

APPENDIX

to the paper

Early Mesoproterozoic (>1.4 Ga) ages from granulite basement inliers of SE Mexico and its implications on the Oaxaquia concept – Evidence from U-Pb and Lu-Hf isotopes on zircon

by

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published in

Revista Mexicana de Ciencias Geológicas, 2014, 31(3), 377-394

Appendix 1. U-Pb geochronologic analyses by LA-MC-ICPMS.

Spot No.	U (ppm)	Isotope ratios								Apparent ages (Ma)						
		$\frac{^{206}\text{Pb}}{^{204}\text{Pb}}$	U/Th	$\frac{^{206}\text{Pb}^*}{^{207}\text{Pb}^*}$		$\frac{^{207}\text{Pb}^*}{^{235}\text{U}}$		$\frac{^{206}\text{Pb}^*}{^{238}\text{U}}$		error corr.	$\frac{^{206}\text{Pb}^*}{^{238}\text{U}}$		$\frac{^{207}\text{Pb}^*}{^{235}\text{U}}$		$\frac{^{206}\text{Pb}^*}{^{207}\text{Pb}^*}$	
				±	±	±	±	±	±		±	±	±	±		
Mol9-1																
1	253	2.48E+04	2.7	13.748	4.1	1.6455	5.2	0.1641	3.2	0.61	979	29	988	33	1007	83
2	93	1.45E+04	2.6	13.138	4.7	1.8498	5.7	0.1763	3.2	0.57	1047	31	1063	37	1098	94
4	129	1.88E+04	1.5	12.407	2.9	2.3384	3.3	0.2104	1.6	0.48	1231	18	1224	23	1212	57
5	170	2.42E+04	2.0	13.126	2.2	1.9858	2.6	0.1890	1.4	0.56	1116	15	1111	18	1100	43
6	114	1.85E+04	2.1	12.646	3.4	2.0961	4.3	0.1923	2.7	0.63	1134	29	1148	30	1174	66
7	268	2.30E+04	1.8	13.518	1.8	1.8499	2.1	0.1814	1.2	0.55	1074	12	1063	14	1041	36
8	282	3.74E+04	3.3	13.549	1.8	1.7373	2.0	0.1707	0.7	0.38	1016	7	1022	13	1036	37
9	211	5.07E+04	2.2	12.869	2.8	2.0759	3.5	0.1937	2.1	0.59	1142	21	1141	24	1139	55
10	396	2.61E+04	5.2	13.435	1.6	1.7939	2.1	0.1748	1.4	0.66	1038	13	1043	13	1053	31
11	327	6.82E+04	1.4	12.607	1.4	2.1760	1.7	0.1990	0.8	0.50	1170	9	1173	12	1180	28
12	222	1.44E+04	2.5	13.661	1.2	1.7060	2.0	0.1690	1.6	0.81	1007	15	1011	13	1019	24
13	203	2.41E+04	1.7	12.586	2.4	2.2703	3.1	0.2072	2.0	0.65	1214	22	1203	22	1183	47
14	403	2.41E+04	3.0	13.053	1.6	2.0046	2.0	0.1898	1.1	0.57	1120	12	1117	13	1111	32
15	238	2.40E+04	3.5	13.841	2.6	1.6782	2.9	0.1685	1.3	0.44	1004	12	1000	19	993	54
17	880	1.41E+05	1.5	12.491	0.6	2.2588	1.5	0.2046	1.4	0.92	1200	16	1200	11	1198	12
18	226	3.29E+04	3.1	13.755	7.0	1.6771	8.0	0.1673	3.8	0.48	997	35	1000	51	1006	142
20	254	4.04E+04	2.9	12.914	2.2	1.9743	2.7	0.1849	1.5	0.56	1094	15	1107	18	1132	44
21	255	3.05E+04	1.1	12.376	1.4	2.2665	1.7	0.2034	0.9	0.52	1194	9	1202	12	1217	28
22	251	4.01E+04	2.9	13.534	1.5	1.6720	1.8	0.1641	0.9	0.51	980	8	998	11	1038	31
23	246	4.23E+04	3.3	13.407	3.6	1.7001	3.7	0.1653	0.9	0.25	986	8	1009	24	1057	73
23	236	2.94E+04	3.4	13.036	2.8	2.0540	6.6	0.1942	6.0	0.91	1144	63	1134	45	1114	56
24	376	5.16E+04	1.4	13.522	1.5	1.7048	1.8	0.1672	1.1	0.60	997	10	1010	12	1040	29
25	270	4.52E+04	1.2	13.082	1.9	2.0053	2.3	0.1903	1.4	0.61	1123	15	1117	16	1107	37
26	174	2.53E+04	2.3	13.473	1.7	1.7421	2.3	0.1702	1.5	0.68	1013	14	1024	15	1047	34
27	296	7.33E+04	2.7	13.511	1.9	1.7332	2.1	0.1698	0.8	0.39	1011	8	1021	14	1042	39
28	272	9.22E+04	5.2	13.539	2.2	1.7234	2.6	0.1692	1.4	0.53	1008	13	1017	17	1038	45
29	155	2.67E+04	1.6	12.412	2.1	2.2332	2.4	0.2010	1.2	0.50	1181	13	1192	17	1211	41
30	203	2.71E+04	3.0	13.455	1.7	1.8319	2.3	0.1788	1.5	0.65	1060	15	1057	15	1050	35
31	194	1.87E+04	2.0	13.492	2.2	1.8186	2.5	0.1780	1.4	0.53	1056	13	1052	17	1045	44
32	165	3.03E+04	1.9	12.645	1.3	2.2000	2.4	0.2018	2.0	0.83	1185	22	1181	17	1174	27
33	550	4.53E+04	1.5	12.814	1.0	2.1042	1.6	0.1956	1.2	0.78	1151	13	1150	11	1148	20
34	147	2.70E+04	2.0	12.344	3.2	2.3477	4.0	0.2102	2.3	0.57	1230	25	1227	28	1222	64
35	225	3.11E+04	1.7	12.053	1.2	2.4692	2.1	0.2158	1.7	0.82	1260	20	1263	15	1269	23
36	159	5.07E+04	1.2	12.687	3.4	2.1529	3.9	0.1981	1.9	0.48	1165	20	1166	27	1168	68
37	365	1.18E+05	2.0	12.740	1.0	2.1283	1.3	0.1967	0.8	0.62	1157	8	1158	9	1159	20
38	357	4.68E+04	1.8	12.511	1.1	2.2230	2.4	0.2017	2.2	0.90	1184	24	1188	17	1195	21
39	364	9.07E+04	1.8	12.509	0.8	2.2091	2.2	0.2004	2.1	0.94	1178	22	1184	15	1196	15
40	275	7.21E+04	2.2	12.630	1.4	2.2185	2.1	0.2032	1.6	0.75	1193	18	1187	15	1177	28
41	243	2.89E+04	4.5	13.701	1.8	1.7760	1.9	0.1765	0.7	0.35	1048	6	1037	12	1014	36
42	252	2.43E+04	3.5	13.696	2.6	1.7538	2.8	0.1742	1.2	0.42	1035	11	1029	18	1014	52
43	175	1.83E+04	2.4	12.986	5.0	1.9957	5.4	0.1880	1.8	0.35	1110	19	1114	36	1121	100
Mol9-4																
1	380	3.28E+03	0.7	11.509	1.2	2.5338	2.5	0.2115	2.2	0.88	1237	25	1282	18	1358	23
3	256	2.40E+03	2.1	12.918	2.6	1.9699	2.9	0.1846	1.2	0.43	1092	12	1105	20	1132	52
4	151	1.12E+03	2.0	12.993	3.9	2.2190	4.0	0.2091	0.7	0.18	1224	8	1187	28	1120	78
5	256	2.55E+03	0.9	13.189	3.5	1.7475	3.7	0.1672	1.2	0.33	996	11	1026	24	1090	70
7	351	2.80E+03	2.2	11.693	2.0	2.5371	2.5	0.2152	1.5	0.61	1256	17	1283	18	1327	38
8	208	1.41E+03	3.2	13.977	3.2	1.5942	4.3	0.1616	2.8	0.66	966	25	968	27	973	65
9	169	1.76E+03	2.3	12.351	2.5	2.5478	5.4	0.2282	4.8	0.89	1325	57	1286	39	1221	49
10	541	4.71E+03	2.2	11.243	1.0	2.8026	1.4	0.2285	1.0	0.72	1327	12	1356	10	1403	19
11	194	1.99E+03	2.9	11.646	2.6	2.6729	3.0	0.2258	1.6	0.53	1312	19	1321	22	1335	50
12	857	9.38E+03	1.0	11.088	1.1	2.7814	3.1	0.2237	2.9	0.94	1301	34	1351	23	1430	21
13	748	1.36E+04	0.7	11.023	0.8	2.7757	1.3	0.2219	0.9	0.75	1292	11	1349	9	1441	16
14	580	1.12E+04	8.4	11.098	1.1	2.7557	2.1	0.2218	1.8	0.85	1291	21	1344	16	1428	21
15	575	3.94E+03	3.2	11.358	0.9	2.5939	1.8	0.2137	1.6	0.87	1248	18	1299	13	1383	17
16	1359	1.13E+04	3.0	11.890	0.7	2.1871	1.1	0.1886	0.9	0.79	1114	9	1177	8	1295	14
17	270	1.85E+03	0.8	12.127	2.5	2.5985	3.2	0.2285	2.1	0.65	1327	25	1300	24	1257	48
18	354	9.32E+03	0.7	11.237	1.2	2.8173	2.0	0.2296	1.6	0.80	1332	19	1360	15	1404	23
19	292	2.94E+03	4.1	11.653	1.1	2.6658	2.4	0.2253	2.1	0.88	1310	25	1319	17	1334	22
20	521	7.47E+03	2.9	11.459	2.9	2.5212	5.3	0.2095	4.5	0.84	1226	50	1278	39	1366	56
21	770	7.01E+03	1.1	11.075	0.8	2.8797	1.5	0.2313	1.3	0.85	1341	15	1377	11	1432	15
22	791	5.06E+03	2.0	11.565	0.9	2.5173	1.2	0.2111	0.8	0.69	1235	10	1277	9	1349	17
23	240	1.74E+03	2.0	13.884	4.0	1.6964	4.8	0.1708	2.7	0.56	1017	26	1007	31	987	81
24	423	4.23E+03	1.7	12.474	1.4	2.0951	3.0	0.1895	2.6	0.87	1119	27	1147	20	1201	28
25	648	9.11E+03	2.0	11.685	1.0	2.4475	3.1	0.2074	2.9	0.94	1215	32	1257	22	1329	20
26	515	4.80E+03	1.5	11.600	1.4	2.5559	2.8	0.2150	2.5	0.88	1256	29	1288	21	1343	26
27	351	4.21E+03	4.3	11.566	1.2	2.6528	2.1	0.2225	1.7	0.82	1295	20	1315	15	1348	23
28	701	3.83E+03	1.9	12.592	1.0	2.0890	1.2	0.1908	0.6	0.51	1126	6	1145	8	1182	20
29	459	1.32E+04	1.5	11.287	0.8	2.7950	1.3	0.2288	1.0	0.78	1328	13	1354	10	1395	16
30	406	6.79E+03	1.5	11.285	1.4	2.8504	2.1	0.2333	1.5	0.72	1352	18	1369	16	1396	28
31	543	4.73E+03	1.5	11.315	1.2	2.7423	2.1	0.2250	1.7	0.81	1308	20	1340	16	1391	24
32	391	7.12E+03	2.3	11.153	1.8	2.8111	4.2	0.2274	3.8	0.90	1321	45	1359	32	1418	34
33	922	7.19E+03	2.7	11.969	1.2	2.1980	2.5	0.1908	2.2	0.87	1126	22	1180	17	1282	23
34	406	3.78E+03	2.1	11.573	1.9	2.7399	2.3	0.2300	1.4	0.60	1334	17	1339	17	1347	36
35	572	4.22E+03	3.5	11.407	0.9	2.8252	1.8	0.2337	1.5	0.87	1354	19	1362	13	1375	17
36	743	4.69E+03	2.3	11.727	1.2	2.5022	2.2	0.2128	1.8	0.83	1244	20	1273	16	1322	24
37	192	1.89E+03	1.9	12.458	3.5	2.5756	4.3	0.2327	2.5	0.59	1349	31	1294	31	1204	68

Appendix 1. U-Pb geochronologic analyses by LA-MC-ICPMS.

