

APPENDIX A: SAMPLE LOCATIONS & ANALYSES

Table B-1. Summary of sample locations and analyses performed

Sample Description				Analyses		
Sample ID	UTM Coordinates	Rock Type	Field Section	Geochronology	Geochemistry	Sm-Nd Isotopes
LP-16	29S 704004 / 4184256	granite	Campofrio Pluton	✓	✓	
LP-18	29S 713559 / 4184727	gabbrodiorite	Campofrio Pluton		✓	
LP-32	29S 721295 / 4174877	epiclastic	V3	✓	✓	
LP-33	29S 669880 / 4178172	andesite	V3	✓	✓	✓
LP-34	29S 715640 / 4173312	basalt	Nerva		✓	✓
LP-38	29S 715963 / 4173499	basalt	Nerva		✓	
LP-39	29S 715331 / 4173706	rhyolite	Nerva	✓	✓	
LP-40	29S 715503 / 4174280	rhyolite	Nerva	✓	✓	
LP-44	29S 714381 / 4183063	granodiorite	Campofrio Pluton	✓	✓	
LP-45	29S 717031 / 4182304	gabbro	Campofrio Pluton		✓	✓
LP-47	29S 730344 / 4182535	gabbro	Campofrio Pluton		✓	
LP-48	29S 738291 / 4180192	gabbro	Campofrio Pluton		✓	
LP-49	29S 735768 / 4186364	granodiorite	Campofrio Pluton		✓	✓
LP-53	29S 736415 / 4185678	andesite	Zufre	✓	✓	✓
LP-56	29S 737055 / 4186144	rhyolite	Zufre		✓	
LP-59	29S 735972 / 4185835	mixed volcanics	Zufre	✓		
LP-62	29S 737766 / 4186559	granodiorite	Campofrio Pluton		✓	
LP-66	29S 738995 / 4186020	rhyolite	Zufre	✓	✓	
JB-24	29S 739059 / 4186862	quartzite	Zufre	✓	Braid et al. 2012	Braid et al. 2012

APPENDIX B: ZIRCON GEOCHRONOLOGY DATA

Table C-1. U-Pb analytical data for igneous zircon sample LP-16

Analysis Number	Isotopic ratios and 2σ errors						Ages and 2σ errors (Ma)						Reported Age	
	$^{207}\text{Pb}/^{235}\text{U}$	2σ	$^{206}\text{Pb}/^{238}\text{U}$	2σ	$^{207}\text{Pb}/^{206}\text{Pb}$	2σ	$^{207}\text{Pb}/^{206}\text{Pb}$	2σ	$^{207}\text{Pb}/^{235}\text{U}$	2σ	$^{206}\text{Pb}/^{238}\text{U}$	2σ	$^{206}\text{Pb}/^{238}\text{U}$	Conc.%
LP-16 - 25	0.3980	0.0160	0.0499	0.0011	0.0582	0.0023	495	83	339	11	314	7	314	92.5
LP-16 - 31	0.4050	0.0110	0.0517	0.0010	0.0568	0.0016	468	63	345	8	325	6	325	94.2
LP-16 - 26	0.4076	0.0110	0.0526	0.0010	0.0562	0.0015	445	60	347	8	330	6	330	95.3
LP-16 - 6	0.4003	0.0092	0.0519	0.0010	0.0561	0.0013	442	54	342	7	326	6	326	95.4
LP-16 - 15	0.4190	0.0140	0.0548	0.0011	0.0559	0.0019	431	78	356	10	344	7	344	96.5
LP-16 - 3	0.4120	0.0120	0.0547	0.0010	0.0547	0.0016	381	63	350	8	343	6	343	98.2
LP-16 - 11	0.4140	0.0120	0.0552	0.0011	0.0547	0.0017	372	68	352	9	346	7	346	98.2
LP-16 - 22	0.3831	0.0098	0.0517	0.0010	0.0541	0.0014	359	59	330	8	325	6	325	98.5
LP-16 - 2	0.4040	0.0110	0.0540	0.0010	0.0541	0.0014	360	58	344	8	339	6	339	98.6
LP-16 - 28	0.3920	0.0140	0.0526	0.0010	0.0540	0.0019	347	75	335	10	331	6	331	98.7
LP-16 - 5	0.3989	0.0099	0.0535	0.0010	0.0542	0.0014	365	57	341	7	336	6	336	98.7
LP-16 - 12	0.3670	0.0150	0.0498	0.0010	0.0535	0.0021	339	88	317	11	313	6	313	98.9
LP-16 - 9	0.4150	0.0130	0.0554	0.0011	0.0543	0.0016	365	65	352	9	348	6	348	98.9
LP-16 - 1	0.4020	0.0120	0.0542	0.0011	0.0539	0.0017	359	73	344	9	340	7	340	99.0
LP-16 - 30	0.3860	0.0140	0.0520	0.0010	0.0539	0.0019	345	77	330	10	327	6	327	99.0
LP-16 - 23	0.3865	0.0110	0.0522	0.0010	0.0537	0.0015	342	59	331	8	328	6	328	99.0
LP-16 - 32	0.4035	0.0084	0.0543	0.0010	0.0537	0.0011	355	49	344	6	341	6	341	99.1
LP-16 - 19	0.3840	0.0120	0.0520	0.0010	0.0537	0.0016	342	66	330	9	327	6	327	99.2
LP-16 - 13	0.4021	0.0097	0.0542	0.0010	0.0534	0.0013	340	56	343	7	340	6	340	99.2
LP-16 - 18	0.3883	0.0099	0.0526	0.0010	0.0535	0.0014	336	56	333	7	330	6	330	99.3
LP-16 - 14	0.4080	0.0130	0.0549	0.0011	0.0540	0.0017	345	69	347	9	345	7	345	99.4
LP-16 - 7	0.3879	0.0092	0.0527	0.0010	0.0533	0.0012	332	49	332	7	331	6	331	99.6
LP-16 - 24	0.3796	0.0080	0.0518	0.0009	0.0531	0.0011	327	48	327	6	326	6	326	99.6
LP-16 - 20	0.3960	0.0160	0.0535	0.0010	0.0533	0.0021	322	85	337	12	336	6	336	99.7
LP-16 - 4	0.3935	0.0099	0.0535	0.0010	0.0533	0.0013	335	56	337	7	336	6	336	99.8
LP-16 - 21	0.3963	0.0096	0.0539	0.0010	0.0534	0.0013	334	55	339	7	338	6	338	99.9
LP-16 - 17	0.3959	0.0099	0.0541	0.0010	0.0530	0.0014	315	56	338	7	339	6	339	100.4
LP-16 - 8	0.4012	0.0110	0.0548	0.0010	0.0531	0.0014	317	58	342	8	344	6	344	100.5
LP-16 - 29	0.4054	0.0110	0.0555	0.0010	0.0533	0.0015	327	59	345	8	348	6	348	100.8
LP-16 - 16	0.4000	0.0120	0.0551	0.0011	0.0525	0.0016	297	68	341	8	346	6	346	101.6
LP-16 - 10	0.3950	0.0120	0.0547	0.0010	0.0527	0.0016	295	65	337	9	343	6	343	101.7
LP-16-core - 1	0.4002	0.0100	0.0545	0.0010	0.0533	0.0014	332	60	341	7	342	6	342	100.3
LP-16-core - 2	0.4120	0.0160	0.0536	0.0010	0.0551	0.0022	395	86	350	11	337	6	337	96.2
LP-16-core - 3	0.3960	0.0150	0.0542	0.0011	0.0531	0.0020	303	81	338	11	340	7	340	100.7
LP-16-core - 4	0.3950	0.0130	0.0536	0.0010	0.0535	0.0017	327	70	337	10	336	6	336	99.7
LP-16-core - 5	0.3900	0.0200	0.0522	0.0015	0.0536	0.0026	340	110	334	15	328	9	328	98.1
LP-16-core - 6	0.4141	0.0110	0.0551	0.0010	0.0545	0.0014	375	59	351	8	346	6	346	98.4

