Table DR1. LA ICPMS *in situ* zircon U-Pb isotope data (concordant grains)

	Isotopic ratios							Apparent ages (Ma)							
Sample/analysis	$^{207}Pb/^{235}U$	±(1σ)	$^{206}Pb/^{238}U$	±(1σ)	$^{207}Pb/^{206}Pb$	±(1σ)	ρ	$^{207}Pb/^{235}U$	±(1σ)	$^{206}Pb/^{238}U$	±(1σ)	$^{207}Pb/^{206}Pb$	±(1σ)	Concordia	±(1σ)
AM-80(4)	0.4042	0.0389	0.0500	0.0025	0.0604	0.0059	0.26	345	28	314	15	620	210	319	15
(5)	0.3864	0.0343	0.0509	0.0042	0.0550	0.0022	0.47	332	25	320	26	411	88	326	22
(6)	0.3833	0.0181	0.0552	0.0013	0.0522	0.0026	0.24	329	13	346	8	293	115	343	7
(7)	0.3817	0.0191	0.0518	0.0012	0.0529	0.0025	0.24	328	14	326	8	326	108	326	7
(8)	0.3942	0.0197	0.0532	0.0011	0.0536	0.0020	0.21	337	14	334	7	354	86	335	7
CAM-03(5)	0.3797	0.0137	0.0489	0.0013	0.0558	0.0020	0.35	327	10	308	8	446	78	313	7
(7)	0.3545	0.0143	0.0488	0.0012	0.0526	0.0017	0.31	308	11	307	8	311	73	308	7
(8)	0.3787	0.0137	0.0500	0.0011	0.0543	0.0016	0.31	326	10	314	7	385	68	317	6
(9)	0.3620	0.0139	0.0511	0.0012	0.0513	0.0015	0.30	314	10	321	7	255	69	319	7
(10)	0.3363	0.0176	0.0499	0.0011	0.0496	0.0022	0.21	294	13	314	7	178	102	311	6
(11)	0.3545	0.0133	0.0512	0.0011	0.0513	0.0014	0.30	308	10	322	7	256	61	318	6
(12)	0.3599	0.0116	0.0498	0.0011	0.0519	0.0015	0.34	312	9	314	7	281	66	313	6
(14)	0.3804	0.0275	0.0504	0.0013	0.0530	0.0029	0.18	327	20	317	8	329	124	318	8
(16)	0.3807	0.0161	0.0500	0.0014	0.0546	0.0019	0.34	328	12	315	9	394	76	318	8
(17)	0.3485	0.0190	0.0502	0.0013	0.0502	0.0021	0.24	304	14	316	8	202	96	314	8
(19)	0.3878	0.0189	0.0509	0.0022	0.0555	0.0024	0.44	333	14	320	13	432	95	326	11
CAM-04(6)	0.3646	0.0125	0.0504	0.0010	0.0518	0.0013	0.29	316	9	317	6	278	58	317	6
(9 inh.)	0.4660	0.0148	0.0592	0.0013	0.0555	0.0020	0.35	388	10	371	8	434	81	376	7
(10)	0.3609	0.0154	0.0513	0.0013	0.0511	0.0013	0.30	313	11	323	8	246	61	320	7
(12)	0.3521	0.0130	0.0493	0.0012	0.0514	0.0013	0.32	306	10	310	7	259	56	309	6
(14)	0.3706	0.0119	0.0499	0.0008	0.0537	0.0014	0.26	320	9	314	5	359	59	315	5
(20)	0.3550	0.0152	0.0486	0.0014	0.0537	0.0018	0.33	308	11	306	8	358	77	307	8
(22)	0.3662	0.0171	0.0490	0.0015	0.0536	0.0023	0.32	317	13	309	9	353	95	311	8
CAM-10(3)	0.2950	0.0137	0.0406	0.0008	0.0559	0.0023	0.22	262	11	257	5	450	93	257	5
CAM-11a(5 inh.)	0.3303	0.0601	0.0416	0.0036	0.0579	0.0092	0.24	290	46	263	23	526	348	266	22
(6 inh.)	0.3609	0.0358	0.0427	0.0024	0.0635	0.0060	0.28	313	27	269	15	724	201	275	14
(7)	0.2685	0.0172	0.0338	0.0015	0.0589	0.0015	0.35	241	14	214	10	565	57	221	9
(8 inh.)	0.3983	0.0636	0.0479	0.0042	0.0590	0.0043	0.28	340	46	302	26	567	160	308	25
(9)	0.2540	0.0271	0.0375	0.0026	0.0499	0.0026	0.33	230	22	238	16	192	122	235	15
CAM-12(6)	0.3977	0.0778	0.0404	0.0036	0.0746	0.0112	0.23	340	56	255	22	1059	302	260	22
(9 inh.)	0.4036	0.0198	0.0494	0.0011	0.0609	0.0026	0.23	344	14	311	7	636	92	314	7

Table DR1. (continued)

	Isotopic ratios							Apparent ages (Ma)							
Sample/analysis	$^{207}Pb/^{235}U$	±(1σ)	$^{206}Pb/^{238}U$	±(1σ)	$^{207}Pb/^{206}Pb$	±(1σ)	ρ	$^{207}Pb/^{235}U$	±(1σ)	$^{206}Pb/^{238}U$	±(1σ)	$^{207}Pb/^{206}Pb$	±(1σ)	Concordia	±(1σ)
(11)	0.2838	0.0229	0.0438	0.0011	0.0483	0.0031	0.16	254	18	276	7	113	151	274	7
(13)	0.3993	0.0670	0.0406	0.0027	0.0704	0.0087	0.20	341	49	257	17	941	254	260	17
(15)	0.2789	0.0179	0.0419	0.0013	0.0495	0.0020	0.24	250	14	265	8	169	93	262	8
(17)	0.2992	0.0164	0.0401	0.0017	0.0532	0.0023	0.38	266	13	253	10	338	100	257	9
(19)	0.3110	0.0294	0.0408	0.0020	0.0556	0.0038	0.26	275	23	258	12	437	152	260	12
(20)	0.4018	0.0504	0.0421	0.0016	0.0710	0.0067	0.15	343	37	266	10	957	192	268	10
CAM-15(3)	0.2791	0.0132	0.0384	0.0013	0.0533	0.0018	0.35	250	10	243	8	342	78	245	7
(5)	0.2758	0.0177	0.0389	0.0014	0.0518	0.0026	0.27	247	14	246	8	276	116	246	8
(6 inh.)	0.3256	0.0854	0.0424	0.0020	0.0560	0.0145	0.09	286	65	268	13	453	575	268	12
(7)	0.2891	0.0136	0.0401	0.0009	0.0528	0.0024	0.23	258	11	254	5	320	103	254	5
(8)	0.2718	0.0130	0.0397	0.0008	0.0511	0.0021	0.21	244	10	251	5	247	94	250	5
CAM-16(12 inh.)	0.4168	0.0325	0.0487	0.0013	0.0628	0.0043	0.18	354	23	306	8	701	145	309	8
(13)	0.2962	0.0115	0.0398	0.0006	0.0537	0.0018	0.18	263	9	252	3	357	75	253	3
(15)	0.2945	0.0184	0.0416	0.0007	0.0577	0.0031	0.14	262	14	263	4	517	117	263	4
(17)	0.2966	0.0115	0.0400	0.0009	0.0549	0.0017	0.30	264	9	253	6	408	71	255	5
CAM-17(6)	1.6049	0.0391	0.1647	0.0033	0.0718	0.0010	0.42	972	15	983	18	979	29	976	14
(8)	1.7116	0.0388	0.1675	0.0035	0.0733	0.0010	0.46	1013	15	998	19	1023	28	1009	14
(9 inh.)	2.1922	0.0466	0.2053	0.0036	0.0774	0.0010	0.41	1179	15	1204	19	1133	25	1186	14
(11 inh.)	2.2404	0.0500	0.1999	0.0037	0.0812	0.0013	0.42	1194	16	1175	20	1227	31	1188	15
(12)	1.6284	0.0499	0.1634	0.0043	0.0724	0.0019	0.43	981	19	976	24	997	53	979	18
(13 inh.)	2.1112	0.0394	0.1926	0.0030	0.0800	0.0010	0.42	1152	13	1135	16	1196	24	1147	12
(14)	1.7388	0.0474	0.1677	0.0038	0.0763	0.0016	0.42	1023	18	1000	21	1103	41	1015	16
(15 inh.)	2.1449	0.0568	0.1910	0.0043	0.0810	0.0014	0.43	1163	18	1127	23	1222	35	1152	17
(17)	1.5549	0.0428	0.1568	0.0036	0.0715	0.0013	0.42	952	17	939	20	973	37	947	15
(18 inh.)	2.0974	0.0548	0.1960	0.0045	0.0778	0.0013	0.44	1148	18	1154	24	1142	32	1149	17
(20 inh.)	2.3055	0.0622	0.2166	0.0063	0.0779	0.0013	0.54	1214	19	1264	33	1144	34	1215	19
(21 inh.)	2.3138	0.0487	0.2154	0.0037	0.0794	0.0014	0.40	1217	15	1258	19	1181	34	1228	14
(22 inh.)	2.3525	0.0566	0.2143	0.0046	0.0800	0.0012	0.45	1228	17	1252	25	1197	30	1233	16
(23 inh.)	2.1775	0.0485	0.2036	0.0044	0.0779	0.0010	0.49	1174	16	1195	24	1143	26	1177	15
CAM-18(5)	1.9644	0.0710	0.1853	0.0043	0.0884	0.0020	0.32	1103	24	1096	24	1392	43	1099	19
(6)	4.3053	0.1503	0.2923	0.0113	0.1043	0.0030	0.55	1694	29	1653	56	1701	52	1695	29
(7)	1.8071	0.0611	0.1770	0.0039	0.0744	0.0014	0.32	1048	22	1051	21	1052	38	1049	18

Table DR1. (continued)

	Isotopic ratios							Apparent ages (Ma)							
Sample/analysis	$^{207}Pb/^{235}U$	±(1σ)	$^{206}Pb/^{238}U$	±(1σ)	$^{207}Pb/^{206}Pb$	±(1σ)	ρ	$^{207}Pb/^{235}U$	±(1σ)	$^{206}Pb/^{238}U$	±(1σ)	$^{207}Pb/^{206}Pb$	±(1σ)	Concordia	±(1σ)
(8 inh.1)	2.5433	0.1294	0.2240	0.0093	0.0877	0.0020	0.41	1285	37	1303	49	1375	44	1290	34
(9 inh.1)	2.6746	0.0772	0.2229	0.0054	0.0914	0.0019	0.42	1321	21	1297	28	1454	39	1315	20
(10 inh.1)	2.4939	0.2466	0.2213	0.0099	0.0958	0.0054	0.23	1270	72	1289	52	1544	106	1283	46
(11 inh.2)	3.6744	0.0896	0.2582	0.0059	0.1009	0.0017	0.47	1566	19	1480	30	1640	31	1553	19
(12)	1.9205	0.0915	0.1769	0.0058	0.0781	0.0023	0.34	1088	32	1050	32	1148	58	1068	26
(13 inh.2)	3.8175	0.1207	0.2683	0.0083	0.1028	0.0015	0.49	1596	25	1532	42	1675	27	1590	25
(14 inh.2)	4.3182	0.1654	0.3027	0.0082	0.1037	0.0024	0.35	1697	32	1704	40	1692	42	1699	29
(16 inh.2)	3.9452	0.1419	0.2896	0.0117	0.1012	0.0037	0.56	1623	29	1640	58	1647	67	1622	29
(18 inh.2)	3.9786	0.1930	0.2751	0.0116	0.1034	0.0047	0.43	1630	39	1567	59	1685	84	1618	38
(19 inh.2)	4.2915	0.1674	0.2854	0.0130	0.1060	0.0034	0.59	1692	32	1618	65	1731	59	1697	32
(20 inh.2)	3.6405	0.1842	0.2652	0.0119	0.1000	0.0026	0.44	1558	40	1517	61	1624	48	1551	39
CAM-19a(6)	0.2788	0.0140	0.0408	0.0007	0.0500	0.0020	0.16	250	11	258	4	194	94	257	4
(10)	0.2932	0.0167	0.0393	0.0010	0.0558	0.0025	0.22	261	13	248	6	442	100	250	6
(13)	0.2862	0.0078	0.0387	0.0008	0.0536	0.0013	0.37	256	6	245	5	353	55	248	4
(14)	0.3095	0.0183	0.0416	0.0012	0.0547	0.0022	0.25	274	14	263	8	399	88	264	7
(16)	0.2807	0.0099	0.0389	0.0009	0.0524	0.0014	0.34	251	8	246	6	304	61	247	5
(18)	0.2910	0.0164	0.0421	0.0012	0.0505	0.0027	0.25	259	13	266	7	219	126	265	7
(19)	0.2927	0.0182	0.0432	0.0018	0.0496	0.0029	0.33	261	14	272	11	178	136	269	10
CAM-22(10)	1.2107	0.0632	0.1225	0.0043	0.0728	0.0018	0.33	806	29	745	24	1009	50	766	22
(12)	1.1120	0.1033	0.1209	0.0075	0.0671	0.0081	0.33	759	50	736	43	842	251	745	38
(14)	1.0908	0.0607	0.1218	0.0032	0.0630	0.0025	0.24	749	29	741	18	710	84	743	17
(16)	1.4383	0.1716	0.1367	0.0087	0.0731	0.0044	0.27	905	71	826	49	1017	121	845	46
(17)	1.3057	0.1549	0.1324	0.0116	0.0715	0.0038	0.37	848	68	802	66	973	108	823	56
(19 inh.)	1.7020	0.1011	0.1704	0.0079	0.0717	0.0020	0.39	1009	38	1015	44	978	57	1011	34
(20)	0.9524	0.0820	0.1223	0.0054	0.0540	0.0029	0.26	679	43	744	31	371	119	723	28
(21)	1.0791	0.0790	0.1192	0.0062	0.0671	0.0016	0.36	743	39	726	36	841	51	733	31
CAM-23(5)	0.9304	0.0319	0.1053	0.0027	0.0634	0.0019	0.37	668	17	646	16	721	63	655	13
(6)	1.0015	0.0721	0.1169	0.0047	0.0625	0.0034	0.28	705	37	713	27	692	117	710	24
(7)	1.0101	0.0470	0.1165	0.0030	0.0633	0.0018	0.28	709	24	710	18	718	61	710	16
(9)	1.1522	0.0876	0.1131	0.0044	0.0757	0.0043	0.26	778	41	690	26	1088	114	706	24
(10)	0.9664	0.0320	0.1122	0.0026	0.0629	0.0015	0.36	687	17	685	15	704	52	686	13
(11)	1.0184	0.0305	0.1158	0.0031	0.0637	0.0012	0.45	713	15	706	18	732	42	711	14

Table DR1. (continued)

	Isotopic ratios							Apparent ages (Ma)							
Sample/analysis	$^{207}Pb/^{235}U$	±(1σ)	$^{206}Pb/^{238}U$	±(1σ)	$^{207}Pb/^{206}Pb$	±(1σ)	ρ	$^{207}Pb/^{235}U$	±(1σ)	$^{206}Pb/^{238}U$	±(1σ)	$^{207}Pb/^{206}Pb$	±(1σ)	Concordia	±(1σ)
CAM-24(6)	0.2977	0.0429	0.0451	0.0027	0.0466	0.0048	0.21	265	34	284	17	29	249	281	16
(13)	0.2375	0.0440	0.0358	0.0055	0.0464	0.0025	0.41	216	36	227	34	21	131	222	29
(15)	0.2800	0.0330	0.0405	0.0020	0.0765	0.0026	0.21	251	26	256	12	1108	68	255	12
CAM-26(9)	0.3141	0.0469	0.0464	0.0018	0.0514	0.0055	0.13	277	36	292	11	259	245	292	11
CAM-30(5 core)	0.4001	0.0592	0.0530	0.0028	0.0636	0.0053	0.18	342	43	333	17	727	176	333	17
(6)	0.3516	0.0290	0.0464	0.0036	0.0533	0.0033	0.47	306	22	292	22	343	139	299	19
(11 core)	0.4178	0.0414	0.0493	0.0043	0.0601	0.0035	0.44	354	30	310	26	608	126	327	24
(13 core)	0.4260	0.0489	0.0574	0.0040	0.0603	0.0036	0.30	360	35	360	24	613	129	360	22
(14)	0.3354	0.0482	0.0440	0.0031	0.0576	0.0052	0.24	294	37	277	19	516	200	280	18
(16 core)	0.4522	0.0720	0.0536	0.0044	0.0629	0.0050	0.26	379	50	337	27	706	170	342	26
(17)	0.3225	0.0423	0.0454	0.0023	0.0607	0.0052	0.19	284	32	286	14	627	186	286	14
(18)	0.3437	0.0553	0.0455	0.0027	0.0614	0.0045	0.19	300	42	287	17	655	157	288	17
(19)	0.3446	0.0523	0.0427	0.0026	0.0598	0.0073	0.20	301	39	269	16	598	263	272	16
CAM-33(7)	0.2471	0.0133	0.0385	0.0011	0.0476	0.0024	0.26	224	11	244	7	80	122	239	6
(8)	0.2723	0.0122	0.0369	0.0008	0.0547	0.0022	0.25	245	10	234	5	399	89	235	5
(9)	0.2499	0.0099	0.0383	0.0007	0.0474	0.0015	0.22	226	8	242	4	68	77	240	4
(10)	0.2518	0.0224	0.0388	0.0011	0.0480	0.0041	0.16	228	18	245	7	101	201	244	7
(11)	0.2854	0.0167	0.0373	0.0010	0.0559	0.0029	0.24	255	13	236	6	449	113	238	6
(12)	0.2517	0.0130	0.0370	0.0009	0.0506	0.0021	0.24	228	11	234	6	223	95	233	5
(13)	0.2549	0.0140	0.0363	0.0009	0.0507	0.0025	0.23	231	11	230	6	227	115	230	5
(15)	0.2600	0.0201	0.0384	0.0010	0.0494	0.0033	0.17	235	16	243	6	169	158	242	6
(17)	0.2680	0.0082	0.0383	0.0010	0.0498	0.0012	0.43	241	7	243	6	187	56	242	5
(18)	0.2546	0.0136	0.0399	0.0010	0.0466	0.0024	0.23	230	11	252	6	29	121	249	6
CAM-35(5)	0.2550	0.0131	0.0382	0.0009	0.0484	0.0023	0.22	231	11	241	5	117	112	240	5
(6)	0.2851	0.0261	0.0390	0.0016	0.0547	0.0046	0.22	255	21	246	10	399	190	247	9
(8)	0.2884	0.0204	0.0385	0.0015	0.0554	0.0029	0.27	257	16	244	9	428	117	246	9
(9)	0.3039	0.0274	0.0417	0.0025	0.0518	0.0056	0.33	269	21	263	15	276	246	265	14
(11)	0.2720	0.0171	0.0398	0.0008	0.0499	0.0027	0.17	244	14	251	5	188	125	251	5
(13)	0.2496	0.0278	0.0359	0.0020	0.0491	0.0054	0.25	226	23	228	13	152	257	227	12
(15)	0.2912	0.0127	0.0397	0.0011	0.0533	0.0021	0.32	259	10	251	7	344	91	253	6
(16)	0.3093	0.0260	0.0391	0.0016	0.0565	0.0052	0.24	274	20	247	10	474	202	250	9
(17)	0.3144	0.0274	0.0399	0.0019	0.0587	0.0044	0.27	278	21	252	11	557	163	256	11

Table DR1. (continued)