Spot No.	U (ppm)	Isotope ratios									Apparent ages (Ma)					
		$\frac{^{206}\text{Pb}}{^{204}\text{Pb}}$	U/Th	$\frac{^{206}\text{Pb}^*}{^{207}\text{Pb}^*}$	\pm	$\frac{^{207}\text{Pb}^*}{^{235}\text{U}}$	\pm	$\frac{^{206}\text{Pb}^*}{^{238}\text{U}}$	\pm	error	$\frac{^{206}\text{Pb}^*}{^{238}\text{U}}$	\pm	$\frac{^{207}\text{Pb}^*}{^{235}\text{U}}$	\pm	$\frac{^{206}\text{Pb}^*}{^{207}\text{Pb}^*}$	\pm
				(%)	(%)	(%)	(%)	(%)	(Ma)	(Ma)	(Ma)	(Ma)				
38	1260	9.41E+03	2.8	11.615	0.8	2.5227	1.9	0.2125	1.7	0.89	1242	19	1279	14	1340	16
39	495	3.35E+03	2.5	11.991	1.2	2.4667	1.8	0.2145	1.3	0.72	1253	15	1262	13	1279	24
40	893	8.19E+03	1.7	11.548	1.0	2.5895	2.0	0.2169	1.7	0.87	1265	20	1298	15	1352	20
Mol9-5																
2	202	1.65E+03	4.0	12.139	2.6	2.3520	4.8	0.2071	4.0	0.84	1213	44	1228	34	1255	51
3	209	2.38E+03	4.0	12.116	2.0	2.4059	2.2	0.2114	0.9	0.41	1236	10	1244	16	1258	40
4	201	2.83E+03	3.1	9.472	1.9	4.1436	2.6	0.2847	1.8	0.70	1615	26	1663	22	1724	34
5	218	4.03E+03	1.8	9.698	1.3	4.1362	2.6	0.2909	2.3	0.87	1646	33	1661	21	1681	24
6	461	7.11E+03	3.9	11.239	0.8	2.6685	1.8	0.2175	1.7	0.91	1269	19	1320	13	1404	15
9	252	1.51E+03	3.7	13.211	3.2	2.0914	4.0	0.2004	2.4	0.59	1177	26	1146	28	1087	65
10	396	4.13E+03	4.8	11.790	1.8	2.4963	2.1	0.2135	1.1	0.53	1247	13	1271	15	1311	34
11	547	5.34E+03	5.2	11.331	1.4	2.6569	3.2	0.2184	2.9	0.90	1273	34	1317	24	1388	27
12	1080	9.64E+03	3.2	11.337	1.0	2.7222	2.5	0.2238	2.2	0.91	1302	26	1335	18	1387	19
13	191	1.65E+03	5.5	13.372	3.3	2.2416	4.6	0.2174	3.2	0.70	1268	37	1194	32	1063	66
14	476	3.52E+03	4.5	11.586	1.9	2.5706	2.4	0.2160	1.4	0.58	1261	16	1292	17	1345	38
15	297	6.64E+03	3.1	11.327	1.2	2.7706	4.7	0.2276	4.5	0.97	1322	54	1348	35	1389	23
16	406	4.04E+03	4.6	11.496	2.2	2.7982	2.8	0.2333	1.7	0.62	1352	21	1355	21	1360	42
17	426	3.46E+03	4.6	11.622	1.8	2.7998	2.7	0.2360	2.0	0.74	1366	24	1355	20	1339	35
18	256	2.21E+03	3.4	12.687	2.2	2.3846	2.5	0.2194	1.1	0.44	1279	13	1238	18	1168	44
19	844	4.33E+03	4.6	11.773	0.8	2.4499	1.0	0.2092	0.5	0.56	1224	6	1257	7	1314	16
20	740	6.79E+03	3.6	10.951	0.9	2.7579	2.1	0.2190	1.8	0.89	1277	21	1344	15	1453	18
21	282	2.25E+03	7.4	11.945	2.3	2.4318	2.8	0.2107	1.6	0.59	1232	18	1252	20	1286	44
23	252	3.62E+03	1.2	9.743	1.9	3.6174	2.4	0.2556	1.5	0.63	1467	20	1553	19	1672	35
24	185	2.04E+03	0.9	8.959	1.8	4.5535	2.7	0.2959	2.1	0.76	1671	31	1741	23	1826	32
25	148	1.87E+03	1.2	8.386	1.8	5.3264	3.1	0.3239	2.5	0.81	1809	40	1873	27	1945	33
26	679	1.01E+04	4.6	10.763	1.1	2.8437	2.4	0.2220	2.1	0.90	1292	25	1367	18	1486	20
27	265	1.99E+03	3.1	11.491	3.3	2.7356	3.9	0.2280	2.1	0.53	1324	25	1338	29	1361	64
28	300	2.14E+03	3.0	11.385	1.8	2.7467	2.2	0.2268	1.2	0.55	1318	14	1341	16	1379	35
29	681	1.27E+04	4.2	10.916	1.1	2.6781	2.4	0.2120	2.1	0.90	1240	24	1322	18	1459	20
30	162	1.19E+03	4.6	12.365	4.0	2.4064	6.4	0.2158	5.0	0.78	1260	57	1244	46	1218	78
31	197	1.87E+03	3.0	11.899	2.6	2.5813	3.1	0.2228	1.6	0.52	1296	19	1295	23	1294	51
32	341	2.33E+03	4.7	11.978	2.5	2.3723	5.0	0.2061	4.3	0.87	1208	48	1234	36	1281	48
33	447	2.97E+03	3.0	11.447	1.3	2.5044	2.5	0.2079	2.1	0.86	1218	24	1273	18	1368	24
34	1420	1.35E+04	2.3	9.553	0.6	3.2194	2.6	0.2231	2.5	0.97	1298	30	1462	20	1709	12
35	521	8.04E+03	4.2	10.994	1.2	2.6049	2.5	0.2077	2.2	0.88	1217	24	1302	18	1446	23
36	225	5.05E+03	3.7	12.543	1.7	1.8513	2.5	0.1684	1.8	0.72	1003	17	1064	17	1190	35
37	299	3.45E+03	5.3	12.161	2.1	2.1114	3.1	0.1862	2.3	0.74	1101	23	1153	22	1251	42
38	446	4.42E+03	4.1	11.505	1.6	2.3633	2.7	0.1972	2.2	0.81	1160	23	1232	19	1359	30
39	113	1.35E+03	5.5	12.512	5.1	2.2299	5.4	0.2024	1.7	0.32	1188	19	1190	38	1195	100
40	159	1.38E+03	3.7	12.265	2.9	2.1522	5.6	0.1914	4.8	0.86	1129	50	1166	39	1234	56
41	206	1.62E+03	5.0	12.192	2.9	2.4757	4.2	0.2189	3.1	0.73	1276	35	1265	30	1246	56
42	211	1.61E+03	4.4	12.787	3.0	2.1022	4.1	0.1950	2.8	0.69	1148	30	1150	28	1152	59
Mol9-6																
1	832	2.61E+05	13.1	12.751	0.6	2.0501	1.4	0.1896	1.2	0.88	1119	12	1132	9	1158	13
3	322	2.90E+04	1.9	13.647	3.0	1.6579	4.2	0.1641	2.9	0.69	979	26	993	26	1022	60
6	734	7.28E+04	3.0	12.269	1.1	2.1734	3.3	0.1934	3.1	0.94	1140	33	1173	23	1234	22
7	405	3.50E+04	4.8	12.900	3.1	1.7714	5.6	0.1657	4.7	0.83	989	43	1035	37	1135	62
8	456	6.79E+04	3.5	12.446	1.3	2.1362	2.7	0.1928	2.4	0.88	1137	25	1161	19	1205	25
9	264	2.51E+04	2.5	12.193	3.3	2.3110	6.4	0.2044	5.4	0.85	1199	60	1216	45	1246	66
11	424	3.09E+04	2.7	13.013	2.3	1.9126	5.9	0.1805	5.4	0.92	1070	53	1086	39	1117	46
13	428	2.37E+04	2.5	13.134	2.1	1.7898	3.4	0.1705	2.7	0.78	1015	25	1042	22	1099	43
14	224	1.42E+04	2.5	12.492	5.2	2.3498	6.1	0.2129	3.1	0.52	1244	36	1228	43	1198	102
15	394	3.04E+04	2.4	12.667	1.8	2.0082	5.2	0.1845	4.9	0.94	1091	49	1118	35	1171	35
16	704	9.39E+04	1.8	12.257	1.3	2.4090	4.2	0.2141	4.0	0.95	1251	46	1245	30	1236	26
17	511	4.58E+04	3.1	12.639	1.8	2.2351	5.4	0.2049	5.1	0.94	1201	55	1192	38	1175	36
17	280	3.73E+04	2.4	12.162	1.8	2.2696	4.2	0.2002	3.8	0.90	1176	41	1203	30	1251	35
18	228	1.22E+04	5.6	13.772	3.9	1.7235	5.6	0.1721	4.0	0.71	1024	37	1017	36	1003	80
19	249	1.46E+04	2.7	12.046	4.1	2.3330	5.1	0.2038	3.1	0.60	1196	34	1222	37	1270	80
20	290	2.74E+04	2.6	12.361	2.5	2.3383	3.7	0.2096	2.7	0.74	1227	30	1224	26	1219	49
21	329	2.16E+04	2.9	13.067	1.9	1.8841	3.0	0.1786	2.3	0.76	1059	22	1075	20	1109	39
22	405	4.34E+04	3.1	12.603	2.2	2.1440	4.7	0.1960	4.1	0.88	1154	44	1163	32	1181	43
23	439	3.83E+04	3.9	12.485	2.5	2.2657	3.3	0.2052	2.1	0.64	1203	23	1202	23	1199	49
24	330	4.53E+04	2.6	12.418	1.8	2.3097	3.0	0.2080	2.4	0.79	1218	26	1215	21	1210	36
25	415	4.65E+04	2.4	12.468	1.6	2.2573	5.3	0.2041	5.1	0.95	1197	55	1199	37	1202	32
26	225	1.56E+04	2.9	13.338	3.6	1.8517	10.1	0.1791	9.4	0.93	1062	92	1064	67	1068	72
27	341	8.72E+04	2.8	12.309	2.0	2.3279	3.7	0.2078	3.2	0.84	1217	35	1221	27	1227	39
28	163	1.15E+04	2.4	12.519	3.2	2.3861	4.9	0.2166	3.7	0.75	1264	43	1238	35	1194	64
29	245	1.14E+04	2.4	12.977	3.2	1.9957	4.4	0.1878	3.0	0.69	1110	31	1114	30	1123	63
30	565	6.32E+04	1.5	12.482	1.5	2.2007	3.7	0.1992	3.4	0.92	1171	36	1181	26	1200	29
31	173	1.66E+04	2.7	12.550	3.3	2.3695	5.7	0.2157	4.6	0.81	1259	53	1233	41	1189	66
32	229	2.30E+04	3.2	12.864	3.6	2.1280	5.6	0.1985	4.3	0.76	1167	46	1158	39	1140	72
33	238	2.48E+04	2.2	12.858	3.2	2.0798	4.9	0.1940	3.6	0.75	1143	38	1142	33	1141	64
35	276	2.45E+04	2.6	12.809	3.3	2.0470	4.5	0.1902	3.1	0.68	1122	32	1131	31	1149	65
36	225	2.72E+04	2.3	12.008	3.1	2.5370	5.1	0.2209	4.1	0.80	1287	48	1283	37	1276	60
37	305	3.92E+04	1.7	12.477	1.9	2.2533	4.0	0.2039	3.6	0.88	1196	39	1198	28	1201	37
38	326	2.56E+04	1.8	12.063	2.5	2.3742	3.6	0.2077	2.6	0.72	1217	29	1235	26	1267	49
39	439	8.82E+04	3.4	12.485	1.5	2.2372	6.3	0.2026	6.2	0.97	1189	67	1193	44	1199	29

