	65	1.0	41	34	4.4	0.8	17	2.3	31	6.0	5.6	<20	4.42	0.62
1943	CA1214	12	<4	2	23	71	0.9	44	24	4.8	0.6	17	2.0	33	5.1	6.4	<20	4.13	0.59
1944	CA1215	10	<4	1	19	70	1.0	43	31	4.8	0.5	17	2.0	31	3.9	5.7	<20	3.91	0.45
1945	CA1216	10	<4	1	21	96	1.3	56	29	6.2	0.7	20	2.3	36	6.1	6.8	<20	4.47	0.55
1946	CA1301	27	14	4	24	73	0.3	24	7	2.6	<0.5	24	<0.5	21	4.7	3.8	<20	3.25	0.48
1947	CA1302	14	<4	<1	22	120	1.0	36	20	4.2	1.2	25	2.9	29	5.5	5.7	<20	4.23	0.57
1948	CA1303	13	<4	<1	23	110	0.6	17	13	2.3	0.7	26	3.5	32	4.9	5.3	<20	4.19	0.60
1949	CA1304	17	7	<1	22	73	0.7	17	7	2.3	0.7	28	2.9	20	6.4	5.7	<20	4.19	0.60
1950	CA1305	32	<4	<1	20	38	0.7	14	14	2.1	1.6	27	2.8	29	2.0	5.2	<20	3.97	0.61
1951	CA1306	11	<4	2	26	57	0.9	24	18	3.3	0.9	25	2.9	32	4.4	5.7	<20	4.51	0.67
1952	CA1307	6	10	1	25	54	0.7	29	18	3.3	<0.5	18	1.9	30	3.2	4.5	<20	3.74	0.50
1953	CA1308	7	7	2	24	74	1.0	36	21	4.0	<0.5	19	<0.5	30	4.3	4.9	<20	3.51	0.50
1954	CA1309	19	<4	<1	23	75	1.4	56	43	6.1	<0.5	14	1.9	32	4.8	6.0	<20	3.63	0.50
1955	CA1310	17	<4	<1	17	120	0.7	27	18	3.9	<0.5	22	2.2	26	3.5	4.9	<20	3.64	0.55
1956	CA1311	12	<4	2	21	61	0.7	25	14	2.9	<0.5	19	3.0	26	5.4	5.8	<20	3.55	0.49
1957	CA1312	11	<4	1	19	36	0.5	16	12	2.1	<0.5	19	2.8	24	1.5	4.6	<20	3.27	0.46
1958	CA1401	10	12	<1	25	140	1.3	39	27	5.1	0.7	26	2.3	32	3.7	5.2	29	4.27	0.58
1959	CA1402	18	<4	<1	23	110	0.8	31	21	3.7	0.7	22	2.6	29	3.5	5.6	<20	4.04	0.56
1960	CA1403	9	<4	<1	23	130	0.7	25	18	2.8	1.0	29	3.1	31	5.8	5.8	<20	5.12	0.65
1961	CA1404	17	<4	2	21	120	0.5	20	11	2.3	0.8	26	2.6	30	1.1	6.2	<20	4.44	0.64
1962	CA1405	12	<4	1	23	100	0.8	19	7	2.4	0.5	25	2.2	31	4.7	5.8	<20	4.41	0.53
1963	CA1406	12	7	<1	22	66	0.7	18	11	2.4	0.7	25	1.7	28	5.4	5.7	<20	4.29	0.50
1964	CA1407	7	<4	<1	27	81	2.8	86	58	13.0	2.0	16	3.7	53	12.0	11.1	<20	6.09	0.88
1965	CA1408	<5	<4	<1	18	60	1.0	39	23	4.0	1.0	14	1.6	25	4.2	4.8	<20	3.32	0.40
1966	CA1409	11	<4	<1	21	78	1.0	64	34	5.0	<0.5	18	<0.5	28	4.7	5.8	<20	3.64	0.54
1967	CA1410	9	<4	<1	24	65	1.0	42	22	4.4	<0.5	14	2.5	29	4.2	5.8	<20	3.80	0.50
1968	CA1411	5	<4	<1	26	120	1.6	67	32	7.2	0.8	20	3.6	46	6.6	7.5	<20	4.96	0.70
1969	CA1412	12	<4	<1	20	58	0.7	22	14	2.7	0.5	21	2.8	28	3.4	5.3	<20	3.77	0.50
1970	CA1413	11	<4	1	20	46	0.5	14	10	2.0	1.0	21	3.0	27	2.6	5.4	<20	4.48	0.59
1971	CA1414	9	<4	2	29	59	0.8	21	18	3.1	0.9	24	3.3	35	2.3	6.5	<20	4.71	0.59
1972	CA1415	6	<4	<1	23	46	0.7	22	9	2.5	1.0	23	1.5	33	4.1	6.2	<20	4.15	0.54
1973	CA1501	12	7	2	21	89	0.9	33	21	4.4	0.8	22	2.2	31	4.6	5.6	<20	4.21	0.52
1974	CA1502	9	<4	2	27	84	0.8	17	9	2.8	0.7	26	2.6	32	6.5	6.5	<20	4.66	0.55
1975	CA1503	11	<4	2	24	140	0.7	21	11	3.0	0.7	27	1.8	35	3.8	6.8	<20	4.19	0.56

NO	SP.No. unit	Sn ppm	W ppm	Ta ppm	Nb ppm	Ce ppm	Eu ppm	La ppm	Nd ppm	Sm ppm	Tb ppm	Th ppm	U ppm	Y ppm	Gd ppm	Dy ppm	Pr ppm	Yb ppm	Lu ppm
1976	CA1504	8	<4	2	26	140	0.7	20	18	3.0	0.7	24	2.7	38	3.6	6.6	<20	4.09	0.58
1977	CA1505	7	6	1	30	93	0.6	16	9	3.0	0.7	24	2.2	40	4.6	5.5	<20	4.56	0.65
1978	CA1506	<5	6	2	28	59	0.9	23	13	3.6	0.7	22	2.6	36	6.2	6.1	<20	4.45	0.57
1979	CA1507	11	<4	<1	28	72	1.1	36	33	4.7	0.5	20	3.2	33	2.5	6.0	<20	3.90	0.61
1980	CA1508	7	<4	<1	20	45	0.7	22	11	2.8	<0.5	16	2.4	26	4.6	4.8	<20	3.66	0.53
1981	CA1509	8	<4	1	22	43	0.7	21	15	2.7	0.5	19	2.1	30	4.3	5.1	<20	3.48	0.51
1982	CA1510	11	<4	<1	23	35	0.6	14	6	2.0	0.9	25	1.8	25	2.8	6.2	<20	4.10	0.53
1983	CA1511	9	<4	<1	21	74	0.7	25	13	3.3	<0.5	24	2.3	32	4.0	5.2	<20	3.86	0.56
1984	CA1512	8	<4	2	24	55	0.3	18	13	2.7	<0.5	27	<0.5	33	1.3	5.8	<20	3.62	0.52
1985	CA1513	<5	<4	2	20	63	0.6	24	18	3.4	<0.5	19	1.9	29	2.3	5.3	<20	3.71	0.57
1986	CA1514	10	<4	2	24	86	0.9	27	26	4.2	<0.5	30	<0.5	37	2.9	7.0	<20	3.78	0.62
1987	CA1601	8	12	<1	19	74	0.9	35	27	4.7	<0.5	10	1.9	28	6.2	4.9	<20	3.13	0.50
1988	CA1602	7	8	2	21	67	0.9	32	22	4.8	<0.5	16	<0.5	31	7.4	5.1	<20	2.98	0.54
1989	CA1603	11	9	<1	21	72	1.0	30	15	4.6	<0.5	17	2.3	31	7.7	5.4	<20	3.27	0.53
1990	CA1604	5	7	<1	21	72	1.0	24	19	3.6	<0.5	19	1.8	31	4.3	5.5	<20	3.97	0.51
1991	CA1605	7	7	<1	22	77	0.7	23	25	3.6	<0.5	17	3.0	33	2.9	5.7	<20	3.68	0.51
1992	CA1606	9	5	1	19	86	1.4	37	35	7.3	<0.5	13	1.8	33	5.5	7.9	<20	3.48	0.52
1993	CA1607	25	<4	<1	26	78	0.6	29	15	2.9	<0.5	22	2.6	32	3.7	5.7	<20	3.90	0.57
1994	CA1608	7	<4	1	28	42	0.5	21	12	2.7	0.9	15	2.3	35	1.9	6.5	<20	4.00	0.54
1995	CA1609	<5	<4	<1	21	60	0.7	19	15	2.8	0.5	24	2.4	20	1.3	5.9	<20	3.54	0.53
1996	CA1610	6	<4	2	21	43	0.6	16	18	2.3	<0.5	23	2.9	31	3.8	5.6	<20	3.79	0.50
1997	CA1611	6	6	2	20	94	1.1	38	22	4.1	<0.5	23	2.1	29	6.9	5.7	<20	3.71	0.53
1998	CA1612	13	<4	2	24	110	0.9	29	22	4.1	1.2	26	2.9	33	2.1	6.3	<20	3.91	0.53
1999	CA1613	9	9	<1	24	120	1.2	50	43	6.4	1.1	28	3.2	38	5.9	6.3	<20	3.63	0.50
2000	CA1614	10	7	2	26	110	0.9	35	28	4.7	<0.5	31	2.9	40	3.1	7.2	<20	3.81	0.53
2001	CA1701	13	7	2	25	84	1.4	42	31	6.1	0.5	21	1.6	37	7.8	7.5	<20	3.81	0.49
2002	CA1702	11	<4	2	23	92	0.7	15	18	2.7	<0.5	23	1.4	34	3.2	6.2	<20	4.04	0.51
2003	CA1703	9	8	2	25	61	0.6	15	13	2.6	0.5	21	2.3	33	2.3	5.7	<20	3.73	0.58
2004	CA1704	9	<4	1	23	62	0.7	19	14	3.0	<0.5	21	2.4	31	3.8	5.4	<20	3.58	0.51
2005	CA1705	11	6	<1	23	89	0.8	27	16	3.6	<0.5	21	2.3	27	2.8	6.6	<20	3.64	0.53
2006	CA1706	6	<4	2	22	93	0.7	22	20	3.0	0.7	24	1.9	30	3.6	6.6	<20	4.09	0.55
2007	CA1707	10	<4	<1	24	84	0.8	19	9	2.8	0.6	26	2.6	31	3.4	6.8	<20	4.03	0.63
2008	CA1708	8	5	<1	21	62	0.6	16	13	2.4	<0.5	23	1.9	30	4.7	6.9	<20	3.37	0.54
2009	CA1709	8	<4	2	22	75	0.7	22	23	3.3	<0.5	23	2.3	29	6.0	5.8	<20	3.81	0.53
2010	CA1710	7	<4	<1	20	75	0.6	14	9	2.3	0.8	27	2.1	28	2.6	5.2	<20	4.00	0.46
2011	CA1801	<5	6	<1	19	91	1.3	49	31	6.3	<0.5	15	1.2	34	5.9	6.0	<20	2.71	0.44
2012	CA1802	<5	8	<1	19	85	1.3	46	32	5.9	<0.5	17	1.9	34	7.9	7.0	<20	2.79	0.39
2013	CA1803	<5	8	2	16	81	0.9	37	22	4.9	<0.5	15	2.6	30	7.0	5.6	<20	3.25	0.49
2014	CA1804	7	7	<1	20	81	1.0	34	22	4.5	<0.5	19	1.4	34	4.9	5.7	<20	3.33	0.53
2015	CA1805	<5	6	2	18	58	0.7	32	22	4.1	<0.5	20	1.5	30	3.6	6.6	<20	3.22	0.47
2016	CA1806	8	<4	<1	22	83	1.1	50	36	5.4	<0.5	18	3.0	34	4.5	6.6	<20	3.70	0.45
2017	CA1807	8	<4	<1	28	59	0.5	12	7	1.9	0.9	23	2.5	32	3.8	7.7	<20	4.26	0.54
2018	CA1808	7	<4	2	20	95	0.5	17	9	2.8	1.4	25	2.7	31	4.6	6.0	<20	3.91	0.56
2019	CA1809	9	<4	1	21	79	0.7	19	15	2.9	0.7	21	2.1	28	2.2	5.2	<20	3.42	0.46
2020	CA1810	10	<4	<1	20	38	0.4	15	12	1.8	<0.5	20	1.6	24	4.5	5.4	<20	3.21	0.43
2021	CA1901	<5	10	<1	18	90	1.4	51	31	6.5	1.1	19	1.5	34	5.2	7.0	<20	3.46	0.45
2022	CA1902	<5	7	<1	20	74	1.0	39	31	4.8	<0.5	16	2.5	32	5.6	5.4	<20	2.77	0.40
2023	CA1903	9	7	<1	18	79	1.2	41	24	5.3	<0.5	18	2.4	32	5.3	6.2	<20	3.73	0.42
2024	CA1904	18	5	2	19	88	0.9	31	18	4.3	<0.5	18	2.1	30	4.7	6.4	<20	3.17	0.46
2025	CA1905	<5	5	1	21	39	0.8	18	11	2.8	<0.5	19	2.0	31	4.2	5.6	<20	3.51	0.53
2026	CA1906	<5	<4	1	20	54	0.3	19	18	2.9	<0.5	20	1.9	32	3.8	5.2	<20	3.48	0.57
2027	CA1907	7	<4	<1	25	80	1.1	40	31	5.6	<0.5	20	2.5	36	4.7	7.3	<20	3.88	0.52
2028	CA1908	10	<4	<1	20	85	0.6	27	12	3.7	<0.5	23	2.3	30	4.8	4.9	<20	3.42	0.58
2029	CA1909	11	<4	2	21	100	0.3	20	16	2.6	<0.5	25	3.4	28	2.5	5.2	<20	3.52	0.46
2030	CA1910	9	<4	2	20	88	0.8	21	15	3.3	1.0	24	2.0	31	4.7	5.7	<20	3.30	0.57
2031	CA2001	8	7	2	19	87	1.2	49	38	6.2	<0.5	18	1.5	32	8.5	6.3	<20	3.03	0.41
2032	CA2002	14	<4	1	18	78	1.0	43	35	5.4	<0.5	15	1.2	30	6.6	5.7	<20	2.99	0.41
2033	CA2003	13	9	<1	19	76	1.0	42	39	5.5	<0.5	18	1.4	30	7.0	6.8	<20	6.43	0.45
2034	CA2004	11	6	1	19	68	0.9	31	22	4.1	<0.5	16	2.0	31	5.9	6.1	<20	3.26	0.46
2035	CA2005	9	<4	1	21	47	0.5	13	11	2.2	<0.5	19	1.4	31	6.3	6.8	<20	3.68	0.53
2036	CA2006	6	<4	2	22	48	0.6	14	11	2.1	<0.5	22	2.2	30	2.5	5.7	<20	3.62	0.42
2037	CA2007	9	<4	1	24	57	0.8	27	22	3.8	<0.5	18	2.5	35	5.5	5.9	<20	3.85	0.55
2038	CA2008	7	6	1	20	110	0.9	42	32	4.6	<0.5	21	3.0	33	4.7	5.9	<20	3.92	0.52
2039	CA2009	12	<4	1	20	100	0.7	25	14	3.5	<0.5	20	2.4	31	3.7	5.7	<20	3.14	0.48
2040	CA2010	9	<4	<1	17	120	0.8	25	15	3.9	<0.5	22	2.3	28	8.5	5.3	<20	3.52	0.45
2041	CA2011	26	<4	<1	27	120	1.1	43	32	5.9	<0.5	28	1.5	43	5.2	7.7	<20	4.26	0.66
2042	CA2101	10	6	<1	20	84	1.0	49	38	5.9	<0.5	17	1.9	30	8.2	6.6	<20	3.03	0.41
2043	CA2102	11	<4	<1	20	72	0.9	32	24	4.3	<0.5	17	1.6	29	3.7	5.1	<20	3.63	0.50
2044	CA2103	<5	6	<1	19	63	0.8	25	25	3.4	<0.5	18	2.2	32	2.8	6.2	<20	3.06	0.44
2045	CA2104	8	<4	2	18	80	0.7	23	14	3.2	<0.5	21	2.1	29	5.4	5.7	<20	3.13	0.47
2046	CA2105	6	<4	1	22	82	0.6	20	9	2.4	0.5	22	2.0	29	1.5	5.7	<20	3.45	0.49
2047	CA2106	<5	<4	<1	25	50	0.4	13	9	1.8	0.9	24	3.1	32	3.8	6.5	<20	4.16	0.49
2048	CA2107	9	<4	2	24	69	0.6	18	14	2.8	0.8	24	3.1	33	4.8	6.4	<20	4.26	0.62
2049	CA2108	7	<4	2	23	120	0.7	41	27	4.1	<0.5	24	2.1	33	3.3	7.2	<20	3.84	0.52
2050	CA2109	7	<4	2	22	99	0.6	32	21	3.9	<0.5	22	2.4	30	6.1	6.1	<20	3.42	0.56
2051	CA2110	10	<4	<1	26	120	1.1	36	21	4.4	<0.5	30	3.2	39	5.1	5.9	<20	4.13	0.60
2052	CA2111	11	<4	2	23	160	0.9	50	28	4.8	<0.5	28	4.1	34	4.9	5.3	<20	3.92	0.50
2053	CA2201	12	8	<1	17	90	0.9	63	38	5.7	<0.5	16	2.3	29	7.9	5.9	<20	2.89	0.38
2054	CA2202	<5	6	<1	21	97	1.0	37	32	4.7	<0.5	19	1.8	32	5.7	5.3	<20	3.69	0.51
2055	CA2203	6	<4	<1	18	100	0.6	30	30	4.6	<0.5	18	3.9	26	2.3	4.9	<20	2.79	0.47
2056	CA2204	10	<4	2	21	65	0.8	29	18	3.7	<0.5	15	1.9	30	3.0	5.0	<20	3.27	0.47
2057	CA2205	7	5	<1	21	110	0.7	28	20	3.5	<0.5	21	2.1	32	2.0	6.0	<20	3.61	0.50
2058	CA2206	7	<4	<1	22	86	0.5	16	9	2.1	0.6	23	2.5	30	3.0	5.6	<20	3.49	0.52
2059	CA2207	<5	<4	1	19	110	0.8	29	24	3.9	<0.5	34	2.4	32	4.9	6.1	<20	3.67	0.56
2060	CA2208	6	7	<1	21	120	1.1	48	44	6.0	<0.5	27	2.4	30	6.3	6.8	<20	3.53	0.58
2061	CA2209	12	<4	3	23	70	0.8	40	29	4.4	<0.5	20	2.0	31	2.8	5.8	<20	2.99	0.47
2062	CA2210	16	<4	2	23	140	1.0	43	38	6.5	0.8	30	3.3	33	4.9	5.4	<20	7.19	0.65
2063	CA2211	7	<4	<1	24	170	1.3	49	39	7.6	<0.5	31	<0.5	31	3.7	4.9	<20	3.81	0.60
2064	CA2301	9	<4	<1	21	91	0.8	20	23	3.4	<0.5	20	2.5	32	3.7	5.6	<20	3.57	0.43
2065	CA2302	<5	4	2	22	86	0.7	18	12	3.0	<0.5	19	2.1	31	5.9	5.0	<20	3.51	0.49
2066	CA2303	7	5	2	20	81	0.7	15	15	2.7	<0.5	22	2.6	28	3.3	5.2	<20	3.46	0.55
2067	CA2304	6	<4	<1	22	110	0.6	15	18	2.7	<0.5	25	2.4	31	5.0	5.7	<20	3.77	0.54
2068	CA2305	14	<4	<1	26	120	0.3	20	23	3.7	0.7	32	2.8	35	5.5	6.6	<20	4.31	0.61
2069	CA2306	5	<4	<1	26	110	0.8	30	22	4.4	0.7	28	1.8	40	5.0	7.9	<20	4.33	0.64