Table B-2. U-Pb analytical data for igneous zircon sample LP-32

Analysis Number	Isotopic ratios and 2σ errors						Ages and 2σ errors (Ma)						Reported Age	
	$^{207}\text{Pb}/^{235}\text{U}$	2σ	$^{206}\text{Pb}/^{238}\text{U}$	2σ	$^{207}\text{Pb}/^{206}\text{Pb}$	2σ	$^{207}\text{Pb}/^{206}\text{Pb}$	2σ	$^{207}\text{Pb}/^{235}\text{U}$	2σ	$^{206}\text{Pb}/^{238}\text{U}$	2σ	$^{206}\text{Pb}/^{238}\text{U}$	Conc.%
LP-32 - 5	0.5850	0.0370	0.0553	0.0012	0.0770	0.0049	980	130	460	23	347	8	347	75.4
LP-32 - 2	0.4610	0.0300	0.0526	0.0013	0.0630	0.0037	670	130	383	21	331	8	331	86.3
LP-32 - 10	0.4440	0.0210	0.0535	0.0012	0.0603	0.0028	559	100	371	15	336	7	336	90.6
LP-32 - 27	0.4610	0.0300	0.0567	0.0014	0.0591	0.0039	510	140	382	21	356	8	356	93.1
LP-32 - 23	0.4440	0.0440	0.0555	0.0019	0.0590	0.0059	460	200	370	33	348	12	348	94.1
LP-32 - 8	0.4070	0.0180	0.0521	0.0014	0.0568	0.0027	455	100	346	13	327	9	327	94.6
LP-32 - 24	0.4190	0.0140	0.0537	0.0011	0.0566	0.0018	449	71	354	10	337	7	337	95.3
LP-32 - 16	0.4180	0.0140	0.0537	0.0012	0.0567	0.0020	447	76	354	10	337	7	337	95.4
LP-32 - 20	0.4090	0.0150	0.0536	0.0011	0.0554	0.0021	396	79	346	11	336	7	336	97.2
LP-32 - 22	0.3830	0.0150	0.0508	0.0011	0.0549	0.0022	381	87	328	11	319	7	319	97.3
LP-32 - 6	0.4080	0.0160	0.0537	0.0012	0.0551	0.0022	389	86	346	12	337	7	337	97.5
LP-32 - 7	0.3950	0.0160	0.0523	0.0011	0.0546	0.0022	368	86	337	11	329	7	329	97.6
LP-32 - 4	0.3920	0.0160	0.0520	0.0011	0.0547	0.0023	365	88	334	12	327	7	327	97.8
LP-32 - 1	0.4140	0.0220	0.0545	0.0013	0.0554	0.0030	370	110	349	16	342	8	342	97.9
LP-32 - 14	0.4090	0.0180	0.0541	0.0012	0.0549	0.0023	371	88	346	13	339	7	339	98.1
LP-32 - 21	0.4030	0.0160	0.0535	0.0011	0.0548	0.0023	362	88	342	12	336	7	336	98.2
LP-32 - 18	0.4060	0.0150	0.0541	0.0011	0.0544	0.0019	363	74	344	10	340	7	340	98.6
LP-32 - 19	0.4090	0.0320	0.0546	0.0015	0.0545	0.0042	350	160	346	23	343	9	343	99.0
LP-32 - 9	0.4100	0.0160	0.0549	0.0011	0.0541	0.0022	351	85	348	11	345	7	345	99.1
LP-32 - 15	0.4000	0.0200	0.0535	0.0011	0.0536	0.0026	340	100	339	15	336	7	336	99.1
LP-32 - 26	0.3930	0.0210	0.0531	0.0012	0.0543	0.0029	330	100	336	16	333	7	333	99.2
LP-32 - 11	0.4200	0.0300	0.0557	0.0013	0.0545	0.0038	330	140	352	21	349	8	349	99.3
LP-32 - 3	0.4040	0.0280	0.0542	0.0014	0.0540	0.0037	320	140	342	20	340	9	340	99.4
LP-32 - 25	0.3930	0.0160	0.0536	0.0011	0.0532	0.0022	304	85	335	12	337	7	337	100.5
LP-32 - 12	0.3870	0.0140	0.0531	0.0011	0.0529	0.0019	296	75	331	10	334	7	334	100.7
LP-32 - 17	0.3750	0.0150	0.0518	0.0011	0.0528	0.0022	296	87	323	11	326	7	326	100.8
LP-32 - 13	0.3890	0.0140	0.0536	0.0011	0.0523</td									