Appendix 1. U-Pb geochronologic analyses by LA-MC-ICPMS.

Spot No.	U (ppm)	Isotope ratios									Apparent ages (Ma)					
		^{206}Pb	U/Th	$^{206}\text{Pb}^*$	\pm	$^{207}\text{Pb}^*$	\pm	$^{206}\text{Pb}^*$	\pm	error	$^{206}\text{Pb}^*$	\pm	$^{207}\text{Pb}^*$	\pm	$^{206}\text{Pb}^*$	\pm
		^{204}Pb		$^{207}\text{Pb}^*$	(%)	^{235}U	(%)	^{238}U	(%)	corr.	^{238}U	(Ma)	^{235}U	(Ma)	$^{207}\text{Pb}^*$	(Ma)
40	829	1.10E+05	1.9	12.202	1.0	2.1307	2.5	0.1886	2.2	0.91	1114	23	1159	17	1244	20
41	399	3.37E+04	3.1	12.278	1.1	2.3230	2.0	0.2069	1.7	0.84	1212	19	1219	14	1232	21
42	620	1.38E+04	1.4	12.458	0.9	2.1419	2.8	0.1935	2.7	0.95	1140	28	1162	20	1204	18
43	750	6.97E+04	1.5	13.132	1.1	1.9108	3.1	0.1820	2.9	0.94	1078	28	1085	20	1099	21
44	526	7.06E+04	2.0	12.502	2.2	2.1092	7.3	0.1913	6.9	0.95	1128	72	1152	50	1197	43
45	518	3.91E+04	1.4	12.583	2.0	2.0769	3.3	0.1895	2.6	0.79	1119	27	1141	23	1184	40
46	333	3.85E+04	1.6	12.326	1.9	2.5518	3.5	0.2281	2.9	0.84	1325	35	1287	25	1225	36
47	389	4.08E+04	2.4	12.506	1.3	2.1939	4.0	0.1990	3.8	0.95	1170	41	1179	28	1196	26
49	730	6.07E+04	2.4	12.688	1.4	2.0902	4.7	0.1923	4.5	0.96	1134	47	1146	33	1167	27
50	470	3.37E+04	2.0	12.401	1.6	2.3298	3.3	0.2095	2.8	0.87	1226	32	1221	23	1213	32
51	1180	1.17E+05	1.5	12.245	0.7	2.4312	2.2	0.2159	2.0	0.95	1260	23	1252	16	1238	14
52	290	3.42E+04	2.2	12.413	2.4	2.3757	3.6	0.2139	2.6	0.74	1249	30	1235	26	1211	47
53	213	1.51E+04	2.7	13.908	4.7	1.6219	6.9	0.1636	5.0	0.72	977	45	979	43	983	97
54	103	7.92E+03	3.3	13.510	8.3	1.9124	9.7	0.1874	5.0	0.52	1107	51	1085	65	1042	168
54	232	3.64E+04	3.5	13.298	3.3	1.8099	7.7	0.1746	7.0	0.90	1037	67	1049	51	1074	67
55	372	5.52E+04	1.5	13.365	2.1	1.5170	4.0	0.1470	3.4	0.85	884	28	937	24	1064	43
55	324	5.26E+04	1.9	12.728	2.4	2.1897	3.6	0.2021	2.7	0.74	1187	29	1178	25	1161	49
56	333	4.92E+04	3.4	12.613	2.3	2.2391	4.1	0.2048	3.3	0.82	1201	37	1193	29	1179	46
57	511	4.77E+04	2.5	12.740	0.8	2.0137	2.8	0.1861	2.7	0.96	1100	28	1120	19	1159	16
58	212	3.27E+04	2.6	12.436	2.8	2.3427	4.2	0.2113	3.1	0.75	1236	35	1225	30	1207	55
59	342	2.80E+04	2.3	12.548	2.2	2.3029	3.6	0.2096	2.9	0.79	1227	32	1213	26	1190	44
60	285	3.29E+04	1.8	12.424	2.3	2.3018	4.0	0.2074	3.3	0.82	1215	37	1213	29	1209	46
61	141	1.60E+04	28.6	14.152	7.7	1.6171	8.3	0.1660	3.2	0.38	990	29	977	52	948	157
61	311	2.37E+04	2.3	13.218	3.4	1.9817	3.5	0.1900	0.9	0.27	1121	10	1109	24	1086	67
62	257	2.27E+04	3.1	13.175	2.6	1.9133	5.0	0.1828	4.3	0.85	1082	43	1086	34	1092	53
63	490	5.76E+04	14.5	12.638	1.5	2.0877	3.0	0.1914	2.6	0.86	1129	27	1145	21	1175	30
64	300	2.78E+04	2.5	13.486	7.1	1.6847	9.6	0.1648	6.5	0.68	983	59	1003	61	1046	142
64	393	2.27E+04	1.9	13.007	2.7	2.0933	3.3	0.1975	1.9	0.57	1162	20	1147	23	1118	54
65	224	2.97E+04	2.4	12.420	2.3	2.2640	5.1	0.2039	4.5	0.89	1196	50	1201	36	1210	45
66	218	2.46E+04	3.0	12.640	4.1	1.9594	10.5	0.1796	9.7	0.92	1065	95	1102	71	1175	80
67	227	3.89E+04	2.8	12.581	2.6	2.3093	8.2	0.2107	7.7	0.95	1233	87	1215	58	1184	51
68	327	2.80E+04	3.4	13.179	2.3	1.9225	4.7	0.1838	4.2	0.88	1088	42	1089	32	1092	45
69	297	4.96E+04	2.4	12.968	3.2	1.8222	4.1	0.1714	2.5	0.62	1020	24	1053	27	1124	63
71	147	1.68E+04	16.2	13.345	4.0	1.7562	4.5	0.1700	2.0	0.45	1012	19	1029	29	1067	80
73	235	2.95E+04	2.4	12.975	4.5	2.1152	9.0	0.1990	7.8	0.86	1170	84	1154	62	1123	91
74	328	3.47E+04	2.0	13.323	2.9	1.6360	4.1	0.1581	2.9	0.70	946	25	984	26	1070	59
75	347	3.67E+04	2.8	12.357	2.7	2.4224	4.0	0.2171	2.9	0.72	1267	33	1249	29	1220	54
76	353	1.83E+04	2.8	12.437	1.8	2.2599	4.2	0.2038	3.8	0.90	1196	41	1200	29	1207	35
77	161	1.22E+04	2.6	13.528	3.8	1.8432	6.1	0.1808	4.7	0.78	1072	47	1061	40	1039	76
78	514	1.03E+05	2.1	12.746	1.7	2.0289	3.6	0.1875	3.1	0.87	1108	32	1125	24	1158	35
79	535	3.29E+04	2.2	12.369	1.3	2.1556	4.5	0.1934	4.3	0.96	1140	45	1167	31	1218	26
80	293	3.15E+04	2.3	12.381	1.8	2.3732	5.2	0.2131	4.9	0.94	1245	56	1235	37	1216	36
Mol9-7																
2	106	5.07E+04	2.3	12.425	1.5	2.2174	1.9	0.1998	1.1	0.59	1174	12	1187	13	1209	30
3	44	7.40E+03	2.8	12.329	1.6	2.2362	3.8	0.2000	3.4	0.90	1175	37	1192	27	1224	32
4	39	6.76E+03	2.1	12.347	1.6	2.4328	2.5	0.2179	1.8	0.75	1271	21	1252	18	1221	32
5	46	6.01E+03	2.0	12.745	2.3	2.0194	5.2	0.1867	4.6	0.89	1103	47	1122	35	1159	46
6	63	1.32E+04	2.3	13.847	1.2	1.6572	3.2	0.1664	3.0	0.93	992	28	992	20	992	23
7	26	3.27E+03	2.8	13.257	2.8	2.0190	3.5	0.1941	2.1	0.61	1144	22	1122	24	1080	56
8	41	6.83E+03	2.4	13.097	3.0	1.9747	3.7	0.1876	2.2	0.59	1108	22	1107	25	1104	60
10	104	1.39E+04	1.7	13.981	1.5	1.5417	4.1	0.1563	3.8	0.93	936	33	947	25	972	31
11	47	7.73E+03	2.9	12.744	2.9	2.1842	3.0	0.2019	0.8	0.27	1185	9	1176	21	1159	58
12	45	9.22E+03	3.7	13.604	1.9	1.6409	2.8	0.1619	2.1	0.75	967	19	986	18	1028	38
13	33	3.86E+03	3.8	14.020	2.8	1.6399	6.4	0.1667	5.8	0.90	994	54	986	41	967	57
14	71	7.06E+03	2.6	13.896	1.4	1.5975	2.2	0.1610	1.7	0.76	962	15	969	14	985	29
15	40	5.25E+03	3.2	13.700	2.3	1.7570	4.0	0.1746	3.3	0.82	1037	32	1030	26	1014	47
17	419	3.96E+04	3.1	12.744	1.3	1.9542	1.5	0.1806	0.7	0.45	1070	7	1100	10	1159	27
18	29	4.00E+03	5.2	12.584	3.4	2.2653	3.9	0.2067	2.0	0.51	1211	22	1202	28	1184	67
19	39	2.96E+03	2.5	14.597	2.3	1.5341	3.6	0.1624	2.8	0.77	970	25	944	22	884	47
20	156	2.07E+04	3.5	12.748	1.3	2.0999	1.8	0.1941	1.2	0.66	1144	12	1149	12	1158	27
21	59	8.98E+03	4.0	12.673	1.0	2.1638	2.2	0.1989	1.9	0.89	1169	20	1170	15	1170	19
22	207	2.07E+04	3.9	13.270	1.0	1.7960	1.3	0.1728	0.8	0.60	1028	7	1044	8	1078	21
23	88	1.26E+04	3.7	13.309	1.2	1.9662	1.5	0.1898	0.9	0.59	1120	9	1104	10	1072	24
24	85	1.03E+04	1.8	13.936	1.2	1.5911	2.4	0.1608	2.0	0.87	961	18	967	15	979	24
26	63	7.66E+03	3.0	12.764	1.6	2.0736	2.6	0.1920	2.0	0.78	1132	21	1140	18	1156	32
27	113	1.21E+04	2.0	13.079	1.3	2.0287	1.6	0.1924	1.0	0.60	1135	10	1125	11	1107	26
28	51	5.18E+03	2.6	12.299	3.5	2.3374	5.7	0.2085	4.4	0.78	1221	49	1224	40	1229	69
29	80	1.22E+04	3.0	12.796	1.9	2.0160	3.7	0.1871	3.2	0.86	1106	33	1121	25	1151	38
31	31	3.08E+03	3.8	13.892	3.2	1.6721	4.6	0.1685	3.3	0.72	1004	31	998	29	985	64
32	174	1.63E+04	4.6	13.438	1.2	1.7973	1.8	0.1752	1.4	0.75	1041	13	1044	12	1053	25
33	100	9.51E+03	3.9	14.111	1.5	1.5426	1.9	0.1579	1.2	0.62	945	11	948	12	954	31
34	298	3.65E+04	47.5	13.107	1.2	1.8256	2.4	0.1735	2.1	0.88	1032	20	1055	16	1103	23
35	137	1.59E+04	4.0	13.165	0.9	1.9101	2.7	0.1824	2.5	0.94	1080	25	1085	18	1094	19
36	82	1.06E+04	3.4	13.013	1.7	1.9980	3.8	0.1886	3.4	0.89	1114	35	1115	26	1117	35
37	54	4.56E+03	1.9	14.443	2.3	1.5029	3.0	0.1574	1.8	0.62	943	16	932	18	906	48
38	87	8.12E+03	2.5	14.086	1.8	1.5423	2.9	0.1576	2.2	0.77	943	19	947	18	957	37
39	232	2.52E+04	2.2	13.111	0.9	1.8203	1.7	0.1731	1.4	0.83	1029	13	1053	11	1102	19
40	90	1.03E+04	2.5													

