

Table 1 Summary of SHRIMP U-Pb zircon data for the Taitao granites

Grain spot	$^{206}\text{Pb}_c$	U ppm	Th ppm	$^{232}\text{Th}/^{238}\text{U}$	$^{206}\text{Pb}^*$ ppm	$^{206}\text{Pb}/^{238}\text{U}$ Age**	Total		Total	
	%						± Ma	$^{238}\text{U}/^{206}\text{P}$ ±%	$^{207}\text{Pb}/^{206}\text{Pb}$ ±%	
TPA14 (Tres Montes pluton)										
<u>1.1</u>	0.16	157	112	0.74	11.94	547.4 ±7.2	11.3	1.3	0.0598	2.1
2.1	6.81	344	241	0.73	0.27	5.47 ±0.21	1097	3.6	0.1000	9.9
<u>3.1</u>	0.30	541	272	0.52	7.05	96.8 ±1.2	65.9	1.2	0.0503	2.7
4.1	9.98	102	68	0.69	0.09	5.76 ±0.38	1008	5.3	0.1250	22.0
<u>5.1</u>	0.75	90	48	0.56	1.83	149.8 ±2.9	42.2	1.9	0.0550	5.0
6.1‡	7.01	229	110	0.49	0.17	5.06 ±0.24	1185	4.0	0.1015	15.3
<u>7.1</u>	0.04	371	137	0.38	5.99	119.9 ±1.6	53.3	1.3	0.0487	2.9
<u>7.2</u>	22.15	380	167	0.45	7.92	120.6 ±1.8	41.2	1.2	0.2246	2.0
8.1	8.45	140	103	0.76	0.11	5.34 ±0.30	1105	5.0	0.1129	17.4
<u>9.1</u>	0.07	670	310	0.48	25.27	276.8 ±3.8	22.8	1.4	0.0523	1.4
10.1	2.36	551	993	1.86	0.43	5.72 ±0.16	1100	2.6	0.0648	10.5
11.1	5.00	238	145	0.63	0.19	5.65 ±0.24	1084	3.9	0.0857	13.9
<u>12.1</u>	0.18	728	202	0.29	71.35	695.4 ±8.0	8.8	1.2	0.0641	0.7
13.1	2.88	187	144	0.80	0.16	6.25 ±0.28	1001	4.1	0.0689	20.4
14.1	11.10	96	42	0.46	0.09	6.04 ±0.41	949	5.7	0.1338	18.4
TPD110 (Seno Hoppner pluton)										
1.1	3.01	642	284	0.46	0.47	5.36 ±0.15	1166	2.6	0.0700	9.4
2.1	3.41	442	205	0.48	0.32	5.30 ±0.17	1174	3.0	0.0731	10.7
3.1	4.00	317	150	0.49	0.24	5.39 ±0.20	1147	3.5	0.0777	12.4
4.1	2.11	958	1016	1.10	0.66	5.03 ±0.11	1253	2.2	0.0628	8.1
5.1	5.86	398	199	0.52	0.29	5.06 ±0.17	1198	3.1	0.0924	10.2
6.1	3.33	603	342	0.59	0.41	4.93 ±0.14	1265	2.7	0.0725	9.2
7.1‡	0.86	5058	2756	0.56	3.82	5.61 ±0.08	1138	1.3	0.0530	3.8
8.1	4.08	603	330	0.56	0.46	5.45 ±0.16	1134	2.7	0.0784	9.2
8.2	12.99	107	36	0.35	0.08	5.14 ±0.41	1090	5.3	0.1487	27.4
9.1	2.25	943	928	1.02	0.65	5.07 ±0.11	1241	2.2	0.0639	7.6
10.1	3.94	482	216	0.46	0.34	5.10 ±0.16	1213	3.0	0.0773	10.2
11.1	8.28	338	183	0.56	0.25	5.05 ±0.19	1170	3.4	0.1116	9.9
12.1	6.05	1456	1124	0.80	1.09	5.26 ±0.10	1151	1.9	0.0939	5.2
13.1	4.63	193	58	0.31	0.14	5.19 ±0.26	1184	4.4	0.0827	22.1
TPD172 (Seno Hoppner pluton)										
1.1	6.83	263	126	0.50	0.19	5.14 ±0.21	1168	3.6	0.1001	13.0
2.1	7.60	302	140	0.48	0.22	5.09 ±0.19	1171	3.4	0.1062	10.4
3.1	16.07	204	53	0.27	0.16	4.79 ±0.24	1130	4.1	0.1730	10.5
4.1‡	81.02	221	104	0.49	0.65	4.16 ±0.81	294	2.0	0.6860	3.8
5.1	1.17	144	52	0.37	0.10	5.27 ±0.23	1208	4.2	0.0554	17.4
5.2	1.77	95	31	0.33	0.06	5.02 ±0.31	1261	6.0	0.0601	23.9
6.1	1.03	254	111	0.45	0.17	4.94 ±0.17	1290	3.4	0.0543	14.0
7.1	0.93	707	594	0.87	0.47	4.95 ±0.11	1290	2.2	0.0535	8.5
8.1	7.18	441	230	0.54	0.33	5.15 ±0.14	1161	2.5	0.1028	7.5
9.1	0.32	218	76	0.36	0.14	4.89 ±0.18	1313	3.7	0.0486	15.3
10.1	0.36	692	538	0.80	0.49	5.28 ±0.12	1216	2.2	0.0490	9.1
11.1	18.05	310	183	0.61	0.25	4.95 ±0.20	1067	3.0	0.1887	9.3
12.1	0.33	237	109	0.48	0.17	5.31 ±0.19	1209	3.5	0.0488	14.8
13.1	1.44	636	374	0.61	0.45	5.20 ±0.13	1222	2.4	0.0575	8.3
14.1	9.76	526	308	0.61	0.40	5.11 ±0.13	1137	2.4	0.1232	6.4
<u>14.2</u>	0.38	721	111	0.16	40.30	404.7 ±4.18	15.4	1.1	0.0579	0.9
15.1	23.68	1118	852	0.79	0.98	5.00 ±0.15	984	1.7	0.2331	6.2