Table B-3. U-Pb analytical data for igneous zircon sample LP-33

Analysis Number	Isotopic ratios and 2σ errors						Ages and 2σ errors (Ma)						Reported Age	
	$^{207}\text{Pb}/^{235}\text{U}$	2σ	$^{206}\text{Pb}/^{238}\text{U}$	2σ	$^{207}\text{Pb}/^{206}\text{Pb}$	2σ	$^{207}\text{Pb}/^{206}\text{Pb}$	2σ	$^{207}\text{Pb}/^{235}\text{U}$	2σ	$^{206}\text{Pb}/^{238}\text{U}$	2σ	$^{206}\text{Pb}/^{238}\text{U}$	Conc. %
LP-33 - 29	0.4302	0.0110	0.0522	0.0010	0.0599	0.0016	582	60	363	8	328	6	328	90.5
LP-33 - 27	0.4260	0.0180	0.0525	0.0011	0.0587	0.0025	529	88	359	13	330	7	330	91.9
LP-33 - 1	0.4070	0.0150	0.0515	0.0011	0.0575	0.0021	489	80	346	11	324	7	324	93.6
LP-33 - 3	0.4350	0.0160	0.0552	0.0011	0.0574	0.0021	474	81	366	12	347	7	347	94.7
LP-33 - 2	0.3980	0.0180	0.0520	0.0012	0.0557	0.0025	411	98	339	13	327	7	327	96.5
LP-33 - 6	0.4160	0.0160	0.0551	0.0011	0.0545	0.0021	375	85	352	11	346	7	346	98.2
LP-33 - 16	0.3870	0.0130	0.0517	0.0010	0.0539	0.0018	354	72	331	9	325	6	325	98.2
LP-33 - 22	0.4030	0.0160	0.0535	0.0012	0.0544	0.0021	355	82	342	11	336	7	336	98.2
LP-33 - 21	0.3940	0.0130	0.0528	0.0011	0.0543	0.0019	356	75	337	10	332	6	332	98.5
LP-33 - 26	0.4130	0.0210	0.0548	0.0012	0.0545	0.0029	360	110	349	15	344	7	344	98.5
LP-33 - 25	0.4180	0.0140	0.0557	0.0012	0.0546	0.0019	375	75	354	10	349	7	349	98.7
LP-33 - 15	0.3750	0.0140	0.0508	0.0012	0.0530	0.0018	337	84	323	10	319	8	319	98.7
LP-33 - 23	0.3890	0.0120	0.0523	0.0010	0.0537	0.0016	339	67	333	9	329	6	329	98.8
LP-33 - 17	0.3930	0.0270	0.0525	0.0014	0.0543	0.0037	340	140	334	20	330	9	330	98.8
LP-33 - 4	0.3990	0.0120	0.0535	0.0010	0.0542	0.0016	360	65	340	8	336	6	336	98.9
LP-33 - 11	0.4230	0.0170	0.0564	0.0012	0.0544	0.0022	366	88	357	12	353	8	353	99.0
LP-33 - 7	0.4110	0.0130	0.0550	0.0011	0.0542	0.0017	356	68	349	10	345	7	345	99.1
LP-33 - 28	0.3860	0.0130	0.0522	0.0011	0.0536	0.0019	333	76	331	10	328	7	328	99.1
LP-33 - 5	0.3950	0.0110	0.0533	0.0010	0.0540	0.0016	348	65	338	8	335	6	335	99.1
LP-33 - 19	0.4140	0.0260	0.0554	0.0013	0.0540	0.0032	340	120	350	19	348	8	348	99.3
LP-33 - 8	0.4110	0.0260	0.0549	0.0013	0.0544	0.0036	330	130	346	18	344	8	344	99.5
LP-33 - 12	0.4000	0.0220	0.0539	0.0013	0.0540	0.0028	350	110	340	16	338	8	338	99.5
LP-33 - 18	0.4000	0.0220	0.0542	0.0012	0.0534	0.0028	320	110	340	16	340	7	340	100.0
LP-33 - 10	0.4040	0.0140	0.0547	0.0011	0.0536	0.0019	330	73	343	10	343	7	343	100.0
LP-33 - 14	0.3910	0.0140	0.0533	0.0010	0.0532	0.0019	314	76	334	10	335	6	335	100.2
LP-33 - 9	0.3940	0.0170	0.0539	0.0011	0.0533	0.0024	305	91	336	12	338	7	338	100.6
LP-33 - 13	0.4030	0.0230	0.0550	0.0013	0.0534	0.0030	320	120	342	17	345	8	345	100.9
LP-33 - 20	0.3940	0.0160	0.0541	0.0011	0.0528	0.0022	298	87	336	12	340	7	340	101.0
LP-33-core - 2	0.9730	0.0440	0.0897	0.0021	0.0779	0.0026	1135	70	688	23	554	13	554	80.5
LP-33-core - 3	0.4430	0.0160	0.0524	0.0011	0.0608	0.0021	598	73	371	11	329	7	329	88.8
LP-33-core	0.4070	0.0170	0.0539	0.0011	0.0546	0.0022	371	85	346	12	339	7	339	97.9
LP-33-core - 1	0.4190	0.0160	0.0554	0.0012	0.0553	0.0022	393	84	354	11	348	7	348	98.2
LP-33-core - 5	0.4180	0.0140	0.0559	0.0011	0.0540	0.0018	351	72	355	10	351	7	351	98.6
LP-33-core - 9	0.4060	0.0140	0.0543	0.0011	0.0542	0.0020	357	81	345	10	341	7	341	98.8
LP-33-core - 8	0.4170	0.0150	0.0557	0.0011	0.0541	0.0020	345	78	353	11	350	7	350	99.0
LP-33-core - 4	0.4090	0.0130	0.0548	0.0010	0.0538	0.0018	337	72	347	10	344	6	344	99.2
LP-33-core - 6	0.4160	0.0170	0.0557	0.0011	0.0540	0.0023	340	87	352	12	350	7	350	99.3
LP-33-core - 7	0.4110	0.0220	0.0565	0.0013	0.0525	0.0027	280	110	348	15	354	8	354	101.7