Appendix 1. U-Pb geochronologic analyses by LA-MC-ICPMS.

Spot No.	U (ppm)	Isotope ratios									Apparent ages (Ma)						
		²⁰⁶ Pb/ ²⁰⁴ Pb		U/Th	²⁰⁶ Pb* ±		²⁰⁷ Pb* ±		²⁰⁶ Pb* ±		error corr.	²⁰⁶ Pb* ±		²⁰⁷ Pb* ±		²⁰⁶ Pb* ±	
					²⁰⁷ Pb* (%)	²³⁵ U (%)	²³⁸ U (%)	²³⁸ U (%)	²³⁸ U (Ma)	²³⁵ U (Ma)		²⁰⁷ Pb* (Ma)	²⁰⁶ Pb* (Ma)				
42	76	7.57E+03	3.9	13.687	2.2	1.7414	6.5	0.1729	6.1	0.94	1028	58	1024	42	1016	44	
43	121	1.22E+04	5.2	13.910	1.7	1.6010	3.0	0.1615	2.5	0.83	965	22	971	19	983	35	
44	165	2.07E+04	1.9	13.896	0.8	1.5417	2.1	0.1554	1.9	0.92	931	17	947	13	985	17	
45	88	9.38E+03	4.5	13.840	1.5	1.7041	3.2	0.1711	2.8	0.88	1018	27	1010	21	993	31	
46	68	8.63E+03	2.8	14.039	1.5	1.6427	1.7	0.1673	0.7	0.41	997	6	987	11	964	31	
47	106	1.76E+04	2.5	13.034	1.1	2.0681	4.6	0.1955	4.4	0.97	1151	47	1138	31	1114	22	
48	135	1.41E+04	3.8	12.816	1.5	2.2053	1.8	0.2050	1.0	0.54	1202	10	1183	12	1148	30	
50	174	1.88E+04	3.4	14.158	1.6	1.5191	4.5	0.1560	4.3	0.94	934	37	938	28	947	32	
51	88	8.12E+03	2.5	13.949	1.7	1.6348	2.4	0.1654	1.7	0.71	987	16	984	15	977	35	
52	80	8.69E+03	6.8	13.995	1.1	1.5994	2.4	0.1623	2.1	0.88	970	19	970	15	970	23	
53	169	2.03E+04	3.0	12.991	1.2	1.9575	3.6	0.1844	3.4	0.94	1091	34	1101	24	1121	24	
54	156	1.29E+04	1.5	14.301	1.3	1.4024	2.0	0.1455	1.6	0.78	875	13	890	12	926	26	
54	102	1.39E+04	2.7	13.117	0.8	1.9720	1.5	0.1876	1.2	0.84	1108	12	1106	10	1101	16	
55	70	7.61E+03	3.5	13.867	1.3	1.6310	1.9	0.1640	1.4	0.74	979	13	982	12	989	26	
57	79	1.12E+04	3.2	12.699	0.8	2.1542	1.8	0.1984	1.6	0.90	1167	18	1166	13	1166	16	
58	108	3.17E+04	3.1	12.937	2.8	1.7297	12.2	0.1623	11.8	0.97	970	107	1020	78	1129	56	
59	76	1.11E+04	2.7	12.452	1.4	2.1958	2.6	0.1983	2.2	0.85	1166	24	1180	18	1205	27	
60	102	9.72E+03	3.2	13.344	0.7	1.9030	1.6	0.1842	1.5	0.90	1090	15	1082	11	1067	14	
61	80	9.14E+03	4.0	13.868	1.6	1.7200	3.4	0.1730	2.9	0.87	1029	28	1016	22	989	34	
64	62	7.34E+03	6.6	13.323	1.5	1.9449	3.5	0.1879	3.1	0.90	1110	32	1097	23	1070	31	
65	118	1.11E+04	4.1	13.006	1.1	1.9624	2.3	0.1851	2.0	0.88	1095	20	1103	16	1118	22	
66	108	1.31E+04	4.7	13.410	1.5	1.8285	1.9	0.1778	1.1	0.61	1055	11	1056	12	1057	30	
67	94	9.47E+03	2.6	13.532	0.7	1.7776	3.4	0.1745	3.3	0.98	1037	32	1037	22	1039	14	
68	113	1.14E+04	2.5	14.312	0.8	1.5172	4.9	0.1575	4.8	0.99	943	42	937	30	925	17	
69	90	7.28E+03	2.3	14.649	2.2	1.4668	6.8	0.1558	6.5	0.95	934	56	917	41	877	45	
70	37	3.76E+03	2.8	13.366	4.3	1.8536	6.5	0.1797	4.9	0.75	1065	48	1065	43	1064	87	
71	48	6.59E+03	4.5	12.826	1.2	2.1409	2.6	0.1992	2.3	0.89	1171	25	1162	18	1146	23	
72	38	2.63E+04	2.5	12.768	3.0	2.0615	9.3	0.1909	8.9	0.95	1126	92	1136	64	1155	60	
73	70	6.41E+03	8.2	14.282	2.2	1.5395	2.7	0.1595	1.6	0.58	954	14	946	17	929	46	
74	132	1.46E+04	2.8	12.578	1.3	2.0254	2.2	0.1848	1.8	0.80	1093	18	1124	15	1185	26	
75	110	1.62E+04	3.4	12.440	1.6	2.1991	5.3	0.1984	5.0	0.95	1167	53	1181	37	1206	32	
76	125	1.40E+04	4.4	13.297	1.6	1.7826	4.6	0.1719	4.4	0.94	1023	41	1039	30	1074	33	
77	101	1.27E+04	1.8	13.167	1.5	1.8673	6.1	0.1783	5.9	0.97	1058	58	1070	40	1094	30	
78	117	2.09E+04	4.5	12.591	1.2	2.1714	1.9	0.1983	1.5	0.78	1166	16	1172	13	1183	24	
79	47	6.43E+03	2.1	12.830	3.8	2.0101	6.6	0.1871	5.4	0.81	1105	55	1119	45	1145	76	
80	101	1.01E+04	4.5	13.043	2.5	2.0581	3.9	0.1947	2.9	0.76	1147	31	1135	26	1113	50	
81	85	1.13E+04	5.7	12.517	2.2	2.2487	2.7	0.2041	1.5	0.56	1198	16	1196	19	1194	44	
82	79	1.11E+04	5.6	13.259	1.5	1.9720	2.1	0.1896	1.4	0.68	1119	15	1106	14	1080	31	
83	164	1.49E+04	5.8	13.804	0.9	1.6470	2.9	0.1649	2.7	0.95	984	25	988	18	998	19	
84	153	1.57E+04	3.2	12.451	1.1	2.3562	2.7	0.2128	2.4	0.92	1244	28	1229	19	1205	21	
85	225	3.25E+04	3.7	13.505	2.0	1.7809	5.0	0.1744	4.6	0.91	1037	44	1039	33	1043	41	
86	258	3.83E+04	3.6	13.747	1.2	1.7313	1.8	0.1726	1.3	0.74	1026	12	1020	11	1007	24	
87	279	3.48E+04	4.0	12.781	0.7	2.1102	1.3	0.1956	1.1	0.84	1152	12	1152	9	1153	14	
88	178	2.37E+04	4.4	13.265	1.2	1.9648	1.7	0.1890	1.1	0.68	1116	11	1104	11	1079	24	
89	284	2.74E+04	2.3	13.884	1.3	1.4860	3.1	0.1496	2.8	0.91	899	23	925	19	987	26	
90	181	2.04E+04	3.6	12.691	1.1	2.1811	2.1	0.2008	1.7	0.85	1179	19	1175	14	1167	22	
91	42	3.93E+03	3.6	13.673	2.2	1.6402	4.9	0.1627	4.3	0.89	972	39	986	31	1018	45	
92	127	1.51E+04	3.7	13.360	1.2	1.8446	2.6	0.1787	2.3	0.90	1060	23	1062	17	1065	23	
93	67	9.92E+03	6.9	13.488	2.8	1.7942	3.5	0.1755	2.2	0.63	1042	21	1043	23	1045	55	
94	115	1.16E+04	3.9	12.916	1.6	2.1218	2.7	0.1988	2.2	0.82	1169	24	1156	19	1132	31	
95	131	2.02E+04	4.1	12.947	1.4	2.0037	3.2	0.1882	2.9	0.90	1111	30	1117	22	1127	28	
96	66	6.86E+03	4.6	13.880	1.8	1.5796	13.5	0.1590	13.4	0.99	951	119	962	84	987	37	
97	578	1.60E+05	13.2	13.277	2.1	1.7577	2.9	0.1693	2.0	0.70	1008	19	1030	19	1077	41	
98	123	7.25E+03	5.2	14.517	1.1	1.4564	3.0	0.1533	2.8	0.93	920	24	913	18	895	23	
98	140	1.15E+04	2.2	14.342	1.2	1.4232	2.9	0.1480	2.6	0.91	890	22	899	17	920	24	
98	71	5.80E+03	8.6	14.291	2.1	1.4713	3.3	0.1525	2.6	0.79	915	22	919	20	928	42	
99	85	1.34E+04	1.9	12.435	2.0	2.4246	3.8	0.2187	3.2	0.86	1275	37	1250	27	1207	38	
Mol9-8																	
2	393	3.60E+04	18.0	12.314	1.4	2.4716	1.8	0.2207	1.0	0.59	1286	12	1264	13	1226	28	
3	96	7.04E+03	1.0	13.643	1.4	1.7873	4.6	0.1769	4.4	0.95	1050	42	1041	30	1022	29	
4	284	1.38E+04	5.9	12.762	0.8	1.6046	7.6	0.1485	7.5	0.99	893	63	972	47	1156	17	
10	273	3.22E+04	2.3	12.360	1.4	2.2819	4.6	0.2046	4.4	0.95	1200	48	1207	32	1219	27	
11	321	1.59E+04	8.3	12.892	1.3	1.6636	3.1	0.1556	2.8	0.90	932	24	995	20	1136	27	
12	119	1.77E+04	2.5	13.032	1.0	1.9814	12.8	0.1873	12.8	1.00	1107	130	1109	87	1114	21	
13	129	1.72E+04	1.1	13.292	1.1	1.7111	12.4	0.1650	12.3	1.00	984	112	1013	79	1075	21	
14	291	5.63E+04	2.0	12.301	1.2	2.2318	11.3	0.1991	11.3	0.99	1171	121	1191	80	1229	24	
15	132	1.30E+04	4.7	12.509	2.0	2.2861	8.1	0.2074	7.9	0.97	1215	87	1208	57	1196	39	
17	414	4.01E+04	4.6	12.531	0.9	2.1351	6.3	0.1940	6.2	0.99	1143	65	1160	43	1192	18	
18	234	1.77E+04	1.2	12.447	1.1	2.1461	3.8	0.1937	3.6	0.96	1142	38	1164	26	1205	22	
19	181	1.63E+04	1.8	13.074	0.9	1.8712	7.5	0.1774	7.5	0.99	1053	72	1071	50	1108	17	
20	255	3.88E+04	1.4	12.210	0.9	2.2648	11.2	0.2006	11.2	1.00	1178	120	1201	79	1243	18	
21	164	1.29E+04	1.6	12.719	1.4	2.2415	4.0	0.2068	3.8	0.94	1212	42	1194	28	1163	27	
22	292	2.16E+04	1.8	13.063	0.6	1.8517	10.4	0.1754	10.3	1.00	1042	99	1064	68	1110	11	
23	299	6.95E+04	1.7	12.272	0.9	2.3219	11.4	0.2067	11.3	1.00	1211	125	1219	81	1233	18	
24	907	6.20E+04	2.1	12.645	0.7	1.9098	2.8	0.1751	2.7	0.96	1040	26	1085	18	1174	14	
25	473	3.62E+04	2.0	12.257	0.6	2.3658	1.4	0.2103	1.3	0.91	1230	14	1232	10	1236	11	
26	446	9.39E+04	1.3	12.220	0.7	2.3713	2.4	0.2102	2.3	0.96	1230	25	1234	17	1241	13	
27	366	3.91E+04	2.3	12.431	0.5	2.2693	1.3	0.2046	1.2								