	Isotopic ratios							Apparent ages (Ma)							
Sample/analysis	$^{207}Pb/^{235}U$	±(1σ)	$^{206}Pb/^{238}U$	±(1σ)	$^{207}Pb/^{206}Pb$	±(1σ)	ρ	$^{207}Pb/^{235}U$	±(1σ)	$^{206}Pb/^{238}U$	±(1σ)	$^{207}Pb/^{206}Pb$	±(1σ)	Concordia	±(1σ)
(19)	0.3433	0.0319	0.0401	0.0014	0.0631	0.0055	0.19	300	24	253	9	711	184	256	9
(20)	0.2543	0.0282	0.0367	0.0019	0.0516	0.0049	0.24	230	23	232	12	267	219	232	11
CAM-39(9)	0.2497	0.0144	0.0357	0.0012	0.0501	0.0023	0.28	226	12	226	7	198	106	226	7
(11)	0.2303	0.0215	0.0357	0.0011	0.0470	0.0035	0.16	210	18	226	7	49	180	225	6
(12)	0.2594	0.0114	0.0364	0.0008	0.0523	0.0022	0.26	234	9	230	5	299	96	231	5
(14 inh.)	0.3766	0.0544	0.0575	0.0045	0.0496	0.0037	0.27	325	40	360	27	176	174	351	25
(16)	0.2283	0.0104	0.0358	0.0008	0.0465	0.0017	0.25	209	9	227	5	25	85	223	5
(17)	0.2439	0.0122	0.0355	0.0009	0.0484	0.0020	0.24	222	10	225	5	118	98	225	5
(18)	0.2701	0.0099	0.0357	0.0014	0.0547	0.0014	0.53	243	8	226	9	398	56	236	7
(19)	0.2466	0.0166	0.0362	0.0011	0.0509	0.0025	0.22	224	14	230	7	236	114	229	6
(20)	0.2578	0.0157	0.0364	0.0011	0.0527	0.0026	0.24	233	13	231	7	316	110	231	6
(21)	0.2612	0.0141	0.0355	0.0009	0.0549	0.0022	0.24	236	11	225	6	406	91	226	6
CAM-40(8)	0.2896	0.0125	0.0427	0.0008	0.0497	0.0020	0.23	258	10	269	5	180	92	268	5
(11)	0.2857	0.0117	0.0405	0.0010	0.0512	0.0021	0.30	255	9	256	6	249	94	256	6
(12)	0.2950	0.0134	0.0414	0.0009	0.0516	0.0022	0.25	263	10	262	6	268	100	262	6
(14)	0.2940	0.0149	0.0410	0.0010	0.0526	0.0022	0.24	262	12	259	6	313	96	260	6
(15)	0.2898	0.0163	0.0407	0.0008	0.0508	0.0027	0.17	258	13	257	5	233	121	257	5
(16)	0.2771	0.0142	0.0408	0.0011	0.0484	0.0023	0.26	248	11	258	7	120	110	256	6
(18 sector)	0.3459	0.0153	0.0455	0.0012	0.0526	0.0023	0.30	302	12	287	7	312	100	290	7
(19 sector)	0.3319	0.0189	0.0466	0.0015	0.0528	0.0025	0.29	291	14	293	9	321	108	293	9
(20 sector)	0.3349	0.0222	0.0470	0.0020	0.0511	0.0027	0.32	293	17	296	12	247	124	295	11
(21 sector)	0.3490	0.0195	0.0455	0.0013	0.0542	0.0029	0.26	304	15	287	8	378	118	289	8
(22 sector)	0.3068	0.0155	0.0452	0.0011	0.0481	0.0024	0.25	272	12	285	7	107	117	283	7
(23)	0.2997	0.0123	0.0424	0.0011	0.0522	0.0019	0.33	266	10	268	7	294	81	267	7
CAM-41(7)	0.2881	0.0239	0.0404	0.0022	0.0497	0.0024	0.33	257	19	255	14	182	115	256	13
(8)	0.3296	0.0103	0.0436	0.0011	0.0536	0.0018	0.41	289	8	275	7	355	74	280	6
(9)	0.2749	0.0183	0.0407	0.0014	0.0496	0.0017	0.26	247	15	257	9	175	78	255	8
(11)	0.2657	0.0121	0.0403	0.0010	0.0476	0.0014	0.28	239	10	255	6	77	71	251	6
(12)	0.3135	0.0167	0.0410	0.0010	0.0567	0.0018	0.24	277	13	259	6	479	70	261	6
(14)	0.2600	0.0119	0.0390	0.0008	0.0487	0.0013	0.22	235	10	246	5	133	65	245	5
(16)	0.2667	0.0144	0.0379	0.0013	0.0506	0.0016	0.31	240	12	240	8	225	72	240	7
(22)	0.3181	0.0198	0.0429	0.0010	0.0528	0.0026	0.19	280	15	271	6	320	112	272	6

Table DR1. (continued)

	Isotopic ratios							Apparent ages (Ma)							
Sample/analysis	$^{207}Pb/^{235}U$	±(1σ)	$^{206}Pb/^{238}U$	±(1σ)	$^{207}Pb/^{206}Pb$	±(1σ)	ρ	$^{207}Pb/^{235}U$	±(1σ)	$^{206}Pb/^{238}U$	±(1σ)	$^{207}Pb/^{206}Pb$	±(1σ)	Concordia	±(1σ)
CAM-44a(5)	0.3458	0.0191	0.0486	0.0010	0.0531	0.0025	0.19	302	14	306	6	331	107	305	6
(9)	0.3630	0.0221	0.0472	0.0010	0.0571	0.0033	0.17	314	16	298	6	497	128	299	6
(10)	0.3262	0.0333	0.0465	0.0016	0.0518	0.0047	0.17	287	26	293	10	278	210	293	10
(11)	0.3142	0.0233	0.0468	0.0012	0.0500	0.0031	0.17	277	18	295	7	195	143	293	7
(12)	0.3273	0.0207	0.0497	0.0010	0.0494	0.0027	0.16	288	16	313	6	165	129	311	6
(13)	0.3531	0.0250	0.0498	0.0010	0.0531	0.0037	0.15	307	19	313	6	331	159	313	6
CAM-45a(6)	0.2992	0.0189	0.0418	0.0011	0.0542	0.0034	0.21	266	15	264	7	381	140	264	7
(7)	0.2817	0.0107	0.0414	0.0007	0.0513	0.0017	0.21	252	8	261	4	254	78	260	4
(8 inh.)	0.3069	0.0167	0.0460	0.0008	0.0478	0.0025	0.16	272	13	290	5	90	125	288	5
(9)	0.2711	0.0138	0.0408	0.0007	0.0483	0.0021	0.18	244	11	258	5	115	102	256	4
(10)	0.2498	0.0168	0.0405	0.0008	0.0462	0.0028	0.14	226	14	256	5	8	145	254	5
(11)	0.2713	0.0175	0.0411	0.0010	0.0482	0.0030	0.18	244	14	260	6	109	145	258	6
(12)	0.2522	0.0120	0.0398	0.0008	0.0468	0.0021	0.22	228	10	251	5	38	108	248	5
(13)	0.2908	0.0130	0.0402	0.0009	0.0528	0.0021	0.26	259	10	254	6	321	90	255	6
(15)	0.2821	0.0155	0.0410	0.0010	0.0498	0.0023	0.21	252	12	259	6	185	108	258	6
(17)	0.2650	0.0099	0.0394	0.0008	0.0491	0.0016	0.27	239	8	249	5	151	75	247	5
CAM-45c(4 inh.)	0.3210	0.0224	0.0490	0.0032	0.0482	0.0017	0.47	283	17	309	20	110	81	292	16
(6)	0.2908	0.0168	0.0401	0.0018	0.0521	0.0026	0.38	259	13	253	11	288	113	255	10
(7)	0.3066	0.0163	0.0392	0.0013	0.0575	0.0025	0.32	272	13	248	8	511	97	253	8
(9)	0.2781	0.0130	0.0416	0.0010	0.0483	0.0018	0.27	249	10	263	6	113	89	260	6
(10)	0.2628	0.0117	0.0393	0.0011	0.0488	0.0017	0.30	237	9	249	7	137	84	245	6
(13 inh.)	0.3672	0.0324	0.0456	0.0032	0.0554	0.0030	0.39	318	24	287	19	428	119	297	18
(14 inh.)	0.3167	0.0152	0.0464	0.0020	0.0513	0.0026	0.44	279	12	292	12	254	116	285	10
(15)	0.2731	0.0209	0.0407	0.0011	0.0495	0.0032	0.18	245	17	257	7	171	150	256	7
(16 inh.)	0.3915	0.0316	0.0528	0.0032	0.0515	0.0033	0.37	335	23	332	20	263	146	333	17
CAM-49a(4)	0.3851	0.0180	0.0480	0.0013	0.0583	0.0023	0.28	331	13	302	8	540	87	307	7
(5)	0.3685	0.0150	0.0487	0.0010	0.0549	0.0022	0.24	319	11	307	6	408	90	308	6
(6)	0.3715	0.0116	0.0498	0.0011	0.0542	0.0013	0.36	321	9	313	7	378	55	316	6
(7)	0.3251	0.0171	0.0491	0.0016	0.0486	0.0018	0.32	286	13	309	10	131	89	301	9
(8)	0.3689	0.0125	0.0491	0.0012	0.0543	0.0014	0.35	319	9	309	7	382	57	312	7
(9)	0.3653	0.0174	0.0500	0.0012	0.0538	0.0021	0.25	316	13	314	7	364	88	315	7
(10)	0.3623	0.0146	0.0480	0.0012	0.0542	0.0018	0.31	314	11	302	7	381	75	305	7

Table DR1. (continued)

	Isotopic ratios							Apparent ages (Ma)							
Sample/analysis	$^{207}Pb/^{235}U$	±(1σ)	$^{206}Pb/^{238}U$	±(1σ)	$^{207}Pb/^{206}Pb$	±(1σ)	ρ	$^{207}Pb/^{235}U$	±(1σ)	$^{206}Pb/^{238}U$	±(1σ)	$^{207}Pb/^{206}Pb$	±(1σ)	Concordia	±(1σ)
(11)	0.3681	0.0098	0.0492	0.0009	0.0543	0.0011	0.33	318	7	310	5	383	44	312	5
(12)	0.3644	0.0113	0.0473	0.0010	0.0553	0.0013	0.35	315	8	298	6	424	53	303	6
(13)	0.3672	0.0127	0.0488	0.0011	0.0533	0.0017	0.32	318	9	307	7	343	71	310	6
CAM-52(3)	0.3843	0.0109	0.0517	0.0010	0.0532	0.0013	0.35	330	8	325	6	337	54	326	6
(7)	0.3918	0.0208	0.0497	0.0014	0.0549	0.0031	0.27	336	15	313	9	407	126	316	8
(8)	0.3585	0.0179	0.0478	0.0015	0.0530	0.0019	0.32	311	13	301	9	328	81	304	9
(9)	0.3683	0.0189	0.0500	0.0011	0.0521	0.0021	0.22	318	14	314	7	292	92	315	7
(10)	0.3608	0.0175	0.0495	0.0013	0.0528	0.0022	0.27	313	13	312	8	319	94	312	8
(11)	0.3109	0.0453	0.0461	0.0028	0.0498	0.0054	0.21	275	35	290	17	188	254	288	16
(12)	0.3492	0.0170	0.0480	0.0016	0.0528	0.0017	0.33	304	13	302	10	319	71	303	9
(13)	0.3540	0.0218	0.0489	0.0014	0.0517	0.0036	0.23	308	16	308	9	271	158	308	8
(14 inh.)	0.4792	0.0352	0.0574	0.0022	0.0566	0.0022	0.26	398	24	360	13	475	87	366	13
(15)	0.3473	0.0285	0.0500	0.0012	0.0504	0.0035	0.15	303	21	315	8	214	159	314	7
CAM-54(7 core)	0.6749	0.0318	0.0858	0.0020	0.0575	0.0027	0.24	524	19	531	12	511	104	529	11
(8 inh.)	0.3894	0.0154	0.0542	0.0010	0.0537	0.0023	0.23	334	11	340	6	359	96	339	6
(10 inh.)	1.5314	0.0735	0.1535	0.0060	0.0728	0.0018	0.41	943	29	920	34	1008	51	934	26
(11)	0.3197	0.0217	0.0485	0.0011	0.0489	0.0028	0.16	282	17	306	7	141	133	303	6
(13)	0.3116	0.0129	0.0453	0.0010	0.0507	0.0017	0.27	275	10	286	6	226	75	284	6
(14 core)	0.5577	0.0483	0.0795	0.0033	0.0506	0.0040	0.24	450	31	493	20	223	183	483	18
(15)	0.3355	0.0148	0.0450	0.0016	0.0539	0.0025	0.41	294	11	284	10	368	103	288	9
(16 inh.)	0.4170	0.0192	0.0552	0.0021	0.0538	0.0018	0.42	354	14	346	13	361	77	350	11
(17)	0.3516	0.0108	0.0470	0.0009	0.0541	0.0015	0.32	306	8	296	6	376	61	298	5
(18 inh.)	0.5863	0.0249	0.0717	0.0014	0.0598	0.0025	0.23	469	16	446	8	597	89	450	8
(19)	0.3430	0.0166	0.0480	0.0012	0.0531	0.0020	0.26	299	13	302	7	333	86	301	7
(20 inh.)	0.3602	0.0144	0.0502	0.0011	0.0527	0.0015	0.28	312	11	316	7	316	67	315	7
(21)	0.3218	0.0121	0.0457	0.0009	0.0516	0.0016	0.26	283	9	288	6	268	71	287	5
CAM-55b(5)	0.4689	0.0577	0.0499	0.0015	0.0648	0.0075	0.12	390	40	314	9	767	244	315	9
(7)	0.3955	0.0201	0.0520	0.0013	0.0546	0.0030	0.25	338	15	327	8	395	123	329	8
(9)	0.3625	0.0274	0.0511	0.0020	0.0526	0.0040	0.26	314	20	322	12	312	173	320	12
(15)	0.4313	0.0445	0.0519	0.0014	0.0600	0.0059	0.13	364	32	326	9	604	211	327	9
(16)	0.3577	0.0346	0.0498	0.0013	0.0536	0.0058	0.13	310	26	313	8	353	244	313	8
(17)	0.4217	0.0317	0.0507	0.0011	0.0598	0.0044	0.15	357	23	319	7	598	161	320	7

Table DR1. (continued)

	Isotopic ratios							Apparent ages (Ma)							
Sample/analysis	$^{207}Pb/^{235}U$	±(1σ)	$^{206}Pb/^{238}U$	±(1σ)	$^{207}Pb/^{206}Pb$	±(1σ)	ρ	$^{207}Pb/^{235}U$	±(1σ)	$^{206}Pb/^{238}U$	±(1σ)	$^{207}Pb/^{206}Pb$	±(1σ)	Concordia	±(1σ)
(18)	0.3372	0.0286	0.0498	0.0016	0.0496	0.0042	0.20	295	22	313	10	178	199	311	10
CAM-57(5)	0.3831	0.0346	0.0482	0.0017	0.0610	0.0053	0.19	329	25	304	10	639	189	306	10
(6)	0.3577	0.0530	0.0482	0.0035	0.0568	0.0088	0.24	310	40	304	21	484	341	305	20
(8)	0.3840	0.0571	0.0489	0.0028	0.0664	0.0110	0.20	330	42	308	17	818	347	310	17
(10)	0.3551	0.0271	0.0475	0.0012	0.0560	0.0036	0.16	309	20	299	7	454	142	300	7
(11)	0.4301	0.0379	0.0486	0.0016	0.0651	0.0055	0.19	363	27	306	10	778	176	309	10
(12)	0.4095	0.0282	0.0481	0.0011	0.0620	0.0040	0.17	349	20	303	7	673	139	305	7
(13)	0.3401	0.1101	0.0479	0.0036	0.0528	0.0132	0.12	297	83	302	22	321	570	302	22
COCA 262(6)	0.2148	0.0070	0.0318	0.0006	0.0479	0.0015	0.31	198	6	202	4	94	76	201	4
(7)	0.2275	0.0072	0.0330	0.0004	0.0503	0.0015	0.18	208	6	209	2	207	70	209	2
(9)	0.2322	0.0078	0.0327	0.0006	0.0474	0.0016	0.26	212	6	207	4	68	82	208	3
(11 inh.)	0.3329	0.0260	0.0473	0.0035	0.0503	0.0011	0.48	292	20	298	22	207	53	294	18
(13 inh.)	0.3094	0.0166	0.0444	0.0025	0.0491	0.0013	0.53	274	13	280	16	151	62	276	12
COCA 268(5 inh.)	0.3108	0.0314	0.0457	0.0046	0.0497	0.0016	0.50	275	24	288	28	179	77	279	22
(6)	0.2547	0.0073	0.0353	0.0006	0.0517	0.0012	0.28	230	6	224	4	272	55	225	3
(7)	0.2590	0.0075	0.0369	0.0009	0.0487	0.0010	0.43	234	6	234	6	136	50	234	5
(8 inh.)	0.3313	0.0521	0.0448	0.0065	0.0512	0.0033	0.46	291	40	283	40	248	148	287	34
COCA 269(8 inh.)	0.2930	0.0258	0.0427	0.0036	0.0496	0.0015	0.48	261	20	270	22	176	72	265	18
(9)	0.2431	0.0090	0.0332	0.0006	0.0534	0.0018	0.25	221	7	210	4	345	76	212	4
(10)	0.2252	0.0097	0.0324	0.0007	0.0547	0.0019	0.26	206	8	206	5	398	80	206	4
(11 inh.)	0.3515	0.0296	0.0526	0.0046	0.0487	0.0009	0.52	306	22	330	28	132	43	312	21
(12)	0.2261	0.0084	0.0323	0.0009	0.0491	0.0014	0.36	207	7	205	5	153	65	206	5
(14 inh.)	0.3876	0.0634	0.0578	0.0096	0.0481	0.0026	0.51	333	46	362	58	106	129	341	44
(15 inh.)	0.4087	0.0695	0.0597	0.0094	0.0481	0.0016	0.46	348	50	374	57	104	76	357	45
COCA 298(5)	0.2379	0.0060	0.0328	0.0007	0.0520	0.0011	0.40	217	5	208	4	286	49	211	4
(6)	0.2533	0.0082	0.0362	0.0008	0.0508	0.0013	0.34	229	7	229	5	233	58	229	5
(8)	0.2253	0.0063	0.0338	0.0005	0.0486	0.0010	0.28	206	5	215	3	130	50	213	3
(9)	0.2383	0.0077	0.0342	0.0008	0.0492	0.0012	0.38	217	6	217	5	159	58	217	5
(11 inh.)	0.3150	0.0274	0.0441	0.0026	0.0536	0.0040	0.34	278	21	278	16	355	167	278	15
(12 inh.)	0.3348	0.0238	0.0462	0.0037	0.0508	0.0014	0.56	293	18	291	23	229	64	293	17
(13)	0.2440	0.0084	0.0339	0.0006	0.0526	0.0016	0.25	222	7	215	4	314	69	216	3
(14 inh.)	0.3008	0.0133	0.0429	0.0014	0.0492	0.0016	0.37	267	10	271	9	155	74	270	8

Table DR1. (continued)