Table B-4. U-Pb analytical data for igneous zircon sample LP-39

Analysis Number	Isotopic ratios and 2σ errors						Ages and 2σ errors (Ma)						Reported Age	
	$^{207}\text{Pb}/^{235}\text{U}$	2σ	$^{206}\text{Pb}/^{238}\text{U}$	2σ	$^{207}\text{Pb}/^{206}\text{Pb}$	2σ	$^{207}\text{Pb}/^{206}\text{Pb}$	2σ	$^{207}\text{Pb}/^{235}\text{U}$	2σ	$^{206}\text{Pb}/^{238}\text{U}$	2σ	$^{206}\text{Pb}/^{238}\text{U}$	Conc.%
LP-39 - 23	0.4860	0.0210	0.0534	0.0011	0.0666	0.0031	782	97	400	15	335	7	335	83.9
LP-39 - 11	0.4990	0.0210	0.0555	0.0012	0.0656	0.0028	779	90	412	15	348	8	348	84.5
LP-39 - 27	0.4120	0.0140	0.0520	0.0010	0.0578	0.0019	491	71	349	10	327	6	327	93.7
LP-39 - 25	0.3549	0.0110	0.0463	0.0009	0.0561	0.0016	439	65	308	8	291	6	291	94.6
LP-39 - 5	0.4047	0.0089	0.0519	0.0010	0.0568	0.0012	477	48	345	7	326	6	326	94.7
LP-39 - 3	0.4450	0.0150	0.0566	0.0013	0.0575	0.0019	487	73	373	11	355	8	355	95.1
LP-39 - 21	0.4060	0.0150	0.0523	0.0011	0.0569	0.0021	455	77	345	11	329	7	329	95.4
LP-39 - 7	0.3823	0.0110	0.0514	0.0010	0.0543	0.0015	367	60	328	8	323	6	323	98.4
LP-39 - 1	0.4130	0.0120	0.0551	0.0011	0.0547	0.0016	387	66	351	8	346	6	346	98.7
LP-39 - 2	0.4180	0.0130	0.0557	0.0011	0.0544	0.0016	384	66	353	9	349	7	349	98.8
LP-39 - 9	0.4090	0.0210	0.0551	0.0015	0.0548	0.0027	365	100	350	16	347	9	347	99.1
LP-39 - 20	0.4100	0.0130	0.0550	0.0011	0.0544	0.0016	367	65	348	9	345	7	345	99.2
LP-39 - 26	0.4380	0.0130	0.0585	0.0011	0.0549	0.0016	387	64	369	9	367	7	367	99.3
LP-39 - 12	0.4251	0.0110	0.0569	0.0011	0.0546	0.0014	383	57	359	8	357	7	357	99.3
LP-39 - 28	0.3904	0.0100	0.0529	0.0010	0.0541	0.0014	360	57	334	8	332	6	332	99.3
LP-39 - 19	0.3740	0.0160	0.0509	0.0010	0.0538	0.0023	338	92	322	12	320	6	320	99.4
LP-39 - 15	0.4008	0.0098	0.0543	0.0010	0.0539	0.0013	356	55	343	7	341	6	341	99.5
LP-39 - 17	0.3920	0.0230	0.0531	0.0017	0.0543	0.0027	360	110	335	17	334	10	334	99.6
LP-39 - 10	0.3870	0.0110	0.0526	0.0010	0.0536	0.0015	335	63	331	8	330	6	330	99.6
LP-39 - 4	0.4050	0.0098	0.0548	0.0010	0.0539	0.0013	357	54	345	7	344	6	344	99.7
LP-39 - 14	0.3853	0.0100	0.0525	0.0010	0.0536	0.0015	338	60	330	8	330	6	330	99.8
LP-39 - 16	0.3959	0.0095	0.0538	0.0011	0.0540	0.0012	363	51	338	7	338	7	338	99.8
LP-39 - 22	0.3750	0.0130	0.0512	0.0010	0.0534	0.0018	323	72	322	9	322	6	322	99.8
LP-39 - 13	0.3945	0.0095	0.0537	0.0010	0.0535	0.0012	340	52	337	7	337	6	337	100.1
LP-39 - 24	0.3825	0.0094	0.0524	0.0010	0.0533	0.0014	333	58	329	7	329	6	329	100.2
LP-39 - 30	0.4010	0.0130	0.0546	0.0011	0.0535	0.0019	335	72	341	10	342	7	342	100.3
LP-39 - 8	0.3548	0.0100	0.0492	0.0010	0.0527	0.0014	305	59	308	8	309	6	309	100.5
LP-39 - 6	0.4049	0.0083	0.0553	0.0010	0.0534	0.0012	334	48	345	6	347	6	347	100.6
LP-39 - 29	0.3940	0.0086	0.0541	0.0010	0.0533	0.0011	340	50	337	6	340	6	340	100.7
LP-39 - 18	0.4140	0.0300	0.0564	0.0015	0.0551	0.0042	370	150	349	21	353	9	353	101.3
LP-39-core - 6	0.4490	0.0260	0.0543	0.0013	0.0610	0.0037	570	130	374	18	341	8	341	91.1
LP-39-core - 2	0.4140	0.0200	0.0538	0.0013	0.0558	0.0029	420	110	351	14	338	8	338	96.3
LP-39-core - 1	0.4200	0.0170	0.0550	0.0012	0.0555	0.0024	410	93	356	12	345	7	345	96.9
LP-39-core - 3	0.4050	0.0130	0.0545	0.0012	0.0535	0.0013	345	57	345	9	342	7	342	99.2
LP-39-core - 8	0.4000	0.0150	0.0543	0.0011	0.0535	0.0018	340	77	341	10	341	7	341	99.9
LP-39-core - 4	0.4010	0.0130	0.0543	0.0011	0.0538	0.0018	337	72	341	10	341	7	341	100.0
LP-39-core - 7	0.4210	0.0130	0.0570	0.0011	0.0541	0.0016	361	66	356	9	357	7	357	100.4
LP-39-core - 9	0.4030	0.0120	0.0550	0.0011	0.0531	0.0015	328	65	343	9	345	7	345	100.8