Appendix 1. U-Pb geochronologic analyses by LA-MC-ICPMS.

Spot No.	U (ppm)	Isotope ratios								Apparent ages (Ma)						
		²⁰⁶ Pb/ ²⁰⁴ Pb	U/Th	²⁰⁶ Pb* ±		²⁰⁷ Pb* ±		²⁰⁶ Pb* ±		error corr.	²⁰⁶ Pb* ±		²⁰⁷ Pb* ±		²⁰⁶ Pb* ±	
				²⁰⁷ Pb*	(%)	²³⁵ U	(%)	²³⁸ U	(%)		²³⁸ U	(Ma)	²³⁵ U	(Ma)	²⁰⁷ Pb*	(Ma)
29	624	2.88E+04	1.3	13.102	0.5	1.9214	3.5	0.1826	3.4	0.99	1081	34	1089	23	1104	11
30	969	6.23E+04	1.5	12.439	0.8	2.2203	1.2	0.2003	0.9	0.76	1177	10	1187	9	1207	15
31	1650	1.88E+04	9.4	12.159	0.9	1.7295	3.8	0.1525	3.6	0.97	915	31	1020	24	1251	18
32	887	6.92E+04	1.6	12.147	0.8	2.4268	2.0	0.2138	1.9	0.92	1249	21	1251	15	1253	15
33	965	9.22E+04	2.0	12.226	0.8	2.1446	4.1	0.1902	4.0	0.98	1122	41	1163	28	1241	17
34	427	2.66E+04	1.3	13.943	0.9	1.6106	3.5	0.1629	3.4	0.97	973	31	974	22	978	18
35	2630	1.98E+05	4.1	12.284	0.6	1.9908	1.5	0.1774	1.4	0.93	1053	14	1112	10	1231	11
36	474	6.52E+04	2.0	12.605	1.8	2.2107	6.4	0.2021	6.2	0.96	1187	67	1184	45	1180	35
37	1230	6.05E+04	2.2	12.191	1.0	2.3525	1.4	0.2080	1.1	0.74	1218	12	1228	10	1246	19
38	902	5.02E+04	2.8	12.024	0.5	2.5387	1.4	0.2214	1.4	0.93	1289	16	1283	11	1273	10
39	1840	1.95E+05	2.2	11.936	0.7	2.4538	1.9	0.2124	1.8	0.94	1242	20	1259	14	1287	13
41	424	2.73E+04	1.6	13.904	0.5	1.6694	1.7	0.1683	1.6	0.95	1003	15	997	11	984	11
42	990	8.63E+04	1.4	13.519	0.8	1.8174	1.5	0.1782	1.3	0.85	1057	13	1052	10	1041	16
43	653	4.32E+04	4.0	12.361	0.9	2.3364	1.4	0.2095	1.1	0.75	1226	12	1223	10	1219	18
44	727	6.44E+04	1.8	12.377	0.7	2.2956	2.1	0.2061	2.0	0.95	1208	22	1211	15	1217	13
45	596	6.44E+04	5.2	13.231	1.2	1.8583	2.1	0.1783	1.8	0.83	1058	17	1066	14	1084	23
46	586	3.52E+04	1.6	12.307	1.0	2.3877	1.7	0.2131	1.4	0.83	1245	16	1239	12	1228	19
47	1320	8.53E+04	2.2	12.152	0.8	2.2970	2.1	0.2024	1.9	0.92	1188	20	1211	15	1252	16
48	698	1.28E+05	1.9	12.312	0.6	2.2281	2.1	0.1990	2.1	0.96	1170	22	1190	15	1227	12
49	649	5.15E+04	2.0	13.941	0.6	1.5526	6.5	0.1570	6.5	1.00	940	57	952	40	978	12
50	1360	1.50E+05	2.5	12.053	0.8	2.3456	1.4	0.2050	1.2	0.82	1202	13	1226	10	1268	16
52	1360	9.85E+04	2.3	12.717	0.7	1.8144	2.0	0.1673	1.8	0.93	997	17	1051	13	1163	14
53	904	4.56E+04	2.3	12.415	0.5	2.0435	1.3	0.1840	1.2	0.91	1089	12	1130	9	1210	11
54	2040	1.12E+05	2.8	12.598	0.6	1.6377	2.1	0.1496	2.0	0.96	899	17	985	13	1182	11
55	605	6.69E+04	2.4	12.147	0.7	2.2917	1.8	0.2019	1.6	0.91	1186	17	1210	12	1253	14
55	297	2.04E+04	1.4	12.275	1.2	2.3284	3.2	0.2073	3.0	0.92	1214	33	1221	23	1233	24
56	836	1.16E+05	1.5	12.377	1.0	2.1685	2.1	0.1947	1.9	0.88	1147	20	1171	15	1216	20
57	695	4.97E+04	2.0	12.851	0.6	1.8030	1.7	0.1680	1.6	0.93	1001	15	1047	11	1142	12
57	860	4.38E+04	48.5	12.494	0.8	1.9708	3.0	0.1786	2.9	0.97	1059	28	1106	20	1198	15
58	540	4.48E+04	2.4	12.763	2.0	2.2213	2.5	0.2056	1.6	0.62	1205	17	1188	18	1156	39
59	768	6.27E+04	1.6	12.593	1.3	2.1540	6.1	0.1967	6.0	0.98	1158	64	1166	43	1182	27
60	1130	5.95E+04	1.9	12.034	0.7	2.5175	1.9	0.2197	1.7	0.92	1280	20	1277	14	1272	14
Oax3-10-1																
1	104	3.32E+04	1.3	13.001	2.6	1.9423	3.8	0.1831	2.7	0.72	1084	27	1096	26	1119	53
2	488	1.23E+05	2.8	12.502	0.6	2.1427	2.4	0.1943	2.3	0.97	1144	24	1163	17	1197	12
3	336	1.00E+05	2.1	11.012	1.1	3.0619	4.5	0.2446	4.3	0.97	1410	55	1423	34	1443	21
4	379	7.54E+04	2.6	13.137	1.4	1.9214	3.4	0.1831	3.0	0.90	1084	30	1089	22	1098	29
5	168	7.60E+04	2.0	11.737	1.1	2.5544	3.5	0.2174	3.4	0.95	1268	39	1288	26	1320	21
6	260	7.55E+04	2.4	11.232	2.3	3.2400	5.2	0.2639	4.6	0.90	1510	62	1467	40	1405	43
7	231	4.46E+04	1.5	11.856	1.1	2.4069	6.1	0.2070	6.0	0.98	1213	66	1245	44	1301	21
8	314	1.17E+05	2.1	11.574	2.2	2.6013	8.4	0.2184	8.1	0.97	1273	94	1301	62	1347	42
9	691	2.12E+05	5.2	12.038	0.6	2.3918	3.2	0.2088	3.2	0.99	1223	35	1240	23	1271	11
10	600	1.11E+05	2.4	12.833	1.4	2.0608	2.1	0.1918	1.6	0.76	1131	17	1136	14	1145	27
11	192	6.53E+04	1.3	12.098	2.0	2.5235	3.2	0.2214	2.4	0.77	1289	29	1279	23	1261	40
12	128	3.39E+04	2.4	13.936	2.3	1.6412	3.2	0.1659	2.2	0.69	989	20	986	20	979	46
13	241	6.86E+04	2.8	12.415	1.0	2.1947	3.5	0.1976	3.4	0.96	1162	36	1179	24	1210	19
14	492	7.77E+04	1.4	11.612	0.8	2.4835	7.3	0.2092	7.2	0.99	1224	81	1267	53	1341	16
16	224	2.08E+04	2.0	12.011	1.8	2.5455	3.1	0.2217	2.5	0.82	1291	30	1285	23	1275	35
17	2830	3.74E+05	73.0	13.648	0.5	1.5376	4.1	0.1522	4.1	0.99	913	35	946	25	1021	9
18	560	2.01E+05	1.5	12.374	0.7	2.1922	1.7	0.1967	1.6	0.91	1158	16	1179	12	1217	14
20	548	1.24E+05	1.8	11.551	1.1	2.7304	5.8	0.2287	5.7	0.98	1328	68	1337	43	1351	21
21	589	2.59E+05	2.4	11.417	1.0	2.6056	7.8	0.2158	7.7	0.99	1259	88	1302	57	1374	19
22	349	9.29E+04	2.4	12.697	0.9	1.9696	3.2	0.1814	3.1	0.96	1074	31	1105	22	1166	18
23	185	2.52E+04	2.1	13.038	2.8	2.1126	3.2	0.1998	1.4	0.45	1174	16	1153	22	1113	57
24	232	6.51E+04	1.7	13.207	1.7	1.9102	6.1	0.1830	5.9	0.96	1083	59	1085	41	1088	34
25	1030	3.59E+05	9.5	12.851	0.6	2.0208	2.8	0.1883	2.7	0.97	1112	28	1123	19	1142	13
26	327	9.25E+04	3.4	12.128	1.1	2.3944	5.5	0.2106	5.4	0.98	1232	61	1241	40	1256	22
27	63	8.92E+03	1.5	13.632	8.7	1.6755	8.9	0.1657	1.9	0.22	988	18	999	57	1024	176
28	353	5.14E+04	2.7	13.544	1.9	1.9193	3.5	0.1885	2.9	0.84	1113	30	1088	23	1037	38
29	855	6.86E+04	6.8	13.420	2.0	1.8217	9.8	0.1773	9.6	0.98	1052	93	1053	64	1055	41
30	437	4.52E+04	2.5	10.952	0.7	3.1575	1.7	0.2508	1.6	0.92	1443	20	1447	13	1453	13
31	545	2.03E+05	1.7	11.461	0.5	2.6505	4.8	0.2203	4.8	1.00	1284	56	1315	36	1366	9
32	830	1.07E+05	6.9	13.147	0.8	1.9091	2.5	0.1820	2.4	0.95	1078	24	1084	17	1097	15
34	561	1.93E+05	2.5	12.100	1.8	2.5554	8.4	0.2243	8.2	0.98	1304	97	1288	62	1261	36
35	287	5.74E+04	1.6	12.432	0.9	2.2666	1.7	0.2044	1.4	0.83	1199	15	1202	12	1208	18
36	157	3.44E+04	3.2	12.929	2.2	1.9853	5.3	0.1862	4.8	0.91	1101	49	1111	36	1130	44
37	58	1.89E+04	3.1	13.596	5.4	1.5827	8.0	0.1561	6.0	0.74	935	52	963	50	1029	110
38	253	4.59E+04	3.3	12.027	1.5	2.3089	4.5	0.2014	4.3	0.94	1183	46	1215	32	1273	29
39	226	7.34E+04	2.1	12.092	1.2	2.3046	3.8	0.2021	3.6	0.95	1187	39	1214	27	1262	24
40	400	7.68E+04	17.7	12.650	1.3	2.0839	2.8	0.1912	2.5	0.89	1128	26	1144	20	1174	26
41	391	8.46E+04	1.8	12.713	1.4	2.0801	4.2	0.1918	3.9	0.94	1131	41	1142	29	1164	29
42	574	1.76E+05	7.4	12.772	1.5	2.1955	3.8	0.2034	3.5	0.92	1193	38	1180	27	1154	31
43	673	1.16E+05	50.3	12.568	1.4	2.2619	2.5	0.2062	2.0	0.82	1208	22	1201	18	1186	28
45	555	2.16E+05	5.0	12.843	1.3	1.9686	2.1	0.1834	1.7	0.80	1085	17	1105	14	1143	25
46	406	8.93E+04	4.2	12.131	2.6	2.3697	8.7	0.2085	8.4	0.96	1221	93	1234	63	1256	50
47	360	1.19E+05	1.9	13.514	1.7	1.7666	3.3	0.1732	2.8	0.86	1029	27	1033	21	1041	34
48	392	6.35E+04	1.9	11.540	1.6	2.8508	2.0	0.2386	1.2	0.63	1379	16	1369	15	1353	30
49	345	6.86E+04	2.3	11.054	0.9	3.0329	5.9	0.2432	5.							