	Isotopic ratios							Apparent ages (Ma)							
Sample/analysis	$^{207}Pb/^{235}U$	±(1σ)	$^{206}Pb/^{238}U$	±(1σ)	$^{207}Pb/^{206}Pb$	±(1σ)	ρ	$^{207}Pb/^{235}U$	±(1σ)	$^{206}Pb/^{238}U$	±(1σ)	$^{207}Pb/^{206}Pb$	±(1σ)	Concordia	±(1σ)
(15)	0.2303	0.0102	0.0343	0.0006	0.0486	0.0019	0.20	210	8	217	4	129	93	217	4
COCA 302(4)	0.2109	0.0124	0.0309	0.0008	0.0496	0.0029	0.21	194	10	196	5	178	137	196	5
(5)	0.1924	0.0098	0.0300	0.0007	0.0468	0.0021	0.22	179	8	190	4	38	109	189	4
(6)	0.2205	0.0078	0.0303	0.0006	0.0527	0.0014	0.30	202	6	192	4	316	62	194	4
(7)	0.1964	0.0083	0.0296	0.0006	0.0475	0.0017	0.24	182	7	188	4	72	87	187	4
(8)	0.2049	0.0087	0.0297	0.0006	0.0484	0.0019	0.24	189	7	188	4	119	90	188	4
(9)	0.2028	0.0087	0.0294	0.0006	0.0518	0.0019	0.25	187	7	187	4	279	84	187	4
(10)	0.1989	0.0080	0.0297	0.0006	0.0486	0.0018	0.24	184	7	189	4	131	85	188	3
(11)	0.1924	0.0097	0.0288	0.0009	0.0508	0.0023	0.32	179	8	183	6	233	106	182	5
(14)	0.2111	0.0083	0.0313	0.0008	0.0497	0.0016	0.34	195	7	199	5	182	76	198	5
(15)	0.2168	0.0072	0.0308	0.0007	0.0489	0.0013	0.34	199	6	195	4	143	63	196	4
COCA 358(6)	0.2472	0.0108	0.0358	0.0013	0.0506	0.0015	0.41	224	9	227	8	220	66	226	7
(7)	0.2624	0.0115	0.0397	0.0012	0.0468	0.0017	0.34	237	9	251	7	40	85	246	7
(8)	0.2466	0.0093	0.0364	0.0009	0.0499	0.0017	0.34	224	8	230	6	190	80	228	5
(9)	0.2714	0.0087	0.0385	0.0012	0.0513	0.0013	0.48	244	7	243	7	254	58	244	6
(10)	0.2350	0.0080	0.0348	0.0008	0.0486	0.0016	0.32	214	7	221	5	128	75	219	4
COCA 362(8)	0.2348	0.0101	0.0340	0.0008	0.0494	0.0012	0.28	214	8	215	5	165	57	215	5
(10)	0.2572	0.0093	0.0364	0.0010	0.0489	0.0016	0.37	232	7	230	6	143	75	231	5
(12)	0.2644	0.0090	0.0370	0.0008	0.0526	0.0016	0.34	238	7	234	5	310	71	235	5
(14)	0.2553	0.0102	0.0367	0.0014	0.0497	0.0011	0.47	231	8	232	9	179	50	231	7
NAM-02a(5)	0.3467	0.0191	0.0477	0.0015	0.0512	0.0026	0.29	302	14	300	9	250	118	301	9
(6)	0.3336	0.0464	0.0473	0.0045	0.0506	0.0044	0.34	292	35	298	28	223	201	296	25
(9)	0.3492	0.0175	0.0472	0.0013	0.0544	0.0020	0.27	304	13	298	8	386	82	299	8
(10)	0.3463	0.0162	0.0467	0.0013	0.0506	0.0021	0.30	302	12	294	8	224	97	296	8
(11)	0.3622	0.0155	0.0502	0.0012	0.0534	0.0020	0.28	314	12	316	7	345	84	315	7
(12)	0.3267	0.0154	0.0475	0.0011	0.0499	0.0020	0.25	287	12	299	7	191	92	297	7
(13)	0.3421	0.0181	0.0486	0.0013	0.0524	0.0025	0.25	299	14	306	8	304	107	305	8
(14)	0.3284	0.0201	0.0480	0.0013	0.0501	0.0027	0.22	288	15	302	8	199	128	300	8
(15)	0.3273	0.0149	0.0472	0.0013	0.0504	0.0023	0.30	288	11	297	8	213	104	295	7
NAM-05(4)	0.2783	0.0145	0.0380	0.0009	0.0518	0.0025	0.23	249	12	241	6	277	109	242	5
(5)	0.2771	0.0130	0.0392	0.0007	0.0496	0.0022	0.19	248	10	248	4	177	104	248	4
(6)	0.2829	0.0111	0.0379	0.0007	0.0533	0.0019	0.23	253	9	240	4	339	82	241	4

Table DR1. (continued)

	Isotopic ratios							Apparent ages (Ma)							
Sample/analysis	$^{207}Pb/^{235}U$	±(1σ)	$^{206}Pb/^{238}U$	±(1σ)	$^{207}Pb/^{206}Pb$	±(1σ)	ρ	$^{207}Pb/^{235}U$	±(1σ)	$^{206}Pb/^{238}U$	±(1σ)	$^{207}Pb/^{206}Pb$	±(1σ)	Concordia	±(1σ)
(7)	0.2888	0.0130	0.0393	0.0008	0.0533	0.0023	0.21	258	10	248	5	341	98	249	5
(8)	0.2704	0.0122	0.0386	0.0006	0.0516	0.0021	0.17	243	10	244	4	267	93	244	4
(9)	0.2655	0.0178	0.0335	0.0007	0.0575	0.0034	0.16	239	14	213	5	512	128	214	5
(10)	0.2565	0.0171	0.0385	0.0006	0.0494	0.0030	0.12	232	14	243	4	165	142	243	4
(11)	0.2768	0.0178	0.0387	0.0011	0.0521	0.0035	0.21	248	14	244	7	291	154	245	6
NAM-11a(4)	0.1928	0.0099	0.0273	0.0006	0.0517	0.0026	0.22	179	8	173	4	272	113	174	4
(5)	0.1730	0.0122	0.0274	0.0008	0.0476	0.0028	0.20	162	11	174	5	80	140	173	5
(6)	0.1873	0.0093	0.0268	0.0007	0.0496	0.0021	0.26	174	8	170	4	176	100	171	4
(7)	0.1916	0.0096	0.0263	0.0007	0.0553	0.0025	0.27	178	8	167	4	425	101	169	4
(9)	0.1738	0.0104	0.0274	0.0007	0.0472	0.0021	0.20	163	9	174	4	62	104	173	4
(11)	0.1810	0.0131	0.0267	0.0006	0.0492	0.0029	0.16	169	11	170	4	155	137	170	4
(12)	0.1848	0.0112	0.0278	0.0006	0.0493	0.0024	0.18	172	10	177	4	164	113	177	4
(13)	0.1913	0.0091	0.0273	0.0006	0.0513	0.0022	0.24	178	8	174	4	253	97	174	4
(14)	0.2041	0.0119	0.0268	0.0006	0.0543	0.0027	0.19	189	10	171	4	382	114	172	4
(16)	0.2012	0.0127	0.0272	0.0007	0.0527	0.0032	0.19	186	11	173	4	314	137	174	4
(17)	0.2029	0.0113	0.0281	0.0006	0.0532	0.0027	0.21	188	10	179	4	339	114	179	4
(18)	0.2000	0.0113	0.0278	0.0008	0.0526	0.0024	0.24	185	10	177	5	312	105	178	5
(19)	0.1959	0.0136	0.0270	0.0007	0.0528	0.0031	0.19	182	12	172	4	320	132	173	4
(20)	0.1815	0.0096	0.0275	0.0007	0.0484	0.0022	0.24	169	8	175	4	117	109	174	4
(22)	0.1982	0.0162	0.0261	0.0009	0.0546	0.0035	0.21	184	14	166	6	394	145	167	5
NAM-18(4)	0.3680	0.0223	0.0484	0.0015	0.0552	0.0029	0.25	318	17	305	9	422	119	307	9
(5)	0.4040	0.0236	0.0490	0.0014	0.0565	0.0027	0.24	345	17	308	9	473	107	313	8
(6)	0.3765	0.0198	0.0514	0.0013	0.0529	0.0021	0.24	324	15	323	8	326	92	323	7
(7)	0.3584	0.0274	0.0500	0.0032	0.0546	0.0039	0.42	311	20	315	20	394	160	313	17
(8)	0.3830	0.0167	0.0508	0.0012	0.0572	0.0024	0.28	329	12	319	8	501	92	321	7
(9)	0.3691	0.0202	0.0493	0.0011	0.0554	0.0026	0.21	319	15	310	7	427	105	311	7
(10)	0.3513	0.0156	0.0522	0.0012	0.0501	0.0017	0.26	306	12	328	7	198	78	323	7
(11)	0.3382	0.0247	0.0494	0.0015	0.0502	0.0033	0.21	296	19	311	9	204	153	309	9
(13)	0.3899	0.0182	0.0495	0.0010	0.0588	0.0025	0.23	334	13	312	6	559	94	314	6
(14)	0.3532	0.0209	0.0523	0.0011	0.0493	0.0029	0.17	307	16	329	7	160	140	327	6
(15)	0.4295	0.0212	0.0528	0.0009	0.0599	0.0030	0.18	363	15	331	6	602	110	334	6
(16)	0.3683	0.0182	0.0514	0.0014	0.0535	0.0025	0.27	318	14	323	9	351	106	322	8

Table DR1. (continued)

	Isotopic ratios							Apparent ages (Ma)							
Sample/analysis	$^{207}Pb/^{235}U$	±(1σ)	$^{206}Pb/^{238}U$	±(1σ)	$^{207}Pb/^{206}Pb$	±(1σ)	ρ	$^{207}Pb/^{235}U$	±(1σ)	$^{206}Pb/^{238}U$	±(1σ)	$^{207}Pb/^{206}Pb$	±(1σ)	Concordia	±(1σ)
(18)	0.3899	0.0181	0.0503	0.0013	0.0558	0.0021	0.28	334	13	317	8	444	85	320	8
(19)	0.3594	0.0144	0.0507	0.0010	0.0512	0.0021	0.26	312	11	319	6	251	96	318	6
(20)	0.3831	0.0225	0.0515	0.0017	0.0534	0.0025	0.29	329	17	324	11	345	106	325	10
NAM-22(4)	0.3997	0.0305	0.0477	0.0025	0.0593	0.0037	0.34	341	22	300	15	577	134	309	14
(5)	0.3478	0.0127	0.0485	0.0012	0.0523	0.0015	0.34	303	10	305	7	300	67	305	7
(6)	0.3558	0.0212	0.0474	0.0016	0.0528	0.0023	0.29	309	16	298	10	321	101	301	9
(7)	0.3427	0.0166	0.0480	0.0013	0.0528	0.0020	0.27	299	13	302	8	319	84	301	7
(8)	0.3552	0.0273	0.0481	0.0014	0.0540	0.0027	0.19	309	20	303	9	369	114	303	8
(9)	0.3164	0.0207	0.0471	0.0015	0.0496	0.0023	0.24	279	16	296	9	177	106	293	9
(11)	0.4045	0.0312	0.0497	0.0015	0.0580	0.0038	0.20	345	23	312	10	531	145	315	9
(13)	0.3404	0.0237	0.0489	0.0014	0.0492	0.0032	0.21	297	18	308	9	159	151	306	8
(14)	0.3559	0.0164	0.0494	0.0012	0.0518	0.0021	0.27	309	12	311	7	277	95	310	7
(15)	0.3402	0.0144	0.0513	0.0010	0.0475	0.0020	0.23	297	11	323	6	73	101	318	6
(16)	0.3379	0.0178	0.0516	0.0011	0.0487	0.0021	0.20	296	14	324	7	134	100	320	6
(17)	0.3578	0.0173	0.0505	0.0015	0.0520	0.0026	0.31	311	13	318	9	284	114	316	9
(18)	0.3530	0.0170	0.0495	0.0013	0.0507	0.0020	0.27	307	13	312	8	225	93	311	7
(19)	0.3419	0.0178	0.0483	0.0013	0.0521	0.0023	0.27	299	13	304	8	290	102	303	8
(20)	0.3538	0.0187	0.0490	0.0019	0.0518	0.0025	0.37	308	14	308	12	276	112	308	11
NAM-27a(6)	0.3949	0.0227	0.0488	0.0020	0.0581	0.0029	0.35	338	17	307	12	533	111	315	11
(7)	0.3522	0.0189	0.0517	0.0013	0.0513	0.0021	0.23	306	14	325	8	256	94	322	8
(8)	0.3623	0.0161	0.0506	0.0013	0.0529	0.0020	0.29	314	12	318	8	322	86	317	8
(9)	0.3428	0.0196	0.0512	0.0013	0.0488	0.0022	0.23	299	15	322	8	138	108	318	8
(10)	0.3676	0.0199	0.0480	0.0014	0.0553	0.0025	0.26	318	15	302	8	423	101	305	8
(11)	0.3339	0.0164	0.0486	0.0014	0.0514	0.0021	0.28	293	12	306	8	257	93	303	8
(12)	0.3458	0.0120	0.0477	0.0015	0.0519	0.0017	0.44	302	9	301	9	280	75	301	8
(14)	0.3738	0.0164	0.0495	0.0012	0.0555	0.0022	0.29	322	12	311	8	434	89	314	7
(15)	0.3801	0.0166	0.0514	0.0015	0.0545	0.0023	0.33	327	12	323	9	390	93	324	8
(16)	0.3992	0.0219	0.0503	0.0014	0.0582	0.0026	0.26	341	16	316	9	539	98	320	9
(17)	0.4050	0.0168	0.0512	0.0012	0.0575	0.0021	0.29	345	12	322	8	509	80	326	7
(18)	0.3530	0.0111	0.0505	0.0010	0.0508	0.0014	0.32	307	8	317	6	230	62	314	6
(20)	0.3245	0.0186	0.0479	0.0017	0.0500	0.0021	0.31	285	14	301	10	197	97	297	9
NAM-28a(4)	0.3542	0.0182	0.0497	0.0015	0.0553	0.0020	0.29	308	14	312	9	423	82	311	9

Table DR1. (continued)

	Isotopic ratios							Apparent ages (Ma)							
Sample/analysis	$^{207}Pb/^{235}U$	±(1σ)	$^{206}Pb/^{238}U$	±(1σ)	$^{207}Pb/^{206}Pb$	±(1σ)	ρ	$^{207}Pb/^{235}U$	±(1σ)	$^{206}Pb/^{238}U$	±(1σ)	$^{207}Pb/^{206}Pb$	±(1σ)	Concordia	±(1σ)
(5)	0.3335	0.0168	0.0488	0.0015	0.0512	0.0018	0.31	292	13	307	9	250	82	303	9
(6)	0.3768	0.0149	0.0502	0.0014	0.0575	0.0021	0.36	325	11	316	9	511	79	319	8
(7)	0.3505	0.0158	0.0491	0.0013	0.0522	0.0021	0.29	305	12	309	8	294	91	308	7
(8)	0.3439	0.0168	0.0514	0.0012	0.0497	0.0024	0.24	300	13	323	8	179	111	319	7
(9)	0.3774	0.0197	0.0513	0.0015	0.0541	0.0026	0.28	325	15	323	9	374	106	323	9
(10)	0.3435	0.0210	0.0476	0.0014	0.0532	0.0025	0.24	300	16	300	9	338	107	300	8
(11)	0.3670	0.0128	0.0497	0.0012	0.0528	0.0018	0.34	317	10	313	7	319	76	314	7
(12)	0.3404	0.0165	0.0495	0.0016	0.0482	0.0023	0.33	297	12	311	10	110	112	307	9
(13)	0.3674	0.0139	0.0504	0.0014	0.0544	0.0017	0.37	318	10	317	9	386	70	317	8
(14)	0.3295	0.0194	0.0491	0.0015	0.0479	0.0026	0.26	289	15	309	9	92	127	305	9
(15)	0.3497	0.0172	0.0514	0.0014	0.0503	0.0023	0.28	304	13	323	9	207	106	319	8
(16)	0.4027	0.0184	0.0531	0.0015	0.0561	0.0022	0.31	344	13	334	9	456	86	336	8
(17)	0.3444	0.0154	0.0481	0.0016	0.0511	0.0018	0.37	300	12	303	10	247	81	302	9
(18)	0.3522	0.0163	0.0509	0.0015	0.0523	0.0019	0.32	306	12	320	9	297	82	316	8
NAM-30(6 inh.)	0.4307	0.0130	0.0584	0.0014	0.0530	0.0015	0.41	364	9	366	9	327	65	365	8
(7 inh.)	0.4103	0.0156	0.0549	0.0011	0.0550	0.0017	0.26	349	11	345	7	411	70	345	6
(8)	0.3893	0.0148	0.0494	0.0013	0.0562	0.0014	0.34	334	11	311	8	458	55	317	7
(9 inh.)	0.4411	0.0241	0.0566	0.0011	0.0564	0.0029	0.18	371	17	355	7	468	113	356	7
(10)	0.3508	0.0146	0.0481	0.0010	0.0530	0.0017	0.26	305	11	303	6	330	74	303	6
(11)	0.3713	0.0197	0.0494	0.0012	0.0548	0.0023	0.23	321	15	311	7	402	94	312	7
(12)	0.3510	0.0187	0.0494	0.0012	0.0516	0.0019	0.22	305	14	311	7	269	86	310	7
(13)	0.3447	0.0155	0.0491	0.0012	0.0513	0.0018	0.28	301	12	309	8	255	78	307	7
(14)	0.3440	0.0179	0.0489	0.0015	0.0518	0.0017	0.29	300	13	308	9	275	76	306	8
(15)	0.3772	0.0144	0.0506	0.0013	0.0530	0.0014	0.34	325	11	318	8	330	59	320	7
(16)	0.3678	0.0154	0.0512	0.0012	0.0528	0.0017	0.28	318	11	322	7	320	74	321	7
(17)	0.3752	0.0133	0.0496	0.0012	0.0539	0.0014	0.33	323	10	312	7	367	57	315	7
(18)	0.3700	0.0272	0.0502	0.0014	0.0529	0.0033	0.20	320	20	316	9	326	141	316	9
(19)	0.3709	0.0163	0.0504	0.0013	0.0526	0.0018	0.30	320	12	317	8	312	78	318	7
SAM-04a(4)	0.5494	0.0216	0.0743	0.0013	0.0532	0.0021	0.23	445	14	462	8	336	88	459	7
(6 inh.1)	0.6265	0.0324	0.0802	0.0030	0.0561	0.0026	0.36	494	20	498	18	457	105	496	15
(7 inh.2)	2.1262	0.1131	0.1919	0.0048	0.0762	0.0041	0.24	1157	37	1131	26	1099	106	1139	24
(8 inh.2)	2.0000	0.1058	0.1847	0.0086	0.0737	0.0020	0.44	1116	36	1093	47	1033	54	1109	34

Table DR1. (continued)