Appendix 4　Chemical analysis data of soil samples

NO	SP.No. unit	Sn ppm	W ppm	Ta ppm	Nb ppm	Ce ppm	Eu ppm	La ppm	Nd ppm	Sm ppm	Tb ppm	Th ppm	U ppm	Y ppm	Gd ppm	Dy ppm	Pr ppm	Yb ppm	Lu ppm
2070	CA2307	8	<4	2	22	150	1.7	70	52	8.5	0.7	26	3.2	37	7.3	7.7	<20	4.02	0.57
2071	CA2308	12	<4	<1	26	160	1.7	84	58	10.0	0.9	37	<0.5	41	7.5	7.7	<20	5.36	0.78
2072	CA2309	18	<4	<1	30	110	1.4	66	26	6.8	0.9	26	<0.5	39	4.9	6.8	<20	4.56	0.59
2073	CA2310	9	<4	2	26	140	1.3	55	26	7.5	1.0	32	4.0	31	4.9	5.9	<20	4.33	0.64
2074	DA0301	41	<4	6	28	130	1.2	66	59	9.4	0.9	30	8.0	44	5.0	7.8	<20	4.77	0.74
2075	DA0302	28	<4	<1	25	120	1.5	65	47	9.1	1.1	20	7.4	42	6.3	6.8	<20	4.68	0.76
2076	DA0303	17	<4	<1	26	100	1.4	54	40	8.0	1.1	25	7.3	43	5.7	6.8	<20	4.41	0.66
2077	DA0304	35	16	6	25	110	1.1	61	29	8.4	0.7	29	7.5	43	3.1	6.6	<20	4.31	0.62
2078	DA0305	24	11	4	25	120	1.5	57	46	8.4	0.7	27	6.4	44	7.5	7.4	<20	4.21	0.64
2079	DA0306	23	<4	<1	25	110	1.7	62	48	8.8	2.6	29	7.9	42	6.5	6.5	<20	4.65	0.55
2080	DA0307	27	11	4	25	110	1.5	58	45	8.6	0.9	28	6.8	40	5.1	6.6	<20	4.64	0.59
2081	DA0308	37	<4	5	24	100	1.3	63	35	7.7	0.9	28	6.1	42	4.4	7.7	<20	4.37	0.52
2082	DA0309	21	<4	<1	22	100	1.2	49	42	7.4	0.6	25	6.9	38	7.3	8.3	<20	3.69	0.56
2083	DA0401	22	<4	<1	23	82	1.2	50	39	6.0	<0.5	30	5.9	21	4.7	5.6	<20	3.36	0.49
2084	DA0402	17	<4	<1	25	85	1.0	53	38	6.4	0.7	27	5.8	34	4.0	4.5	<20	4.12	0.60
2085	DA0403	36	15	5	27	140	1.5	70	57	9.9	1.0	33	7.9	45	7.1	7.2	<20	5.21	0.77
2086	DA0404	18	<4	4	25	92	1.0	54	40	6.6	0.6	30	8.3	36	4.2	5.7	<20	3.95	0.46
2087	DA0405	20	<4	<1	25	100	1.3	57	40	8.8	0.8	30	8.7	39	5.5	7.2	<20	4.18	0.63
2088	DA0406	33	<4	<1	26	120	1.5	59	61	8.4	<0.5	28	7.0	45	7.8	7.7	<20	3.78	0.70
2089	DA0407	32	<4	4	28	100	1.3	55	43	7.7	0.9	25	5.6	42	4.8	7.5	<20	4.22	0.53
2090	DA0408	24	<4	2	24	78	1.0	46	34	6.2	<0.5	27	7.4	37	3.9	5.7	<20	3.33	0.45
2091	DA0409	30	<4	4	27	120	1.6	59	31	8.6	0.9	31	6.8	42	4.8	7.0	<20	4.51	0.62
2092	DA0410	30	<4	6	29	140	1.9	72	51	10.0	1.1	33	6.6	49	5.6	8.4	<20	5.01	0.63
2093	DA0501	30	9	4	25	120	1.6	65	57	9.1	1.1	29	6.1	44	7.6	8.4	<20	4.58	0.66
2094	DA0502	23	<4	<1	24	120	1.6	56	39	8.4	1.0	30	8.0	40	3.9	6.8	<20	4.39	0.65
2095	DA0503	26	<4	<1	22	90	1.2	51	44	8.9	0.9	27	7.8	34	7.8	5.6	<20	4.24	0.50
2096	DA0504	26	<4	<1	23	100	1.3	54	43	8.2	1.6	27	6.8	41	6.5	6.9	<20	4.69	0.63
2097	DA0505	26	10	<1	22	120	1.6	66	51	9.4	0.9	28	5.6	45	6.4	7.9	<20	5.05	0.70
2098	DA0506	23	<4	3	23	140	1.8	68	52	9.8	1.1	29	7.3	43	6.4	7.3	<20	5.55	0.71
2099	DA0507	32	<4	7	26	130	1.7	68	53	9.6	0.7	28	6.8	41	4.6	7.3	<20	4.38	0.70
2100	DA0508	21	<4	<1	25	140	1.6	64	56	9.5	1.1	30	8.1	41	5.3	6.9	<20	5.22	0.83
2101	DA0509	21	<4	<1	25	120	1.3	61	38	9.1	0.9	30	8.9	43	5.7	7.3	<20	4.71	0.51
2102	DA0510	16	<4	<1	23	120	1.6	58	40	8.2	0.9	26	6.0	41	5.7	6.6	<20	4.41	0.55
2103	DA0511	43	<4	<1	25	110	1.1	59	39	7.2	1.3	30	4.8	46	5.6	8.5	<20	4.39	0.46
2104	DA0512	35	11	4	26	120	1.3	60	44	7.6	0.9	28	7.0	45	5.2	7.6	<20	4.36	0.64
2105	DA0513	24	<4	2	24	98	1.2	50	33	6.8	0.9	29	7.3	38	6.0	5.8	<20	4.07	0.48
2106	DA0601	21	6	<1	26	88	1.0	49	26	5.5	0.7	28	6.7	36	4.7	5.9	<20	3.40	0.50
2107	DA0602	16	5	1	23	84	1.2	47	30	5.8	0.7	25	6.9	39	5.3	5.4	<20	3.72	0.50
2108	DA0603	19	5	3	21	91	1.1	47	32	6.0	0.6	28	7.1	34	5.1	6.0	<20	3.35	0.47
2109	DA0604	29	8	2	24	66	0.9	42	24	4.4	0.8	25	7.1	33	3.8	5.3	<20	3.21	0.41
2110	DA0605	22	7	3	22	73	0.8	42	20	5.0	<0.5	26	6.6	34	5.0	6.3	<20	3.63	0.42
2111	DA0606	36	8	2	26	88	0.9	47	36	5.9	<0.5	31	7.2	36	4.9	6.9	<20	3.42	0.50
2112	DA0607	24	5	<1	26	96	1.2	50	36	6.3	<0.5	27	6.4	41	7.1	6.8	<20	3.79	0.48
2113	DA0608	40	7	5	27	110	1.3	56	39	7.0	<0.5	28	4.7	45	5.7	5.9	<20	3.01	0.52
2114	DA0609	24	7	2	25	100	1.2	51	37	6.5	0.9	30	7.0	40	4.2	7.4	<20	4.14	0.53
2115	DA0610	28	6	2	22	84	1.1	45	22	5.8	<0.5	26	7.5	39	5.6	8.0	<20	3.46	0.47
2116	DA0611	15	<4	2	24	69	0.9	40	33	4.5	<0.5	22	5.0	37	4.9	4.7	<20	3.06	0.42
2117	DA0612	32	7	3	25	99	1.1	51	41	6.4	0.8	24	6.4	43	6.5	6.4	<20	4.09	0.51
2118	DA0613	19	6	3	26	80	0.9	46	28	5.2	<0.5	28	6.7	35	3.7	5.8	<20	3.45	0.45
2119	DA0614	20	6	2	24	82	0.9	43	31	5.2	<0.5	25	6.0	37	4.2	6.1	<20	3.69	0.44
2120	DA0615	31	7	3	24	73	1.0	41	28	5.1	<0.5	26	6.0	33	6.1	5.3	<20	3.19	0.42
2121	DA0701	28	<4	2	26	77	0.9	41	34	5.2	<0.5	25	5.9	38	6.5	6.5	<20	3.05	0.44
2122	DA0702	29	<4	3	25	92	1.1	44	28	5.9	<0.5	30	8.4	37	4.4	6.6	<20	3.54	0.54
2123	DA0703	32	7	3	23	74	1.1	45	30	4.9	<0.5	31	8.2	31	2.9	4.5	<20	3.42	0.42
2124	DA0704	20	9	2	23	99	1.2	51	42	6.6	<0.5	29	9.0	33	4.4	5.2	<20	3.90	0.54
2125	DA0705	23	7	2	26	93	1.1	51	40	6.2	0.9	29	7.7	36	4.1	6.3	<20	4.03	0.46
2126	DA0706	25	7	2	24	83	0.9	46	35	5.6	0.9	27	7.5	38	5.6	5.9	<20	3.23	0.40
2127	DA0707	41	10	3	27	110	1.3	56	36	7.1	<0.5	29	6.3	46	6.1	6.9	<20	4.01	0.51
2128	DA0708	7	7	2	25	79	0.9	44	30	5.3	0.5	26	7.5	35	3.9	5.6	<20	3.36	0.48
2129	DA0709	30	7	3	22	88	1.2	47	44	6.4	0.5	31	8.5	37	3.7	6.5	<20	3.82	0.58
2130	DA0710	25	6	<1	22	79	0.9	50	37	5.3	0.5	31	6.1	35	3.0	4.9	<20	3.75	0.55
2131	DA0711	16	9	2	26	85	1.1	52	35	6.0	0.5	31	6.3	38	3.3	6.0	<20	3.86	0.48
2132	DA0712	38	7	<1	23	97	1.3	53	41	6.1	0.5	31	7.3	39	4.4	6.5	<20	4.19	0.55
2133	DA0713	26	7	4	22	87	1.2	47	31	5.7	0.5	27	5.8	36	7.6	5.7	<20	3.63	0.50
2134	DA0714	29	8	<1	22	95	1.0	50	39	6.0	0.5	26	7.7	40	5.1	6.7	<20	3.58	0.46
2135	DA0715	29	10	4	24	90	1.1	49	42	5.8	1.1	26	7.6	39	5.0	7.1	<20	3.56	0.46
2136	DA0716	23	9	3	43	82	0.8	42	28	4.3	0.8	23	5.4	41	4.0	6.8	<20	3.97	0.59
2137	DA0717	42	8	5	44	140	0.9	54	37	5.9	<0.5	40	6.5	34	6.4	6.4	<20	2.97	0.45
2138	DA0718	25	<4	<1	25	150	1.9	120	94	13.0	1.8	45	9.9	39	11.5	10.5	<20	3.32	0.44
2139	DA0719	60	13	4	41	230	1.7	110	81	12.0	1.7	41	11.0	33	12.5	9.9	<20	2.84	0.49
2140	DA0801	22	6	<1	22	74	0.9	45	34	4.7	0.7	28	5.5	35	4.7	5.6	<20	3.09	0.49
2141	DA0802	25	7	3	24	70	0.9	40	34	4.5	<0.5	26	6.5	36	5.0	5.6	<20	3.28	0.48
2142	DA0803	28	6	3	23	66	0.6	38	29	4.2	<0.5	25	8.0	33	4.8	5.7	<20	3.06	0.36
2143	DA0804	28	8	<1	25	77	1.0	44	29	5.3	<0.5	30	7.4	36	5.7	6.4	<20	3.24	0.50
2144	DA0805	23	10	4	25	95	1.2	51	42	6.4	<0.5	30	8.1	41	6.9	7.8	<20	3.55	0.55
2145	DA0806	19	<4	2	24	67	1.0	41	29	4.3	<0.5	26	6.7	35	5.8	4.8	<20	3.15	0.48
2146	DA0807	19	6	<1	23	65	0.8	39	25	4.4	<0.5	22	6.1	37	2.8	6.8	<20	2.76	0.46
2147	DA0808	19	9	4	26	79	1.0	44	28	5.3	<0.5	29	6.2	36	6.9	6.8	<20	3.31	0.51
2148	DA0809	33	9	2	25	82	1.1	46	39	5.7	<0.5	27	5.9	40	6.3	7.2	<20	3.35	0.57
2149	DA0810	24	11	2	26	82	0.9	44	28	5.3	<0.5	30	9.2	37	4.8	7.0	<20	3.56	0.52
2150	DA0811	18	6	2	21	68	0.8	43	25	4.2	<0.5	27	6.7	32	5.5	5.1	<20	3.18	0.47
2151	DA0812	33	8	3	26	85	1.0	47	29	5.4	<0.5	29	6.3	38	4.2	6.6	<20	3.35	0.55
2152	DA0813	29	9	4	28	100	1.1	54	30	6.3	0.9	29	6.0	48	7.1	7.9	<20	4.03	0.56
2153	DA0814	71	6	5	68	230	0.3	76	35	6.9	<0.5	160	6.5	25	5.9	5.8	<20	3.04	0.32
2154	DA0815	51	9	5	67	310	0.5	88	69	9.7	1.9	120	6.3	69	9.5	12.9	<20	6.44	0.96
2155	DA0816	53	8	6	72	390	0.3	120	76	11.0	<0.5	160	6.0	34	5.7	7.1	<20	2.98	0.41
2156	DA0817	38	14	5	63	270	0.4	91	57	6.7	<0.5	150	6.8	19	4.9	4.4	<20	1.70	0.21
2157	DA0818	46	14	6	63	200	0.4	67	37	5.3	<0.5	120	6.1	14	3.0	3.6	<20	1.96	0.21
2158	DA0819	41	9	4	37	93	0.5	32	18	3.7	<0.5	54	5.9	17	1.8	3.8	<20	1.57	0.23
2159	DA0820	38	10	4	34	140	0.8	46	34	5.9	<0.5	39	9.6	22	6.3	5.5	<20	2.11	0.35
2160	DA0821	60	18	3	31	150	1.5	83	68	10.0	1.4	32	11.0	40	10.7	9.6	<20	3.39	0.53
2161	DA0822	97	13	9	37	160	1.3	62	52	7.2	<0.5	37	10.0	35	5.2	7.6	<20	2.95	0.52
2162	DA0901	34	7	3	26	82	1.0	44	27	5.3	<0.5	28	6.7	39	4.9	6.8	<20	3.52	0.50
2163	DA0902	35	8	3	25	83	1.1	46	34	5.5	<0.5	29	7.2	37	6.4	6.3	<20	3.41	0.53