Errors are 1-sigma; Pbc and Pb* indicate the common and radiogenic portions, respectively. Error in Standard calibration was 0.68 % for TPA14, TPD110 and TPD169, 0.36% for TPB236, 0.19% for TPB246, and 0.34% for TPD172 spots 1.1 to 3.1 and 0.18% for the remainder (these are not included in above errors but required when comparing data from different mounts). **Common Pb corrected by assuming $^{206}\text{Pb}/^{238}\text{U}$ - $^{207}\text{Pb}/^{235}\text{U}$ age-concordance. ‡ grains with discordant age (TPA14), anomalous U (TPD110) or Pbc contents (TPD172, TPD 169 & TPB236). Samples with underline are recycled zircon.

Grain spot	$^{206}\text{Pb}_c$	U ppm	Th ppm	$^{232}\text{Th}/^{238}\text{U}$	$^{206}\text{Pb}^*$ ppm	$^{206}\text{Pb}/^{238}\text{U}$ Age**		Total $^{238}\text{U}/^{206}\text{Pb}$		Total $^{207}\text{Pb}/^{206}\text{Pb}$	
	%					Ma	\pm Ma	b	\pm %	\pm %	
TPD169 (Estero Cono pluton)											
1.1	1.27	1154	1459	1.31	0.79	5.10	± 0.10	1247	2.0	0.0562	7.1
2.1	1.60	773	599	0.80	0.56	5.33	± 0.13	1190	2.4	0.0587	9.2
3.1	3.75	272	84	0.32	0.19	4.94	± 0.21	1256	3.9	0.0757	17.1
4.1	4.92	329	113	0.36	0.23	4.94	± 0.18	1240	3.4	0.0850	11.5
5.1	3.58	441	228	0.54	0.31	5.06	± 0.16	1229	3.0	0.0744	10.7
6.1	0.77	902	504	0.58	0.65	5.40	± 0.12	1184	2.2	0.0522	9.1
7.1	2.93	375	146	0.40	0.25	4.83	± 0.16	1294	3.2	0.0693	11.9
8.1	7.00	440	308	0.72	0.34	5.41	± 0.24	1107	3.3	0.1015	20.2
9.1	5.50	336	116	0.35	0.23	4.90	± 0.18	1243	3.4	0.0896	11.5
10.1‡	74.52	269	152	0.58	0.43	3.03	± 2.7	542	10.7	0.6347	27.7
11.1	2.60	851	783	0.95	0.60	5.15	± 0.17	1218	2.5	0.0667	9.1
12.1	5.11	437	212	0.50	0.32	5.19	± 0.12	1177	3.1	0.0865	11.3
13.1	1.20	832	563	0.70	0.56	5.03	± 0.17	1267	2.2	0.0556	8.7
14.1	2.50	400	112	0.29	0.29	5.31	± 0.17	1183	3.1	0.0659	11.9
15.1	3.17	373	165	0.46	0.25	4.91	± 0.13	1270	3.3	0.0711	11.9
TPB246 (Bahia Barrientos pluton)											
1.1	1.16	438	140	0.33	0.29	4.95	± 0.14	1287	2.7	0.0553	10.9
2.1	1.38	835	594	0.74	0.55	4.90	± 0.11	1298	2.1	0.0570	7.8
3.1	3.46	227	103	0.47	0.16	5.19	± 0.20	1199	3.7	0.0734	13.2