	Isotopic ratios							Apparent ages (Ma)							
Sample/analysis	$^{207}Pb/^{235}U$	±(1σ)	$^{206}Pb/^{238}U$	±(1σ)	$^{207}Pb/^{206}Pb$	±(1σ)	ρ	$^{207}Pb/^{235}U$	±(1σ)	$^{206}Pb/^{238}U$	±(1σ)	$^{207}Pb/^{206}Pb$	±(1σ)	Concordia	±(1σ)
(9)	0.5470	0.0145	0.0713	0.0015	0.0533	0.0012	0.40	443	10	444	9	343	53	444	8
(10)	0.5147	0.0234	0.0686	0.0021	0.0561	0.0016	0.33	422	16	428	12	458	64	426	11
(11 inh. 2)	1.9181	0.0549	0.1895	0.0047	0.0737	0.0018	0.43	1087	19	1119	25	1033	49	1095	18
(12 inh.1)	0.6030	0.0311	0.0822	0.0028	0.0541	0.0021	0.33	479	20	509	17	377	89	498	14
(13 inh.1)	0.6565	0.0164	0.0830	0.0014	0.0541	0.0012	0.34	512	10	514	8	376	51	514	7
SAM-08(4)	0.3004	0.0161	0.0443	0.0011	0.0506	0.0027	0.23	267	13	279	7	222	122	277	6
(5)	0.3219	0.0107	0.0442	0.0009	0.0541	0.0013	0.31	283	8	279	6	373	53	280	5
(6)	0.3324	0.0128	0.0448	0.0009	0.0548	0.0020	0.27	291	10	282	6	405	80	284	6
(7)	0.3176	0.0378	0.0446	0.0020	0.0532	0.0049	0.19	280	29	281	13	338	210	281	12
(8)	0.3280	0.0112	0.0463	0.0010	0.0523	0.0014	0.30	288	9	292	6	297	63	291	5
(10)	0.3413	0.0152	0.0459	0.0011	0.0543	0.0022	0.26	298	11	289	7	385	91	291	6
(11)	0.3306	0.0128	0.0455	0.0011	0.0519	0.0016	0.32	290	10	287	7	282	71	288	6
SAM-09(9)	0.3682	0.0359	0.0453	0.0011	0.0603	0.0047	0.13	318	27	286	7	615	170	287	7
(10)	0.3587	0.0211	0.0481	0.0009	0.0546	0.0031	0.15	311	16	303	5	395	126	303	5
(11)	0.3406	0.0200	0.0463	0.0009	0.0469	0.0030	0.16	298	15	292	5	46	153	292	5
(13)	0.3243	0.0240	0.0438	0.0010	0.0611	0.0040	0.16	285	18	277	6	641	139	277	6
SAM-12a(4)	0.3774	0.0090	0.0515	0.0008	0.0528	0.0011	0.34	325	7	324	5	321	46	324	5
(5)	0.3769	0.0091	0.0533	0.0011	0.0518	0.0010	0.43	325	7	335	7	279	43	330	6
(7)	0.3593	0.0127	0.0506	0.0011	0.0518	0.0013	0.30	312	9	319	7	275	57	317	6
(10)	0.3427	0.0114	0.0474	0.0012	0.0530	0.0011	0.38	299	9	299	7	330	47	299	7
(14)	0.3535	0.0152	0.0471	0.0009	0.0552	0.0025	0.22	307	11	297	6	422	101	298	5
(15)	0.3858	0.0170	0.0532	0.0016	0.0520	0.0019	0.35	331	12	334	10	285	84	333	9
(16)	0.4089	0.0212	0.0506	0.0010	0.0593	0.0033	0.20	348	15	318	6	580	120	321	6
SAM-17(6)	0.2592	0.0237	0.0365	0.0013	0.0632	0.0055	0.20	234	19	231	8	717	184	231	8
(9)	0.2432	0.0177	0.0352	0.0011	0.0598	0.0035	0.21	221	14	223	7	597	127	223	6
SAM-20(4)	0.2116	0.0108	0.0307	0.0010	0.0503	0.0018	0.31	195	9	195	6	210	81	195	6
(5)	0.2222	0.0084	0.0318	0.0009	0.0498	0.0014	0.36	204	7	202	5	186	66	202	5
SAM-21(7)	0.1918	0.0072	0.0286	0.0007	0.0462	0.0019	0.31	178	6	182	4	6	102	181	4
(9)	0.1982	0.0114	0.0284	0.0007	0.0506	0.0028	0.20	184	10	180	4	222	126	181	4
(10)	0.1997	0.0083	0.0285	0.0005	0.0466	0.0020	0.23	185	7	181	3	30	102	181	3
(11)	0.2091	0.0066	0.0302	0.0007	0.0492	0.0013	0.39	193	6	192	5	160	64	192	4
(12)	0.2088	0.0096	0.0325	0.0016	0.0480	0.0013	0.53	193	8	206	10	98	66	196	8

Table DR1. (continued)

	Isotopic ratios							Apparent ages (Ma)							
Sample/analysis	$^{207}Pb/^{235}U$	±(1σ)	$^{206}Pb/^{238}U$	±(1σ)	$^{207}Pb/^{206}Pb$	±(1σ)	ρ	$^{207}Pb/^{235}U$	±(1σ)	$^{206}Pb/^{238}U$	±(1σ)	$^{207}Pb/^{206}Pb$	±(1σ)	Concordia	±(1σ)
SAM-22a(7)	0.2090	0.0096	0.0300	0.0008	0.0492	0.0021	0.29	193	8	191	5	159	101	191	5
(8)	0.2128	0.0109	0.0311	0.0008	0.0500	0.0023	0.25	196	9	197	5	196	108	197	5
(9)	0.1853	0.0127	0.0282	0.0009	0.0485	0.0027	0.23	173	11	179	6	124	131	178	5
(10)	0.1942	0.0079	0.0295	0.0007	0.0484	0.0019	0.28	180	7	187	4	120	92	186	4
(11)	0.1997	0.0137	0.0304	0.0009	0.0474	0.0030	0.21	185	12	193	6	67	150	192	5
(12)	0.2162	0.0134	0.0311	0.0007	0.0500	0.0027	0.19	199	11	197	5	193	127	198	4
(14)	0.2031	0.0105	0.0314	0.0010	0.0478	0.0022	0.30	188	9	199	6	90	108	196	6
(15)	0.2066	0.0153	0.0306	0.0015	0.0492	0.0026	0.33	191	13	194	9	155	124	193	9
SCAM-01(6)	0.2793	0.0229	0.0355	0.0015	0.0602	0.0050	0.25	250	18	225	9	609	181	228	9
(8)	0.2735	0.0134	0.0382	0.0009	0.0518	0.0024	0.25	245	11	242	6	275	105	242	6
(6b)	0.2774	0.0140	0.0393	0.0008	0.0518	0.0025	0.20	249	11	248	5	277	112	248	5
SCAM-02(4)	0.2136	0.0153	0.0326	0.0011	0.0509	0.0026	0.24	197	13	207	7	235	116	205	7
(5)	0.2730	0.0398	0.0323	0.0024	0.0603	0.0068	0.25	245	32	205	15	615	243	209	15
(9)	0.2461	0.0187	0.0347	0.0014	0.0518	0.0034	0.27	223	15	220	9	277	149	221	8
(10)	0.2272	0.0311	0.0339	0.0025	0.0485	0.0047	0.27	208	26	215	15	124	228	213	15
(11)	0.2612	0.0129	0.0347	0.0009	0.0532	0.0023	0.27	236	10	220	6	337	100	222	5
(12)	0.2553	0.0173	0.0371	0.0012	0.0512	0.0026	0.24	231	14	235	7	251	116	234	7
(13)	0.2336	0.0139	0.0349	0.0011	0.0479	0.0026	0.26	213	11	221	7	96	129	219	6
(14)	0.2329	0.0113	0.0334	0.0010	0.0507	0.0019	0.32	213	9	212	6	227	88	212	6
(15)	0.2230	0.0155	0.0353	0.0013	0.0467	0.0029	0.25	204	13	224	8	34	149	220	7
(17)	0.2215	0.0140	0.0331	0.0010	0.0496	0.0025	0.24	203	12	210	6	177	119	209	6
(18)	0.2578	0.0123	0.0356	0.0010	0.0526	0.0022	0.30	233	10	225	6	310	95	227	6
(19)	0.2444	0.0151	0.0341	0.0012	0.0530	0.0025	0.29	222	12	216	8	330	108	217	7
(23)	0.2915	0.0194	0.0356	0.0011	0.0597	0.0033	0.23	260	15	225	7	593	121	228	7
(24)	0.2463	0.0171	0.0332	0.0010	0.0545	0.0028	0.22	224	14	211	6	390	117	212	6
SCAM-04(5)	0.0351	0.0025	0.0047	0.0002	0.0511	0.0033	0.23	35	2	30	1	247	148	31	1
(7)	0.0338	0.0025	0.0045	0.0002	0.0531	0.0035	0.25	34	2	29	1	335	151	30	1
(14)	0.0275	0.0024	0.0044	0.0002	0.0464	0.0036	0.23	28	2	28	1	20	187	28	1
(18)	0.0339	0.0028	0.0046	0.0002	0.0522	0.0036	0.33	34	3	29	2	295	159	30	2
(21)	0.0332	0.0024	0.0046	0.0002	0.0522	0.0033	0.26	33	2	30	1	295	143	30	1
SCAM-06(6)	0.3331	0.0251	0.0420	0.0014	0.0565	0.0026	0.23	292	19	265	9	472	103	268	9
(7)	0.2699	0.0192	0.0394	0.0011	0.0541	0.0031	0.19	243	15	249	7	375	129	248	6

Table DR1. (continued)

	Isotopic ratios							Apparent ages (Ma)							
Sample/analysis	$^{207}Pb/^{235}U$	±(1σ)	$^{206}Pb/^{238}U$	±(1σ)	$^{207}Pb/^{206}Pb$	±(1σ)	ρ	$^{207}Pb/^{235}U$	±(1σ)	$^{206}Pb/^{238}U$	±(1σ)	$^{207}Pb/^{206}Pb$	±(1σ)	Concordia	±(1σ)
(10)	0.3097	0.0583	0.0416	0.0013	0.0581	0.0089	0.08	274	45	263	8	532	336	263	8
SCAM-08(4b)	0.0404	0.0039	0.0053	0.0001	0.0573	0.0052	0.14	40	4	34	1	504	200	34	1
(7)	0.0327	0.0025	0.0049	0.0001	0.0488	0.0033	0.18	33	2	31	1	139	159	31	1
(8b)	0.0354	0.0029	0.0048	0.0002	0.0517	0.0041	0.23	35	3	31	1	274	183	31	1
SCAM-17(6 inh.)	2.3555	0.1955	0.2248	0.0183	0.0752	0.0023	0.49	1229	59	1307	96	1074	61	1236	58
(8 inh.)	2.4959	0.2038	0.2500	0.0239	0.0725	0.0033	0.59	1271	59	1438	123	1000	92	1257	59
(10)	1.8986	0.0502	0.1829	0.0047	0.0760	0.0010	0.49	1081	18	1083	26	1094	27	1081	17
(11 inh.)	2.1772	0.0708	0.2043	0.0061	0.0773	0.0011	0.46	1174	23	1199	33	1130	29	1179	22
(5b)	1.9620	0.1360	0.1863	0.0145	0.0768	0.0025	0.56	1103	47	1102	79	1115	66	1103	47
(7b)	2.0704	0.0322	0.1901	0.0026	0.0787	0.0008	0.43	1139	11	1122	14	1165	21	1134	10
(9b)	1.9353	0.1543	0.1899	0.0043	0.0710	0.0071	0.14	1093	53	1121	24	956	206	1117	22
(10b)	2.0526	0.0346	0.1890	0.0030	0.0769	0.0008	0.47	1133	12	1116	16	1120	20	1130	11
(4b inh.)	2.8343	0.3130	0.2639	0.0307	0.0775	0.0016	0.53	1365	83	1510	156	1134	41	1364	83
SCAM-18(4)	1.0831	0.0579	0.1157	0.0030	0.0694	0.0034	0.24	745	28	706	17	910	101	713	16
(5)	1.1386	0.0704	0.1214	0.0028	0.0692	0.0041	0.18	772	33	739	16	906	122	743	15
(6)	1.1323	0.1234	0.1208	0.0062	0.0682	0.0068	0.23	769	59	735	35	875	207	742	33
(8)	1.0070	0.0793	0.1209	0.0030	0.0619	0.0040	0.16	707	40	736	17	672	137	732	17
(10)	1.0739	0.0669	0.1235	0.0023	0.0640	0.0040	0.15	741	33	751	13	742	132	750	13
(11)	1.1444	0.0413	0.1226	0.0022	0.0692	0.0021	0.25	775	20	745	13	904	62	752	12
(12)	1.0902	0.0735	0.1262	0.0022	0.0626	0.0041	0.13	749	36	766	13	694	138	764	12
(13)	1.1033	0.0469	0.1234	0.0024	0.0644	0.0024	0.23	755	23	750	14	756	79	751	13
(14)	1.0980	0.0378	0.1240	0.0021	0.0654	0.0018	0.25	752	18	753	12	786	57	753	11
(15)	1.1017	0.0372	0.1267	0.0016	0.0639	0.0019	0.19	754	18	769	9	739	62	767	9
(16)	1.2490	0.1045	0.1200	0.0047	0.0776	0.0054	0.23	823	47	731	27	1138	139	745	26
SCAM-22(3)	0.2552	0.0192	0.0363	0.0011	0.0505	0.0028	0.19	231	16	230	7	216	130	230	6
(5)	0.2741	0.0186	0.0369	0.0010	0.0553	0.0036	0.20	246	15	233	6	426	146	234	6
(7)	0.2727	0.0146	0.0371	0.0008	0.0528	0.0028	0.21	245	12	235	5	320	120	236	5
(8)	0.3523	0.0481	0.0375	0.0013	0.0685	0.0076	0.13	306	36	237	8	883	228	239	8
(9)	0.2746	0.0169	0.0388	0.0007	0.0525	0.0032	0.14	246	13	246	4	305	139	246	4

Table DR2. Major and trace element composition of the Eastern Peruvian Cordillera granitoids

Age group		Oligocene			E. Jurassic (S)	
Sample	AM-04-18	SC-AM-05-04	SC-AM-05-08	COCA 263	COCA 303	COCA 304
Latitude (^{o}S)	8.1	12.5	12.5	14.0	13.9	13.9
Longitude (^{o}W)	77.4	74.6	74.6	70.1	70.2	70.2
Lithology	quartz monzonite	granodiorite	granodiorite	nepheline syenite	nepheline-bearing syenite	nepheline-alkali feldspar syenite
SiO_2	70.21	65.64	63.58	56.82	54.40	54.45
TiO_2	0.36	0.40	0.57	0.16	0.68	0.69
Al_2O_3	14.46	17.16	17.34	19.64	21.00	21.27
Fe_2O_3*	3.23	3.93	4.91	4.14	5.01	3.52
Fe_2O_3	0.89	1.95	1.67	3.33	4.71	2.12
FeO	2.08	1.76	2.89	0.66	0.18	1.23
MnO	0.07	0.13	0.12	0.17	0.20	0.12
MgO	0.66	1.12	1.62	0.18	0.83	0.59
CaO	2.72	4.71	5.23	0.95	1.84	1.45
Na_2O	3.24	4.35	4.41	10.27	8.66	6.62
K_2O	3.43	2.00	1.91	5.33	5.11	9.27
P_2O_5	0.08	0.20	0.29	0.04	0.29	0.22
H_2O^+	1.03	0.61	0.80	1.95	2.01	1.04
Total	99.24	100.03	100.43	99.49	99.92	99.07
[Mg #]	0.36	0.53	0.50	0.32	0.89	0.46
Fe #	0.76	0.61	0.64	0.79	0.18	0.67
Nb	13.8	20.4	21.5	113.1	85.7	95.2
Ta	1.2	1.9	1.9	3.7	8.1	4.7
Zr	167	196	198	1370	452	195
Y	32.9	14.6	13.7	44.9	25.5	17.9
Hf	5.3	4.7	4.6	4.4	8.3	4.3
Sr	130	948	1039	34	659	271
Rb	120.7	72.1	60.3	264.3	78.3	235.3
Ba	650.3	950.3	1486.7	147.4	724.9	537.4
U	3.0	2.0	1.3	5.3	2.0	2.2
Th	13.5	9.1	6.0	28.8	6.3	4.0
Pb	23.6	12.4	5.8	13.9	28.9	4.2
Ga	17	22	22	44	28	24
Ni	2	4	5	7	2	3
Cr	14	11	15	5	2	2
V	36	47	71	5	4	5
Co	4	10	13	2	2	2
Sc	6	12	11	2	3	4
Cs	1.8	1.3	1.3	27.9	27.6	4.5
La	31.9	35.6	36.8	35.6	79.1	49.8
Ce	62.6	60.7	63.2	70.9	150.8	96.5
Pr	7.2	7.1	7.1	6.9	16.0	9.6
Nd	26.6	29.0	28.4	23.6	57.2	36.3
Sm	5.1	5.2	4.7	5.4	10.1	6.3
Eu	1.2	1.4	1.5	0.2	2.7	1.4
Gd	5.1	4.5	4.5	3.3	8.1	5.3
Tb	0.7	0.5	0.4	0.8	1.2	0.7
Dy	6.3	3.7	2.8	5.8	6.8	3.8
Ho	1.1	0.6	0.6	1.0	1.2	0.7
Er	3.7	2.1	1.3	4.0	3.2	2.1
Tm	0.7	0.2	0.2	0.6	0.5	0.3
Yb	3.7	1.6	1.5	4.5	3.4	1.8
Lu	0.7	0.2	0.2	0.7	0.5	0.2

Table DR2. (continued)

Age group	Early Jurassic (S)					
Sample	COCA 305a	COCA 58	COCA 59	COCA 60	COCA 62a	S-AM-06-20
Latitude (^{o}S)	13.8	14.2	14.3	14.3	14.0	13.8
Longitude (^{o}W)	70.4	70.4	70.4	70.4	70.4	70.5
Lithology	nepheline-bearing syenite	nepheline-bearing syenite	nepheline monzosyenite	nepheline monzosyenite	nepheline-bearing syenite	nepheline monzosyenite
SiO_2	54.26	53.95	54.21	55.03	57.94	52.87
TiO_2	0.56	0.31	0.24	0.83	1.64	2.26
Al_2O_3	21.07	21.09	21.66	18.71	16.01	16.42
Fe_2O_3*	3.12	4.37	4.32	4.04	9.19	9.53
Fe_2O_3	2.95	0.70	2.37	2.77	5.16	3.42
FeO	0.05	3.24	1.61	1.10	3.62	5.42
MnO	0.12	0.15	0.13	0.10	0.10	0.20
MgO	1.27	0.44	0.53	0.73	1.50	3.19
CaO	1.44	1.12	1.28	2.54	2.35	5.16
Na_2O	5.31	10.01	6.15	9.57	7.96	5.54
K_2O	8.42	5.94	7.05	6.15	1.92	3.01
P_2O_5	0.15	0.20	0.14	0.27	0.51	0.78
H_2O^+	3.45	1.96	3.90	1.38	0.52	1.43
Total	99.05	99.12	99.27	99.17	99.22	99.71
[Mg #]	0.98	0.20	0.37	0.54	0.42	0.51
Fe #	0.04	0.88	0.75	0.60	0.71	0.63
Nb	87.6	215.4	197.7	136.6	141.0	64.9
Ta	5.3	12.9	12.7	9.3	7.8	4.8
Zr	262	1207	1081	440	391	226
Y	16.8	32.7	22.2	14.3	77.2	38.6
Hf	5.4	23.1	20.0	7.2	12.2	4.9
Sr	480	288	513	348	182	816
Rb	188.8	213.8	234.6	211.2	30.7	100.6
Ba	527.7	299.8	511.7	493.4	148.0	600.9
U	1.4	5.9	6.4	6.7	1.2	1.5
Th	3.4	16.5	13.8	4.7	15.9	5.1
Pb	58.5	152.0	105.1	10.5	4.6	5.4
Ga	25	36	35	23	32	25
Ni	2	3	3	4	2	13
Cr	2	2	2	5	2	18
V	3	5	2	17	17	140
Co	2	2	2	3	2	15
Sc	2	2	3	3	10	16
Cs	37.5	4.4	23.0	2.1	1.6	10.9
La	40.3	66.5	57.7	37.4	93.0	71.0
Ce	80.9	128.1	109.6	68.4	194.6	132.5
Pr	8.7	12.0	11.1	7.2	22.8	14.0
Nd	29.2	38.3	30.9	22.7	90.6	55.7
Sm	4.7	6.4	5.6	3.5	17.1	10.2
Eu	1.4	1.1	1.2	1.0	5.8	3.0
Gd	4.4	6.1	4.2	2.7	16.3	8.6
Tb	0.6	0.8	0.7	0.4	2.3	1.3
Dy	3.8	6.9	4.4	2.9	15.7	7.6
Ho	0.6	1.4	0.8	0.5	3.0	1.4
Er	1.7	4.5	2.6	1.5	8.2	3.8
Tm	0.3	0.7	0.5	0.2	1.2	0.5
Yb	1.6	4.9	3.7	1.7	6.8	3.2
Lu	0.2	0.8	0.6	0.2	1.1	0.5