Appendix 1. U-Pb geochronologic analyses by LA-MC-ICPMS.

Spot No.	U (ppm)	Isotope ratios									Apparent ages (Ma)					
		²⁰⁶ Pb/ ²⁰⁴ Pb	U/Th	²⁰⁶ Pb* ±		²⁰⁷ Pb* ±		²⁰⁶ Pb* ±		error corr.	²⁰⁶ Pb* ±		²⁰⁷ Pb* ±		²⁰⁶ Pb* ±	
				²⁰⁷ Pb*/ ²³⁵ U (%)	(%)	²³⁵ U (%)	(%)	²³⁸ U (%)	(%)		²³⁸ U (Ma)	(Ma)	²³⁵ U (Ma)	(Ma)	²⁰⁷ Pb* (Ma)	(Ma)
51	689	6.58E+04	5.3	13.118	1.0	1.8314	3.9	0.1742	3.8	0.97	1035	36	1057	26	1101	19
Oax3-10-2																
1	345	1.21E+05	4.8	12.823	0.3	2.0821	1.3	0.1936	1.3	0.97	1141	13	1143	9	1147	6
2	1560	6.13E+05	15.6	12.670	0.1	2.1780	0.9	0.2001	0.9	0.99	1176	9	1174	6	1170	3
3	183	1.88E+05	1.0	13.254	0.7	1.8516	2.1	0.1780	2.0	0.95	1056	19	1064	14	1081	14
4	1340	5.79E+05	25.1	12.445	0.3	2.2915	1.5	0.2068	1.5	0.99	1212	17	1210	11	1206	5
5	1040	9.53E+05	16.3	12.466	0.3	2.3273	2.3	0.2104	2.2	0.99	1231	25	1221	16	1202	6
6	1330	6.55E+05	24.4	12.624	0.1	2.1383	0.9	0.1958	0.9	0.99	1153	10	1161	6	1177	2
7	1230	1.44E+06	42.5	12.721	0.6	2.0417	1.2	0.1884	1.0	0.85	1113	10	1130	8	1162	13
8	134	6.84E+04	1.0	12.681	0.6	2.1371	2.7	0.1966	2.6	0.97	1157	27	1161	18	1169	12
9	281	1.58E+05	1.4	13.564	0.4	1.7253	0.7	0.1697	0.5	0.81	1011	5	1018	4	1034	8
10	1040	1.25E+06	36.7	12.466	0.4	2.2251	2.7	0.2012	2.7	0.99	1182	29	1189	19	1202	8
11	267	2.54E+05	3.8	12.822	0.7	2.0919	3.7	0.1945	3.7	0.98	1146	38	1146	26	1147	14
12	986	7.69E+05	67.3	13.679	0.3	1.6679	1.4	0.1655	1.4	0.98	987	13	996	9	1017	5
13	1340	9.50E+05	31.0	13.524	0.3	1.7138	1.2	0.1681	1.2	0.96	1002	11	1014	8	1040	7
14	1150	1.16E+06	17.7	12.945	0.9	1.8959	2.2	0.1780	2.1	0.92	1056	20	1080	15	1128	17
15	121	1.05E+04	0.9	12.869	1.0	1.9150	2.0	0.1787	1.7	0.87	1060	17	1086	13	1139	20
16	458	4.46E+05	6.9	12.648	0.4	2.1287	3.4	0.1953	3.4	0.99	1150	36	1158	24	1174	9
17	908	6.56E+05	3.8	12.607	0.2	2.1645	1.0	0.1979	1.0	0.99	1164	10	1170	7	1180	3
18	1680	1.29E+05	24.7	12.633	0.2	2.1073	0.9	0.1931	0.8	0.96	1138	9	1151	6	1176	5
19	1670	1.80E+06	37.3	12.417	0.2	2.2153	0.8	0.1995	0.8	0.97	1173	8	1186	5	1210	4
20	448	2.30E+05	4.4	13.187	0.5	1.8687	2.0	0.1787	1.9	0.97	1060	19	1070	13	1091	10
21	264	5.00E+03	2.0	13.242	2.4	1.7016	4.8	0.1634	4.2	0.87	976	38	1009	31	1082	48
22	175	1.48E+05	0.8	12.618	0.4	2.1190	1.4	0.1939	1.4	0.97	1143	14	1155	10	1178	7
23	747	1.96E+05	17.8	12.970	1.8	1.7841	9.0	0.1678	8.8	0.98	1000	82	1040	59	1124	36
24	491	2.60E+05	6.2	12.575	0.6	2.1856	2.6	0.1993	2.5	0.98	1172	27	1176	18	1185	11
25	1180	1.25E+06	14.2	12.435	0.1	2.2352	1.2	0.2016	1.2	0.99	1184	13	1192	8	1207	2
26	219	1.32E+04	2.4	12.886	1.1	1.9252	3.3	0.1799	3.1	0.95	1067	31	1090	22	1137	21
27	1550	1.76E+05	36.8	12.949	0.3	1.9596	1.3	0.1840	1.3	0.98	1089	13	1102	9	1127	6
28	880	3.23E+05	17.1	12.870	0.7	2.0176	3.4	0.1883	3.3	0.98	1112	34	1121	23	1139	14
29	1740	1.27E+06	28.2	13.583	0.3	1.7097	1.8	0.1684	1.7	0.99	1003	16	1012	11	1031	6
30	1560	6.49E+05	63.9	13.102	0.3	1.9029	1.0	0.1808	1.0	0.96	1071	10	1082	7	1104	6
31	1030	5.61E+05	20.1	12.826	0.6	2.0526	1.4	0.1909	1.3	0.90	1126	13	1133	10	1146	12
33	125	1.41E+05	0.9	13.342	0.7	1.7599	1.9	0.1703	1.8	0.94	1014	17	1031	12	1067	13
34	844	1.15E+05	9.2	13.423	0.3	1.7105	1.4	0.1665	1.4	0.97	993	13	1012	9	1055	6
35	102	6.87E+04	1.0	13.021	0.7	1.9144	1.6	0.1808	1.5	0.90	1071	15	1086	11	1116	14
36	421	2.14E+04	3.6	12.988	0.7	1.9410	1.5	0.1828	1.3	0.89	1082	13	1095	10	1121	14
37	539	2.85E+05	2.3	12.597	0.4	2.1536	0.9	0.1968	0.8	0.92	1158	9	1166	6	1182	7
38	991	6.34E+04	32.0	13.715	0.8	1.6323	4.4	0.1624	4.4	0.98	970	39	983	28	1011	16
39	1380	1.05E+06	19.8	13.166	0.7	1.8263	4.2	0.1744	4.2	0.99	1036	40	1055	28	1094	14
40	150	2.25E+05	0.8	12.571	0.4	2.1056	2.3	0.1920	2.3	0.99	1132	24	1151	16	1186	7
41	1320	8.62E+05	15.0	12.417	0.1	2.2090	0.9	0.1989	0.9	0.99	1170	10	1184	6	1210	3
42	1280	9.03E+05	17.9	13.114	0.2	1.8507	1.5	0.1760	1.5	0.99	1045	14	1064	10	1102	4
43	1580	8.20E+04	28.6	13.292	0.5	1.8466	4.2	0.1780	4.1	0.99	1056	40	1062	27	1075	10
44	1610	2.35E+05	28.6	12.405	0.1	2.2135	0.8	0.1991	0.8	0.99	1171	9	1185	6	1212	2
45	169	3.74E+03	1.5	12.815	0.8	1.9186	2.5	0.1783	2.4	0.95	1058	23	1088	17	1148	16
46	1110	1.41E+06	32.6	13.234	0.3	1.8127	1.0	0.1740	1.0	0.97	1034	10	1050	7	1083	5
47	254	1.00E+05	0.9	12.488	2.3	2.0334	2.6	0.1842	1.1	0.43	1090	11	1127	18	1199	46
48	753	2.35E+04	11.5	13.053	0.4	1.8078	2.4	0.1711	2.3	0.99	1018	22	1048	16	1111	8
49	92	9.60E+04	1.0	12.776	1.1	2.0527	3.1	0.1902	2.9	0.93	1122	29	1133	21	1154	22
50	1500	7.30E+05	39.3	13.045	0.3	1.8566	3.2	0.1757	3.2	1.00	1043	31	1066	21	1112	5
52	1270	8.72E+05	19.0	12.559	0.3	2.1780	1.9	0.1984	1.8	0.99	1167	20	1174	13	1188	6
53	134	1.24E+05	0.9	12.725	1.1	2.0068	2.8	0.1852	2.5	0.91	1095	25	1118	19	1162	23
54	160	9.46E+04	1.5	13.539	0.9	1.7079	2.8	0.1677	2.6	0.94	999	24	1011	18	1038	19
56	1140	6.74E+05	14.8	12.424	0.1	2.2169	1.6	0.1998	1.5	1.00	1174	17	1186	11	1209	2
57	1580	7.99E+05	20.3	13.298	0.2	1.8084	1.1	0.1744	1.1	0.98	1036	10	1048	7	1074	4
58	1010	9.10E+04	13.6	13.056	0.6	1.9046	2.0	0.1804	1.9	0.96	1069	19	1083	13	1111	11
59	1260	6.49E+04	11.6	13.561	0.3	1.7117	1.0	0.1683	1.0	0.96	1003	9	1013	7	1034	5
59	1370	4.69E+05	15.5	13.520	0.2	1.7398	1.4	0.1706	1.3	0.98	1015	13	1023	9	1041	5
61	1140	1.84E+05	42.1	12.452	0.6	2.2324	3.4	0.2016	3.3	0.99	1184	36	1191	24	1205	11
62	1660	1.15E+06	19.1	12.616	1.3	2.2270	6.5	0.2038	6.4	0.98	1196	69	1190	46	1179	27
63	108	8.28E+04	1.0	13.146	0.8	1.8479	1.9	0.1762	1.7	0.91	1046	16	1063	12	1097	15
64	1040	1.24E+06	15.4	12.343	0.2	2.3100	1.4	0.2068	1.4	0.99	1212	16	1215	10	1222	3
65	1160	1.03E+06	18.0	12.599	0.1	2.1351	0.9	0.1951	0.9	0.99	1149	10	1160	6	1181	3
66	1550	2.04E+06	36.9	12.644	0.2	2.1395	1.6	0.1962	1.6	0.99	1155	16	1162	11	1174	5
67	1180	2.64E+05	14.7	12.422	0.3	2.2821	1.5	0.2056	1.4	0.98	1205	16	1207	10	1209	5
68	844	6.08E+05	21.0	12.516	0.3	2.2194	1.1	0.2015	1.1	0.97	1183	12	1187	8	1195	6
69	1670	1.20E+06	21.6	13.298	0.4	1.8816	1.1	0.1815	1.0	0.93	1075	10	1075	7	1074	8
70	1180	2.66E+04	16.6	13.826	0.2	1.6303	1.3	0.1635	1.2	0.98	976	11	982	8		