Table B-5. U-Pb analytical data for igneous zircon sample LP-40

Analysis Number	Isotopic ratios and 2σ errors						Ages and 2σ errors (Ma)						Reported Age	
	$^{207}\text{Pb}/^{235}\text{U}$	2σ	$^{206}\text{Pb}/^{238}\text{U}$	2σ	$^{207}\text{Pb}/^{206}\text{Pb}$	2σ	$^{207}\text{Pb}/^{206}\text{Pb}$	2σ	$^{207}\text{Pb}/^{235}\text{U}$	2σ	$^{206}\text{Pb}/^{238}\text{U}$	2σ	$^{206}\text{Pb}/^{238}\text{U}$	Conc.%
LP-40 - 18	0.4630	0.0230	0.0459	0.0016	0.0730	0.0035	970	100	385	16	289	10	289	75.1
LP-40 - 21	0.3247	0.0073	0.0386	0.0008	0.0607	0.0012	623	41	285	6	244	5	244	85.7
LP-40 - 9	0.4060	0.0120	0.0509	0.0011	0.0579	0.0017	500	64	346	9	320	7	320	92.6
LP-40 - 20	0.3868	0.0085	0.0501	0.0010	0.0560	0.0013	438	51	332	6	315	6	315	95.0
LP-40 - 6	0.3978	0.0099	0.0516	0.0010	0.0561	0.0015	438	59	340	7	324	6	324	95.5
LP-40 - 14	0.4040	0.0130	0.0533	0.0013	0.0548	0.0016	393	64	344	9	335	8	335	97.2
LP-40 - 10	0.4044	0.0110	0.0538	0.0010	0.0545	0.0016	382	65	345	8	338	6	338	97.7
LP-40 - 13	0.4030	0.0110	0.0535	0.0010	0.0548	0.0016	389	66	343	8	336	6	336	97.8
LP-40 - 2	0.3884	0.0110	0.0520	0.0010	0.0544	0.0016	366	63	334	8	327	6	327	97.9
LP-40 - 12	0.3870	0.0130	0.0520	0.0011	0.0545	0.0020	368	80	332	9	327	7	327	98.6
LP-40 - 11	0.3891	0.0100	0.0525	0.0011	0.0537	0.0015	349	61	334	8	330	6	330	98.9
LP-40 - 7	0.3740	0.0110	0.0510	0.0011	0.0536	0.0016	336	67	324	9	320	7	320	99.0
LP-40 - 19	0.3890	0.0200	0.0525	0.0011	0.0538	0.0029	330	110	333	15	330	7	330	99.1
LP-40 - 4	0.3790	0.0140	0.0517	0.0011	0.0531	0.0020	326	84	327	11	325	7	325	99.4
LP-40 - 5	0.3956	0.0097	0.0536	0.0010	0.0535	0.0013	339	55	338	7	337	6	337	99.6
LP-40 - 3	0.3890	0.0140	0.0530	0.0010	0.0531	0.0020	307	77	332	10	333	6	333	100.2
LP-40 - 8	0.4070	0.0170	0.0551	0.0012	0.0535	0.0022	324	88	345	13	346	7	346	100.2
LP-40 - 15	0.4100	0.0130	0.0557	0.0013	0.0534	0.0019	325	76	348	10	350	8	350	100.5
LP-40-core - 1	0.4200	0.0230	0.0558	0.0011	0.0542	0.0030	360	120	355	17	350	7	350	98.6
LP-40-core - 2	0.4080	0.0220	0.0543	0.0011	0.0546	0.0030	340	110	345	16	341	7	341	98.7
LP-40-core - 3	0.4080	0.0140	0.0556	0.0011	0.0530	0.0017	317	71	348	10	349	7	349	100.4
LP-40-core - 4	0.5020	0.0120	0.0546	0.0012	0.0668	0.0017	823	53	413	8	343	7	343	83.1
LP-40-core - 5	0.4150	0.0140	0.0554	0.0011	0.0543	0.0020	362	79	352	10	347	7	347	98.8