Table DR2. (continued)

Age group	E. Jurassic (S)		Early Jurassic (N)		Late Triassic	
Sample	S-AM-06-21	N-AM-05-11a	AM-04-145	AM-04-147	COCA 268	COCA 358
Latitude (^{o}S)	13.8	8.2	7.9	7.9	14.0	14.1
Longitude (^{o}W)	70.5	77.3	77.5	77.5	70.1	69.7
Lithology	nepheline-alkali feldspar syenite	quartz syenite	quartz syenite	quartz syenite	granodiorite	granite
SiO_2	56.78	64.94	67.55	77.58	71.27	69.71
TiO_2	0.57	0.56	0.34	0.08	0.48	0.46
Al_2O_3	21.40	15.65	16.04	12.72	13.79	15.10
Fe_2O_3*	3.51	4.75	3.29	0.75	3.14	3.53
Fe_2O_3	2.31	1.18	1.42	0.19	1.20	0.89
FeO	1.01	3.18	1.67	0.50	1.74	2.37
MnO	0.10	0.09	0.06	0.01	0.06	0.07
MgO	0.56	1.95	0.23	0.12	0.85	0.96
CaO	1.85	4.49	2.04	0.65	2.26	2.27
Na_2O	6.33	2.73	3.91	3.43	3.57	3.19
K_2O	6.17	3.51	4.77	4.63	3.29	3.90
P_2O_5	0.20	0.11	0.03	0.10	0.17	0.20
H_2O^+	2.35	1.16	0.71	0.41	0.61	0.75
Total	99.62	99.55	98.76	100.41	99.28	99.87
[Mg #]	0.50	0.52	0.20	0.30	0.46	0.42
Fe #	0.64	0.62	0.88	0.81	0.67	0.71
Nb	93.8	12.0	18.3	21.2	32.5	19.3
Ta	6.4	1.3	1.0	2.3	3.8	1.8
Zr	450	155	409	106	192	159
Y	20.1	16.0	37.2	48.1	36.5	33.8
Hf	7.7	5.0	12.5	5.5	5.7	4.4
Sr	718	496	167	66	131	143
Rb	219.7	574.0	114.1	176.6	237.2	214.0
Ba	413.6	145.7	2979.3	386.8	240.0	567.0
U	8.5	1.7	2.0	4.9	10.0	5.7
Th	26.1	22.1	22.5	23.6	17.4	11.2
Pb	16.9	10.6	15.8	16.0	14.4	23.5
Ga	29	18	19	17	19	19
Ni	3	5	2	2	10	9
Cr	2	30	13	17	15	19
V	11	82	2	2	38	40
Co	5	16	3	2	8	9
Sc	3	13	11	2	8	6
Cs	37.9	4.9	2.5	1.5	21.0	14.7
La	47.0	34.9	152.6	22.4	33.6	35.5
Ce	83.9	57.2	295.4	53.6	64.6	69.8
Pr	8.4	6.5	30.8	6.8	6.9	7.9
Nd	28.6	26.7	112.2	30.4	26.4	29.5
Sm	5.0	6.0	15.6	7.0	5.9	5.5
Eu	1.3	1.2	3.3	0.5	0.9	1.3
Gd	4.0	4.3	11.9	9.8	5.6	5.8
Tb	0.5	0.6	1.7	1.5	0.8	1.0
Dy	3.8	3.2	8.1	9.3	5.4	5.4
Ho	0.7	0.6	1.6	2.1	1.3	1.3
Er	2.0	1.7	4.7	6.1	3.7	3.0
Tm	0.3	0.2	0.6	0.9	0.6	0.5
Yb	2.3	2.0	4.3	6.9	4.0	3.5
Lu	0.4	0.3	0.7	1.2	0.6	0.5

Table DR2. (continued)

Age group			Late Triassic			
Sample	COCA 362	COCA 372	COCA 205	COCA 262	COCA 266	COCA 269
Latitude (^{o}S)	14.2	14.2	14.2	14.0	13.9	14.0
Longitude (^{o}W)	69.7	69.9	70.7	69.9	70.0	69.8
Lithology	granite	alkali feldspar granite	quartz alkali feldspar syenite	quartz monzodiorite	high SiO_2 granite	quartz monzonite
SiO_2	69.46	68.81	69.92	75.53	76.75	75.08
TiO_2	0.50	0.49	0.30	0.25	0.22	0.32
Al_2O_3	14.61	14.90	15.32	12.68	11.90	13.03
Fe_2O_3*	3.68	3.49	2.52	1.99	1.94	2.37
Fe_2O_3	1.21	0.98	0.77	0.67	0.86	1.61
FeO	2.21	2.24	1.54	1.18	0.97	0.67
MnO	0.07	0.05	0.10	0.03	0.03	0.03
MgO	1.02	0.83	0.93	0.29	0.23	0.25
CaO	2.46	1.63	0.75	0.79	0.86	0.60
Na_2O	3.08	2.92	2.38	3.23	3.17	5.92
K_2O	3.50	5.28	5.14	4.68	4.09	0.94
P_2O_5	0.20	0.18	0.20	0.07	0.05	0.09
H_2O^+	0.83	0.84	1.82	0.57	0.33	0.95
Total	99.14	99.14	99.17	99.96	99.46	99.48
[Mg #]	0.45	0.40	0.52	0.30	0.30	0.40
Fe #	0.68	0.73	0.62	0.80	0.81	0.73
Nb	18.7	17.5	15.2	35.4	35.8	36.7
Ta	1.6	1.6	2.4	5.2	4.6	3.6
Zr	184	196	102	188	158	220
Y	35.1	33.7	30.1	49.9	45.3	49.6
Hf	5.4	5.6	3.5	6.4	5.9	5.6
Sr	146	137	169	49	44	45
Rb	194.8	259.6	334.2	428.1	342.4	59.4
Ba	515.1	850.7	561.5	194.0	143.3	54.0
U	2.9	3.7	15.7	7.0	12.1	10.5
Th	11.5	13.9	15.4	38.6	43.3	31.3
Pb	22.1	30.9	224.1	16.1	19.4	4.4
Ga	18	18	25	18	18	17
Ni	10	10	14	7	6	5
Cr	22	27	35	5	13	13
V	47	41	23	12	10	20
Co	9	10	2	4	3	3
Sc	7	6	6	4	3	6
Cs	12.0	17.3	24.0	35.3	16.8	2.0
La	37.0	39.1	35.2	45.9	53.5	46.6
Ce	76.6	81.0	74.0	90.8	102.7	89.2
Pr	8.6	9.2	9.1	8.7	10.8	9.3
Nd	32.2	32.8	33.5	30.3	36.7	32.0
Sm	6.3	6.9	7.2	5.1	5.8	5.1
Eu	1.3	1.2	1.2	0.5	0.4	0.5
Gd	6.2	7.5	6.1	6.1	6.2	5.4
Tb	1.0	1.0	0.9	1.1	1.0	1.1
Dy	6.0	6.3	4.8	7.1	6.9	7.3
Ho	1.2	1.1	1.0	1.5	1.4	1.6
Er	3.8	3.7	2.8	4.4	4.9	5.0
Tm	0.4	0.6	0.4	0.8	0.9	0.8
Yb	3.7	3.6	3.2	4.8	5.8	4.6
Lu	0.5	0.5	0.3	0.8	0.8	0.8

Table DR2. (continued)

Age group	Late Triassic					
Sample	COCA 271 intr	COCA 272-2	COCA 295	COCA 298	COCA 302	COCA 359
Latitude (^{o}S)	14.0	14.0	14.1	13.8	13.8	14.2
Longitude (^{o}W)	70.1	70.1	70.3	70.6	70.4	69.7
Lithology	granite	quartz syenite	granite	alkali feldspar granite	granite	granite
SiO_2	69.98	70.93	71.14	76.99	72.73	70.25
TiO_2	0.38	0.36	0.31	0.20	0.22	0.43
Al_2O_3	12.38	14.85	15.19	12.96	12.92	14.53
Fe_2O_3*	3.01	2.72	1.51	0.13	1.07	3.29
Fe_2O_3	0.73	0.79	0.67	0.13	0.48	0.93
FeO	1.91	1.72	0.74	0.00	0.52	2.10
MnO	0.06	0.05	0.02	0.00	0.02	0.06
MgO	0.78	0.89	0.28	0.04	0.25	0.87
CaO	1.12	2.09	0.75	0.80	2.04	2.16
Na_2O	2.79	3.69	2.65	6.75	3.09	3.07
K_2O	4.31	3.80	5.87	0.47	5.32	3.81
P_2O_5	0.13	0.12	0.42	0.10	0.08	0.17
H_2O^+	5.72	0.82	1.11	0.75	1.35	0.89
Total	100.29	100.10	99.15	99.18	99.01	99.28
[Mg #]	0.42	0.48	0.40	1.00	0.46	0.43
Fe #	0.71	0.66	0.73	0.00	0.68	0.71
Nb	3.2	16.5	7.9	17.7	23.8	18.0
Ta	2.6	1.8	1.3	2.3	2.8	1.6
Zr	222	149	163	118	157	159
Y	4.4	30.3	8.2	16.8	44.6	31.6
Hf	4.1	4.3	4.6	3.8	5.5	4.2
Sr	1081	152	104	195	214	140
Rb	91.0	213.5	570.6	18.3	232.7	200.8
Ba	235.3	399.2	409.1	32.0	297.2	532.6
U	6.9	7.5	18.1	2.0	17.7	2.2
Th	16.1	11.1	28.2	14.9	30.6	9.2
Pb	16.7	21.9	39.4	4.0	6.5	22.7
Ga	20	18	25	16	22	18
Ni	5	14	7	2	5	9
Cr	8	19	6	7	6	20
V	46	31	8	10	12	37
Co	5	6	5	2	2	9
Sc	4	6	2	2	3	5
Cs	36.0	18.0	42.0	1.2	4.5	12.9
La	36.1	33.6	51.0	13.2	25.9	33.4
Ce	69.1	63.0	112.7	28.8	62.5	65.1
Pr	7.3	6.9	13.6	3.2	8.3	7.5
Nd	26.6	23.5	45.7	12.6	30.7	27.7
Sm	5.6	5.7	8.6	2.4	5.4	6.3
Eu	0.5	0.8	1.2	0.4	0.5	1.1
Gd	4.7	4.3	5.1	1.9	5.2	5.1
Tb	0.8	0.9	0.5	0.3	1.2	0.8
Dy	6.1	5.1	2.2	2.3	7.3	5.0
Ho	1.0	1.0	0.3	0.5	1.4	1.0
Er	3.4	3.1	0.5	1.1	5.4	2.6
Tm	0.5	0.4	0.1	0.2	0.6	0.3
Yb	3.9	2.8	0.2	1.3	6.0	2.5
Lu	0.5	0.4	0.0	0.3	0.7	0.4

Table DR2. (continued)

Age group	Late Triassic					
Sample	COCA 360	COCA 368	COCA 373	COCA 444	COCA 446	COCA 457
Latitude (^{o}S)	14.2	14.3	14.2	14.6	14.6	13.8
Longitude (^{o}W)	69.7	69.6	69.9	69.4	69.4	70.4
Lithology	quartz monzonite	granite	granodiorite	granite	granite	alkali feldspar granite
SiO_2	70.10	75.98	68.02	72.35	75.34	75.58
TiO_2	0.40	0.16	0.55	0.24	0.04	0.16
Al_2O_3	15.11	12.78	14.87	14.95	14.40	13.00
Fe_2O_3*	3.12	1.14	4.55	1.59	0.62	1.20
Fe_2O_3	1.03	0.60	1.56	0.62	0.47	0.48
FeO	1.86	0.48	2.66	0.85	0.13	0.64
MnO	0.06	0.02	0.10	0.02	0.02	0.02
MgO	0.81	0.28	1.41	0.36	0.09	0.30
CaO	2.17	0.98	3.08	0.58	0.39	0.84
Na_2O	3.19	3.16	3.80	2.81	3.84	3.95
K_2O	4.15	4.59	2.12	4.97	3.18	3.74
P_2O_5	0.17	0.04	0.13	0.31	0.24	0.04
H_2O^+	0.71	0.51	0.94	1.22	1.15	0.57
Total	99.76	99.57	99.23	99.28	99.28	99.32
[Mg #]	0.44	0.51	0.49	0.43	0.56	0.45
Fe #	0.70	0.63	0.65	0.71	0.59	0.68
Nb	17.4	13.5	20.4	18.7	24.2	14.2
Ta	1.6	2.2	2.1	2.6	3.5	1.6
Zr	137	91	135	78	16	76
Y	28.2	35.9	34.1	15.2	7.8	13.9
Hf	3.8	2.8	3.8	2.4	1.4	2.2
Sr	142	70	154	90	22	185
Rb	204.2	211.4	178.1	507.3	432.4	138.9
Ba	574.5	450.3	351.8	367.1	57.8	616.4
U	4.4	3.2	5.1	5.5	10.1	4.5
Th	9.2	21.8	7.1	10.1	1.3	13.2
Pb	27.4	33.7	16.8	26.5	6.9	32.5
Ga	17	14	20	20	25	13
Ni	7	9	13	8	7	7
Cr	17	5	31	7	3	17
V	35	10	55	11	2	7
Co	6	2	10	4	2	3
Sc	8	3	16	3	6	3
Cs	15.3	12.0	16.2	69.3	13.1	3.2
La	31.1	40.2	14.2	25.4	0.8	16.8
Ce	63.3	78.7	27.0	55.3	3.3	31.7
Pr	7.1	8.6	3.1	6.3	0.5	3.2
Nd	26.2	28.2	14.2	25.3	1.7	10.5
Sm	5.7	5.3	3.6	4.4	0.6	1.9
Eu	1.2	0.5	1.0	0.7	0.1	0.5
Gd	5.4	4.6	4.6	3.5	1.0	1.5
Tb	0.7	0.7	0.8	0.4	0.3	0.4
Dy	5.0	6.2	5.2	2.6	1.1	1.8
Ho	0.9	1.2	1.2	0.6	0.2	0.3
Er	2.6	3.3	3.1	0.9	0.5	1.1
Tm	0.3	0.6	0.5	0.1	0.1	0.2
Yb	3.4	4.5	3.8	1.5	0.7	1.8
Lu	0.4	0.5	0.6	0.2	0.1	0.3

Table DR2. (continued)

Age group	Late Triassic			Permian-Triassic		
Sample	COCA 461	COCA 464	COCA 465	S-AM-06-22a	C-AM-05-06	C-AM-05-07
Latitude (^{o}S)	13.8	13.8	13.8	13.7	11.1	11.0
Longitude (^{o}W)	70.4	70.6	70.6	70.5	75.3	75.3
Lithology	granodiorite	granite	granodiorite	granodiorite	alkali feldspar granite	alkali feldspar granite
SiO_2	66.16	72.69	62.87	64.74	72.36	75.11
TiO_2	0.65	0.37	0.81	0.79	0.25	0.17
Al_2O_3	16.34	14.29	17.92	17.72	13.96	13.09
Fe_2O_3*	4.02	2.82	4.93	5.39	2.32	1.63
Fe_2O_3	2.20	1.05	1.40	1.89	2.22	1.20
FeO	1.63	1.58	3.15	3.12	0.08	0.38
MnO	0.05	0.05	0.07	0.04	0.01	0.02
MgO	1.10	0.77	1.45	1.41	0.10	0.13
CaO	2.31	2.13	3.52	1.97	0.20	0.46
Na_2O	3.79	4.33	4.01	3.02	4.53	3.81
K_2O	4.20	1.92	3.43	4.36	4.87	4.97
P_2O_5	0.23	0.16	0.36	0.23	0.07	0.02
H_2O^+	0.63	0.73	0.89	0.94	0.54	0.40
Total	99.27	100.06	99.89	100.24	99.19	99.76
[Mg #]	0.55	0.46	0.45	0.45	0.69	0.38
Fe #	0.60	0.67	0.68	0.69	0.45	0.75
Nb	23.5	16.6	28.4	25.5	84.0	48.6
Ta	1.4	1.3	1.4	1.5	10.7	5.3
Zr	254	140	281	323	462	185
Y	26.5	17.2	27.1	19.6	88.0	37.2
Hf	6.0	3.0	7.3	8.0	16.2	6.5
Sr	270	191	341	281	161	58
Rb	148.9	118.6	153.7	207.2	379.5	340.9
Ba	983.7	491.5	867.7	815.5	385.7	211.0
U	2.6	2.1	1.6	3.0	7.7	8.5
Th	14.3	6.9	9.7	21.0	50.7	38.4
Pb	23.7	12.8	17.4	23.0	18.7	13.8
Ga	20	17	22	25	29	22
Ni	14	15	18	18	8	5
Cr	21	25	26	37	2	3
V	51	29	62	66	7	4
Co	11	9	13	9	4	2
Sc	8	9	9	14	2	2
Cs	6.3	6.6	5.4	6.8	12.3	5.2
La	49.6	26.6	46.2	69.9	87.1	20.0
Ce	95.2	47.4	83.0	135.1	173.5	70.2
Pr	10.0	5.0	8.6	14.5	18.5	4.7
Nd	37.6	19.7	35.1	52.9	69.3	16.8
Sm	6.6	3.8	6.1	8.9	15.4	3.2
Eu	1.5	1.1	1.9	2.1	0.9	0.4
Gd	6.2	3.1	6.4	6.9	13.1	3.4
Tb	1.0	0.5	0.9	0.8	2.6	0.7
Dy	5.1	2.8	5.2	4.6	16.7	5.1
Ho	0.8	0.5	1.0	0.7	3.6	1.1
Er	2.6	1.4	2.5	2.1	9.6	3.4
Tm	0.4	0.3	0.3	0.3	1.5	0.6
Yb	3.0	1.7	2.1	2.0	11.0	4.1
Lu	0.3	0.3	0.4	0.3	1.6	0.7

Table DR2. (continued)