4.1	1.79	565	278	0.51	0.36	4.75	± 0.12	1332	2.4	0.0603	9.2
5.1	8.61	432	186	0.45	0.30	4.73	± 0.14	1244	2.8	0.1141	7.9
6.1	1.21	575	232	0.42	0.38	4.85	± 0.13	1313	2.7	0.0557	10.7
7.1	--	605	351	0.60	0.41	5.09	± 0.12	1269	2.3	0.0437	10.0
7.2	3.51	212	80	0.39	0.13	4.56	± 0.20	1363	4.1	0.0740	14.6
8.1	1.41	307	145	0.49	0.20	4.83	± 0.17	1316	3.4	0.0573	17.2
9.1	2.06	456	199	0.45	0.29	4.64	± 0.14	1361	2.9	0.0624	12.8
10.1	2.30	326	92	0.29	0.22	4.82	± 0.16	1307	3.2	0.0643	12.3
11.1	0.73	601	305	0.52	0.39	4.83	± 0.12	1324	2.4	0.0519	9.7
12.1	0.43	323	156	0.50	0.22	5.10	± 0.15	1259	2.8	0.0495	12.0
13.1	1.38	335	172	0.53	0.22	4.95	± 0.14	1283	2.7	0.0571	10.9
14.1	1.61	442	208	0.49	0.29	4.83	± 0.13	1312	2.5	0.0589	13.4
15.1	2.64	496	254	0.53	0.34	4.95	± 0.13	1268	2.4	0.0670	9.4
16.1	--	395	280	0.73	0.26	4.97	± 0.13	1305	2.6	0.0417	13.0
TPB236 (Cabo Raper pluton)											
1.1	0.44	391	250	0.66	0.20	3.89	± 0.11	1648	2.7	0.0496	11.4
2.1	5.42	159	56	0.37	0.08	3.68	± 0.17	1654	4.2	0.0889	14.1
3.1	2.94	172	57	0.34	0.09	4.01	± 0.17	1560	3.9	0.0693	14.9
4.1	3.42	106	42	0.40	0.06	3.80	± 0.20	1636	4.9	0.0731	15.7
5.1	2.02	271	100	0.38	0.15	4.15	± 0.14	1521	3.1	0.0621	12.1
6.1	2.99	213	83	0.40	0.11	3.74	± 0.14	1671	3.6	0.0698	14.4
7.1	4.60	243	117	0.50	0.13	3.75	± 0.13	1641	3.3	0.0824	11.5
8.1	4.79	193	111	0.60	0.10	3.72	± 0.15	1649	3.7	0.0839	12.8
9.1	1.84	224	84	0.39	0.13	4.11	± 0.15	1539	3.4	0.0606	13.8
9.2	0.31	500	369	0.76	0.28	4.20	± 0.10	1531	2.4	0.0486	10.1
11.1	0.63	307	122	0.41	0.16	3.89	± 0.13	1645	3.2	0.0511	13.6
12.1	2.01	175	85	0.50	0.09	3.66	± 0.16	1726	4.3	0.0620	17.2
12.2	1.60	146	92	0.65	0.07	3.78	± 0.17	1679	4.4	0.0588	19.6
13.1‡	56.53	491	409	0.86	0.72	4.75	± 1.47	589	3.5	0.4926	21.3
14.1	29.23	207	93	0.46	0.15	3.92	± 0.20	1164	3.6	0.2770	7.4
15.1	0.58	958	331	0.36	0.51	3.98	± 0.08	1611	2.0	0.0507	8.4
16.1	1.93	338	91	0.28	0.19	4.04	± 0.13	1566	3.1	0.0614	12.1
17.1	4.90	182	73	0.42	0.10	3.96	± 0.17	1549	4.0	0.0848	13.9
18.1	3.93	243	124	0.53	0.13	3.79	± 0.14	1635	3.5	0.0772	12.4