Appendix 1. U-Pb geochronologic analyses by LA-MC-ICPMS.

Spot No.	U (ppm)	Isotope ratios								Apparent ages (Ma)						
		²⁰⁶ Pb/ ²⁰⁴ Pb	U/Th	²⁰⁶ Pb* ± ²⁰⁷ Pb*	(%)	²⁰⁷ Pb* ± ²³⁵ U	(%)	²⁰⁶ Pb* ± ²³⁸ U	(%)	error corr.	²⁰⁶ Pb* ± ²³⁸ U	(Ma)	²⁰⁷ Pb* ± ²³⁵ U	(Ma)	²⁰⁶ Pb* ± ²⁰⁷ Pb*	(Ma)
10	80	1.82E+04	3.7	14.255	4.3	1.5404	4.9	0.1593	2.3	0.46	953	20	947	30	933	89
11	98	5.68E+04	5.3	12.706	3.4	2.2848	6.9	0.2105	6.1	0.87	1232	68	1208	49	1165	67
12	338	1.03E+05	3.5	13.936	1.1	1.6065	1.9	0.1624	1.5	0.80	970	14	973	12	979	23
13	553	1.21E+05	7.5	12.836	2.4	1.7432	5.2	0.1623	4.7	0.89	969	42	1025	34	1144	47
14	316	7.04E+04	15.5	12.614	0.9	2.1727	1.8	0.1988	1.6	0.88	1169	17	1172	13	1179	17
15	965	2.21E+05	10.3	12.697	0.4	2.0834	0.8	0.1919	0.7	0.88	1131	7	1143	5	1166	7
16	652	4.04E+05	3.4	12.599	0.5	2.1191	1.1	0.1936	0.9	0.88	1141	10	1155	7	1181	10
17	347	7.25E+04	5.9	12.624	0.9	2.1382	3.5	0.1958	3.4	0.96	1153	36	1161	24	1178	19
18	429	9.55E+04	3.6	14.024	1.6	1.5625	2.3	0.1589	1.7	0.72	951	15	955	14	966	33
19	329	7.34E+04	1.3	12.745	1.0	2.1271	2.7	0.1966	2.5	0.93	1157	27	1158	19	1159	20
20	258	2.72E+05	4.2	12.460	1.4	2.2279	2.7	0.2013	2.2	0.84	1182	24	1190	19	1203	29
21	1220	1.03E+04	3.8	12.680	0.7	2.0823	7.9	0.1915	7.8	1.00	1129	81	1143	54	1169	14
22	355	1.23E+05	3.7	13.694	1.0	1.6635	4.3	0.1652	4.2	0.97	986	38	995	27	1015	21
23	663	3.56E+04	4.3	13.381	2.6	1.6249	11.1	0.1577	10.7	0.97	944	94	980	70	1061	52
24	278	9.65E+04	1.9	12.510	1.3	2.2313	1.7	0.2024	1.1	0.63	1188	12	1191	12	1195	27
27	285	6.51E+04	2.4	12.404	1.5	2.1479	3.8	0.1932	3.5	0.92	1139	37	1164	27	1212	29
28	433	2.94E+05	1.8	12.541	1.1	2.1404	1.5	0.1947	1.0	0.67	1147	11	1162	11	1191	23
29	534	2.65E+05	0.8	12.625	0.9	2.0818	1.8	0.1906	1.5	0.86	1125	16	1143	12	1177	18
30	326	6.82E+04	2.7	12.396	1.5	2.0814	7.2	0.1871	7.0	0.98	1106	71	1143	49	1213	29
32	1030	2.41E+05	1.7	12.833	0.6	1.9885	1.8	0.1851	1.7	0.95	1095	18	1112	12	1145	11
33	621	2.66E+05	11.0	13.054	0.8	1.8523	2.9	0.1754	2.8	0.96	1042	27	1064	19	1111	16
34	355	9.18E+04	2.2	14.013	0.9	1.5546	2.0	0.1580	1.7	0.89	946	15	952	12	968	19
35	339	6.58E+04	3.1	12.524	1.9	2.3372	9.8	0.2123	9.6	0.98	1241	109	1224	70	1193	37
36	309	6.46E+04	7.8	12.919	1.3	2.0568	2.1	0.1927	1.6	0.77	1136	17	1135	14	1132	27
37	716	3.66E+05	5.4	12.457	0.3	2.2348	1.2	0.2019	1.1	0.96	1186	12	1192	8	1204	7
38	301	9.60E+04	4.8	12.502	1.0	2.2121	1.3	0.2006	0.9	0.67	1178	9	1185	9	1197	19
39	71	1.87E+04	2.7	13.763	4.6	1.6244	4.9	0.1621	1.7	0.34	969	15	980	31	1004	93
40	502	9.12E+04	4.1	12.635	0.8	2.1340	1.8	0.1956	1.7	0.91	1151	18	1160	13	1176	15
41	743	1.83E+05	7.8	12.771	0.8	1.9862	2.9	0.1840	2.8	0.96	1089	28	1111	20	1155	16
42	724	3.79E+05	4.2	13.089	3.1	1.7259	5.5	0.1638	4.5	0.82	978	41	1018	35	1106	62
43	311	1.12E+05	4.1	14.158	1.5	1.5235	2.6	0.1564	2.2	0.83	937	19	940	16	947	30
44	446	1.31E+05	3.5	12.756	1.2	2.1051	4.4	0.1947	4.3	0.96	1147	45	1150	31	1157	24
45	277	6.17E+04	5.0	13.671	1.3	1.6456	6.9	0.1632	6.8	0.98	974	62	988	44	1018	25

Gui3-6-5 (spots 1-73) and Gui3-6-6 (spots 74-100)