Age group	Permian-Triassic					
Sample	C-AM-05-08	C-AM-05-09	C-AM-05-10	C-AM-05-11a	C-AM-05-11b	C-AM-05-12
Latitude (^{o}S)	11.0	10.9	11.3	11.3	11.3	11.3
Longitude (^{o}W)	75.3	75.3	75.3	75.3	75.3	75.3
Lithology	alkali feldspar granite	alkali feldspar granite	alkali feldspar granite	granite	micro-granodiorite	granite
SiO_2	74.40	75.98	77.06	71.45	64.93	69.76
TiO_2	0.16	0.17	0.06	0.31	0.79	0.39
Al_2O_3	13.23	12.73	12.17	14.49	15.34	13.85
Fe_2O_3*	1.95	1.86	1.51	2.56	6.18	2.95
Fe_2O_3	1.73	1.84	0.82	0.96	1.77	1.07
FeO	0.19	0.01	0.61	1.44	3.94	1.62
MnO	0.02	0.00	0.05	0.05	0.11	0.05
MgO	0.08	0.05	0.05	0.40	1.13	0.53
CaO	0.56	0.24	0.16	1.42	2.35	1.42
Na_2O	3.80	3.84	3.38	4.15	4.54	3.77
K_2O	5.30	4.89	4.89	4.81	3.51	4.70
P_2O_5	0.04	0.03	0.01	0.10	0.27	0.12
H_2O^+	0.53	0.32	0.35	0.51	1.00	2.94
Total	100.04	100.10	99.61	100.07	99.68	100.21
[Mg #]	0.43	0.89	0.13	0.33	0.34	0.37
Fe #	0.70	0.18	0.92	0.78	0.78	0.76
Nb	48.3	49.4	54.3	29.2	55.7	25.6
Ta	4.5	5.2	6.8	2.9	3.5	2.6
Zr	261	279	42	224	383	238
Y	31.1	41.1	90.5	61.9	60.9	48.2
Hf	7.3	10.7	3.1	7.5	9.5	7.4
Sr	51	38	10	114	146	120
Rb	379.8	286.7	780.6	278.3	352.5	275.0
Ba	181.5	124.1	23.1	569.6	438.4	495.4
U	4.4	5.5	4.5	8.6	6.4	6.2
Th	36.5	49.1	37.4	32.1	8.1	31.0
Pb	9.9	9.7	20.0	24.4	16.0	25.3
Ga	23	22	24	23	27	21
Ni	5	4	11	5	7	5
Cr	2	5	2	11	6	11
V	3	4	2	15	43	20
Co	2	3	2	4	8	5
Sc	2	2	3	3	10	4
Cs	12.3	5.1	20.2	8.5	14.5	6.8
La	24.9	59.5	19.2	61.2	15.6	50.9
Ce	49.2	98.1	41.5	113.3	34.4	94.6
Pr	5.6	11.3	6.7	13.5	5.4	10.4
Nd	20.8	44.2	31.8	51.7	26.6	41.9
Sm	4.3	8.1	9.6	11.6	9.7	7.9
Eu	0.3	0.2	0.3	0.8	0.9	1.0
Gd	3.8	8.0	12.8	10.9	9.4	8.2
Tb	0.8	1.3	2.1	1.8	1.7	1.3
Dy	4.5	7.9	13.9	11.6	11.1	8.2
Ho	1.1	1.7	2.8	2.5	2.3	1.7
Er	3.2	4.9	7.2	7.5	6.8	4.9
Tm	0.5	0.7	1.3	1.2	1.0	0.8
Yb	2.7	4.5	7.8	6.0	6.6	5.2
Lu	0.6	0.8	0.8	1.1	0.9	0.8

Table DR2. (continued)

Age group	Permian-Triassic					
Sample	C-AM-05-15	C-AM-05-16	C-AM-05-33	C-AM-05-35	C-AM-05-37	C-AM-05-38
Latitude (^{o}S)	11.2	11.0	10.7	10.7	10.7	10.7
Longitude (^{o}W)	75.3	74.7	75.4	75.5	75.6	75.6
Lithology	alkali feldspar granite	granite	granite	granite	alkali feldspar granite	granite
SiO_2	76.06	74.85	71.30	75.14	77.95	74.98
TiO_2	0.12	0.13	0.41	0.21	0.14	0.25
Al_2O_3	12.26	13.28	14.68	13.39	12.39	13.19
Fe_2O_3*	1.09	1.58	2.16	1.12	0.93	1.65
Fe_2O_3	0.73	0.64	1.20	0.71	0.81	0.99
FeO	0.32	0.84	0.84	0.37	0.10	0.58
MnO	0.02	0.03	0.05	0.02	0.02	0.10
MgO	0.10	0.11	1.21	0.26	0.18	0.38
CaO	0.23	0.76	1.13	0.87	0.14	0.77
Na_2O	3.58	3.70	4.54	4.29	4.36	4.18
K_2O	5.11	5.10	3.44	4.18	4.15	4.18
P_2O_5	0.03	0.03	0.13	0.04	0.02	0.07
H_2O^+	0.48	0.46	1.23	0.56	0.28	0.50
Total	99.04	99.92	100.14	100.02	100.54	100.18
[Mg #]	0.36	0.19	0.72	0.56	0.75	0.54
Fe #	0.76	0.88	0.41	0.59	0.37	0.61
Nb	20.4	40.5	9.6	11.5	26.5	17.5
Ta	3.3	4.9	1.0	1.0	2.1	1.5
Zr	120	143	146	116	143	172
Y	53.3	69.4	22.0	38.2	15.5	19.3
Hf	4.1	6.6	4.7	4.7	7.4	5.5
Sr	25	38	124	67	21	129
Rb	414.9	313.0	122.4	130.3	181.2	180.0
Ba	95.3	140.1	830.4	741.7	142.2	412.8
U	8.8	6.9	3.8	2.5	3.0	2.9
Th	52.2	32.9	18.2	16.3	24.8	14.6
Pb	8.7	24.6	9.7	10.7	4.9	12.9
Ga	19	24	18	14	20	18
Ni	6	6	3	3	2	3
Cr	3	6	6	2	4	6
V	3	3	29	9	3	13
Co	2	2	2	2	2	2
Sc	2	2	5	3	2	2
Cs	6.2	4.6	1.8	1.5	1.5	1.0
La	39.0	39.7	51.3	26.7	28.9	33.4
Ce	73.2	83.7	105.0	51.0	47.5	55.2
Pr	7.9	10.3	11.1	6.1	4.1	6.0
Nd	24.5	40.7	41.0	26.2	11.5	20.0
Sm	5.2	9.1	6.0	4.8	2.5	1.6
Eu	0.3	0.6	1.3	0.4	0.4	0.5
Gd	5.5	11.0	5.7	6.3	1.7	3.0
Tb	1.0	1.7	0.6	0.9	0.3	0.4
Dy	6.9	11.8	3.9	7.3	2.5	2.6
Ho	1.6	2.5	0.8	1.5	0.5	0.7
Er	4.9	7.0	2.6	4.7	1.3	2.3
Tm	0.8	1.1	0.4	0.5	0.4	0.3
Yb	5.9	7.9	3.4	4.7	3.8	1.7
Lu	0.9	1.1	0.4	0.6	0.6	0.3

Table DR2. (continued)

Age group			Permian-Triassic			
Sample	C-AM-05-39	S-AM-06-08	SC-AM-05-01	SC-AM-05-02	SC-AM-05-03	SC-AM-05-06
Latitude (^{o}S)	10.7	13.3	13.3	13.0	13.0	12.4
Longitude (^{o}W)	75.6	72.1	74.3	74.0	74.1	74.7
Lithology	alkali feldspar granite	quartz syenite	quartz monzonite	granite	granite	granite
SiO_2	73.36	74.41	62.04	69.84	72.75	75.10
TiO_2	0.30	0.25	0.97	0.49	0.30	0.18
Al_2O_3	13.69	13.48	15.63	14.91	14.27	13.58
Fe_2O_3*	1.79	1.55	6.26	2.94	1.95	1.69
Fe_2O_3	1.05	0.73	2.95	1.36	0.58	0.45
FeO	0.65	0.73	2.92	1.40	1.22	1.11
MnO	0.07	0.02	0.17	0.06	0.03	0.04
MgO	0.60	0.34	2.54	0.85	0.45	0.28
CaO	0.59	1.27	4.25	2.04	1.11	1.19
Na_2O	4.63	3.66	4.53	4.09	3.86	3.87
K_2O	4.11	4.69	2.39	4.61	4.72	4.33
P_2O_5	0.08	0.05	0.24	0.14	0.08	0.05
H_2O^+	0.76	0.48	1.46	0.80	1.00	0.54
Total	99.88	100.11	100.08	100.60	100.35	100.72
[Mg #]	0.62	0.45	0.61	0.52	0.40	0.31
Fe #	0.52	0.68	0.53	0.62	0.73	0.80
Nb	22.4	16.1	9.0	24.5	19.4	16.0
Ta	2.0	1.7	0.8	2.8	2.6	2.8
Zr	180	141	195	273	180	107
Y	21.3	21.8	29.5	29.9	25.2	42.6
Hf	7.4	4.5	6.0	6.7	5.7	4.8
Sr	100	122	261	188	139	87
Rb	182.5	146.7	85.3	207.9	233.0	257.0
Ba	405.1	651.1	547.4	665.3	604.8	327.5
U	3.9	4.0	2.2	5.4	6.0	6.5
Th	18.7	19.5	10.2	30.9	36.7	35.1
Pb	11.3	199.5	11.7	14.4	19.7	12.2
Ga	19	17	19	20	19	19
Ni	3	4	16	6	3	4
Cr	4	6	35	12	4	6
V	17	14	123	35	20	18
Co	2	4	19	8	5	6
Sc	2	3	18	4	2	2
Cs	1.7	2.3	1.0	6.9	4.3	8.0
La	83.7	40.4	27.4	45.7	49.5	32.4
Ce	104.8	72.7	50.3	79.5	85.6	57.4
Pr	8.4	7.1	6.3	8.4	8.9	6.1
Nd	29.6	23.7	27.6	30.9	33.6	24.2
Sm	4.4	4.2	6.1	5.8	6.8	5.3
Eu	0.7	0.5	1.5	1.0	0.8	0.6
Gd	4.4	3.9	6.7	5.2	4.4	6.1
Tb	0.6	0.6	0.9	0.8	0.7	1.1
Dy	3.9	4.0	6.3	4.8	5.2	7.3
Ho	0.7	0.7	1.3	1.1	0.9	1.5
Er	2.5	2.1	3.8	3.4	3.1	4.7
Tm	0.3	0.3	0.5	0.5	0.5	0.7
Yb	3.3	2.3	3.4	4.1	2.5	6.4
Lu	0.5	0.3	0.6	0.6	0.6	0.8

Table DR2. (continued)

Age group			Permian-Triassic			
Sample	SC-AM-05-09	SC-AM-05-19	SC-AM-05-21	SC-AM-05-22	SU-03-23	SC-AM-05-07
Latitude (^{o}S)	13.5	13.4	13.4	13.4	11.1	12.4
Longitude (^{o}W)	74.2	74.0	74.1	74.1	75.3	74.7
Lithology	granite	alkali feldspar granite	granite	granite	granite	granite
SiO_2	75.31	75.64	75.75	75.47	74.68	73.07
TiO_2	0.23	0.19	0.23	0.25	0.145	0.24
Al_2O_3	13.60	12.40	13.00	13.38	13.83	13.79
Fe_2O_3*	1.56	0.9	1.71	1.68	1.78	2.14
Fe_2O_3	1.39	0.84	1.09	0.94	0.53	0.55
FeO	0.15	0.03	0.55	0.66	1.24	1.40
MnO	0.04	0.01	0.05	0.06	0.01	0.05
MgO	0.26	0.03	0.33	0.36	0.02	0.47
CaO	0.94	0.13	0.51	1.00	0.29	1.41
Na_2O	4.76	3.94	4.33	4.31	3.92	3.96
K_2O	3.15	4.46	4.42	3.86	5.04	3.81
P_2O_5	0.04	0.02	0.05	0.05	0.03	0.07
H_2O^+	0.33	2.83	0.50	0.41	0.26	1.65
Total	100.19	100.52	100.81	100.73	100.00	100.47
[Mg #]	0.76	0.60	0.51	0.49	0.03	0.38
Fe #	0.36	0.54	0.63	0.65	0.98	0.75
Nb	12.2	29.6	28.1	13.7	27.0	19.0
Ta	1.1	1.5	2.2	1.5	4.3	3.1
Zr	170	207	243	139	155.0	139
Y	64.6	41.8	62.9	33.5	27.0	46.1
Hf	5.8	6.4	8.9	5.3	6.0	5.4
Sr	89	27	39	85	30.4	107
Rb	109.4	213.0	183.2	159.1	317.9	276.1
Ba	804.6	96.6	184.6	653.2	160.5	358.9
U	2.6	2.8	4.5	3.9	3.4	4.0
Th	12.8	16.2	21.4	19.4	27.2	29.1
Pb	14.2	2.3	6.3	14.8	11.8	9.3
Ga	16	20	19	16	22.0	19
Ni	3	3	3	2	3.0	5
Cr	2	10	15	9	13.0	11
V	13	3	2	12	2.0	20
Co	3	3	8	4	2	7
Sc	2	2	3	5	2	4
Cs	1.0	0.5	0.8	1.3	0.0	6.8
La	98.0	42.2	24.2	27.0	56.8	35.2
Ce	50.2	37.8	58.6	53.8	120.1	62.7
Pr	30.0	8.8	7.3	6.0	12.5	7.1
Nd	123.0	33.8	27.5	23.7	42.3	25.7
Sm	30.8	7.0	6.4	5.3	7.4	6.7
Eu	5.1	0.8	0.6	1.0	0.3	0.4
Gd	22.3	7.8	7.6	4.4	5.5	6.5
Tb	3.4	1.1	1.4	0.8	0.8	1.1
Dy	18.5	5.5	10.2	5.0	4.2	7.7
Ho	3.4	1.1	2.2	1.2	0.9	1.7
Er	8.9	2.5	7.3	3.3	2.7	5.2
Tm	1.4	0.5	1.2	0.6	0.4	0.8
Yb	8.6	3.2	7.3	5.2	3.0	5.7
Lu	1.4	0.5	1.2	0.7	0.4	0.9

Table DR2. (continued)

Age group	Carboniferous-Permian					
Sample	AM-04-12	AM-04-13	AM-04-134	AM-04-17a	AM-04-20	AM-04-25
Latitude (^{o}S)	8.0	8.0	7.8	8.1	8.1	8.0
Longitude (^{o}W)	77.5	77.5	77.5	77.4	77.4	77.5
Lithology	granodiorite	tonalite	granodiorite	granodiorite	granite	tonalite
SiO_2	69.99	60.84	63.03	64.51	69.39	62.65
TiO_2	0.44	0.87	0.73	0.70	0.46	0.68
Al_2O_3	14.72	15.98	16.78	15.37	15.28	15.49
Fe_2O_3*	3.87	6.90	5.93	5.60	4.36	6.02
Fe_2O_3	1.36	3.72	2.15	2.50	1.47	1.32
FeO	2.22	2.75	3.30	2.72	2.53	4.08
MnO	0.08	0.13	0.11	0.08	0.05	0.13
MgO	1.11	2.56	2.13	1.57	2.14	2.10
CaO	3.22	5.28	4.06	4.20	0.72	3.95
Na_2O	3.05	2.85	3.38	2.88	4.82	2.63
K_2O	2.63	2.26	2.28	2.86	1.13	3.00
P_2O_5	0.06	0.23	0.36	0.00	0.46	0.19
H_2O^+	1.26	1.95	2.29	1.60	2.08	3.18
Total	100.14	99.42	100.60	99.00	100.53	99.41
[Mg #]	0.47	0.62	0.53	0.51	0.60	0.48
Fe #	0.67	0.52	0.61	0.63	0.54	0.66
Nb	11.9	9.8	14.1	14.8	16.0	10.9
Ta	1.0	0.7	0.9	0.9	1.0	0.6
Zr	153	154	228	183	260	185
Y	29.3	29.1	31.3	43.1	44.0	29.2
Hf	3.6	4.3	6.6	6.4	5.8	4.5
Sr	188	201	244	213	110	152
Rb	83.6	89.9	89.9	111.0	60.8	100.5
Ba	624.7	493.0	585.3	485.5	124.4	659.9
U	3.1	1.7	1.6	2.4	3.1	1.8
Th	12.1	8.0	10.0	8.5	12.8	7.9
Pb	18.5	10.2	8.0	9.1	4.0	16.2
Ga	17	19	20	19	19	18
Ni	3	3	5	2	2	2
Cr	53	28	22	13	13	36
V	52	143	107	89	24	120
Co	9	14	13	12	6	10
Sc	9	24	14	19	19	25
Cs	0.8	1.3	0.9	1.0	0.6	1.4
La	37.6	24.6	39.0	30.3	43.7	27.8
Ce	70.2	52.8	75.4	62.1	74.3	55.8
Pr	7.7	6.1	8.1	7.5	10.3	6.9
Nd	29.2	25.3	30.7	33.2	39.0	24.5
Sm	6.2	5.6	6.5	7.3	8.3	4.8
Eu	1.3	1.2	1.4	1.2	1.0	1.1
Gd	5.0	4.7	5.5	7.1	8.4	5.2
Tb	0.8	0.8	0.8	1.1	1.3	0.6
Dy	4.8	4.8	5.7	7.8	8.0	4.9
Ho	1.0	1.1	1.1	1.6	1.6	1.3
Er	2.3	2.4	3.6	4.2	3.8	2.9
Tm	0.4	0.6	0.5	0.6	0.5	0.5
Yb	3.3	3.8	3.7	3.9	5.2	2.7
Lu	0.7	0.4	0.5	0.4	0.8	0.5

Table DR2. (continued)

Age group	Carboniferous-Permian					
Sample	AM-04-3	AM-04-31a	AM-04-36	AM-04-43	AM-04-49	AM-04-4a
Latitude (^{o}S)	8.1	7.9	7.7	7.7	7.7	8.1
Longitude (^{o}W)	77.3	77.6	77.6	77.6	77.6	77.4
Lithology	quartz syenite	granite	granite	granite	granite	granodiorite
SiO_2	70.38	68.13	77.29	77.29	70.83	68.02
TiO_2	0.47	0.41	0.09	0.07	0.39	0.63
Al_2O_3	14.61	14.99	12.53	12.57	15.44	14.96
Fe_2O_3*	3.14	5.49	1.23	0.90	3.23	4.61
Fe_2O_3	1.73	1.15	0.33	0.57	0.72	2.13
FeO	1.26	3.80	0.81	0.30	2.24	2.19
MnO	0.08	0.08	0.04	0.01	0.04	0.07
MgO	0.90	1.14	0.09	0.05	0.76	1.17
CaO	2.57	0.95	0.59	0.72	2.94	3.55
Na_2O	3.61	3.61	3.16	2.43	3.98	2.93
K_2O	3.66	3.65	4.58	5.94	1.64	2.54
P_2O_5	0.21	0.17	0.07	0.10	0.13	0.15
H_2O^+	0.45	2.48	0.45	0.18	1.18	1.24
Total	99.93	100.56	100.03	100.23	100.28	99.59
[Mg #]	0.56	0.35	0.17	0.23	0.38	0.49
Fe #	0.58	0.77	0.90	0.86	0.75	0.65
Nb	16.1	11.0	14.3	3.5	15.7	11.4
Ta	0.9	0.8	1.4	0.7	0.5	0.5
Zr	178	137	90	68	258	200
Y	32.8	25.0	43.7	11.2	39.0	27.8
Hf	4.9	3.5	4.7	3.9	8.8	5.0
Sr	264	75	43	37	210	188
Rb	154.3	127.2	228.8	159.5	74.3	96.5
Ba	960.9	572.3	559.1	281.0	510.2	574.5
U	3.2	3.0	4.6	2.4	1.9	1.7
Th	15.9	10.3	18.3	16.8	25.7	8.6
Pb	15.4	7.6	27.8	26.5	15.7	9.6
Ga	18	18	16	13	19	19
Ni	2	6	2	2	6	2
Cr	20	24	10	22	9	21
V	31	46	2	2	36	54
Co	3	5	2	4	4	8
Sc	7	9	2	2	12	14
Cs	3.2	1.5	2.7	2.5	1.7	1.8
La	48.7	24.1	27.3	12.0	62.7	36.7
Ce	99.7	46.5	56.4	27.6	124.7	72.4
Pr	10.7	5.3	7.1	2.7	13.6	8.2
Nd	41.5	21.5	27.7	10.4	54.3	29.5
Sm	8.6	4.3	6.8	2.5	10.0	5.5
Eu	1.3	0.8	0.6	0.6	1.9	1.1
Gd	6.8	4.0	6.9	2.4	8.8	4.4
Tb	0.7	0.6	1.3	0.4	1.5	0.7
Dy	5.7	4.6	7.1	2.1	6.7	5.0
Ho	0.9	0.8	1.6	0.5	1.4	1.1
Er	3.6	2.8	4.9	1.7	5.6	3.2
Tm	0.5	0.3	0.7	0.4	0.7	0.3
Yb	4.6	3.8	6.1	2.5	3.8	3.8
Lu	0.5	0.5	0.6	0.6	0.6	0.4