Table B-6. U-Pb analytical data for igneous zircon sample LP-44

Analysis Number	Isotopic ratios and 2σ errors						Ages and 2σ errors (Ma)						Reported Age	
	$^{207}\text{Pb}/^{235}\text{U}$	2σ	$^{206}\text{Pb}/^{238}\text{U}$	2σ	$^{207}\text{Pb}/^{206}\text{Pb}$	2σ	$^{207}\text{Pb}/^{206}\text{Pb}$	2σ	$^{207}\text{Pb}/^{235}\text{U}$	2σ	$^{206}\text{Pb}/^{238}\text{U}$	2σ	$^{206}\text{Pb}/^{238}\text{U}$	Conc.%
LP-44 - 22	0.5880	0.0300	0.0547	0.0014	0.0774	0.0042	1060	110	465	19	343	8	343	73.8
LP-44 - 19	0.4660	0.0180	0.0481	0.0017	0.0701	0.0020	913	60	387	13	303	11	303	78.3
LP-44 - 23	0.5050	0.0290	0.0543	0.0015	0.0671	0.0036	770	110	411	19	341	9	341	82.9
LP-44 - 7	0.4570	0.0210	0.0513	0.0014	0.0643	0.0026	716	91	380	14	322	9	322	84.8
LP-44 - 21	0.4310	0.0230	0.0504	0.0013	0.0617	0.0034	620	120	363	17	317	8	317	87.3
LP-44 - 14	0.4380	0.0200	0.0518	0.0012	0.0618	0.0031	600	110	369	15	326	7	326	88.2
LP-44 - 1	0.4280	0.0160	0.0520	0.0011	0.0599	0.0024	567	87	363	12	327	7	327	90.0
LP-44 - 18	0.4010	0.0250	0.0514	0.0013	0.0564	0.0035	400	130	340	18	323	8	323	95.0
LP-44 - 16	0.4260	0.0260	0.0547	0.0013	0.0558	0.0033	410	130	358	19	343	8	343	95.8
LP-44 - 9	0.4390	0.0200	0.0564	0.0012	0.0563	0.0026	420	98	367	14	354	7	354	96.3
LP-44 - 15	0.4740	0.0640	0.0585	0.0020	0.0598	0.0089	340	250	378	42	366	12	366	96.8
LP-44 - 2	0.4060	0.0160	0.0543	0.0012	0.0543	0.0022	361	87	345	12	341	8	341	98.7
LP-44 - 10	0.4000	0.0170	0.0535	0.0011	0.0537	0.0023	335	93	340	13	336	7	336	98.9
LP-44 - 5	0.4340	0.0270	0.0575	0.0015	0.0549	0.0037	360	140	364	19	360	9	360	99.0
LP-44 - 24	0.3870	0.0160	0.0523	0.0012	0.0540	0.0024	341	94	331	12	329	7	329	99.3
LP-44 - 11	0.4030	0.0160	0.0543	0.0011	0.0531	0.0021	314	86	342	12	341	7	341	99.7
LP-44 - 3	0.3900	0.0140	0.0533	0.0011	0.0532	0.0019	325	79	335	11	335	7	335	99.8
LP-44 - 6	0.3910	0.0160	0.0536	0.0011	0.0529	0.0023	316	92	336	12	336	7	336	100.1
LP-44-core - 1	0.5050	0.0240	0.0562	0.0012	0.0643	0.0030	726	95	414	16	353	7	353	85.2
LP-44-core - 2	1.2290	0.0510	0.1325	0.0030	0.0671	0.0027	810	86	810	23	802	17	802	99.3
LP-44-core - 4	0.4248	0.0100	0.0569	0.0010	0.0539	0.0013	357	53	359	7	357	6	357	99.3
LP-44-core - 6	0.5360	0.0130	0.0515	0.0010	0.0749	0.0017	1059	46	435	9	324	6	324	74.4

Table B-7. U-Pb analytical data for igneous zircon sample LP-53

Analysis Number	Isotopic ratios and 2σ errors						Ages and 2σ errors (Ma)						Reported Age	
	$^{207}\text{Pb}/^{235}\text{U}$	2σ	$^{206}\text{Pb}/^{238}\text{U}$	2σ	$^{207}\text{Pb}/^{206}\text{Pb}$	2σ	$^{207}\text{Pb}/^{206}\text{Pb}$	2σ	$^{207}\text{Pb}/^{235}\text{U}$	2σ	$^{206}\text{Pb}/^{238}\text{U}$	2σ	$^{206}\text{Pb}/^{238}\text{U}$	Conc.%
LP-53 - 11	0.6500	0.0450	0.0527	0.0011	0.0874	0.0052	1310	110	499	26	331	7	331	66.3
LP-53 - 12	0.5660	0.0240	0.0544	0.0011	0.0753	0.0030	1022	84	452	16	341	7	341	75.5
LP-53 - 17	0.6000	0.1500	0.0546	0.0014	0.0660	0.0200	1820	200	450	89	343	9	343	76.2
LP-53 - 19	0.4970	0.0190	0.0523	0.0011	0.0692	0.0027	859	84	408	13	329	7	329	80.5
LP-53 - 5	0.5000	0.1200	0.0500	0.0018	0.0680	0.0190	1540	260	380	88	314	11	314	82.7
LP-53 - 22	0.4900	0.0140	0.0532	0.0010	0.0666	0.0021	804	67	404	10	334	6	334	82.8
LP-53 - 2	0.4490	0.0140	0.0520	0.0010	0.0630	0.0020	688	69	376	10	327	6	327	86.9
LP-53 - 18	0.4420	0.0150	0.0526	0.0010	0.0611	0.0021	611	71	371	10	331	6	331	89.2
LP-53 - 4	0.4158	0.0098	0.0536	0.0010	0.0564	0.0014	455	53	353	7	337	6	337	95.5
LP-53 - 10	0.4186	0.0092	0.0542	0.0010	0.0562	0.0013	450	50	355	7	340	6	340	95.9
LP-53 - 1	0.3960	0.0210	0.0524	0.0013	0.0544	0.0029	370	110	338	15	329	8	329	97.4
LP-53 - 16	0.3851	0.0110	0.0515	0.0010	0.0545	0.0015	380	63	330	8	324	6	324	98.0
LP-53 - 20	0.4050	0.0140	0.0541	0.0011	0.0548	0.0021	374	82	346	11	340	7	340	98.2
LP-53 - 3	0.4030	0.0130	0.0539	0.0011	0.0543	0.0018	384	81	343	10	338	7	338	98.5
LP-53 - 21	0.3900	0.0120	0.0524	0.0010	0.0541	0.0017	360	69	333	9	329	6	329	98.7
LP-53 - 7	0.4120	0.0100	0.0553	0.0011	0.0545	0.0015	374	60	351	8	347	7	347	98.9
LP-53 - 9	0.4000	0.0130	0.0537	0.0011	0.0544	0.0018	368	74	341	10	337	7	337	98.9
LP-53 - 15	0.3940	0.0110	0.0533	0.0010	0.0538	0.0015	350	65	337	8	335	6	335	99.3
LP-53 - 6	0.4080	0.0170	0.0548	0.0013	0.0539	0.0022	347	90	346	12	344	8	344	99.4
LP-53 - 23	0.4010	0.0140	0.0541	0.0010	0.0538	0.0018	337	74	341	10	340	6	340	99.6
LP-53 - 14	0.3700	0.0120	0.0508	0.0010	0.0530	0.0017	312	71	319	9	320	6	320	100.1
LP-53 - 8	0.4160	0.0610	0.0547	0.0014	0.0535	0.0079	1000	130	329	47	343	8	343	104.3
LP-53 - 13	0.2670	0.0870	0.0380	0.0025	0.0450	0.0170	1620	190	213	71	240	16	240	112.7
LP-53-core - 7	0.4470	0.0180	0.0523	0.0011	0.0613	0.0027	637	97	375	12	329	7	329	87.7
LP-53-core - 5	0.4230	0.0160	0.0501	0.0010	0.0615	0.0024	613	84	357	11	315	6	315	88.2
LP-53-core - 3	0.4010	0.0150	0.0539	0.0010	0.0539	0.0020	350	80	342	11	338	6	338	98.9
LP-53-core - 6	0.4010	0.0120	0.0541	0.0011	0.0539	0.0016	347	63	343	9	339	7	339	99.1
LP-53-core - 4	0.3990	0.0130	0.0539	0.0010	0.0537	0.0018	335	70	340	9	338	6	338	99.4
LP-53-core - 1	0.3910	0.0120	0.0531	0.0010	0.0539	0.0017	344	67	334	9	334	6	334	99.9