Appendix 4   Chemical analysis data of soil samples

NO	SP.No. unit	Sn ppm	W ppm	Ta ppm	Nb ppm	Ce ppm	Eu ppm	La ppm	Nd ppm	Sm ppm	Tb ppm	Th ppm	U ppm	Y ppm	Gd ppm	Dy ppm	Pr ppm	Yb ppm	Lu ppm
2164	DA0903	18	7	2	23	94	1.0	48	32	5.7	1.1	27	7.6	40	3.2	7.3	<20	3.51	0.55
2165	DA0904	26	7	<1	19	89	1.0	50	28	5.7	2.0	24	5.8	39	5.9	7.4	<20	3.27	0.43
2166	DA0905	20	10	3	24	93	1.1	50	28	5.7	<0.5	26	8.0	41	4.4	5.9	<20	3.46	0.44
2167	DA0906	25	<4	3	23	90	1.2	50	41	5.7	1.4	27	7.9	39	5.9	7.0	<20	3.59	0.58
2168	DA0907	21	6	2	23	68	0.8	42	32	4.0	<0.5	20	6.7	35	3.3	5.5	<20	3.16	0.51
2169	DA0908	21	<4	3	25	92	1.0	50	34	5.7	<0.5	30	7.3	42	4.8	6.6	<20	3.44	0.58
2170	DA0909	16	10	3	24	100	1.1	56	33	6.3	<0.5	26	6.6	41	6.2	6.6	<20	3.94	0.58
2171	DA0910	12	8	3	33	130	0.9	65	44	7.5	0.9	38	7.8	46	6.7	6.9	<20	4.41	0.66
2172	DA0911	27	8	<1	25	78	0.8	46	31	5.0	0.8	31	5.6	37	5.2	5.3	<20	3.20	0.49
2173	DA0912	25	8	3	26	84	1.0	47	32	5.6	1.3	30	8.0	39	4.8	6.1	<20	3.44	0.53
2174	DA0913	29	8	3	30	96	1.0	53	38	6.2	0.1	32	7.1	42	5.3	5.9	<20	3.34	0.50
2175	DA0914	59	10	7	63	390	0.5	130	92	14.0	0.9	150	8.0	44	12.7	9.9	22	4.40	0.57
2176	DA0915	55	7	6	65	490	0.5	110	76	12.0	1.1	180	7.9	40	6.9	8.8	<20	4.00	0.52
2177	DA0916	55	8	6	62	420	0.5	92	55	9.5	1.0	150	6.7	46	6.6	9.7	<20	4.57	0.62
2178	DA0917	52	8	6	72	350	0.4	120	94	12.0	0.9	150	6.5	52	10.4	10.7	30	4.35	0.61
2179	DA0918	44	13	4	51	310	0.4	120	61	7.9	<0.5	140	5.0	22	6.1	4.6	<20	1.84	0.24
2180	DA0919	37	11	2	34	180	0.5	100	35	4.2	<0.5	50	6.6	16	1.9	3.4	<20	1.82	0.27
2181	DA0920	51	10	5	45	130	0.7	53	39	5.4	<0.5	42	9.6	22	4.8	4.3	<20	2.20	0.31
2182	DA0921	60	11	6	44	120	1.1	85	75	9.1	1.0	42	9.8	20	8.7	6.9	<20	2.36	0.33
2183	DA1006	111	9	3	29	98	1.1	52	40	6.1	<0.5	25	4.6	49	7.3	7.2	<20	3.75	0.51
2184	DA1007	11	<4	2	26	92	1.0	49	36	5.6	0.8	27	6.4	42	6.5	7.2	<20	3.58	0.62
2185	DA1008	15	6	4	26	73	1.0	44	37	4.8	0.1	26	6.2	34	4.6	6.3	<20	3.36	0.52
2186	DA1009	18	5	2	29	79	0.9	46	32	4.8	0.8	29	5.7	38	5.4	5.6	<20	3.43	0.53
2187	DA1010	30	7	3	29	87	1.0	48	26	5.6	<0.5	32	7.2	38	5.9	7.3	<20	3.57	0.55
2188	DA1011	41	12	<1	30	110	1.2	60	42	6.8	0.8	31	7.3	46	6.8	7.0	<20	4.07	0.57
2189	DA1012	33	9	6	78	200	0.6	120	82	12.0	1.7	76	6.0	46	9.5	11.6	<20	5.37	0.86
2190	DA1013	36	10	7	77	230	0.6	130	99	14.0	0.8	84	6.8	48	10.2	12.1	<20	4.84	0.65
2191	DA1014	72	9	6	51	140	0.5	76	56	7.6	1.2	58	5.7	20	6.9	8.6	<20	4.41	0.74
2192	DA1015	44	<4	4	49	310	0.9	160	130	19.0	2.4	100	8.5	81	15.4	12.8	<20	5.11	0.85
2193	DA1016	56	7	3	57	340	0.3	46	42	5.5	<0.5	36	4.8	30	5.1	5.7	<20	3.11	0.46
2194	DA1017	55	16	6	77	440	0.3	110	68	9.0	<0.5	170	6.4	24	6.7	5.1	<20	2.46	0.27
2195	DA1018	50	12	8	89	420	0.3	120	73	9.2	<0.5	160	5.8	26	6.3	5.6	<20	2.74	0.29
2196	DA1019	33	10	3	45	190	0.5	63	33	5.3	<0.5	64	7.3	15	2.8	2.9	<20	1.82	0.31
2197	DA1020	42	8	4	39	180	0.9	64	45	7.0	<0.5	49	11.0	21	4.6	4.4	<20	1.70	0.33
2198	DA1101	35	9	4	26	100	1.2	53	37	6.1	0.5	28	5.5	42	5.6	7.0	<20	3.46	0.51
2199	DA1102	19	8	3	26	110	1.2	59	37	7.3	1.4	28	5.6	42	7.1	7.1	<20	4.34	0.56
2200	DA1103	17	7	3	25	110	1.3	60	44	7.5	0.7	30	7.5	42	3.5	6.4	<20	4.47	0.60
2201	DA1104	31	7	2	27	120	1.4	63	46	7.4	1.8	30	8.1	44	6.3	7.8	<20	3.99	0.58
2202	DA1105	31	8	3	28	120	1.3	63	41	7.7	1.4	31	5.4	40	5.0	6.9	<20	4.18	0.58
2203	DA1106	25	6	2	24	120	1.3	61	42	7.6	<0.5	28	8.2	41	6.9	7.2	32	3.73	0.54
2204	DA1107	20	5	<1	25	110	1.3	57	34	7.0	0.5	32	7.5	37	5.0	6.2	<20	4.34	0.56
2205	DA1108	38	11	3	29	120	1.3	62	41	7.7	2.3	33	7.1	42	5.7	6.7	<20	4.44	0.49
2206	DA1109	33	9	3	28	120	1.4	61	37	7.5	<0.5	32	6.6	41	6.0	6.5	<20	3.76	0.61
2207	DA1110	19	6	2	28	92	0.9	57	32	6.1	0.5	35	7.3	33	4.4	5.1	<20	4.09	0.60
2208	DA1111	20	10	6	52	180	1.0	100	69	12.0	1.5	70	9.3	45	6.9	8.2	<20	5.26	0.77
2209	DA1112	41	7	8	110	440	0.7	240	160	28.0	2.9	160	11.0	83	19.1	17.8	<20	9.92	1.36
2210	DA1113	44	10	12	126	390	0.7	210	130	23.0	2.1	130	7.8	49	15.4	10.6	<20	5.14	0.65
2211	DA1114	43	<4	5	70	360	0.4	95	54	10.0	1.3	170	7.5	32	6.5	6.5	<20	2.79	0.41
2212	DA1115	40	8	7	66	510	0.5	130	69	12.0	<0.5	180	8.0	33	6.2	6.2	<20	3.56	0.35
2213	DA1116	39	8	6	65	290	0.5	90	57	8.8	<0.5	120	8.2	25	4.9	5.0	<20	3.10	0.34
2214	DA1117	41	7	7	73	290	0.6	110	76	12.0	1.1	120	7.9	29	6.5	5.2	<20	3.80	0.48
2215	DA1118	40	7	4	51	300	0.6	97	53	9.2	<0.5	130	6.2	20	4.1	4.5	<20	2.28	0.29
2216	DA1201	11	<4	2	25	80	1.0	49	25	5.0	<0.5	20	6.7	33	4.7	4.6	<20	3.85	0.52
2217	DA1202	16	8	3	25	82	0.9	48	27	5.5	0.6	30	6.3	34	3.7	5.3	<20	4.04	0.53
2218	DA1203	14	<4	<1	24	92	1.1	49	35	5.9	<0.5	27	8.3	34	5.1	6.0	<20	3.89	0.50
2219	DA1204	20	6	2	28	93	1.0	56	32	5.8	<0.5	36	6.4	32	3.8	4.9	<20	3.74	0.57
2220	DA1205	39	8	2	27	120	1.3	63	40	7.9	0.6	32	5.2	42	5.3	6.1	<20	4.63	0.60
2221	DA1206	36	11	3	29	120	1.4	66	41	8.2	0.7	33	6.4	44	7.5	8.4	<20	4.40	0.56
2222	DA1207	20	5	3	27	88	1.0	51	32	5.3	<0.5	32	6.4	34	3.9	5.3	<20	3.89	0.55
2223	DA1208	20	5	2	26	79	1.1	49	31	5.5	0.7	31	8.0	32	4.5	5.0	20	3.67	0.60
2224	DA1209	32	8	3	26	120	1.3	61	41	7.6	0.8	28	6.0	41	7.3	7.5	<20	4.04	0.54
2225	DA1210	20	6	3	32	110	0.9	64	39	6.5	0.8	41	6.8	34	6.2	6.2	<20	4.13	0.56
2226	DA1211	18	7	3	37	150	1.0	86	53	8.8	0.8	57	7.5	37	5.6	6.2	<20	4.19	0.54
2227	DA1212	20	10	4	54	250	0.9	140	90	15.0	1.8	100	11.0	46	8.5	8.5	<20	4.94	0.64
2228	DA1213	37	6	6	79	330	0.6	130	85	14.0	1.7	180	10.0	33	8.1	7.2	<20	4.13	0.49
2229	DA1214	39	7	6	77	370	0.6	150	110	16.0	2.2	180	8.6	34	8.8	8.6	<20	4.76	0.60
2230	DA1215	41	7	6	64	260	0.5	130	86	13.0	1.0	190	6.7	25	9.9	5.2	<20	2.71	0.31
2231	DA1216	40	6	7	69	290	<0.2	130	78	15.0	1.9	170	6.7	30	5.9	6.0	<20	4.01	0.50
2232	DA1217	37	8	5	68	320	<0.2	130	74	14.0	1.3	170	5.8	24	8.3	5.6	22	2.71	0.38
2233	DA1218	33	9	3	56	190	0.6	85	50	9.6	0.7	83	6.4	26	4.8	5.3	<20	3.15	0.62
2234	DA1219	49	9	5	64	630	<0.2	180	110	21.0	0.8	170	8.0	38	10.9	7.3	<20	4.11	0.69
2235	DA1220	42	7	6	69	290	0.8	110	68	12.0	0.8	110	8.2	28	4.6	5.3	<20	3.37	0.64
2236	DA1304	20	<4	2	24	95	1.2	50	37	6.9	0.7	24	6.3	38	4.9	6.6	<20	3.60	0.72
2237	DA1305	31	6	<1	26	100	1.0	53	28	7.4	0.7	30	7.9	37	5.8	7.2	<20	3.93	0.78
2238	DA1306	11	8	2	26	110	1.1	55	40	7.9	0.6	27	6.7	45	7.6	6.3	<20	3.92	0.74
2239	DA1307	16	<4	2	26	122	1.7	65	39	9.6	0.9	28	6.3	32	7.4	8.2	<20	4.07	0.78
2240	DA1308	13	<4	3	28	99	1.1	53	38	6.6	<0.5	31	6.1	40	4.5	4.5	<20	3.90	0.52
2241	DA1309	18	<4	<1	25	120	1.0	63	49	8.5	1.0	35	8.1	42	4.1	7.2	<20	3.85	0.68
2242	DA1310	20	9	2	25	120	1.3	63	46	8.0	0.5	28	7.8	39	7.1	6.7	<20	3.91	0.43
2243	DA1311	21	8	3	37	160	1.2	89	64	12.0	1.1	51	9.1	44	6.3	7.5	<20	4.16	0.75
2244	DA1312	33	6	7	62	430	1.2	230	140	28.0	1.4	140	12.0	69	17.1	14.0	<20	7.52	1.01
2245	DA1313	42	8	6	73	240	<0.2	120	75	13.0	0.7	150	5.3	37	10.5	6.4	<20	3.49	0.45
2246	DA1314	44	7	7	80	400	0.7	170	100	21.0	1.6	160	8.1	41	10.3	9.3	<20	4.30	0.56
2247	DA1315	43	8	5	70	460	<0.2	150	94	19.0	0.9	170	8.0	31	7.7	7.7	21	3.38	0.60
2248	DA1316	47	6	6	68	470	<0.2	120	77	15.0	1.6	170	7.6	28	5.8	5.0	<20	2.63	0.39
2249	DA1317	39	5	4	71	370	0.4	120	69	14.0	1.6	140	7.9	37	3.0	7.4	<20	3.67	0.45
2250	DA1318	20	<4	2	29	99	0.5	53	29	4.8	0.5	38	5.8	12	7.2	2.6	<20	1.44	0.29
2251	DA1319	42	5	4	55	350	0.9	85	51	11.0	0.9	130	6.5	36	6.1	6.5	<20	3.86	0.50
2252	DA1320	37	8	4	61	360	<0.2	93	57	12.0	0.9	140	8.0	32	5.4	6.3	<20	3.66	0.52
2253	DA1401	20	7	<1	23	99	1.2	54	37	7.6	0.9	29	8.0	36	4.3	6.5	<20	3.42	0.47
2254	DA1402	15	8	<1	2	86	1.0	48	26	6.2	0.7	28	7.2	33	5.7	4.8	<20	3.24	0.43
2255	DA1403	32	7	3	26	100	1.3	54	43	7.7	0.1	28	7.6	39	5.1	6.1	21	3.63	0.49
2256	DA1404	23	7	<1	25	91	1.1	50	28	6.8	0.6	31	8.9	34	4.7	5.5	<20	3.57	0.47
2257	DA1405	25	6	1	25	88	1.2	47	26	6.7	0.6	27	7.3	35	6.6	6.3	<20	3.85	0.55