Table DR2. (continued)

Age group	Carboniferous-Permian					
Sample	AM-04-53	AM-04-55	AM-04-57	AM-04-6	AM-04-72a	AM-04-8
Latitude (^{o}S)	7.7	7.7	7.7	7.9	7.7	8.0
Longitude (^{o}W)	77.6	77.6	77.6	77.5	77.6	77.5
Lithology	granite	granite	granite	granite	granite	granite
SiO_2	77.81	72.68	73.55	68.83	73.57	75.07
TiO_2	0.05	0.22	0.28	0.46	0.31	0.12
Al_2O_3	12.65	13.73	14.06	15.55	14.61	13.02
Fe_2O_3*	0.73	2.08	2.52	3.90	2.45	1.18
Fe_2O_3	0.45	0.86	1.07	1.07	0.61	0.57
FeO	0.25	1.09	1.29	2.51	1.63	0.55
MnO	0.03	0.04	0.06	0.06	0.04	0.02
MgO	0.02	0.35	0.50	0.93	1.15	0.13
CaO	0.62	1.91	2.19	2.86	0.71	1.22
Na_2O	3.29	2.89	3.24	3.60	4.95	3.26
K_2O	4.87	4.48	3.65	3.01	2.09	4.50
P_2O_5	0.12	0.11	0.09	0.15	0.18	0.10
H_2O^+	0.25	0.37	0.49	1.20	1.27	0.48
Total	100.41	98.72	100.48	100.24	101.11	99.04
[Mg #]	0.12	0.36	0.41	0.40	0.56	0.30
Fe #	0.93	0.76	0.72	0.73	0.59	0.81
Nb	6.8	6.8	10.1	14.1	13.3	15.6
Ta	0.9	0.4	0.7	1.1	0.9	1.8
Zr	47	145	154	232	147	97
Y	26.5	17.3	16.5	28.9	24.4	40.1
Hf	2.5	4.4	4.8	6.5	4.7	5.8
Sr	24	139	139	176	75	86
Rb	209.9	121.9	149.4	129.7	76.1	156.4
Ba	43.8	1202.4	929.5	648.8	273.8	774.9
U	5.6	1.4	1.9	1.9	1.7	4.1
Th	20.3	12.4	17.2	11.8	10.8	17.8
Pb	24.6	15.4	18.5	11.6	3.2	14.3
Ga	14	15	16	18	17	15
Ni	2	2	2	3	2	2
Cr	17	29	17	36	15	11
V	4	14	20	40	25	2
Co	2	2	3	6	5	2
Sc	2	3	7	10	2	2
Cs	3.9	1.2	2.4	3.1	0.5	1.7
La	8.3	34.5	38.3	42.8	32.4	26.1
Ce	20.4	68.1	75.9	84.2	68.4	57.3
Pr	2.4	7.1	7.8	9.3	7.3	6.2
Nd	10.4	26.3	25.4	34.2	28.2	26.4
Sm	2.6	4.1	4.9	6.3	5.0	5.7
Eu	0.5	1.1	1.0	1.4	0.7	0.8
Gd	2.0	5.5	2.8	5.2	5.8	4.3
Tb	0.6	0.5	0.4	0.8	0.6	0.9
Dy	2.3	2.8	3.0	5.5	3.5	6.5
Ho	1.0	0.6	0.6	1.3	0.7	1.2
Er	2.2	1.2	1.6	2.7	2.8	3.1
Tm	0.4	0.3	0.4	0.5	0.4	0.5
Yb	2.7	1.8	1.4	4.3	2.2	4.4
Lu	0.5	0.3	0.3	0.5	0.4	1.0

Table DR2. (continued)

Age group	Carboniferous-Permian					
Sample	AM-04-81	AM-04-82	AM-04-83	AM-04-84	AM-04-85	AM-04-89
Latitude (^{o}S)	7.7	7.7	7.7	7.7	7.7	7.7
Longitude (^{o}W)	77.7	77.7	77.7	77.7	77.7	77.6
Lithology	granite	granodiorite	quartz diorite	granodiorite	granite	granodiorite
SiO_2	68.17	64.18	55.51	67.37	71.49	67.31
TiO_2	0.40	0.69	1.14	0.54	0.29	0.49
Al_2O_3	15.22	15.72	16.49	15.05	15.25	16.34
Fe_2O_3*	3.70	6.13	9.63	4.84	2.91	4.18
Fe_2O_3	0.74	2.19	2.52	1.14	0.57	1.16
FeO	2.61	3.46	6.20	3.27	2.09	2.69
MnO	0.08	0.13	0.20	0.09	0.06	0.08
MgO	0.87	1.90	4.04	1.38	0.54	0.89
CaO	2.72	4.34	6.19	3.61	2.98	3.54
Na_2O	3.21	2.37	1.86	2.60	3.09	4.10
K_2O	3.51	2.83	1.76	3.36	3.68	2.60
P_2O_5	0.18	0.31	0.25	0.22	0.07	0.15
H_2O^+	1.97	1.95	2.95	1.55	0.86	1.15
Total	99.66	100.09	99.12	100.20	100.97	100.49
[Mg #]	0.37	0.49	0.54	0.43	0.31	0.37
Fe #	0.75	0.65	0.61	0.70	0.80	0.75
Nb	11.1	12.3	10.4	12.6	11.3	11.9
Ta	0.8	0.7	0.8	0.9	0.9	1.0
Zr	190	201	120	209	184	256
Y	30.7	31.1	18.4	32.8	41.8	32.8
Hf	5.6	4.3	3.7	7.7	5.8	8.7
Sr	149	165	183	149	129	208
Rb	128.6	108.1	79.1	117.6	165.7	111.9
Ba	872.7	801.3	411.8	931.6	849.6	946.9
U	2.9	3.0	1.2	3.2	4.5	2.3
Th	13.7	11.4	3.8	14.6	19.3	13.7
Pb	18.1	14.9	7.2	13.4	15.9	13.5
Ga	19	19	20	18	18	20
Ni	3	7	11	5	3	2
Cr	17	33	51	48	27	5
V	62	114	192	88	38	33
Co	2	11	24	8	3	7
Sc	12	19	31	16	7	13
Cs	1.8	2.3	3.9	2.2	3.3	3.2
La	37.6	27.1	19.4	37.4	42.0	60.8
Ce	75.9	59.1	36.9	74.5	81.7	114.2
Pr	9.1	7.2	3.7	8.0	9.3	11.7
Nd	30.2	28.8	16.6	34.3	32.7	48.9
Sm	5.4	4.8	3.7	6.7	6.7	8.5
Eu	1.4	1.2	1.2	1.2	0.9	1.8
Gd	4.5	5.8	3.1	6.0	8.3	7.2
Tb	0.8	0.6	0.6	1.2	1.4	1.0
Dy	5.2	5.4	3.9	6.9	7.1	6.8
Ho	1.0	0.9	0.7	1.1	1.5	1.3
Er	3.8	3.1	2.7	3.1	5.2	3.8
Tm	0.4	0.5	0.4	0.5	1.0	0.5
Yb	3.3	2.6	2.4	3.0	4.3	3.1
Lu	0.4	0.5	0.3	0.7	0.7	0.5

Table DR2. (continued)

Age group	Carboniferous-Permian					
Sample	AM-04-93	AM-04-95	AM-04-98	AM-04-99	C-AM-05-03	C-AM-05-04
Latitude (^{o}S)	7.7	7.7	7.7	7.7	11.3	11.3
Longitude (^{o}W)	77.6	77.6	77.6	77.6	75.6	75.6
Lithology	granite	granite	granite	granite	alkali feldspar granite	granite
SiO_2	77.33	72.56	75.21	71.68	67.49	71.77
TiO_2	0.04	0.28	0.23	0.35	0.36	0.23
Al_2O_3	12.47	13.80	13.28	15.19	15.47	14.63
Fe_2O_3*	0.86	2.58	1.84	3.00	2.94	2.01
Fe_2O_3	0.49	0.59	0.31	0.86	0.89	0.86
FeO	0.33	1.78	1.35	1.88	1.77	1.03
MnO	0.01	0.06	0.03	0.05	0.06	0.03
MgO	0.02	0.62	0.56	1.55	1.47	0.54
CaO	0.40	1.98	1.12	0.39	1.68	2.30
Na_2O	3.48	3.24	6.10	5.67	3.81	3.38
K_2O	4.80	3.48	0.56	0.96	3.88	3.99
P_2O_5	0.03	0.13	0.19	0.15	0.11	0.09
H_2O^+	0.37	0.73	1.51	1.61	2.88	0.71
Total	99.77	99.24	100.45	100.34	99.89	99.54
[Mg #]	0.10	0.38	0.43	0.59	0.60	0.48
Fe #	0.94	0.74	0.71	0.55	0.55	0.66
Nb	2.9	12.3	14.2	12.2	34.9	8.7
Ta	0.8	0.9	1.1	0.6	4.5	0.8
Zr	72	120	144	208	187	128
Y	10.1	27.9	35.3	26.7	61.2	10.2
Hf	2.6	3.9	4.7	6.0	5.0	2.9
Sr	24	180	71	94	116	282
Rb	140.3	109.8	33.9	37.6	206.3	103.4
Ba	85.2	1009.1	58.6	88.2	286.1	817.5
U	2.4	3.3	2.9	1.9	3.4	1.9
Th	23.3	21.5	15.0	12.1	15.3	11.1
Pb	10.9	24.7	2.3	3.0	3.7	13.4
Ga	13	15	15	18	21	17
Ni	2	7	2	2	6	2
Cr	9	18	20	20	5	5
V	2	22	18	28	27	22
Co	2	4	4	5	6	5
Sc	2	6	5	6	5	4
Cs	1.1	1.7	0.6	0.2	7.0	1.0
La	11.6	44.1	25.5	37.6	74.1	20.2
Ce	27.8	83.7	54.6	72.1	146.6	38.5
Pr	2.9	8.4	6.6	7.4	14.2	3.7
Nd	13.2	30.0	25.1	28.8	46.9	14.7
Sm	2.5	5.4	4.7	6.0	9.7	2.2
Eu	1.0	1.2	0.7	0.8	1.1	0.5
Gd	3.9	5.8	4.8	4.4	7.8	2.1
Tb	0.3	0.7	0.8	0.9	1.3	0.2
Dy	2.5	4.8	5.7	5.3	9.1	1.5
Ho	0.6	1.0	1.3	0.9	1.8	0.3
Er	2.0	3.4	4.4	2.0	6.0	0.9
Tm	0.7	0.5	0.4	0.3	0.8	0.1
Yb	4.1	2.6	3.5	2.8	6.6	1.4
Lu	0.4	0.5	0.6	0.4	1.0	0.2

Table DR2. (continued)

Age group	Carboniferous-Permian					
Sample	C-AM-05-05	C-AM-05-26	C-AM-05-30	C-AM-05-44a	C-AM-05-49a	C-AM-05-52
Latitude (^{o}S)	11.2	11.8	12.0	10.8	10.7	9.2
Longitude (^{o}W)	75.5	75.2	74.9	75.8	75.9	76.2
Lithology	granodiorite	granite	granite	granodiorite	granite	granite
SiO_2	61.20	74.27	69.37	63.83	69.61	72.94
TiO_2	0.73	0.11	0.33	0.69	0.37	0.25
Al_2O_3	16.55	14.07	15.72	16.14	14.44	13.63
Fe_2O_3*	7.49	1.85	3.34	4.81	2.95	1.33
Fe_2O_3	2.17	1.61	1.05	2.36	1.10	0.68
FeO	4.68	0.21	2.04	2.13	1.61	0.57
MnO	0.13	0.05	0.07	0.08	0.07	0.07
MgO	2.90	0.20	0.95	1.94	0.85	0.18
CaO	4.64	1.12	2.61	4.14	2.56	0.75
Na_2O	1.52	4.07	4.09	3.73	3.47	3.79
K_2O	2.93	3.82	2.92	3.02	3.67	4.99
P_2O_5	0.16	0.04	0.14	0.19	0.11	0.04
H_2O^+	2.15	0.65	0.93	1.84	2.17	1.74
Total	99.76	100.22	100.22	100.09	100.02	99.61
[Mg #]	0.53	0.63	0.45	0.62	0.49	0.36
Fe #	0.62	0.51	0.68	0.52	0.65	0.76
Nb	9.6	10.6	12.6	16.7	16.1	14.8
Ta	0.7	0.6	1.2	1.7	1.7	0.6
Zr	125	79	149	232	170	219
Y	23.9	66.0	25.7	29.8	24.1	13.7
Hf	3.5	3.2	3.7	5.0	6.0	6.9
Sr	174	65	345	378	253	95
Rb	144.9	160.3	113.6	117.5	157.4	141.2
Ba	433.2	992.8	578.8	975.2	796.8	1820.1
U	1.9	2.4	2.4	2.7	4.3	2.0
Th	7.7	15.8	17.3	17.0	18.3	18.4
Pb	23.9	57.5	21.6	7.4	11.5	16.2
Ga	20	17	18	20	16	15
Ni	22	5	9	7	3	2
Cr	61	7	20	15	10	2
V	129	6	30	83	37	6
Co	23	3	8	13	6	3
Sc	24	6	5	10	5	3
Cs	5.9	4.1	2.7	2.0	2.9	0.8
La	27.0	29.4	37.0	32.8	38.3	88.0
Ce	55.8	59.8	72.8	17.4	72.0	162.6
Pr	5.7	6.7	8.2	6.8	7.9	17.7
Nd	24.7	25.3	29.5	13.6	27.5	70.2
Sm	4.6	6.6	5.4	5.0	5.7	10.5
Eu	1.0	0.4	1.3	2.4	0.9	1.7
Gd	4.0	8.0	4.9	6.5	4.6	5.7
Tb	0.6	1.6	0.6	0.5	0.5	0.6
Dy	4.1	11.1	4.0	7.8	4.4	2.0
Ho	0.9	2.2	0.8	1.5	0.9	0.5
Er	2.7	7.6	2.6	1.7	2.2	2.4
Tm	0.4	0.9	0.3	0.4	0.2	0.1
Yb	3.1	6.5	2.8	1.8	2.3	0.8
Lu	0.4	0.8	0.4	0.2	0.6	0.3

Table DR2. (continued)

Age group	Carboniferous-Permian					
Sample	C-AM-05-54	C-AM-05-55a	C-AM-05-55b	C-AM-05-57	C-AM-05-58	N-AM-05-02a
Latitude (^{o}S)	8.7	8.6	8.6	8.5	8.5	8.1
Longitude (^{o}W)	76.2	76.6	76.6	76.5	76.5	77.2
Lithology	granite	granite	granite	granite	alkali feldspar granite	quartz monzonite
SiO_2	71.35	70.41	74.61	72.99	73.31	69.66
TiO_2	0.35	0.28	0.14	0.33	0.33	0.48
Al_2O_3	15.11	14.64	13.16	13.88	14.06	14.52
Fe_2O_3*	3.54	2.53	1.46	1.89	1.77	3.09
Fe_2O_3	1.74	1.58	0.93	1.16	1.15	1.77
FeO	1.60	0.81	0.46	0.64	0.55	1.18
MnO	0.05	0.09	0.05	0.10	0.09	0.07
MgO	1.01	0.34	0.12	0.38	0.38	0.90
CaO	2.41	1.61	0.63	1.20	0.97	2.59
Na_2O	3.36	4.62	4.31	4.76	4.66	3.78
K_2O	2.35	3.55	4.22	3.62	3.65	3.70
P_2O_5	0.10	0.08	0.03	0.08	0.08	0.13
H_2O^+	0.67	1.83	0.87	0.57	0.66	0.47
Total	100.09	99.85	99.55	99.71	99.89	99.24
[Mg #]	0.53	0.43	0.31	0.51	0.55	0.58
Fe #	0.61	0.70	0.80	0.63	0.59	0.57
Nb	7.7	21.7	20.6	19.0	19.1	16.8
Ta	0.5	1.5	1.2	1.0	1.1	1.3
Zr	149	290	169	261	262	201
Y	11.2	57.9	40.7	34.1	36.6	33.3
Hf	4.4	9.7	5.0	8.8	6.3	6.4
Sr	123	230	83	155	152	261
Rb	98.4	120.7	151.9	124.9	126.4	893.9
Ba	277.7	1326.6	865.1	1029.7	928.7	158.3
U	1.4	2.8	3.3	3.2	3.2	3.3
Th	13.2	16.2	13.2	14.0	12.4	18.1
Pb	8.6	14.0	17.7	20.7	11.9	15.1
Ga	16	19	18	18	18	18
Ni	6	3	4	3	2	3
Cr	16	6	6	6	3	7
V	41	7	2	10	8	40
Co	6	4	2	2	2	9
Sc	11	5	2	3	5	7
Cs	3.0	0.8	1.7	0.9	1.6	2.3
La	33.5	70.1	40.4	57.2	43.9	46.4
Ce	61.3	117.8	62.1	105.1	80.8	93.6
Pr	6.4	15.7	9.5	12.0	9.1	10.6
Nd	23.3	60.1	38.6	42.0	37.0	40.9
Sm	3.4	11.4	7.5	9.8	5.8	7.6
Eu	1.2	1.7	0.9	1.3	1.2	1.1
Gd	4.0	13.2	7.4	7.3	4.6	6.5
Tb	0.4	1.5	1.2	1.0	1.1	0.9
Dy	2.2	11.6	10.1	6.4	5.7	6.4
Ho	0.3	2.3	1.6	1.5	1.2	1.3
Er	1.1	6.6	4.5	5.0	3.6	3.5
Tm	0.1	0.8	0.5	0.6	0.5	0.6
Yb	0.8	5.3	3.3	4.5	3.0	3.1
Lu	0.2	0.9	0.7	0.6	0.5	0.6

Table DR2. (continued)