19.1	0.97	442	187	0.44	0.24	4.01 ±0.12	1591	2.8	0.054	12.5
20.1	2.14	373	204	0.57	0.20	4.01 ±0.13	1574	3.0	0.063	16.3
20.2	2.32	364	305	0.87	0.19	3.78 ±0.12	1663	3.0	0.064	11.4
22.1	1.84	299	132	0.46	0.15	3.77 ±0.13	1676	3.3	0.061	13.2
23.1	5.60	249	80	0.33	0.14	4.10 ±0.15	1485	3.4	0.090	11.0

Table 2 Summary of SHRIMP U-Pb zircon data for the Taitao gabbro

Grain spot	²⁰⁶ Pb _c %	U ppm	Th ppm	²³² Th / ²³⁸ U	²⁰⁶ Pb* ppm	²⁰⁶ Pb/ ²³⁸ U Age** Ma ± Ma	Total ²³⁸ U/ ²⁰⁶ Pb ± %	Total ²⁰⁷ Pb/ ²⁰⁶ Pb ± %
TPG107 (Taitao gabbro S)								
1.1	6.18	94	68	0.75	0.07	5.40 ±0.32	1121 5.6	0.0949 15.5
1.2	7.18	20	11	0.57	0.02	6.34 ±0.66	943 9.2	0.1029 35.0
2.1	9.88	27	10	0.36	0.02	5.58 ±0.52	1041 7.7	0.1242 29.9
3.1	10.01	16	6	0.36	0.01	6.07 ±0.74	955 10.5	0.1252 34.9
3.2	7.59	23	11	0.52	0.02	6.06 ±0.61	983 8.9	0.1061 31.6
4.1	9.65	22	11	0.52	0.02	5.82 ±0.58	1001 8.6	0.1223 30.4
5.1	10.79	64	65	1.04	0.05	5.65 ±0.35	1017 5.3	0.1314 18.1
5.2	14.93	31	18	0.58	0.03	5.86 ±0.67	936 8.5	0.1641 31.0
6.1	33.99	10	4	0.40	0.01	4.36 ±1.10	976 15.1	0.3146 33.5
7.1	16.73	26	16	0.61	0.02	4.69 ±0.58	1144 9.6	0.1783 28.6
8.1	20.35	12	5	0.40	0.01	6.86 ±1.06	748 11.1	0.2069 32.7
9.1	4.26	112	71	0.65	0.08	5.37 ±0.26	1149 4.4	0.0798 18.8
10.1	2.57	68	44	0.67	0.06	5.93 ±0.39	1059 6.1	0.0664 31.1
11.1	1.97	96	65	0.70	0.07	5.74 ±0.31	1100 4.8	0.0617 30.4
12.1	6.13	98	65	0.69	0.08	5.49 ±0.32	1101 5.2	0.0946 20.7
12.2	29.66	13	7	0.56	0.01	5.19 ±1.06	873 13.1	0.2804 31.2

Errors are 1-sigma; Pbc and Pb* indicate the common and radiogenic portions, respectively. Error in Standard calibration was 0.68 % (these are not included in above errors but required when comparing data from different mounts). **Common Pb corrected by assuming 206Pb/238U-207Pb/235U age-concordance.