Appendix 4 Chemical analysis data of soil samples

NO	SP.No. unit	Sn ppm	W ppm	Ta ppm	Nb ppm	Ce ppm	Eu ppm	La ppm	Nd ppm	Sm ppm	Tb ppm	Th ppm	U ppm	Y ppm	Gd ppm	Dy ppm	Pr ppm	Yb ppm	Lu ppm
2268	DA1406	16	<4	3	25	100	1.1	55	41	7.6	0.7	32	7.1	36	3.8	5.5	<20	4.10	0.75
2259	DA1407	14	8	2	24	110	1.4	57	44	8.3	0.7	29	6.4	39	4.8	6.0	<20	3.71	0.47
2260	DA1408	12	<4	2	28	100	1.2	56	48	7.6	0.7	32	7.2	37	5.6	5.8	<20	3.67	0.47
2261	DA1409	18	4	2	33	130	1.1	65	31	8.3	0.8	36	6.0	42	6.0	6.2	<20	4.20	0.52
2262	DA1410	20	<4	4	50	210	1.0	120	60	15.0	0.8	67	8.9	47	8.9	9.5	<20	4.02	0.50
2263	DA1411	20	<4	4	50	190	0.9	110	65	13.0	1.2	84	14.0	47	9.0	8.9	<20	5.62	0.69
2264	DA1412	33	10	7	74	220	<0.2	100	79	12.0	1.7	140	9.5	35	6.2	7.2	<20	3.92	0.54
2265	DA1413	36	<4	5	70	230	<0.2	120	85	13.0	0.9	200	7.2	30	8.1	6.8	<20	3.38	0.34
2266	DA1414	52	9	4	46	150	0.6	69	56	8.4	0.5	79	8.5	34	5.3	5.8	<20	3.70	0.42
2267	DA1415	47	<4	5	66	390	0.6	120	86	14.0	0.5	180	12.0	38	9.9	7.8	<20	3.93	0.61
2268	DA1416	39	6	5	52	370	0.6	86	63	9.0	<0.5	150	9.1	25	5.1	5.2	<20	2.09	0.30
2269	DA1417	43	<4	5	66	330	0.8	130	94	17.0	1.8	160	13.0	37	12.1	7.9	<20	3.11	0.33
2270	DA1418	42	6	5	79	290	0.5	93	71	11.0	1.0	160	10.0	33	10.3	6.4	<20	3.16	0.47
2271	DA1419	53	11	6	78	360	0.6	97	79	11.0	0.5	170	12.0	32	7.2	5.9	<20	2.87	0.42
2272	DA1420	41	10	7	74	380	0.7	99	76	12.0	<0.5	190	9.5	25	8.1	5.9	<20	2.21	0.38
2273	DA1506	33	<4	3	26	94	1.2	54	31	6.9	0.7	33	9.3	41	6.8	6.7	<20	4.16	0.48
2274	DA1507	7	7	2	26	82	0.3	44	32	5.5	0.9	32	9.7	34	3.4	5.0	<20	4.01	0.47
2275	DA1508	9	6	2	29	94	1.3	51	36	7.0	1.6	33	8.3	41	6.0	6.1	<20	4.13	0.55
2276	DA1509	<5	<4	3	37	130	1.0	76	52	9.2	1.2	59	11.0	40	7.5	7.8	<20	5.39	0.74
2277	DA1510	12	10	4	67	210	0.9	130	84	15.0	1.5	100	12.0	44	10.3	10.5	<20	5.41	0.71
2278	DA1511	16	<4	4	59	140	0.5	86	56	9.2	1.9	140	7.5	23	4.5	5.3	<20	3.12	0.42
2279	DA1512	40	8	5	60	290	0.6	79	62	8.4	1.2	180	7.5	30	6.3	6.7	<20	3.51	0.57
2280	DA1513	39	<4	6	72	240	0.5	110	79	12.0	1.6	150	11.0	41	7.3	7.3	<20	4.29	0.49
2281	DA1514	41	10	7	78	310	0.7	130	96	15.0	2.2	160	16.0	42	9.5	7.0	<20	3.44	0.53
2282	DA1515	43	<4	6	72	290	0.6	130	85	15.0	1.0	190	13.0	39	8.1	8.1	<20	3.66	0.43
2283	DA1516	44	<4	6	80	400	0.8	190	110	21.0	1.1	210	13.0	42	14.8	8.5	<20	4.49	0.41
2284	DA1517	47	11	5	71	370	0.7	140	100	17.0	1.5	180	13.0	34	9.5	7.5	<20	3.86	0.42
2285	DA1518	44	7	5	64	360	0.8	140	100	16.0	1.0	180	14.0	34	10.2	6.8	<20	3.00	0.36
2286	DA1519	51	<4	7	74	310	1.0	140	110	17.0	0.9	170	11.0	41	10.1	6.8	<20	3.95	0.40
2287	DA1520	45	11	8	77	330	0.9	120	95	15.0	0.8	160	9.1	40	8.4	6.8	<20	3.96	0.52
2288	DA1521	42	8	6	62	280	0.9	120	84	16.0	2.4	150	13.0	43	8.8	7.8	<20	3.91	0.43
2289	DA1522	42	<4	5	58	300	0.8	99	66	13.0	1.5	170	11.0	39	8.8	7.4	<20	3.98	0.46
2290	DA1606	<5	8	3	26	82	1.1	50	29	6.3	0.8	35	11.0	34	5.5	5.5	<20	4.30	0.48
2291	DA1607	8	<4	2	26	84	1.0	48	37	6.1	0.8	35	7.4	37	6.6	6.2	24	4.24	0.59
2292	DA1608	7	13	<1	28	110	1.6	56	42	7.3	0.8	35	8.4	45	7.3	6.5	<20	4.46	0.56
2293	DA1609	26	<4	4	36	110	0.8	68	48	7.2	1.5	47	10.0	39	7.4	6.2	<20	4.21	0.50
2294	DA1610	11	9	7	75	230	0.9	130	99	15.0	1.9	97	9.9	45	10.7	8.0	<20	5.09	0.74
2295	DA1611	37	<4	4	68	250	0.0	130	93	15.0	1.2	140	19.0	47	10.4	9.2	26	5.02	0.59
2296	DA1612	20	<4	3	54	130	0.3	75	44	8.2	<0.5	140	6.4	22	5.8	5.4	<20	2.21	0.27
2297	DA1613	36	<4	5	51	280	0.6	92	62	8.3	<0.5	220	6.1	20	6.3	4.6	<20	1.88	0.22
2298	DA1614	37	<4	5	68	350	0.7	170	110	19.0	1.8	260	9.6	32	10.7	8.2	<20	2.82	0.40
2299	DA1615	39	9	6	69	360	0.6	160	120	18.0	2.8	230	12.0	46	12.6	9.5	<20	5.23	0.60
2300	DA1616	34	<4	6	70	380	0.6	150	85	18.0	2.5	220	9.2	62	10.8	12.4	<20	9.72	1.04
2301	DA1617	40	<4	8	76	310	0.7	140	100	17.0	2.2	160	11.0	46	11.0	9.9	<20	4.50	0.47
2302	DA1618	39	<4	4	61	360	1.0	170	130	20.0	2.3	190	12.0	41	10.5	8.0	<20	3.50	0.45
2303	DA1619	40	<4	6	64	330	1.0	170	120	21.0	0.9	170	14.0	50	14.7	9.2	<20	3.90	0.50
2304	DA1620	43	<4	4	64	340	0.8	130	93	14.0	1.8	180	9.8	34	8.7	7.1	<20	2.96	0.36
2305	DA1621	46	9	5	63	330	0.5	110	75	13.0	1.6	180	11.0	34	7.0	5.5	<20	2.63	0.32
2306	DA1622	42	8	6	69	340	0.8	86	71	11.0	<0.5	170	8.6	36	7.5	5.7	<20	2.43	0.37
2307	DA1703	<5	<4	3	25	99	1.0	59	31	7.3	0.7	43	11.0	36	4.8	7.1	<20	4.16	0.50
2308	DA1704	6	<4	3	27	110	1.5	58	37	7.7	0.9	39	8.5	42	7.1	7.2	<20	4.59	0.64
2309	DA1705	<5	6	2	26	75	1.1	47	28	5.5	0.9	34	9.6	36	5.0	5.7	<20	4.14	0.51
2310	DA1706	41	7	2	26	90	0.8	52	42	7.1	0.9	43	9.6	37	3.6	6.6	<20	4.35	0.50
2311	DA1707	20	<4	4	27	98	1.3	57	35	7.2	0.7	33	7.5	43	7.1	6.6	<20	4.52	0.65
2312	DA1708	36	<4	4	52	310	0.6	96	70	12.0	1.6	160	11.0	30	5.4	7.1	<20	2.05	0.24
2313	DA1709	20	6	3	26	78	1.1	46	29	5.2	0.5	33	7.2	34	7.2	5.4	<20	3.76	0.56
2314	DA1710	20	<4	3	29	110	1.3	63	42	7.7	1.4	42	9.9	39	4.7	7.4	<20	5.06	0.61
2315	DA1711	34	7	5	72	200	0.8	100	78	12.0	0.7	130	11.0	38	6.1	6.6	<20	4.19	0.48
2316	DA1712	43	10	5	78	310	1.0	160	100	18.0	0.7	160	17.0	52	8.0	10.6	<20	4.25	0.56
2317	DA1713	43	<4	7	70	310	0.8	140	90	16.0	1.0	180	13.0	42	10.3	7.3	<20	3.24	0.37
2318	DA1714	8	7	4	50	190	0.6	71	59	8.9	1.0	140	10.0	31	10.0	10.0	<20	4.39	0.52
2319	DA1715	20	<4	4	59	240	0.5	84	56	11.0	1.9	140	9.7	43	5.5	6.9	<20	5.50	0.68
2320	DA1716	35	<4	5	72	270	0.7	120	91	15.0	1.6	140	12.0	50	8.8	8.6	<20	4.72	0.56
2321	DA1717	39	9	6	72	330	0.7	130	90	14.0	<0.5	210	11.0	38	10.6	9.8	<20	3.94	0.43
2322	DA1718	40	<4	6	65	420	0.7	150	110	16.0	<0.5	220	11.0	34	9.3	9.1	<20	2.81	0.37
2323	DA1719	37	<4	3	66	420	0.9	190	140	21.0	<0.5	220	12.0	40	9.1	7.8	<20	3.34	0.39
2324	DA1720	41	<4	6	70	380	0.9	150	120	19.0	<0.5	190	12.0	47	9.9	8.9	<20	4.24	0.47
2325	DA1721	33	<4	5	68	340	0.9	160	100	18.0	1.8	200	14.0	47	10.8	8.5	<20	3.86	0.47
2326	DA1722	46	8	6	68	310	0.7	83	58	9.5	<0.5	150	8.5	29	9.4	9.3	<20	2.99	0.41
2327	DA1802	<5	<4	4	28	100	1.4	53	36	6.8	1.2	33	8.2	45	8.7	7.6	<20	4.46	0.59
2328	DA1803	<5	8	2	28	120	1.3	69	41	8.1	1.1	49	8.7	39	5.6	8.2	<20	4.11	0.57
2329	DA1804	6	8	3	26	99	1.1	57	39	6.9	1.0	37	10.0	38	5.1	7.2	<20	3.82	0.51
2330	DA1805	9	<4	4	29	150	1.3	87	58	10.0	1.2	68	11.0	41	9.8	8.6	<20	4.79	0.61
2331	DA1806	15	<4	2	25	83	1.0	50	38	6.4	1.2	34	10.0	38	3.4	6.5	<20	4.82	0.52
2332	DA1807	22	8	3	26	97	1.3	52	39	6.9	1.2	34	8.9	40	6.3	7.2	<20	4.61	0.56
2333	DA1808	24	8	3	28	84	1.2	50	39	6.1	1.2	38	9.8	35	2.0	6.5	<20	3.98	0.54
2334	DA1809	18	6	3	27	130	1.1	71	42	8.1	1.1	54	11.0	34	8.3	7.2	<20	4.26	0.57
2335	DA1810	20	<4	3	32	220	1.1	130	86	14.0	1.3	100	13.0	41	12.9	10.9	<20	5.03	0.66
2336	DA1811	20	<4	3	45	180	0.3	100	66	8.8	0.5	160	8.0	15	5.3	5.2	<20	2.28	0.24
2337	DA1812	31	6	5	60	220	0.3	98	75	11.0	0.7	120	10.0	35	9.6	6.9	<20	3.80	0.40
2338	DA1813	31	<4	5	61	230	0.7	110	64	12.0	0.6	120	12.0	35	10.5	7.7	32	3.15	0.44
2339	DA1814	21	7	2	36	160	0.3	44	39	4.6	<0.5	100	8.2	20	3.3	4.4	<20	2.26	0.22
2340	DA1815	21	6	3	37	200	0.3	46	34	4.2	0.7	170	6.2	18	3.6	4.6	<20	2.18	0.27
2341	DA1816	23	<4	3	34	210	0.5	63	47	8.6	0.6	130	8.8	36	7.1	7.6	<20	3.79	0.51
2342	DA1817	32	5	3	64	290	0.3	94	74	14.0	2.0	140	9.2	56	12.2	13.9	<20	6.96	0.85
2343	DA1818	38	<4	5	69	280	0.7	140	110	16.0	1.4	160	9.4	44	14.8	10.5	<20	4.72	0.55
2344	DA1819	20	<4	2	27	79	1.1	51	34	5.5	1.1	38	6.5	36	7.0	5.5	34	4.09	0.59
2345	DA1820	57	10	5	66	390	0.5	110	79	13.0	1.2	200	12.0	28	8.2	6.8	<20	1.87	0.22
2346	DA1821	58	<4	7	80	390	0.7	110	91	13.0	0.7	200	11.0	29	6.0	7.0	<20	3.04	0.39
2347	DA1901	20	<4	3	26	100	1.5	55	42	7.1	1.0	33	6.4	43	6.8	7.2	<20	4.75	0.62
2348	DA1902	33	<4	4	27	110	1.5	58	39	7.7	1.4	35	7.5	45	9.2	7.5	58	4.94	0.60
2349	DA1903	37	12	5	30	110	1.2	61	48	7.8	1.1	40	7.2	42	4.5	7.5	<20	5.41	0.61
2350	DA1904	<5	<4	<1	23	99	1.5	54	38	6.8	1.1	28	7.6	39	7.5	6.9	<20	4.38	0.61
2351	DA1905	11	<4	3	26	100	1.5	56	40	7.3	1.0	38	7.8	38	8.5	6.9	<20	4.42	0.58