Table B-8. U-Pb analytical data for igneous zircon sample LP-59

Analysis Number	Isotopic ratios and 2σ errors						Ages and 2σ errors (Ma)						Reported Age	
	$^{207}\text{Pb}/^{235}\text{U}$	2σ	$^{206}\text{Pb}/^{238}\text{U}$	2σ	$^{207}\text{Pb}/^{206}\text{Pb}$	2σ	$^{207}\text{Pb}/^{206}\text{Pb}$	2σ	$^{207}\text{Pb}/^{235}\text{U}$	2σ	$^{206}\text{Pb}/^{238}\text{U}$	2σ	$^{206}\text{Pb}/^{238}\text{U}$	Conc.%
LP-59 - 16	0.3810	0.0220	0.0490	0.0012	0.0568	0.0032	430	120	326	16	308	8	308	94.5
LP-59 - 12	0.3810	0.0140	0.0501	0.0010	0.0552	0.0019	400	75	327	10	315	6	315	96.5
LP-59 - 8	0.3810	0.0160	0.0509	0.0011	0.0544	0.0022	362	88	327	12	320	7	320	97.8
LP-59 - 4	0.3830	0.0140	0.0520	0.0011	0.0532	0.0019	331	84	329	10	327	7	327	99.4
LP-59 - 15	0.3860	0.0150	0.0523	0.0011	0.0540	0.0020	351	79	330	11	329	7	329	99.5
LP-59 - 10	0.3830	0.0150	0.0525	0.0011	0.0533	0.0022	310	84	328	11	330	7	330	100.6
LP-59 - 7	0.3930	0.0170	0.0529	0.0012	0.0540	0.0024	333	92	336	12	332	7	332	98.9
LP-59 - 17	0.4040	0.0130	0.0536	0.0011	0.0548	0.0018	377	73	343	10	336	7	336	98.0
LP-59 - 2	0.4000	0.0160	0.0537	0.0011	0.0541	0.0021	342	83	340	11	337	7	337	99.1
LP-59 - 21	0.3990	0.0150	0.0538	0.0011	0.0539	0.0020	345	82	342	11	338	7	338	98.8
LP-59 - 9	0.3980	0.0130	0.0538	0.0011	0.0538	0.0018	337	71	340	10	338	7	338	99.3
LP-59 - 23	0.3940	0.0130	0.0538	0.0010	0.0533	0.0017	320	69	336	9	338	6	338	100.5
LP-59 - 11	0.3920	0.0150	0.0538	0.0011	0.0533	0.0022	307	84	336	11	338	7	338	100.6
LP-59 - 18	0.4030	0.0140	0.0539	0.0011	0.0544	0.0019	360	72	343	10	338	7	338	98.6
LP-59 - 6	0.4040	0.0170	0.0540	0.0012	0.0544	0.0023	360	93	344	13	339	7	339	98.5
LP-59 - 5	0.4000	0.0140	0.0540	0.0011	0.0539	0.0019	344	74	342	10	339	7	339	99.1
LP-59 - 20	0.4080	0.0230	0.0543	0.0013	0.0549	0.0032	350	110	346	16	341	8	341	98.6
LP-59 - 24	0.3950	0.0150	0.0544	0.0011	0.0530	0.0022	296	87	336	11	341	7	341	101.6
LP-59 - 3	0.3930	0.0140	0.0546	0.0010	0.0520	0.0019	272	77	336	10	343	6	343	102.1
LP-59 - 19	0.4240	0.0240	0.0548	0.0014	0.0569	0.0034	440	120	357	17	344	9	344	96.2
LP-59 - 14	0.4070	0.0120	0.0549	0.0011	0.0539	0.0017	345	68	346	9	344	7	344	99.6
LP-59 - 1	0.4150	0.0200	0.0557	0.0012	0.0540	0.0027	340	110	351	14	349	7	349	99.5
LP-59 - 22	0.4190	0.0150	0.0558	0.0011	0.0546	0.0019	368	73	354	10	350	7	350	98.8
LP-59-core - 1	0.4300	0.0180	0.0565	0.0012	0.0553	0.0023	390	89	362	13	354	8	354	97.8
LP-59-core - 2	0.4100	0.0130	0.0557	0.0012	0.0536	0.0017	340	69	350	9	349	7	349	99.9
LP-59-core - 3	0.4170	0.0150	0.0563	0.0012	0.0539	0.0019	344	75	353	11	353	7	353	100.1
LP-59-core - 4	0.4140	0.0130	0.0567	0.0011	0.0533	0.0018	321	69	351	10	356	7	356	101.4
LP-59-core - 5	0.4070	0.0190	0.0553	0.0013	0.0535	0.0026	330	110	346	14	347	8	347	100.3
LP-59-core - 7	0.4070	0.0150	0.0567	0.0011	0.0524	0.0020	289	83	346	11	356	7	356	102.8
LP-59-core - 8	0.4290	0.0120	0.0525	0.0011	0.0595	0.0016	563	58	362	8	330	7	330	91.1