1	580	2.09E+04	3.1	11.633	0.6	2.5759	1.8	0.2173	1.7	0.95	1268	20	1294	13	1337	11
2	304	1.34E+05	2.0	12.522	0.6	2.2196	1.3	0.2016	1.1	0.88	1184	12	1187	9	1193	12
3	254	1.88E+05	1.0	12.555	0.6	2.2746	1.6	0.2071	1.5	0.93	1213	17	1204	11	1188	11
5	198	1.31E+05	2.8	10.882	0.5	3.0594	1.7	0.2415	1.6	0.95	1394	21	1423	13	1465	10
6	188	4.70E+04	2.2	12.815	0.9	1.7277	13.6	0.1606	13.5	1.00	960	121	1019	87	1148	19
7	393	2.12E+05	3.4	11.989	1.6	2.0929	6.9	0.1820	6.8	0.97	1078	67	1146	48	1279	31
8	621	4.62E+05	4.6	12.508	0.4	2.1943	1.5	0.1991	1.4	0.96	1170	15	1179	10	1196	8
9	169	2.33E+05	1.9	13.135	0.7	1.9434	1.8	0.1851	1.7	0.91	1095	17	1096	12	1099	15
10	583	2.22E+05	2.6	13.953	0.3	1.6328	1.1	0.1652	1.1	0.97	986	10	983	7	977	6
11	256	1.10E+05	2.4	11.679	0.6	2.7201	2.1	0.2304	2.1	0.96	1337	25	1334	16	1330	11
12	150	4.42E+04	1.8	13.800	1.6	1.7076	1.9	0.1709	1.0	0.54	1017	10	1011	12	999	33
13	366	1.04E+05	7.3	12.678	0.5	2.0697	12.2	0.1903	12.2	1.00	1123	125	1139	84	1169	10
14	294	1.01E+05	1.8	13.219	1.0	2.0433	6.8	0.1959	6.7	0.99	1153	71	1130	46	1086	20
15	349	1.62E+05	2.9	11.644	0.3	2.7113	2.3	0.2290	2.3	0.99	1329	28	1332	17	1335	6
16	221	2.42E+05	1.2	12.776	0.6	2.3050	1.2	0.2136	1.0	0.86	1248	12	1214	8	1154	12
17	876	3.20E+04	8.9	12.937	1.7	1.7620	17.1	0.1653	17.0	1.00	986	156	1032	111	1129	33
18	346	7.57E+05	2.5	12.191	0.5	2.2937	1.7	0.2028	1.7	0.95	1190	18	1210	12	1246	11
19	387	2.87E+05	2.3	8.533	6.5	3.7446	7.6	0.2317	4.0	0.52	1344	48	1581	61	1914	117
21	293	2.04E+05	2.9	10.453	4.7	3.0535	8.9	0.2315	7.5	0.85	1342	91	1421	68	1541	89
22	376	2.42E+05	2.0	12.590	0.7	2.1867	12.5	0.1997	12.5	1.00	1174	134	1177	87	1183	15
24	251	1.04E+05	4.4	12.333	1.0	2.4063	1.9	0.2152	1.7	0.87	1257	19	1244	14	1223	19
25	394	3.62E+05	1.5	11.327	1.7	2.7723	5.9	0.2278	5.7	0.96	1323	68	1348	44	1389	32
26	127	3.04E+04	2.8	11.936	1.6	2.4347	2.5	0.2108	1.9	0.78	1233	22	1253	18	1287	30
27	358	1.27E+05	5.0	13.225	0.6	1.9305	3.2	0.1852	3.1	0.98	1095	31	1092	21	1085	13
29	171	1.02E+05	1.2	12.586	1.3	2.2376	2.1	0.2043	1.7	0.79	1198	18	1193	15	1183	26
30	308	1.29E+05	11.5	12.526	0.8	2.2524	6.8	0.2046	6.7	0.99	1200	74	1198	48	1193	15
31	258	1.83E+05	1.3	11.342	0.9	2.8539	2.3	0.2348	2.2	0.92	1359	26	1370	18	1386	18
32	328	1.49E+05	2.7	13.870	0.6	1.6283	1.0	0.1638	0.8	0.79	978	7	981	6	989	12
32	334	1.82E+05	7.7	11.907	6.7	2.8017	9.8	0.2419	7.2	0.73	1397	91	1356	74	1292	130
34	73	5.65E+04	2.1	12.462	1.5	2.3298	2.8	0.2106	2.4	0.85	1232	27	1221	20	1203	29
36	192	6.75E+04	4.5	13.106	1.3	1.9661	6.4	0.1869	6.3	0.98	1104	64	1104	43	1103	26
37	96	7.80E+04	2.1	12.793	1.5	2.1369	6.8	0.1983	6.7	0.98	1166	71	1161	47	1151	30
38	421	1.54E+05	4.4	12.900	0.5	1.9355	6.1	0.1811	6.1	1.00	1073	60	1093	41	1135	10
39	350	1.68E+05	2.0	10.984	0.7	2.8995	2.6	0.2310	2.5	0.96	1340	31	1382	20	1447	14
40	464	1.02E+05	8.3	12.600	0.8	2.2005	8.6	0.2011	8.6	1.00	1181	93	1181	60	1181	16
41	81	6.07E+04	2.5	13.174	2.2	1.9209	3.6	0.1835	2.8	0.79	1086	28	1088	24	1093	44
42	204	1.55E+05	3.1	14.019	0.9	1.5983	1.2	0.1625	0.8	0.68	971	7	970	7	967	18
43	112	6.27E+04	1.7	13.054	1.4	2.0143	2.4	0.1907	2.0	0.81	1125	20	1120	16	1111	28
44	544	4.66E+05	3.7	11.631	6.4	2.0522	7.3	0.1731	3.5	0.48	1029	33	1133	50	1338	123
45	490	9.25E+05	3.5	13.957	0.6	1.5746	1.4	0.1594	1.2	0.89	953	11	960	8	976	13
46	631	3.99E+04	3.0	12.632	1.5	1.9091	3.2	0.1749	2.8	0.88	1039	26	1084	21	1176	30
47	63	2.44E+04	1.5	12.452	3.7	2.4481	10.5	0.2211	9.9	0.94	1288	115	1257	76	1205	73
48	159	9.02E+04	1.7	13.057	1.3	1.8442	4.5	0.1746	4.3	0.96	1038	41	1061	29	1110	25
48	451															

Appendix 1. U-Pb geochronologic analyses by LA-MC-ICPMS.

Spot No.	U (ppm)	Isotope ratios										Apparent ages (Ma)					
		²⁰⁶ Pb/ ²⁰⁴ Pb	U/Th	²⁰⁶ Pb*/ ²⁰⁷ Pb*	± (%)	²⁰⁷ Pb*/ ²³⁵ U	± (%)	²⁰⁶ Pb*/ ²³⁸ U	± (%)	error corr.	²⁰⁶ Pb*/ ²³⁸ U (Ma)	± (Ma)	²⁰⁷ Pb*/ ²³⁵ U (Ma)	± (Ma)	²⁰⁶ Pb*/ ²⁰⁷ Pb* (Ma)	± (Ma)	
50	222	2.09E+05	1.6	12.537	0.9	2.1633	1.7	0.1967	1.4	0.85	1158	15	1169	12	1191	18	
51	176	1.14E+05	2.2	12.551	1.0	2.1740	1.5	0.1979	1.0	0.71	1164	11	1173	10	1189	20	
52	158	5.63E+04	2.4	12.850	0.8	1.9574	2.5	0.1824	2.4	0.94	1080	24	1101	17	1142	17	
54	437	7.32E+04	3.6	12.572	0.7	2.2339	5.2	0.2037	5.2	0.99	1195	56	1192	37	1186	14	
55	63	4.30E+04	3.4	12.823	3.4	2.1314	6.3	0.1982	5.4	0.85	1166	57	1159	44	1146	67	
56	347	3.23E+05	1.5	12.712	0.7	2.1353	1.7	0.1969	1.6	0.92	1158	17	1160	12	1164	13	
57	42	1.63E+04	1.2	12.702	3.6	2.1252	3.9	0.1958	1.5	0.39	1153	16	1157	27	1165	71	
58	464	1.53E+05	3.2	12.017	0.3	2.4933	2.7	0.2173	2.7	0.99	1268	31	1270	20	1274	6	
59	479	4.26E+04	5.9	12.887	0.9	1.7330	5.1	0.1620	5.1	0.99	968	45	1021	33	1137	17	
60	217	7.58E+04	1.6	12.434	0.8	2.3090	2.0	0.2082	1.8	0.92	1219	20	1215	14	1207	15	
61	238	6.84E+04	1.4	13.154	1.0	1.9707	6.5	0.1880	6.4	0.99	1111	65	1106	43	1096	19	
62	133	1.09E+05	2.7	12.709	0.9	2.1166	4.2	0.1951	4.1	0.98	1149	43	1154	29	1164	18	
63	749	2.91E+05	3.5	12.439	0.3	2.2495	4.6	0.2029	4.6	1.00	1191	50	1197	32	1207	5	
64	486	3.26E+05	2.6	13.903	0.3	1.6618	1.5	0.1676	1.5	0.98	999	14	994	10	984	6	
65	393	1.98E+05	3.2	12.675	0.6	2.1069	5.6	0.1937	5.6	0.99	1141	58	1151	39	1170	12	
66	253	8.81E+04	3.5	12.382	1.1	2.2305	2.7	0.2003	2.4	0.91	1177	26	1191	19	1216	22	
67	98	5.53E+04	2.3	13.740	1.2	1.6301	1.8	0.1624	1.3	0.73	970	12	982	11	1008	24	
68	336	2.70E+05	2.3	13.889	0.7	1.6276	1.8	0.1639	1.7	0.93	979	15	981	11	986	14	
69	189	1.62E+05	1.8	13.062	1.2	1.9843	2.5	0.1880	2.2	0.88	1110	22	1110	17	1110	23	
70	32	2.01E+04	3.1	12.930	3.7	2.0359	4.5	0.1909	2.5	0.55	1126	25	1128	30	1130	74	
71	64	3.93E+04	2.2	12.671	2.1	2.2309	4.0	0.2050	3.4	0.85	1202	37	1191	28	1170	41	
72	208	1.00E+05	1.5	12.661	0.6	2.1981	2.0	0.2018	1.9	0.96	1185	21	1180	14	1172	12	
73	374	4.66E+05	2.3	12.298	1.9	2.3685	11.0	0.2113	10.8	0.99	1235	121	1233	78	1229	36	
74	1040	1.28E+05	2.5	11.473	3.2	2.5102	6.4	0.2089	5.6	0.87	1223	63	1275	47	1364	61	
75	646	4.81E+05	5.1	11.185	0.6	2.9520	2.7	0.2395	2.6	0.97	1384	33	1395	20	1413	12	
76	1850	6.65E+05	6.9	13.787	0.5	1.7482	6.6	0.1748	6.5	1.00	1039	63	1026	42	1001	10	
77	394	3.38E+05	2.3	9.803	0.5	3.8541	3.9	0.2740	3.9	0.99	1561	54	1604	31	1661	9	
78	658	1.45E+05	5.4	13.475	0.6	1.8126	1.1	0.1772	0.9	0.84	1051	9	1050	7	1047	12	
79	583	6.36E+04	2.4	10.792	1.7	2.8879	3.7	0.2260	3.3	0.90	1314	40	1379	28	1481	31	
80	611	4.29E+04	7.4	12.610	0.9	2.0917	3.1	0.1913	3.0	0.96	1128	31	1146	21	1180	17	
81	753	5.30E+05	10.4	12.645	2.0	2.0693	6.3	0.1898	5.9	0.95	1120	61	1139	43	1174	39	
82	747	3.44E+05	7.0	11.595	4.5	2.3065	6.2	0.1940	4.3	0.70	1143	45	1214	44	1344	87	
83	407	8.37E+04	2.5	12.149	0.7	2.3740	3.9	0.2092	3.9	0.98	1224	43	1235	28	1253	14	
84	1570	4.33E+05	7.7	12.762	0.4	2.0732	4.1	0.1919	4.1	0.99	1132	43	1140	28	1156	9	
85	389	5.23E+04	2.5	11.245	1.7	2.9448	3.9	0.2402	3.5	0.90	1388	44	1394	29	1403	33	
88	426	2.87E+05	4.8	12.384	1.0	2.3857	2.5	0.2143	2.4	0.93	1252	27	1238	18	1215	19	
89	232	1.02E+05	4.9	12.007	1.2	2.4713	4.0	0.2152	3.9	0.95	1256	44	1264	29	1276	24	
90	237	1.63E+05	5.6	9.836	0.7	3.9376	4.1	0.2809	4.0	0.98	1596	57	1621	33	1655	13	
92	1310	3.54E+05	6.1	12.963	0.4	1.9510	1.5	0.1834	1.4	0.97	1086	14	1099	10	1125	7	
93	994	1.24E+06	3.0	12.042	1.3	2.4183	3.9	0.2112	3.6	0.94	1235	41	1248	28	1270	25	
95	649	1.17E+05	4.6	10.313	0.9	3.1369	10.6	0.2346	10.6	1.00	1359	130	1442	82	1567	18	
96	239	2.06E+05	1.2	9.882	0.4	4.0409	1.7	0.2896	1.7	0.98	1640	24	1642	14	1646	7	
97	174	1.54E+05	1.8	10.332	1.5	3.3644	11.1	0.2521	11.0	0.99	1449	142	1496	87	1563	29	
98	581	5.36E+05	8.4	12.109	1.1	2.5066	2.2	0.2201	1.9	0.86	1283	22	1274	16	1259	22	
99	293	1.57E+05	1.4	11.292	1.0	2.9923	8.0	0.2451	8.0	0.99	1413	101	1406	61	1395	20	
100	832	5.16E+04	6.0	12.200	0.7	2.4279	3.8	0.2148	3.8	0.99	1255	43	1251	28	1245	13	

All isotope ratios were corrected for common Pb using measured ²⁰⁴Pb for correction. Individual errors are given as 1 sigma standard deviation.