Appendix 4　Chemical analysis data of soil samples

NO SP.No. unit	Sn ppm	W ppm	Ta ppm	Nb ppm	Ce ppm	Eu ppm	La ppm	Nd ppm	Sm ppm	Tb ppm	Th ppm	U ppm	Y ppm	Gd ppm	Dy ppm	Pr ppm	Yb ppm	Lu ppm
2352 DA1906	16	<4	2	27	130	0.5	72	48	9.1	1.0	47	11.0	42	7.4	8.4	<20	5.76	0.69
2353 DA1907	18	<4	<1	26	170	1.0	100	57	9.9	1.6	67	12.0	36	8.4	8.8	<20	4.95	0.53
2354 DA1908	23	13	<1	35	230	0.8	140	93	13.0	1.8	130	9.8	27	5.9	7.5	<20	2.51	0.32
2355 DA1909	20	8	4	50	270	0.8	160	110	16.0	1.6	160	20.0	29	11.2	7.7	<20	3.41	0.45
2356 DA1910	20	<4	2	39	220	0.3	120	74	10.0	<0.5	160	11.0	15	8.3	4.7	<20	1.84	0.22
2357 DA1911	21	<4	2	38	260	0.6	120	77	10.0	<0.5	160	12.0	35	10.0	3.9	<20	1.19	0.17
2358 DA1912	20	6	2	42	250	0.4	60	25	5.7	<0.5	160	8.2	15	5.1	3.9	<20	1.39	0.14
2359 DA1913	30	<4	4	45	360	0.7	82	55	9.1	<0.5	140	4.9	24	7.4	5.2	<20	2.58	0.22
2360 DA1914	39	4	3	57	370	0.3	120	67	14.0	0.7	160	7.8	32	9.2	8.0	<20	3.10	0.38
2361 DA1915	20	<4	<1	35	280	0.3	120	84	14.0	1.3	130	4.5	27	6.6	7.0	<20	2.40	0.27
2362 DA1916	36	6	4	45	310	0.3	82	31	9.5	0.5	120	5.0	27	6.4	6.2	<20	2.45	0.21
2363 DA1917	47	<4	5	64	360	0.9	160	100	18.0	0.6	170	8.3	38	11.9	9.4	<20	3.33	0.34
2364 DA1918	50	<4	4	64	320	0.9	160	120	21.0	0.8	150	10.0	47	15.7	11.0	<20	3.97	0.38
2365 DA1919	50	<4	6	67	360	0.8	190	120	23.0	2.3	160	12.0	47	14.7	11.0	54	3.66	0.35
2366 DA1920	53	<4	6	72	420	0.3	190	110	21.0	0.7	190	8.1	40	13.7	10.2	45	3.12	0.30
2367 DA2001	<5	10	3	29	120	1.3	63	44	7.9	1.0	31	6.5	43	7.8	8.2	<20	4.48	0.57
2368 DA2002	8	<4	4	63	420	0.3	120	61	13.0	0.8	180	16.0	24	8.7	6.1	<20	3.06	0.30
2369 DA2003	12	<4	<1	31	200	0.8	120	67	12.0	1.1	74	7.4	42	10.2	8.8	<20	4.94	0.75
2370 DA2004	16	<4	<1	31	150	0.8	88	57	10.0	1.1	57	9.5	45	6.8	8.9	28	4.83	0.64
2371 DA2005	33	<4	3	63	210	0.9	120	71	13.0	1.1	110	13.0	48	11.9	9.9	<20	3.31	0.56
2372 DA2006	13	<4	4	26	130	1.2	73	44	7.3	1.6	77	6.4	29	4.5	6.1	<20	2.50	0.34
2373 DA2007	11	7	3	37	200	<0.2	110	60	9.1	<0.5	96	7.8	24	4.8	6.9	<20	2.86	0.38
2374 DA2008	9	<4	4	51	180	0.7	100	58	10.0	0.8	110	8.5	27	9.3	6.5	<20	3.73	0.46
2375 DA2009	18	<4	3	47	210	0.6	93	39	9.3	0.5	140	7.9	20	3.8	6.0	<20	2.62	0.30
2376 DA2010	21	<4	2	42	300	0.6	100	49	8.5	0.5	160	9.5	14	2.9	4.5	<20	2.03	0.00
2377 DA2011	19	<4	3	46	500	0.5	85	39	7.5	0.5	190	11.0	16	4.3	5.0	<20	2.18	0.21
2378 DA2012	28	<4	2	55	630	0.4	99	51	8.3	<0.5	170	13.0	16	6.2	5.2	<20	1.94	0.24
2379 DA2013	24	<4	<1	26	87	0.8	51	30	6.3	0.9	30	6.5	39	9.2	7.4	<20	4.24	0.52
2380 DA2014	27	<4	4	65	460	0.7	130	81	15.0	0.7	180	11.0	26	9.4	8.2	<20	3.27	0.44
2381 DA2015	27	<4	5	78	320	0.8	100	62	12.0	0.7	160	11.0	27	6.7	6.6	<20	3.17	0.40
2382 DA2016	41	<4	4	58	290	0.5	98	51	12.0	1.0	150	9.1	37	13.0	7.4	<20	3.16	0.43
2383 DA2017	42	<4	6	69	290	0.3	78	43	9.8	1.4	140	6.0	38	9.2	7.4	<20	3.85	0.46
2384 DA2018	45	<4	6	79	360	0.8	150	95	16.0	1.5	170	10.0	37	11.3	6.7	<20	3.20	0.35
2385 DA2019	51	<4	4	65	460	0.3	200	110	22.0	2.6	180	13.0	52	14.7	11.2	<20	4.11	0.35
2386 DA2020	50	8	5	85	430	1.0	220	130	24.0	1.2	180	13.0	55	14.3	12.9	<20	4.76	0.47
2387 DA2101	29	<4	2	26	130	1.0	78	43	8.3	1.7	48	6.4	32	4.0	6.6	<20	3.86	0.60
2388 DA2102	27	<4	<1	35	180	0.8	100	61	11.0	1.2	69	7.3	36	7.9	7.9	<20	4.18	0.47
2389 DA2103	36	<4	6	62	160	0.3	93	49	11.0	1.0	100	12.0	41	8.3	8.8	<20	3.80	0.51
2390 DA2104	35	<4	4	63	370	0.6	130	88	16.0	1.1	150	14.0	43	11.6	9.9	<20	4.57	0.48
2391 DA2105	35	<4	4	64	290	1.0	120	67	14.0	1.1	130	15.0	41	9.4	7.8	<20	4.39	0.48
2392 DA2106	38	<4	5	62	300	0.9	110	51	14.0	1.8	130	17.0	49	10.0	7.5	<20	4.08	0.44
2393 DA2107	34	<4	5	59	300	1.0	140	82	18.0	1.8	130	14.0	55	13.1	10.7	<20	4.94	0.64
2394 DA2108	47	<4	5	58	350	0.9	120	76	17.0	1.4	140	8.2	47	12.7	10.0	<20	4.92	0.57
2395 DA2109	49	14	4	39	120	1.4	80	58	10.0	1.4	35	5.6	22	9.9	5.5	<20	2.81	0.42
2396 DA2110	<5	6	3	58	450	0.8	98	41	9.2	0.6	180	13.0	21	6.2	5.0	<20	2.36	0.29
2397 DA2111	19	<4	2	44	490	0.9	150	96	17.0	0.5	210	14.0	22	10.3	6.8	<20	2.98	0.36
2398 DA2112	23	<4	4	58	400	0.4	130	74	15.0	1.2	180	15.0	29	12.7	6.7	<20	2.51	<0.05
2399 DA2113	19	<4	3	54	410	1.0	160	120	22.0	1.5	170	14.0	43	15.4	10.6	<20	4.70	0.52
2400 DA2114	38	<4	5	53	360	1.3	180	130	25.0	1.5	160	11.0	60	15.9	13.5	<20	5.50	0.60
2401 DA2115	39	5	5	62	280	0.6	120	68	14.0	0.9	130	7.4	48	10.2	9.8	<20	4.82	0.56
2402 DA2116	38	<4	6	59	360	0.4	110	64	13.0	0.9	180	11.0	45	10.0	9.9	<20	4.81	0.57
2403 DA2117	33	<4	6	63	300	0.6	120	78	18.0	2.6	130	9.2	58	11.9	12.8	<20	5.33	0.72
2404 DA2118	33	<4	5	66	340	0.7	130	82	16.0	1.2	140	15.0	41	14.0	9.3	<20	4.78	0.48
2405 DA2201	30	<4	<1	40	180	0.9	100	61	11.0	1.2	70	8.1	35	7.8	6.1	<20	3.71	0.41
2406 DA2202	33	<4	4	74	330	0.8	160	100	20.0	3.0	150	16.0	64	14.1	12.3	<20	5.14	0.53
2407 DA2203	32	<4	5	66	300	1.0	160	93	19.0	2.6	140	16.0	64	16.4	11.2	<20	5.06	0.63
2408 DA2204	66	<4	5	63	240	0.5	90	40	11.0	1.6	120	9.1	41	8.3	7.3	<20	3.48	0.51
2409 DA2205	31	<4	5	59	250	0.9	100	63	13.0	1.8	120	11.0	44	11.6	8.6	<20	3.87	0.52
2410 DA2206	38	7	4	60	280	0.7	110	62	14.0	1.8	110	11.0	44	10.5	9.9	<20	4.97	0.49
2411 DA2207	32	<4	5	62	260	0.8	110	78	15.0	2.2	99	9.7	54	15.5	10.2	<20	4.64	0.56
2412 DA2208	35	<4	6	63	240	0.3	98	59	13.0	1.0	100	9.2	48	8.2	8.4	<20	4.22	0.54
2413 DA2209	34	<4	5	68	310	0.5	110	63	14.0	2.5	120	9.8	58	10.8	10.1	<20	4.68	0.62
2414 DA2210	36	<4	6	66	300	1.0	200	130	26.0	2.5	140	13.0	93	21.1	19.2	<20	7.18	0.88
2415 DA2211	33	<4	6	67	300	0.9	210	140	29.0	3.6	130	12.0	109	24.5	20.7	<20	8.17	0.98
2416 DA2212	35	<4	4	62	260	1.6	210	140	30.0	3.4	110	16.0	121	30.6	23.8	<20	9.01	0.97
2417 DA2213	41	<4	6	67	290	0.7	140	93	20.0	2.1	130	11.0	69	17.0	14.6	<20	5.08	0.66
2418 DA2214	39	<4	6	61	310	0.6	120	75	16.0	2.4	150	12.0	56	12.6	10.5	<20	4.53	0.53
2419 DA2215	39	<4	5	62	330	0.5	130	76	18.0	1.4	160	11.0	58	12.6	11.1	<20	5.51	0.55
2420 DA2301	<5	<4	1	36	400	2.6	310	190	32.0	2.5	160	18.0	69	19.3	15.7	<20	5.39	0.72
2421 DA2302	9	<4	5	51	230	0.7	130	82	13.0	1.2	120	11.0	34	10.4	7.6	<20	3.74	0.48
2422 DA2303	31	<4	6	63	230	0.3	100	57	12.0	1.1	140	11.0	34	9.2	7.8	<20	4.00	0.42
2423 DA2304	20	<4	4	58	220	0.8	91	60	11.0	1.0	110	8.5	29	6.9	7.2	<20	3.72	0.47
2424 DA2305	35	<4	4	56	220	0.3	89	50	11.0	1.0	96	8.4	35	10.0	6.9	<20	3.32	0.45
2425 DA2306	20	<4	3	57	260	0.3	100	57	12.0	1.1	110	10.0	41	11.5	7.2	<20	3.84	0.51
2426 DA2307	32	<4	4	58	280	0.9	110	62	11.0	1.1	130	12.0	32	7.8	5.4	<20	3.23	0.26
2427 DA2308	24	<4	4	43	350	0.8	61	37	4.9	<0.5	220	19.0	17	4.0	3.8	<20	1.46	0.26
2428 DA2309	26	<4	4	48	230	0.7	65	33	7.8	0.5	120	7.5	23	6.6	4.7	<20	2.05	0.32
2429 DA2310	35	<4	4	60	260	0.3	87	65	12.0	1.7	110	9.9	45	10.6	9.0	<20	4.30	0.56
2430 DA2311	36	<4	5	64	240	0.3	110	54	13.0	1.1	100	9.7	56	14.5	10.6	<20	4.92	0.42
2431 DA2312	42	<4	5	63	260	0.3	92	51	11.0	2.5	98	14.0	49	11.0	8.4	<20	3.95	0.43
2432 DA2313	35	<4	6	65	280	0.6	100	58	13.0	1.9	110	11.0	55	12.8	9.4	<20	3.16	0.43
2433 DB0101	18	7	2	31	110	0.9	62	27	6.9	1.1	43	8.1	34	6.3	6.2	<20	3.40	0.50
2434 DB0102	16	<4	2	36	130	1.0	78	34	9.0	1.2	57	6.7	41	4.7	9.7	<20	4.42	0.53
2435 DB0103	14	<4	3	30	210	2.0	200	110	14.0	1.0	44	4.8	44	12.2	9.6	<20	3.22	0.41
2436 DB0104	15	<4	3	48	220	0.3	63	40	7.6	1.3	100	8.9	61	6.4	11.5	<20	6.76	0.86
2437 DB0201	17	<4	3	47	300	0.3	100	51	9.0	<0.5	200	9.7	17	5.6	5.6	<20	1.30	0.23
2438 DB0202	11	<4	1	27	130	0.4	76	45	8.6	1.2	48	6.9	40	5.9	11.0	<20	5.52	0.75
2439 DB0203	13	<4	2	27	150	1.1	89	32	9.6	1.2	61	7.1	40	9.5	8.9	<20	5.26	0.62
2440 DB0204	25	<4	3	42	140	1.0	79	46	8.8	1.4	39	6.7	29	6.1	6.4	<20	3.21	0.45
2441 DB0205	24	<4	<1	33	56	0.5	38	21	3.5	0.5	53	1.8	21	4.4	5.3	<20	2.66	0.39
2442 DB0206	18	<4	<1	37	73	0.5	35	19	4.1	<0.5	51	3.3	22	5.9	4.2	<20	1.95	0.31
2443 DB0301	11	<4	1	43	110	0.3	52	33	5.9	1.3	97	12.0	37	5.8	7.2	<20	5.32	0.69
2444 DB0302	9	<4	<1	26	140	0.9	84	38	9.4	1.2	58	6.0	38	7.4	8.4	<20	4.73	0.74
2445 DB0303	13	9	3	30	160	1.4	82	46	11.0	1.2	54	8.5	39	8.3	9.0	<20	5.13	0.76