Table B-9. U-Pb analytical data for igneous zircon sample LP-66

Analysis Number	Isotopic ratios and 2σ errors						Ages and 2σ errors (Ma)						Reported Age	
	$^{207}\text{Pb}/^{235}\text{U}$	2σ	$^{206}\text{Pb}/^{238}\text{U}$	2σ	$^{207}\text{Pb}/^{206}\text{Pb}$	2σ	$^{207}\text{Pb}/^{206}\text{Pb}$	2σ	$^{207}\text{Pb}/^{235}\text{U}$	2σ	$^{206}\text{Pb}/^{238}\text{U}$	2σ	$^{206}\text{Pb}/^{238}\text{U}$	Conc.%
LP-66 - 14	10.4800	0.2300	0.4124	0.0096	0.1850	0.0036	2696	32	2477	20	2225	44	2225	79.2
LP-66 - 26	0.4670	0.0260	0.0537	0.0014	0.0639	0.0037	650	120	386	18	337	9	337	87.4
LP-66 - 22	0.3830	0.0230	0.0468	0.0013	0.0593	0.0033	530	120	327	17	295	8	295	90.2
LP-66 - 27	0.4510	0.0180	0.0548	0.0012	0.0606	0.0025	583	87	378	13	344	7	344	91.0
LP-66 - 19	0.3960	0.0230	0.0510	0.0012	0.0567	0.0035	430	130	337	17	321	8	321	95.1
LP-66 - 1	0.4340	0.0240	0.0558	0.0014	0.0564	0.0031	440	120	365	17	350	9	350	95.9
LP-66 - 18	0.4390	0.0290	0.0567	0.0014	0.0567	0.0038	410	130	369	20	355	8	355	96.3
LP-66 - 25	0.4160	0.0160	0.0541	0.0012	0.0562	0.0023	419	85	352	12	340	7	340	96.5
LP-66 - 6	0.3950	0.0160	0.0520	0.0013	0.0556	0.0023	417	92	338	12	327	8	327	96.7
LP-66 - 8	0.3960	0.0170	0.0522	0.0011	0.0549	0.0023	383	88	337	12	328	7	328	97.2
LP-66 - 11	0.3930	0.0480	0.0524	0.0018	0.0547	0.0068	320	230	332	35	329	11	329	99.1
LP-66 - 21	0.3830	0.0130	0.0524	0.0010	0.0534	0.0019	319	74	329	10	330	6	330	100.1
LP-66 - 2	0.3880	0.0190	0.0525	0.0013	0.0535	0.0024	322	96	331	14	330	8	330	99.6
LP-66 - 4	0.3910	0.0170	0.0529	0.0011	0.0541	0.0023	331	97	334	12	332	7	332	99.5
LP-66 - 16	0.3950	0.0130	0.0534	0.0010	0.0539	0.0018	345	71	337	10	336	6	336	99.6
LP-66 - 17	0.3990	0.0270	0.0536	0.0014	0.0538	0.0035	340	140	339	19	336	8	336	99.2
LP-66 - 28	0.4060	0.0200	0.0542	0.0013	0.0548	0.0030	370	110	345	14	341	8	341	98.7
LP-66 - 20	0.4060	0.0130	0.0545	0.0011	0.0544	0.0017	361	70	345	10	342	7	342	99.1
LP-66 - 15	0.4100	0.0220	0.0547	0.0012	0.0541	0.0029	350	110	347	16	344	8	344	99.0
LP-66 - 5	0.4100	0.0290	0.0548	0.0014	0.0548	0.0036	360	140	348	21	344	9	344	98.8
LP-66 - 24	0.4010	0.0230	0.0556	0.0014	0.0539	0.0034	300	120	342	18	349	9	349	102.0
LP-66 - 13	0.4240	0.0220	0.0565	0.0012	0.0550	0.0030	370	110	357	16	354	7	354	99.2
LP-66 - 7	0.4270	0.0190	0.0569	0.0012	0.0547	0.0024	361	92	359	14	357	7	357	99.3
LP-66 - 10	0.4210	0.0240	0.0570	0.0014	0.0543	0.0034	340	130	355	17	357	9	357	100.6
LP-66 - 3	0.4430	0.0180	0.0580	0.0013	0.0547	0.0024	355	92	363	12	363	8	363	100.0
LP-66 - 9	0.4350	0.0220	0.0581	0.0014	0.0547	0.0029	370	120	366	15	364	8	364	99.5
LP-66-core - 2	0.4390	0.0200	0.0584	0.0013	0.0549	0.0025	368	96	367	14	366	8	366	99.7
LP-66-core - 1	0.4410	0.0330	0.0585	0.0017	0.0553	0.0040	360	150	371	22	366	10	366	98.8
LP-66 - 12	0.4630	0.0240	0.0610	0.0014	0.0558	0.0028	400	100	383	16	381	8	381	99.6
LP-66 - 29	0.4600	0.0150	0.0634	0.0014	0.0528	0.0017	305	71	383	11	396	8	396	103.4