Age group	Carboniferous-Permian					
Sample	N-AM-05-03	N-AM-05-04	N-AM-05-06	N-AM-05-07	N-AM-05-09	N-AM-05-17
Latitude (^{o}S)	8.1	8.1	8.1	8.1	8.1	6.9
Longitude (^{o}W)	77.2	77.3	77.3	77.4	77.4	78.1
Lithology	granite	granite	granite	granite	granite	alkali feldspar granite
SiO_2	69.95	69.75	68.85	75.90	70.70	69.71
TiO_2	0.48	0.54	0.52	0.11	0.35	0.29
Al_2O_3	14.87	15.10	15.15	13.40	14.98	16.33
Fe_2O_3*	3.06	3.51	3.38	1.35	3.00	2.98
Fe_2O_3	1.18	1.59	0.60	0.72	0.44	1.06
FeO	1.68	1.72	2.49	0.56	2.28	1.70
MnO	0.07	0.09	0.09	0.02	0.02	0.05
MgO	0.95	1.06	1.08	0.09	0.79	0.85
CaO	2.52	2.89	2.90	1.02	2.77	1.89
Na_2O	3.84	3.93	3.93	3.89	3.38	4.33
K_2O	3.73	3.28	3.44	4.16	3.17	2.23
P_2O_5	0.12	0.03	0.01	0.00	0.07	0.03
H_2O^+	0.54	0.56	0.72	0.40	1.05	1.37
Total	99.92	100.53	99.77	100.27	100.01	99.83
[Mg #]	0.50	0.52	0.44	0.22	0.38	0.47
Fe #	0.64	0.62	0.70	0.86	0.74	0.67
Nb	16.7	15.2	15.4	17.3	12.4	14.3
Ta	1.5	1.2	1.2	1.4	1.1	0.9
Zr	207	224	213	133	177	205
Y	32.7	31.9	31.6	42.0	27.2	18.6
Hf	6.9	7.3	6.4	4.9	5.8	5.7
Sr	263	302	295	74	218	311
Rb	961.1	988.9	1023.8	598.6	748.6	312.2
Ba	156.2	135.0	143.0	158.8	99.4	96.0
U	3.0	2.9	3.4	3.6	2.3	1.5
Th	19.5	15.9	17.7	13.3	14.0	14.1
Pb	20.6	17.8	21.4	15.1	11.3	13.0
Ga	19	19	19	17	17	19
Ni	3	4	3	2	3	3
Cr	5	9	12	20	10	6
V	37	46	42	2	29	19
Co	7	8	9	6	8	7
Sc	8	9	9	5	7	7
Cs	2.4	2.9	3.1	1.3	0.9	5.6
La	49.6	44.9	48.4	22.0	42.4	49.4
Ce	96.6	94.2	92.4	50.7	69.8	89.5
Pr	10.8	9.5	10.6	5.6	8.1	9.4
Nd	41.2	36.8	40.9	20.6	29.6	36.3
Sm	7.7	7.1	8.6	3.6	5.3	5.2
Eu	1.3	1.2	1.6	0.9	1.1	1.0
Gd	8.0	5.6	7.4	6.7	5.0	4.5
Tb	1.0	0.9	0.9	1.1	0.8	0.7
Dy	6.3	5.7	5.6	6.2	5.2	4.1
Ho	1.4	1.2	1.2	1.5	0.9	0.7
Er	4.0	3.6	3.7	4.2	3.0	2.1
Tm	0.5	0.6	0.6	0.4	0.5	0.4
Yb	3.9	2.9	4.3	3.1	2.7	2.3
Lu	0.6	0.7	0.7	0.6	0.5	0.4

Table DR2. (continued)

Age group	Carboniferous-Permian					
Sample	N-AM-05-20	N-AM-05-22	N-AM-05-24	N-AM-05-27a	N-AM-05-28a	S-AM-06-10
Latitude (^{o}S)	6.9	6.8	6.8	7.0	7.0	13.2
Longitude (^{o}W)	78.0	78.0	78.0	78.0	78.0	72.5
Lithology	granodiorite	granodiorite	alkali feldspar granite	granodiorite	tonalite	granite
SiO_2	62.13	64.60	72.25	67.11	59.92	74.17
TiO_2	0.71	0.60	0.18	0.37	0.80	0.15
Al_2O_3	17.02	16.26	15.24	16.89	16.22	14.16
Fe_2O_3*	5.87	5.14	1.78	3.20	6.85	1.30
Fe_2O_3	1.29	1.11	0.37	0.53	0.52	0.85
FeO	4.06	3.55	1.25	2.37	5.58	0.40
MnO	0.10	0.08	0.06	0.05	0.13	0.04
MgO	2.19	1.78	0.55	1.08	2.59	0.22
CaO	5.20	4.49	1.42	4.36	4.34	1.08
Na_2O	3.21	3.13	4.12	3.85	3.18	3.52
K_2O	2.35	2.16	3.52	1.65	2.71	4.90
P_2O_5	0.04	0.00	0.09	0.00	0.18	0.08
H_2O^+	1.54	2.00	1.22	1.32	2.36	0.59
Total	99.86	99.76	100.28	99.58	98.53	100.16
[Mg #]	0.49	0.47	0.44	0.45	0.45	0.50
Fe #	0.65	0.67	0.69	0.69	0.68	0.64
Nb	11.2	11.2	11.8	10.8	12.3	13.6
Ta	0.9	0.9	1.6	0.5	0.7	1.2
Zr	195	170	105	92	238	130
Y	28.8	18.1	20.4	34.5	31.6	18.8
Hf	6.5	5.4	3.1	2.3	5.8	4.0
Sr	233	218	210	183	215	135
Rb	1130.9	615.9	693.3	455.7	664.7	189.8
Ba	94.3	99.9	137.9	57.0	110.2	854.9
U	1.1	0.8	3.1	0.9	1.0	2.7
Th	5.5	7.7	11.1	6.5	3.9	13.6
Pb	15.2	9.4	30.4	12.0	10.4	217.1
Ga	20	19	17	21	20	16
Ni	6	4	3	8	6	3
Cr	24	17	5	70	23	4
V	102	80	13	302	123	5
Co	20	14	5	41	18	3
Sc	16	17	5	29	18	4
Cs	4.3	2.4	5.2	1.0	4.3	4.1
La	20.6	23.8	27.4	28.0	20.1	35.7
Ce	41.5	44.6	55.2	43.0	49.1	68.1
Pr	5.7	5.2	5.4	3.9	6.0	7.3
Nd	26.0	21.6	19.0	14.9	23.3	26.6
Sm	5.5	3.9	7.2	2.7	5.3	5.5
Eu	1.5	1.2	0.8	1.0	1.1	0.9
Gd	6.0	3.8	3.7	2.4	5.2	4.3
Tb	0.9	0.5	0.8	0.3	0.8	0.6
Dy	6.4	3.9	4.0	1.4	5.0	3.6
Ho	1.3	0.7	0.7	0.3	1.1	0.6
Er	3.5	2.2	2.5	0.8	3.0	1.9
Tm	0.5	0.3	0.4	0.3	0.4	0.3
Yb	3.8	2.0	3.3	1.4	3.2	2.0
Lu	0.5	0.3	0.5	0.2	0.5	0.3

Table DR2. (continued)

Age group	Carboniferous-Permian					
Sample	S-AM-06-11	S-AM-06-12a	S-AM-06-12b	SC-AM-05-05	S-AM-06-09	S-AM-06-04a
Latitude (^{o}S)	13.2	13.2	13.2	12.4	13.3	13.2
Longitude (^{o}W)	72.5	72.5	72.5	74.6	72.1	72.4
Lithology	alkali feldspar granite	granite	granodiorite	granite	alkali feldspar granite	alkali feldspar granite
SiO_2	73.66	73.72	67.73	74.05	67.75	71.35
TiO_2	0.23	0.20	0.46	0.19	0.58	0.28
Al_2O_3	14.09	14.26	16.89	14.15	15.01	14.40
Fe_2O_3*	1.69	1.57	3.50	1.72	2.76	2.33
Fe_2O_3	0.85	0.79	1.81	0.46	1.22	0.70
FeO	0.75	0.70	1.51	1.12	1.35	1.63
MnO	0.03	0.04	0.07	0.03	0.03	0.07
MgO	0.39	0.32	0.75	0.27	1.56	1.02
CaO	0.73	1.33	3.08	1.44	1.25	1.05
Na_2O	4.06	3.75	4.92	3.88	4.69	2.91
K_2O	4.49	4.44	2.56	4.45	4.46	5.18
P_2O_5	0.09	0.06	0.12	0.05	0.13	0.12
H_2O^+	0.59	0.37	0.37	0.59	1.52	1.18
Total	99.95	99.96	100.28	100.69	99.56	99.77
[Mg #]	0.48	0.45	0.47	0.30	0.67	0.53
Fe #	0.66	0.69	0.67	0.81	0.46	0.62
Nb	19.5	16.7	14.6	6.5	24.3	19.9
Ta	1.6	1.4	0.8	0.7	1.8	1.6
Zr	182	127	303	164	407	133
Y	22.9	26.1	17.1	13.0	32.5	28.6
Hf	4.7	3.9	6.6	5.5	9.9	3.7
Sr	132	142	370	114	140	197
Rb	168.9	179.9	82.1	83.6	117.8	208.8
Ba	868.8	809.9	791.7	723.5	873.4	968.7
U	3.2	5.5	2.4	1.0	3.4	2.7
Th	12.9	15.0	5.9	27.7	15.5	17.1
Pb	14.8	50.4	11.5	12.4	153.9	46.3
Ga	15	17	21	18	20	16
Ni	3	4	4	2	7	7
Cr	5	5	3	5	13	8
V	11	10	31	12	41	37
Co	3	5	7	6	7	6
Sc	3	3	8	3	7	3
Cs	1.8	4.6	1.9	1.6	1.2	1.6
La	36.3	39.1	26.1	51.1	49.4	33.6
Ce	69.5	72.6	45.6	79.0	94.1	66.5
Pr	7.6	7.8	4.9	8.6	10.0	7.6
Nd	28.2	26.8	17.5	34.1	37.3	29.2
Sm	5.0	5.0	3.5	4.7	7.6	5.9
Eu	0.7	0.7	1.6	0.8	1.0	1.0
Gd	4.3	4.4	3.2	5.0	6.6	5.1
Tb	0.7	0.7	0.5	0.5	0.9	0.7
Dy	4.2	4.6	3.0	2.4	5.9	4.8
Ho	0.8	0.9	0.7	0.6	1.2	1.0
Er	2.1	2.6	1.6	1.1	3.3	2.8
Tm	0.3	0.4	0.2	0.1	0.5	0.4
Yb	2.4	2.8	1.6	1.8	3.4	3.0
Lu	0.4	0.4	0.3	0.2	0.5	0.4

Table DR2. (continued)

Age group			Late Ordovician			Early Ordovician
Sample	DC-04/5-1	DC-04/5-2	DC-05/6-5	SU-03-24	SU-03-25	DC-05/5-7
Latitude (^{o}S)	8.0	8.0	8.5	11.2	11.2	6.8
Longitude (^{o}W)	77.7	77.7	77.4	75.5	75.5	78.0
Lithology	monzodioritic schist	granodioritic orthogneiss	foliated granitic garnet gniess	migmatitic paragneiss	quartz-augen paragneiss	paragneiss
SiO_2	53.30	66.47	71.39	65.43	71.79	73.55
TiO_2	1.15	0.78	0.42	0.87	0.67	0.21
Al_2O_3	14.91	14.57	14.14	16.58	13.21	14.29
Fe_2O_3*	12.27	5.97	3.43	6.65	5.09	1.90
Fe_2O_3	3.60	1.79	1.03	2.00	1.53	0.57
FeO	8.59	4.18	2.40	4.66	3.56	1.33
MnO	0.21	0.10	0.05	0.08	0.18	0.03
MgO	6.00	1.39	0.89	1.92	1.87	0.47
CaO	7.93	2.84	1.66	0.61	0.78	0.87
Na_2O	2.38	2.98	2.66	1.15	1.06	3.55
K_2O	0.98	2.88	4.77	3.30	2.74	4.47
P_2O_5	0.19	0.28	0.13	0.11	0.07	0.14
H_2O^+	0.59	0.66	0.66	3.03	1.81	0.70
Total	99.92	98.93	100.19	99.21	98.84	100.18
[Mg #]	0.55	0.37	0.40	0.42	0.48	0.39
Fe #	0.59	0.75	0.73	0.71	0.66	0.74
Nb	7.6	14.1	11.5	17.3	14.6	17.1
Ta	0.5	1.1	0	2.3	1.8	0
Zr	93.0	241.0	165	205	143	120
Y	26.6	27.9	38.5	33.7	24.3	29.4
Hf	1.1	2.7	0	0.1	0.3	0
Sr	186.5	110.8	0	103	91	0
Rb	36.3	140.2	198.5	141.3	107.6	150.3
Ba	303.4	506.0	0	616.5	1310.5	0
U	1.0	2.3	0	2.8	2.1	0
Th	11.1	35.9	0	23.9	18.5	0
Pb	5.3	15.8	0	14.4	17.0	0
Ga	20.0	20.0	18	22	19	17
Ni	76.0	9.0	9	41	44	3
Cr	76.0	30.0	24	138	89	13
V	286.0	73.0	42	140	104	10
Co	42	15	10	19	16	6
Sc	48	11	8	19	14	5
Cs	0.0	0.0	0.0	0.0	0.0	0.0
La	18.6	46.5	0.0	42.6	30.6	0.0
Ce	40.4	96.8	0.0	80.9	64.9	0.0
Pr	5.3	11.9	0.0	9.4	6.8	0.0
Nd	19.9	41.2	0.0	36.1	25.7	0.0
Sm	4.8	8.0	0.0	7.2	5.3	0.0
Eu	1.3	1.9	0.0	1.3	1.0	0.0
Gd	5.2	7.0	0.0	6.4	4.8	0.0
Tb	0.8	0.9	0.0	0.9	0.7	0.0
Dy	4.7	5.1	0.0	5.3	4.5	0.0
Ho	1.0	1.0	0.0	1.0	0.9	0.0
Er	2.9	2.9	0.0	2.8	2.6	0.0
Tm	0.4	0.4	0.0	0.4	0.4	0.0
Yb	2.7	2.9	0.0	2.4	2.2	0.0
Lu	0.4	0.4	0.0	0.4	0.3	0.0

Table DR2. (continued)

Age group	E. Ordovician	Middle Neoproterozoic			E. Neoproterozoic	L. Mesoproterozoic
Sample	SU-03-19	C-AM-05-22	C-AM-05-23	SC-AM-05-18	C-AM-05-17 leuc.	C-AM-05-18
Latitude (^{o}S)	11.1	11.5	11.5	13.9	11.3	11.4
Longitude (^{o}W)	75.8	74.8	74.8	73.9	74.7	74.8
Lithology	quartz monzonite	quartz monzonite	alkali feldspar granite	alkali feldspar granite	granite	foliated alkali feldspar granite
SiO_2	71.49	64.16	73.87	72.83	73.16	73.94
TiO_2	0.461	0.49	0.17	0.24	0.08	0.26
Al_2O_3	14.42	15.44	13.16	13.63	15.18	13.51
Fe_2O_3*	3.03	6.9	2.78	2.92	1.01	1.62
Fe_2O_3	0.91	2.47	1.24	1.68	0.88	0.54
FeO	2.12	3.98	1.37	1.10	0.12	0.96
MnO	0.07	0.17	0.04	0.07	0.02	0.02
MgO	0.97	0.16	0.05	0.55	0.12	0.55
CaO	1.26	2.15	0.65	0.33	2.70	0.52
Na_2O	3.00	4.44	3.68	0.83	5.18	3.90
K_2O	4.44	5.82	5.45	7.60	1.33	4.52
P_2O_5	0.11	0.08	0.02	0.03	0.04	0.05
H_2O^+	0.96	0.60	0.47	0.92	0.41	0.72
Total	100.21	99.95	100.18	99.80	99.21	99.48
[Mg #]	0.45	0.07	0.06	0.47	0.65	0.50
Fe #	0.69	0.96	0.97	0.67	0.50	0.64
Nb	21.0	108.7	141.2	59.4	3.2	9.0
Ta	3.3	9.5	3.9	3.7	0.6	0.3
Zr	154.0	1512	443	488	455	221
Y	26.5	130.3	167.8	167.6	9.4	10.1
Hf	6.0	33.7	15.8	14.5	7.0	5.5
Sr	159.4	69	24	66	207	187
Rb	161.6	258.0	157.0	382.4	34.4	106.7
Ba	494.8	511.2	122.1	1102.9	224	723.4
U	3.4	4.0	7.1	3.3	2.2	1.1
Th	17.7	52.4	25.8	19.7	2.9	11.6
Pb	28.7	35.5	20.7	13.4	18	17.0
Ga	17.0	39	36	27	19	16
Ni	10.0	6	8	6	2	5
Cr	35.0	2	3	12	11	4
V	40.0	3	2	2	2	10
Co	7	4	2	2	2	5
Sc	6	4	2	2	5	2
Cs	0.0	0.4	0.6	4.4	0.0	0.3
La	30.0	268.7	105.7	60.2	0.0	41.8
Ce	54.9	488.7	222.5	123.1	0.0	82.0
Pr	6.3	50.6	27.7	13.7	0.0	8.3
Nd	23.8	175.9	110.8	54.5	0.0	32.2
Sm	5.0	27.3	27.3	12.5	0.0	5.3
Eu	0.8	4.3	0.5	1.2	0.0	0.8
Gd	4.7	22.0	29.7	14.9	0.0	3.2
Tb	0.8	3.0	5.1	3.0	0.0	0.3
Dy	4.6	20.1	34.1	22.2	0.0	2.1
Ho	0.9	4.1	7.1	5.2	0.0	0.2
Er	2.6	13.2	19.7	15.8	0.0	1.0
Tm	0.4	2.3	2.5	2.5	0.0	0.1
Yb	2.4	16.8	14.9	15.3	0.0	0.7
Lu	0.4	2.7	1.9	2.1	0.0	0.0

Table DR2. (continued)

Age group	Late Mesoproterozoic		
Sample	SC-AM-05-15	SC-AM-05-16	SC-AM-05-17
Latitude (^{o}S)	14.0	14.0	14.0
Longitude (^{o}W)	73.8	73.8	73.8
Lithology	foliated granite	gabbro	foliated high SiO_2 granite
SiO_2	73.18	47.52	77.88
TiO_2	0.26	1.58	0.14
Al_2O_3	13.79	15.65	12.31
Fe_2O_3*	3.09	13.29	1.15
Fe_2O_3	1.42	3.72	0.78
FeO	1.48	8.57	0.33
MnO	0.06	0.21	0.02
MgO	0.27	9.02	0.16
CaO	1.24	8.76	0.67
Na_2O	3.30	2.67	2.89
K_2O	4.47	1.14	5.26
P_2O_5	0.05	0.19	0.02
H_2O^+	0.83	1.34	0.27
Total	100.35	100.35	100.73
[Mg #]	0.24	0.65	0.46
Fe #	0.85	0.49	0.67
Nb	10.3	6.8	9.2
Ta	0.7	0.5	0.7
Zr	300	108	110
Y	42.9	38.7	37.5
Hf	11.1	4.4	5.6
Sr	141	162	35
Rb	173.7	32.9	339.5
Ba	921.3	145.9	94.5
U	1.3	0.2	5.6
Th	2.1	0.5	38.6
Pb	24.1	6.4	23.6
Ga	21	20	16
Ni	2	134	4
Cr	10	107	6
V	16	194	5
Co	7	62	5
Sc	6	43	2
Cs	0.7	1.3	2.2
La	38.7	12.9	48.9
Ce	71.5	28.6	100.6
Pr	9.1	4.2	10.2
Nd	39.1	20.9	35.2
Sm	8.4	5.9	8.1
Eu	1.9	1.6	0.3
Gd	9.4	7.2	5.6
Tb	1.4	1.2	0.7
Dy	9.5	8.0	6.3
Ho	1.7	1.6	1.2
Er	5.5	4.9	4.1
Tm	0.7	0.8	0.6
Yb	5.7	5.1	5.0
Lu	0.8	0.7	0.6