Appendix 4 Chemical analysis data of soil samples

NO	SP.No. unit	Sn ppm	W ppm	Ta ppm	Nb ppm	Ce ppm	Eu ppm	La ppm	Nd ppm	Sm ppm	Tb ppm	Th ppm	U ppm	Y ppm	Gd ppm	Dy ppm	Pr ppm	Yb ppm	Lu ppm
2446	DB0304	25	<4	3	48	200	1.2	120	63	12.0	1.1	45	5.7	36	10.2	7.7	<20	4.02	0.59
2447	DB0306	21	10	3	44	110	0.6	72	31	6.8	0.7	57	4.9	25	8.4	8.5	<20	2.64	0.48
2448	DB0306	22	<4	5	62	160	0.5	79	62	9.6	1.3	93	7.3	32	6.4	5.1	<20	3.46	0.46
2449	DB0401	6	<4	<1	32	300	1.2	73	43	8.7	0.5	66	9.3	22	7.8	4.4	<20	2.39	0.32
2450	DB0402	9	<4	2	36	280	0.9	66	32	6.6	<0.5	72	11.0	15	3.8	2.9	<20	1.63	0.21
2451	DB0403	11	<4	2	41	280	0.9	98	62	10.0	1.1	170	11.0	20	7.1	6.7	<20	2.53	0.26
2452	DB0404	9	<4	2	36	120	0.4	57	19	5.9	1.6	80	10.0	19	5.6	5.3	<20	3.13	0.39
2453	DB0405	20	<4	<1	25	110	1.4	66	40	8.2	0.9	47	9.5	33	10.9	8.1	<20	4.23	0.70
2454	DB0406	30	7	4	39	130	0.8	76	38	8.8	0.9	49	11.0	36	5.4	6.6	<20	3.64	0.43
2455	DB0407	20	<4	5	78	280	0.4	160	110	18.0	2.2	100	9.4	47	16.6	12.1	<20	4.03	0.71
2456	DB0408	20	9	3	52	79	0.3	47	30	4.7	0.8	68	4.1	19	7.0	4.6	<20	2.13	0.27
2457	DB0409	32	7	4	64	190	0.3	91	58	9.4	1.1	160	5.7	21	11.1	6.5	<20	2.41	0.31
2458	DB0501	<5	<4	2	36	170	1.0	72	59	8.3	0.6	85	14.0	21	5.8	6.0	<20	2.62	0.38
2459	DB0502	8	<4	<1	39	230	0.7	82	58	7.2	0.7	110	12.0	24	8.9	6.0	<20	2.20	0.26
2460	DB0503	9	8	4	27	120	1.0	63	44	7.3	1.1	43	7.8	45	8.7	9.9	<20	3.44	0.42
2461	DB0504	16	<4	<1	27	88	0.6	53	36	5.9	1.5	37	8.3	33	7.1	8.0	<20	3.18	0.46
2462	DB0505	22	6	<1	29	90	0.8	50	35	5.2	0.7	29	5.1	41	4.4	7.5	<20	3.89	0.64
2463	DB0506	30	7	4	40	110	0.7	60	49	7.0	1.4	35	6.7	49	7.4	12.1	<20	6.06	0.92
2464	DB0507	20	10	<1	48	190	0.7	110	76	12.0	1.5	68	8.2	56	13.7	12.1	<20	4.83	0.90
2465	DB0508	34	12	<1	47	130	0.8	70	53	8.2	1.6	40	7.3	52	7.4	10.9	<20	5.96	0.98
2466	DB0509	40	8	4	43	110	0.6	56	41	6.1	1.0	42	11.0	33	8.1	6.5	<20	3.07	0.52
2467	DB0510	20	<4	2	37	230	1.6	87	76	10.0	1.1	70	12.0	25	8.4	8.4	<20	2.16	0.37
2468	DB0601	9	<4	<1	21	92	0.9	52	51	6.1	1.2	31	9.5	41	3.3	7.9	<20	4.53	0.79
2469	DB0602	15	6	2	29	88	0.6	52	30	5.4	1.1	39	7.9	38	4.5	8.0	<20	3.60	0.64
2470	DB0603	35	10	3	28	95	1.0	50	28	6.2	1.1	31	6.2	41	7.3	8.1	<20	4.85	0.58
2471	DB0604	20	<4	<1	28	97	1.1	51	33	6.2	1.1	33	8.8	42	10.6	8.7	<20	4.29	0.54
2472	DB0605	34	7	3	27	91	0.9	49	38	6.1	0.9	32	6.4	40	6.3	8.4	<20	3.76	0.56
2473	DB0606	31	8	<1	31	75	0.9	44	27	4.7	0.9	31	6.1	32	2.3	5.5	<20	3.45	0.51
2474	DB0607	37	7	3	32	79	0.9	45	24	4.8	0.6	30	8.1	35	8.1	6.4	<20	3.78	0.58
2475	DB0608	20	11	2	27	53	0.4	29	17	3.1	0.6	16	3.6	23	5.6	4.2	<20	2.56	0.43
2476	DB0609	20	6	1	28	100	0.8	63	32	6.3	1.2	45	9.6	38	10.2	8.5	<20	3.90	0.55
2477	DB0610	38	9	4	45	98	0.7	47	37	5.3	1.0	37	9.0	32	4.2	5.8	<20	3.34	0.52
2478	DB0701	20	10	5	36	99	0.9	50	35	6.4	1.6	37	5.9	47	10.5	11.0	<20	5.11	0.83
2479	DB0702	20	13	5	28	103	1.3	59	38	7.1	0.9	32	7.4	44	8.3	8.6	<20	3.65	0.65
2480	DB0703	35	8	2	27	91	1.1	48	31	5.7	1.1	28	4.4	47	7.3	7.2	<20	3.59	0.54
2481	DB0704	30	6	3	30	71	0.8	43	21	4.4	0.7	28	5.8	34	6.3	6.0	<20	3.32	0.50
2482	DB0705	32	9	3	31	100	0.8	56	48	6.7	0.9	36	6.6	44	6.3	9.0	<20	5.15	0.81
2483	DB0706	20	7	4	40	150	0.6	84	58	8.7	1.3	60	8.6	52	7.8	9.2	<20	5.26	0.74
2484	DB0707	24	9	5	41	91	0.7	45	31	5.0	0.8	27	6.1	39	7.4	6.8	<20	3.92	0.60
2485	DB0708	20	8	3	34	140	0.6	75	61	8.6	1.6	49	7.3	52	8.6	8.4	<20	5.80	0.83
2486	DB0709	38	16	6	42	97	0.9	52	37	6.0	0.6	40	12.0	31	9.3	6.2	<20	2.87	0.47
2487	DB0710	41	9	4	44	110	0.9	54	52	6.3	0.7	35	11.0	36	7.9	7.3	<20	3.19	0.53
2488	DB0802	32	11	<1	29	120	1.1	63	41	7.4	1.9	37	9.8	42	9.9	7.9	<20	3.95	0.61
2489	DB0803	20	6	4	37	83	0.7	56	42	5.7	1.6	38	7.9	37	5.5	6.7	<20	3.09	0.54
2490	DB0804	28	8	3	29	110	0.4	59	50	7.0	0.9	39	8.8	41	8.5	7.4	<20	4.67	0.75
2491	DB0805	20	5	4	35	100	0.8	52	42	6.0	1.2	31	7.7	43	9.8	7.7	<20	4.99	0.87
2492	DB0806	33	6	5	44	80	0.8	48	36	5.1	1.2	23	6.3	44	8.3	8.6	<20	5.27	0.90
2493	DB0807	38	10	4	54	83	0.7	47	38	5.2	0.8	30	5.6	37	6.1	6.4	<20	3.53	0.66
2494	DB0808	39	10	4	48	92	0.8	49	32	5.4	1.2	31	7.5	40	8.0	6.7	<20	4.31	0.63
2495	DB0809	38	11	4	45	100	0.9	50	49	5.6	1.0	35	11.0	33	7.6	6.3	24	3.65	0.55
2496	DB0810	41	11	4	44	95	0.9	49	43	6.0	1.2	34	10.0	36	6.7	6.3	<20	3.75	0.63
2497	DB0811	40	11	4	44	92	1.0	51	26	5.7	1.2	33	8.7	39	11.5	6.8	25	4.05	0.63
2498	DB0901	36	<4	4	25	93	1.4	54	39	6.3	0.9	28	9.0	41	10.8	6.3	<20	3.24	0.48
2499	DB0902	20	4	4	26	100	1.1	55	56	7.0	1.4	36	13.0	46	10.6	7.5	<20	3.78	0.69
2500	DB0903	20	40	<1	43	140	1.1	140	88	12.0	1.4	91	19.0	45	12.5	9.9	<20	4.40	0.58
2501	DB0904	34	8	3	33	140	1.4	83	53	9.9	1.2	60	12.0	50	9.5	9.5	<20	4.74	0.76
2502	DB0905	32	7	3	32	160	1.2	90	75	11.0	1.5	59	9.3	59	14.2	12.8	<20	6.96	1.12
2503	DB0906	31	9	3	33	83	0.7	46	29	5.1	1.1	28	7.5	43	6.2	7.6	<20	5.71	0.79
2504	DB0907	39	8	5	43	74	0.7	45	34	4.7	1.0	32	10.0	36	6.3	6.7	<20	3.58	0.52
2505	DB0908	32	6	5	40	93	1.8	49	42	5.9	1.3	25	10.0	51	5.6	10.2	<20	7.37	1.12
2506	DB0909	40	<4	5	41	97	0.8	52	34	5.9	1.0	35	9.8	33	8.5	6.8	<20	3.12	0.44
2507	DB0910	41	10	6	44	99	0.9	53	34	6.1	1.1	35	11.0	38	9.3	7.3	<20	4.26	0.66
2508	DB0911	58	12	4	51	95	1.0	57	29	6.4	1.1	25	8.5	42	6.6	7.3	<20	4.68	0.71
2509	DB1001	<5	<4	3	45	82	0.8	58	36	5.3	0.7	120	8.5	30	7.4	6.6	<20	3.24	0.46
2510	DB1002	16	<4	4	49	130	0.7	55	19	4.1	<0.5	130	7.9	14	3.7	3.2	<20	1.87	0.29
2511	DB1003	19	<4	4	29	120	0.8	65	75	8.4	1.6	45	11.0	44	8.1	9.0	<20	5.34	0.88
2512	DB1004	30	13	<1	30	94	1.0	50	43	6.0	1.7	31	6.7	50	6.9	8.3	<20	5.37	1.00
2513	DB1005	20	7	4	41	90	0.3	29	19	3.2	1.1	32	4.7	25	5.9	5.1	<20	3.42	0.60
2514	DB1006	45	12	4	43	94	1.2	49	48	6.1	1.1	34	9.5	37	6.4	6.3	<20	3.58	0.55
2515	DB1007	31	<4	<1	25	110	0.9	53	44	6.7	1.2	29	8.0	40	8.2	7.8	<20	4.66	0.72
2516	DB1008	19	6	4	65	200	0.7	57	25	2.8	0.5	190	8.4	10	2.0	2.6	<20	1.73	0.22
2517	DB1009	23	6	5	37	410	1.2	240	180	26.0	1.4	160	14.0	56	24.9	15.3	<20	5.33	0.67
2518	DB1101	44	11	4	33	120	0.8	49	36	6.3	0.7	36	11.0	34	9.1	5.8	<20	3.38	0.77
2519	DB1102	34	10	4	41	56	0.5	30	15	3.2	0.8	35	6.8	25	4.9	5.3	<20	3.78	0.61
2520	DB1103	39	10	4	41	79	0.6	35	29	4.5	0.9	37	6.8	30	5.7	5.2	<20	3.94	0.59
2521	DB1104	43	10	4	39	110	0.9	44	39	6.4	1.2	38	10.0	32	4.2	8.3	<20	3.20	0.61
2522	DB1201	34	11	5	47	91	<0.2	49	34	5.8	1.1	37	7.9	38	10.0	7.2	<20	4.83	0.74
2523	DB1202	36	10	4	43	75	0.7	34	26	4.4	1.2	37	7.8	31	6.4	5.6	<20	4.20	0.66

Appendix 5　Assay of ore samples

SP.No		WEIGHT OF SAMPLE	VOLUME OF SAMPLING	ORE GRADE		
				CASSITERITE	MONAZITE	XENOTIME
1	AAX-01	285.0	0.10	761.45	77.02	23.27
2	AAX-02	120.0	0.10	169.47	26.60	13.33
3	AAX-03	270.0	0.10	25.95	89.21	51.05
4	AAX-04	270.0	0.10	23.50	66.32	39.86
5	AAX-05	335.0	0.10	11.70	65.08	68.44
6	AAX-06	330.0	0.10	2.62	162.96	86.13
7	AAX-07	123.0	0.13	0.69	54.24	24.52
8	AAM-08	155.0	0.13	0.95	46.83	21.20
9	AAM-09	155.0	0.13	0.33	44.55	30.58
10	AAM-10	190.0	0.12	1.45	39.78	26.42
11	ABM-01	145.0	0.20	6.99	28.37	12.19
12	ABM-02	101.0	0.20	0.51	6.47	3.51
13	ABM-03	188.0	0.15	12.53	12.42	8.77
14	ABM-04	270.0	0.15	32.06	42.61	22.57
15	ABT-01	93.0	0.20	0.41	2.08	1.23
16	ABT-02	124.0	0.25	5.15	16.33	7.33
17	ABT-03	60.0	0.25	0.46	21.11	6.41
18	ABT-04	158.0	0.20	1.55	19.28	6.56
19	ABT-05	160.0	0.20	2.99	15.78	4.45
20	BAT-01	95.0	0.20	27.28	7.71	2.63
21	BAT-02	77.0	0.19	6.83	57.31	17.73
22	BAT-03	90.0	0.15	5.64	46.31	11.55
23	BAT-04	102.0	0.10	0.25	6.34	4.03
24	BBM-01	124.0	0.10	12.04	38.72	20.59
25	BBM-03	72.0	0.10	3.67	50.96	12.38
26	BBM-04	85.0	0.10	2.04	21.87	9.29
27	BCP-01	75.0	0.10	20.24	16.92	8.11
28	BCP-02	103.0	0.10	73.12	14.75	16.40
29	BCP-03	142.0	0.15	33.00	12.13	10.06
30	BCP-04	142.0	0.10	172.71	46.07	11.89
31	BCP-05	137.0	0.10	4.24	7.27	3.88
32	B01-07	123.0	0.10	69.48	27.57	15.93
33	B01-08	220.0	0.10	21.18	43.12	53.35
34	B01-09	115.0	0.23	7.28	43.46	19.32
35	B01-10	140.0	0.10	78.19	53.31	21.60
36	CA1-11	170.0	0.10	12.91	45.30	23.92
37	CA1-12	67.5	0.15	1.75	1.56	0.55
38	CAX-11	89.0	0.10	8.19	3.88	2.33
39	CAX-12	77.0	0.10	23.51	3.90	1.11
40	CAP-06	47.0	0.15	25.95	2.63	1.09
41	CAP-07	35.0	0.15	21.76	2.48	1.11
42	DA1-01	67.0	0.10	3.40	2.48	0.78
43	DA1-02	150.0	0.10	0.61	45.55	15.23
44	DAX-01	197.0	0.10	0.55	268.87	35.75
45	DAM-02	210.0	0.10	0.30	43.25	12.40
46	DAM-03	100.0	0.10	0.71	41.91	14.15
47	DAE-04	116.0	0.23	0.13	31.21	15.08
48	DB1-03	107.0	0.10	0.08	145.56	22.84
49	DB1-04	200.0	0.10	3.37	9.13	3.65
50	DB1-06	104.0	0.10	0.40	53.56	31.49
51	DB1-13	170.0	0.10	0.40	33.56	8.45
52	DBM-05	106.0	0.10	1.82	6.39	5.31
53	DB1-06	165.0	0.10	0.93	5.58	5.07
54	DBH-13	172.0	0.20	1.68	13.29	12.73
55	DBH-05	95.0	0.20	0.02	40.01	8.81
56	DBP-08	240.0	0.10	0.61	6.23	5.28
unit		g	m³		t/m³	

Appendix 6 Chemical analysis data of major elements in granitic rocks (1)

	1	2	3	4	5	6	7	8	9	10	11
SP.NO.	92R-01	92R-02	92R-03	92R-04	92R-05	92R-06	92R-07	92R-08	92R-09	92R-10	92R-11
SiO2	73.62	74.06	73.37	71.07	73.50	67.20	71.21	72.30	69.41	71.91	70.30
TiO2	0.25	0.03	0.26	0.31	0.24	0.28	0.27	0.26	0.22	0.19	0.25
Al2O3	13.51	14.33	13.39	13.20	13.59	14.31	13.72	12.40	13.99	13.71	14.26
Fe2O3	0.10	0.21	0.09	0.20	0.78	0.01	0.01	0.04	1.17	0.58	0.35
FeO	1.57	0.51	1.75	2.11	1.00	2.33	2.11	2.02	0.67	1.12	1.21
MnO	0.02	0.01	0.04	0.06	0.02	0.04	0.06	0.03	0.02	0.02	0.03
MgO	0.30	0.13	0.36	0.65	0.38	0.52	0.51	0.52	0.22	0.34	0.30
CaO	1.49	0.90	0.86	1.43	0.28	1.39	1.41	0.62	0.22	0.61	1.32
Na2O	2.58	3.04	2.30	2.72	2.53	2.61	2.98	3.34	1.95	2.43	2.40
K2O	5.34	4.40	6.44	5.06	5.26	5.48	5.00	5.08	6.14	5.80	6.76
P2O5	0.08	0.04	0.12	0.12	0.14	0.18	0.10	0.16	0.08	0.08	0.10
BaO	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
LOI	0.76	1.19	0.88	0.72	1.34	0.79	0.61	0.90	1.60	0.90	0.44
total	99.62	98.85	99.86	97.65	99.06	95.14	97.99	97.67	95.69	97.69	97.72

--Norm--

Q	33.66	37.19	32.04	30.68	37.50	26.03	29.63	30.27	33.99	33.40	26.76
C	0.97	3.03	1.36	0.94	3.56	1.99	1.08	0.66	3.93	2.52	0.83
or	31.56	26.00	38.06	29.90	31.09	32.39	29.55	30.02	36.29	34.28	39.95
ab	21.83	25.72	19.46	23.02	21.41	22.09	25.22	28.26	16.50	20.56	20.31
an	6.87	4.20	3.48	6.31	0.47	5.72	6.34	2.03	0.57	2.50	5.90
ne	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
di	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
hd	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
en	0.75	0.32	0.90	1.62	0.95	1.30	1.27	1.30	0.55	0.85	0.75
fs	2.42	0.73	2.78	3.31	0.83	3.88	3.53	3.30	0.00	1.30	1.58
fo	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
fa	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
mt	0.14	0.30	0.13	0.29	1.13	0.01	0.01	0.06	1.59	0.84	0.51
ht	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00	0.00
il	0.47	0.06	0.49	0.59	0.46	0.53	0.51	0.49	0.42	0.36	0.47
ru	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ap	0.19	0.09	0.28	0.28	0.32	0.42	0.23	0.37	0.19	0.19	0.23
total	98.86	97.66	98.98	96.93	97.72	94.35	97.38	96.77	94.09	96.79	97.28

Appendix 6 Chemical analysis data of major elements in granitic rocks (2)

	12	13
SP.NO.	92R-12	92R-13
SiO2	84.98	59.45
TiO2	0.01	0.48
Al2O3	0.59	7.84
Fe2O3	0.11	25.99
FeO	0.36	0.08
MnO	0.01	0.01
MgO	0.05	0.13
CaO	0.05	0.15
Na2O	0.05	0.03
K2O	0.08	0.20
P2O5	0.01	0.06
BaO	0.00	0.00
LOI	0.26	6.03
total	86.56	100.45

--Norm---

	12	13
Q	83.97	58.16
C	0.35	7.45
or	0.47	1.18
ab	0.42	0.25
an	0.18	0.35
ne	0.00	0.00
di	0.00	0.00
hd	0.00	0.00
en	0.12	0.32
fs	0.57	0.00
fo	0.00	0.00
fa	0.00	0.00
mt	0.16	0.00
ht	0.00	25.99
il	0.02	0.19
ru	0.00	0.38
ap	0.02	0.14
total	86.30	94.42

Appendix 7 Chemical analysis data of minor elements in granitic rocks

	SP. NO.	SN	W	TA	NB	CE	EU	LA	ND	SM	TB	TH	U	Y	Gd	DY	PR	YB	LU
1	92R-01	<5	<4	2	28	210	0.6	120	71	14	2.1	100	15	73	12.8	9.7	31	8.49	1.1
2	92R-02	19	10	12	16	8	<0.2	6	<5	1	0.5	3.9	7	20	0.7	2.1	<20	3.43	0.45
3	92R-03	6	22	4	29	160	0.8	85	40	11	0.5	74	16	51	8.7	0.8	<20	4.98	0.64
4	92R-04	<5	<4	<1	23	110	1	65	40	8.3	2.1	47	9.8	65	8.3	10.4	<20	7.8	1.02
5	92R-05	10	<4	4	22	110	1.3	73	45	9.9	1.7	33	9.3	61	10.4	9.8	<20	6.37	0.8
6	92R-06	6	23	2	18	93	1.1	49	30	6.8	0.5	29	8	38	8.9	5.8	<20	3.55	0.45
7	92R-07	<5	<4	3	22	99	1.9	110	73	20	4.8	40	16	187	20.4	28.3	<20	20.1	2.55
8	92R-08	<5	<4	3	17	69	0.8	38	30	5.4	<0.5	22	7.8	28	4.5	3.7	<20	1.58	0.23
9	92R-09	17	9	3	42	210	<0.2	120	72	17	<0.5	80	18	59	11.9	10.8	<20	3.86	0.51
10	92R-10	7	<4	3	38	210	<0.2	120	64	16	<0.5	74	17	49	10.6	8.7	<20	2.66	0.38
11	92R-11	<5	<4	<1	12	190	0.6	120	67	10	<0.5	120	16	35	5.8	6.4	<20	2.44	0.34
12	92R-12	<5	<4	<1	<2	<3	<0.2	<1	<5	<0.1	<0.5	<0.5	<0.5	<2	2.2	<0.5	<20	0.07	<0.05
13	92R-13	<5	8	<1	11	32	1	16	10	2.7	<0.5	11	2.2	19	5	4.4	<20	2.84	0.37

Appendix 8   EPMA analysis data of heavy minerals   (1)

min. name	cass	cass	cass	cass	cass	cass	cass
Sp. No.	CAI-12	CAI-12	CAI-12	CAI-12	CAI-12	BDI-07	DBP-08
Point No.	C-A11	C-A12	C-A21	C-B11	C-B21	B-A11	DB-A11
SnO2	90.80	92.32	97.33	96.91	95.24	98.04	98.90
TiO2	0.00	0.00	0.37	1.30	1.17	0.17	0.41
Fe2O3*	1.11	0.93	0.22	0.15	1.02	0.21	0.15
NiO	0.86	1.04	1.37	1.23	1.11	0.72	0.44
Y2O3	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nb2O5	1.36	1.11	0.00	0.00	1.48	0.00	0.12
La2O3	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ce2O3	0.00	0.00	0.00	0.43	0.00	0.00	0.00
Nd2O3	0.00	0.17	0.00	0.00	0.00	0.00	0.00
Sm2O3	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Ta2O5	5.88	4.43	0.72	0.00	0.00	0.88	0.00
Total	100.01	100.00	100.01	100.02	100.02	100.02	100.02

Numbers of ions on the basis of two O.

Sn	0.906	0.922	0.970	0.958	0.933	0.979	0.984
Ti	0.000	0.000	0.007	0.024	0.022	0.003	0.008
Fe	0.021	0.018	0.004	0.003	0.019	0.004	0.003
Ni	0.017	0.021	0.028	0.025	0.022	0.015	0.009
Y	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Nb	0.015	0.013	0.000	0.000	0.016	0.000	0.001
La	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ce	0.000	0.000	0.000	0.004	0.000	0.000	0.000
Nd	0.000	0.002	0.000	0.000	0.000	0.000	0.000
Sm	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Ta	0.040	0.030	0.005	0.000	0.000	0.006	0.000

*: Total Fe as Fe2O3.   cass: cassiterite

Appendix 8 EPMA analysis data of heavy minerals (2)

Min. name	TiO2	TiO2	TiO2	TiO2	TiO2	TiO2
Sp. No.	DAM-03	DBP-08	DBP-08	CBP-08	DBP-08	DBP-08
Point No.	DA-A11	DB-B11	DB-B11	DB-B21	DB-A11	DB-A21
TiO2	94.68	49.96	94.93	94.64	91.59	95.68
SiO2	0.69	0.27	0.47	1.47	1.30	0.58
Al2O3	0.05	0.00	0.22	0.62	0.06	0.24
Fe2O3*	0.39	46.02	0.26	0.00	2.06	0.09
CaO	0.00	0.00	0.10	0.33	0.00	0.08
MnO	0.00	3.43	0.40	0.15	0.00	0.00
NiO	0.00	0.00	0.00	0.11	0.00	0.00
Y2O3	0.07	0.00	0.00	0.00	0.00	0.00
Nb2O5	1.56	0.35	0.30	0.32	2.62	0.54
La2O3	2.29	0.00	2.57	2.47	2.06	2.88
Ce2O3	0.00	0.00	0.00	0.00	0.00	0.00
Nd2O3	0.00	0.00	0.00	0.00	0.00	0.00
Sm2O3	0.00	0.00	0.83	0.00	0.39	0.00
Ta2O5	0.35	0.00	0.00	0.00	0.00	0.00
Total	100.08	100.03	100.08	100.11	100.08	100.09

	Numbers	of ions	on the	basis of	two O.	
Ti	0.965	0.574	0.971	0.957	0.937	0.973
Si	0.009	0.004	0.006	0.020	0.018	0.008
Al	0.001	0.000	0.004	0.010	0.001	0.004
Fe	0.004	0.529	0.003	0.000	0.021	0.001
Ca	0.000	0.000	0.001	0.005	0.000	0.001
Mn	0.000	0.044	0.005	0.002	0.000	0.000
Ni	0.000	0.000	0.000	0.001	0.000	0.000
Y	0.001	0.000	0.000	0.000	0.000	0.000
Nb	0.010	0.002	0.002	0.002	0.016	0.003
La	0.011	0.000	0.013	0.012	0.010	0.014
Ce	0.000	0.000	0.000	0.000	0.000	0.000
Nd	0.000	0.000	0.000	0.000	0.000	0.000
Sm	0.000	0.000	0.004	0.000	0.002	0.000
Ta	0.001	0.000	0.000	0.000	0.000	0.000

*: Total Fe as Fe2O3.　TiO2: rutile or anataze

Appendix 8   EPMA analysis data of heavy minerals (3)

Min. name	zir	zir	zir
Sp. No.	CAI-12	BDI-07	DAM-03
Point No.	C-B11	B-B11	DA-B11
SiO2	35.17	36.04	36.07
ZrO2	60.23	60.05	60.72
TiO2	0.00	0.00	0.10
HfO2	1.63	1.74	3.15
NiO	0.78	0.92	0.00
Y2O3	0.00	0.00	0.00
Nb2O5	1.13	1.29	0.00
La2O3	0.00	0.00	0.00
Ce2O3	0.00	0.00	0.00
Nd2O3	0.00	0.00	0.00
Sm2O3	0.00	0.00	0.00
Ta2O5	1.10	0.00	0.00
Total	100.04	100.04	100.04

Numbers of ions on the basis of four O.

Si	1.060	1.077	1.082
Zr	0.886	0.875	0.888
Ti	0.000	0.000	0.002
Hf	0.014	0.015	0.027
Ni	0.019	0.022	0.000
Y	0.000	0.000	0.000
Nb	0.015	0.017	0.000
La	0.000	0.000	0.000
Ce	0.000	0.000	0.000
Nd	0.000	0.000	0.000
Sm	0.000	0.000	0.000
Ta	0.009	0.000	0.000

zir: zircon

Appendix 8　EPMA analysis data of heavy minerals　(4)

Min. name	moz	moz	moz	moz	moz	moz	moz	moz
Sp. No.	CAI-12	BDI-07	BDI-07	AAM-06	AAM-06	AAM-06	AAM-06	DAM-03
Point No.	C-A11	B-A11	B-B11	A-A11	A-B11	A-C11	A-C21	D-A11
SiO_2	0.00	0.92	1.53	2.06	0.34	1.76	1.80	0.00
TiO_2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fe_2O_3*	------	------	------	------	------	------	------	------
CaO	0.22	0.56	0.57	0.59	0.45	0.22	0.73	0.90
NiO	------	------	------	------	------	------	------	------
Y_2O_3	6.62	3.95	5.83	8.69	5.51	0.75	3.73	8.14
Nb_2O_5	0.40	0.17	0.00	0.38	0.20	0.90	0.00	0.90
La_2O_3	14.66	14.13	15.07	14.50	12.03	15.81	13.70	13.84
Ce_2O_3	35.57	28.49	30.14	27.55	30.20	32.01	29.82	29.09
Nd_2O_3	12.41	12.18	10.34	10.08	12.73	10.50	9.71	10.44
Sm_2O_3	2.87	3.06	1.87	1.90	3.01	2.21	2.88	3.77
Gd_2O_3	0.00	2.11	0.85	0.00	2.14	0.60	0.92	1.59
Tb_2O_3	------	------	------	------	------	------	------	------
Dy_2O_3	------	------	------	------	------	------	------	------
Er_2O_3	------	------	------	------	------	------	------	------
Tm_2O_3	------	------	------	------	------	------	------	------
Yb_2O_3	------	------	------	------	------	------	------	------
Lu_2O_3	------	------	------	------	------	------	------	------
ThO_2	3.42	7.59	7.99	16.94	5.36	5.69	10.38	9.05
UO_3	0.00	0.00	0.17	0.35	0.27	0.24	0.17	0.00
P_2O_5	23.90	26.93	25.74	17.08	27.86	29.41	26.27	22.40
Total	100.07	100.09	100.10	100.12	100.10	100.10	100.11	100.12

Numbers of ions on the basis of four O.

Si	0.000	0.037	0.062	0.096	0.014	0.068	0.073	0.000
Ti	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Fe	------	------	------	------	------	------	------	------
Ca	0.010	0.024	0.025	0.029	0.019	0.009	0.032	0.042
Ni	------	------	------	------	------	------	------	------
Y	0.150	0.085	0.126	0.216	0.117	0.015	0.080	0.188
Nb	0.008	0.003	0.000	0.008	0.004	0.016	0.000	0.018
La	0.230	0.211	0.226	0.250	0.177	0.225	0.204	0.222
Ce	0.555	0.422	0.449	0.471	0.442	0.452	0.442	0.463
Nd	0.189	0.176	0.150	0.168	0.182	0.145	0.140	0.162
Sm	0.042	0.043	0.026	0.031	0.041	0.029	0.040	0.057
Gd	0.000	0.028	0.011	0.000	0.028	0.008	0.012	0.023
Tb	------	------	------	------	------	------	------	------
Dy	------	------	------	------	------	------	------	------
Er	------	------	------	------	------	------	------	------
Tm	------	------	------	------	------	------	------	------
Yb	------	------	------	------	------	------	------	------
Lu	------	------	------	------	------	------	------	------
Th	0.033	0.070	0.074	0.180	0.049	0.050	0.096	0.090
U	0.000	0.000	0.001	0.003	0.002	0.002	0.001	0.000
P	0.862	0.923	0.886	0.675	0.943	0.960	0.900	0.825

*: Total Fe as Fe_2O_3.　　moz: monazite

Appendix 8   EPMA analysis data of heavy minerals (5)

```
============================
Min. name    moz     moz
----------------------------
             DBP-08  DBP-08
----------------------------
Point No.   DB-A11  DB-B11
----------------------------
  SiO2        3.10    0.43
  TiO2        0.00    0.00
  Fe203*     ------  ------
  CaO         0.59    1.62
  NiO        ------  ------
  Y203        5.66   10.33
  Nb205       1.16    0.53
  La203      12.31   12.47
  Ce203      26.09   25.11
  Nd203       9.60    9.47
  Sm203       1.53    3.33
  Gd203       0.98    0.60
  Tb203      ------  ------
  Dy203      ------  ------
  Er203      ------  ------
  Tm203      ------  ------
  Yb203      ------  ------
  Lu203      ------  ------
  Th02       16.14   13.75
  U03         0.23    0.77
  P205       22.76   21.28
  Total     100.15   99.69
----------------------------
Numbers of ions on the basis of four O.
  Si         0.129   0.019
  Ti         0.000   0.000
  Fe        ------  ------
  Ca         0.026   0.076
  Ni        ------  ------
  Y          0.126   0.241
  Nb         0.022   0.010
  La         0.189   0.202
  Ce         0.398   0.403
  Nd         0.143   0.148
  Sm         0.022   0.050
  Gd         0.014   0.009
  Tb        ------  ------
  Dy        ------  ------
  Er        ------  ------
  Tm        ------  ------
  Yb        ------  ------
  Lu        ------  ------
  Th         0.153   0.137
  U          0.002   0.007
  P          0.804   0.789
============================
```

*: Total Fe as Fe203. moz: monazite

Appendix 8　EPMA analysis data of heavy minerals　(6)

Min. name	xeno	xeno	xeno	xeno	xeno
Sp. No.	AAM-06	AAM-06	AAM-06	DAM-03	DAM-03
Point No.	A-A11	A-A21	A-C11	DA-A11	DA-B11
SiO2	------	------	------	------	------
TiO2	------	------	------	------	------
Fe2O3*	0.00	1.03	0.46	0.00	0.20
CaO	------	------	------	------	------
NiO	------	------	------	------	------
Y2O3	30.78	29.81	29.80	31.77	32.03
Nb2O5	------	------	------	------	------
La2O3	------	------	------	------	------
Ce2O3	------	------	------	------	------
Nd2O3	------	------	------	------	------
Sm2O3	0.00	0.63	0.97	0.93	1.21
Gd2O3	1.99	1.73	2.55	1.76	2.61
Tb2O3	0.00	0.00	0.00	0.00	0.00
Dy2O3	6.34	0.00	5.51	7.01	6.61
Er2O3	6.24	6.10	5.84	4.93	4.68
Tm2O3	0.48	1.53	0.75	0.00	0.40
Yb2O3	7.83	11.92	8.06	3.67	5.15
Lu2O3	0.00	2.46	2.88	0.39	0.88
ThO2	0.00	0.36	0.77	0.85	0.38
UO3	0.42	0.52	0.79	2.04	0.73
P2O5	45.99	43.99	41.70	46.70	45.19
Total	100.07	100.08	100.08	100.05	100.07

Numbers of ions on the basis of four O.

Si	------	------	------	------	------
Ti	------	------	------	------	------
Fe	0.000	0.024	0.011	0.000	0.005
Ca	------	------	------	------	------
Ni	------	------	------	------	------
Y	0.493	0.489	0.504	0.502	0.515
Nb	------	------	------	------	------
La	------	------	------	------	------
Ce	------	------	------	------	------
Nd	------	------	------	------	------
Sm	0.000	0.007	0.011	0.010	0.013
Gd	0.020	0.018	0.027	0.017	0.026
Tb	0.000	0.000	0.000	0.000	0.000
Dy	0.061	0.000	0.056	0.067	0.064
Er	0.059	0.059	0.058	0.046	0.044
Tm	0.004	0.015	0.007	0.000	0.004
Yb	0.072	0.112	0.078	0.033	0.047
Lu	0.000	0.023	0.028	0.003	0.008
Th	0.000	0.003	0.006	0.006	0.003
U	0.003	0.003	0.005	0.013	0.005
P	1.171	1.147	1.121	1.173	1.156

*: Total Fe as Fe2O3.　xeno: xenotime

Min. name	poly	poly	poly	poly	poly	poly
Sp. No.	BDI-07	BDI-07	AAM-06	AAM-06	DAM-03	DAM-03
Point No.	B-A11	B-B21	A-A11	A-C11	DA-A11	DA-A11
SiO2	------	------	------	------	------	------
TiO2	28.98	26.65	28.95	29.15	28.92	26.89
Fe2O3*	0.56	0.86	1.59	0.46	0.70	0.35
CaO	0.00	0.34	0.28	0.42	0.28	0.35
NiO	------	------	------	------	------	------
Y2O3	0.80	10.52	9.54	10.64	8.74	8.91
Nb2O5	9.52	22.80	17.88	19.00	17.77	18.72
La2O3	------	------	------	------	------	------
Ce2O3	------	------	------	------	------	------
Nd2O3	0.00	0.50	0.00	0.40	0.00	0.59
Sm2O3	0.00	1.27	0.24	0.51	0.79	1.35
Gd2O3	0.21	2.75	1.34	1.30	0.94	2.43
Tb2O3	------	------	------	------	------	------
Dy2O3	1.12	2.76	3.35	2.31	3.08	5.05
Er2O3	2.08	2.05	2.23	1.50	2.09	3.00
Tm2O3	------	------	------	------	------	------
Yb2O3	7.37	6.38	5.79	5.70	3.99	3.67
Ta2O5	29.96	8.97	5.09	3.69	9.78	10.00
ThO2	2.60	2.30	3.33	3.57	3.49	4.42
UO3	16.82	11.92	20.46	21.43	19.49	14.35
Total	100.02	100.07	100.07	100.08	100.06	100.08

	Numbers	of ions	on the	basis of	six O.	
Si	------	------	------	------	------	------
Ti	1.410	1.230	1.341	1.343	1.341	1.276
Fe	0.027	0.040	0.074	0.021	0.032	0.017
Ca	0.000	0.022	0.018	0.028	0.018	0.024
Ni	------	------	------	------	------	------
Y	0.028	0.344	0.313	0.347	0.287	0.299
Nb	0.278	0.633	0.498	0.526	0.495	0.534
La	------	------	------	------	------	------
Ce	------	------	------	------	------	------
Nd	0.000	0.011	0.000	0.009	0.000	0.013
Sm	0.000	0.027	0.005	0.011	0.017	0.029
Gd	0.005	0.056	0.027	0.026	0.019	0.051
Tb	------	------	------	------	------	------
Dy	0.023	0.055	0.066	0.046	0.061	0.103
Er	0.042	0.040	0.043	0.029	0.040	0.059
Tm	------	------	------	------	------	------
Yb	0.145	0.119	0.109	0.106	0.075	0.071
Ta	0.527	0.150	0.085	0.061	0.164	0.172
Th	0.038	0.032	0.047	0.050	0.049	0.063
U	0.229	0.154	0.265	0.276	0.252	0.190

*: Total Fe as Fe2O3.   poly: polyclase

Appendix 8 EPMA analysis data of heavy minerals (8)

Min. name	eux	eux	eux
Sp. No.	AAM-06	AAM-06	BDI-07
Point No.	A-A11	A-A12	B-B11
SiO2	------	------	------
TiO2	1.62	1.73	1.38
Fe2O3*	------	------	------
CaO	0.72	0.69	0.13
NiO	------	------	------
Y2O3	24.65	25.04	16.57
Nb2O5	41.11	41.98	32.23
La2O3	------	------	------
Ce2O3	0.00	0.20	0.16
Nd2O3	0.96	0.78	0.25
Sm2O3	1.51	1.23	1.01
Gd2O3	2.93	2.47	2.08
Tb2O3	------	------	------
Dy2O3	4.51	4.72	4.34
Er2O3	2.84	2.40	4.06
Tm2O3	------	------	------
Yb2O3	8.12	7.53	9.56
Ta2O5	2.82	1.35	23.32
ThO2	1.94	1.88	1.40
UO3	6.30	8.01	3.53
Total	100.03	100.01	100.02

Numbers of ions on the basis of six O.

Si	------	------	------
Ti	0.085	0.090	0.077
Fe	------	------	------
Ca	0.054	0.051	0.010
Ni	------	------	------
Y	0.914	0.921	0.655
Nb	1.295	1.311	1.083
La	------	------	------
Ce	0.000	0.005	0.004
Nd	0.024	0.019	0.007
Sm	0.036	0.029	0.026
Gd	0.068	0.057	0.051
Tb	------	------	------
Dy	0.101	0.105	0.104
Er	0.062	0.052	0.095
Tm	------	------	------
Yb	0.173	0.159	0.217
Ta	0.053	0.025	0.471
Th	0.031	0.030	0.024
U	0.092	0.116	0.055

*: Total Fe as Fe2O3. eux: euxenite

Appendix 8 EPMA analysis data of heavy minerals (9)

Min. name	thor	thor	thor
Sp. No.	DAM-03	DAM-03	DAM-03
Point No.	DA-A11	DA-A12	DA-A21
SiO_2	12.28	11.87	11.42
Al_2O_3	1.83	2.17	1.55
Fe_2O_3*	8.09	11.14	4.32
CaO	------	------	------
NiO	------	------	------
La_2O_3	0.24	0.00	0.51
Ce_2O_3	0.41	0.25	0.33
Nd_2O_3	0.00	0.45	0.62
Sm_2O_3	0.65	0.00	0.54
Gd_2O_3	------	------	------
Tb_2O_3	------	------	------
Dy_2O_3	------	------	------
Er_2O_3	------	------	------
Tm_2O_3	------	------	------
Nb_2O_5	------	------	------
PbO	0.68	1.03	0.83
ThO_2	65.60	62.17	71.97
UO_3	5.98	6.77	2.46
P_2O_5	4.23	4.15	5.46
Total	99.99	100.00	100.01

Numbers of ions on the basis of four O.

Si	0.611	0.578	0.589
Al	0.107	0.125	0.094
Fe3+	0.303	0.408	0.168
Ca	------	------	------
Ni	------	------	------
La	0.004	0.000	0.010
Ce	0.007	0.004	0.006
Nd	0.000	0.008	0.011
Sm	0.011	0.000	0.010
Gd	------	------	------
Tb	------	------	------
Dy	------	------	------
Er	------	------	------
Tm	------	------	------
Yb	------	------	------
Pb	0.009	0.014	0.012
Th	0.743	0.689	0.844
U	0.063	0.069	0.027
P	0.178	0.171	0.238

*: Total Fe as Fe_2O_3.   thor: thorite

JICA