Table 3 Summary of SHRIMP U-Pb zircon data for clastic zircon in the MVU

Grain spot	²⁰⁶ Pb _c %	U ppm	Th ppm	²³² Th / ²³⁸ U	²⁰⁶ Pb* ppm	²⁰⁶ Pb/ ²³⁸ U Age** Ma ± Ma	Total ²³⁸ U/ ²⁰⁶ P ± %	Total ²⁰⁷ Pb/ ²⁰⁶ Pb ± %		
TPB338 (Sandstone in MVU)										
1.1	5.01	311	247	0.82	0.21	4.91 ±0.17	1247	3.1	0.0860	12.3
2.1	--	635	459	0.75	0.45	5.36 ±0.13	1204	2.4	0.0444	15.8
3.1	--	727	595	0.85	0.50	5.20 ±0.12	1241	2.3	0.0441	11.7
4.1	--	413	312	0.78	0.30	5.56 ±0.16	1170	2.8	0.0389	18.6
5.1	15.56	455	323	0.73	0.37	5.14 ±0.26	1059	2.9	0.1690	16.4
6.1	--	284	171	0.62	0.81	21.28 ±0.42	303	1.9	0.0462	8.8
7.1	6.20	659	487	0.76	0.48	5.08 ±0.14	1189	2.3	0.0951	10.7
8.1	1.10	449	317	0.73	0.31	5.11 ±0.15	1246	2.7	0.0548	18.7
9.1	0.05	223	181	0.84	4.01	133.8 ±1.9	47.7	1.4	0.0491	4.0
10.1	--	1007	843	0.86	0.73	5.45 ±0.11	1191	1.9	0.0395	10.0
11.1	1.43	145	100	0.71	0.55	27.93 ±0.66	227	2.3	0.0579	9.7
12.1	0.30	258	140	0.56	0.19	5.50 ±0.20	1168	3.5	0.0485	18.3
13.1	5.38	283	169	0.62	0.20	4.89 ±0.18	1247	3.3	0.0887	13.3
14.1	--	352	244	0.71	0.26	5.57 ±0.17	1178	2.9	0.0311	26.0
15.1	1.21	565	399	0.73	0.40	5.30 ±0.14	1201	2.5	0.0557	11.3
16.1	0.29	257	266	1.07	10.20	290.2 ±3.4	21.7	1.2	0.0544	2.2
17.1	5.53	335	190	0.59	0.26	5.42 ±0.18	1123	3.0	0.0898	11.8
18.1	3.18	325	169	0.54	0.24	5.26 ±0.18	1186	3.1	0.0713	13.7
19.1	0.48	473	325	0.71	0.32	5.00 ±0.14	1282	2.7	0.0499	14.0
20.1	1.85	320	212	0.68	0.23	5.35 ±0.18	1183	3.0	0.0607	15.7
21.1	7.03	692	492	0.73	0.53	5.34 ±0.14	1122	2.2	0.1017	11.3
22.1	0.88	236	134	0.59	0.55	17.17 ±0.39	372	2.1	0.0533	10.2
23.1	2.41	249	176	0.73	0.17	5.08 ±0.19	1237	3.5	0.0652	16.2
24.1	28.26	634	407	0.66	0.61	5.20 ±0.16	890	2.0	0.2693	4.6

Errors are 1-sigma; Pbc and Pb* indicate the common and radiogenic portions, respectively. Error in Standard calibration was 0.39 % (not included in above errors but required when comparing data from different mounts).

**Common Pb corrected by assuming 206Pb/238U-207Pb/235U age-concordance.

Table 4 Major and trace elements for the Taitao granites

Sample No. Rock Type*	TPA14 TM	TPD110 SH	TPD172 SH	TPD169 EC	TPB246 BB	TPB236 CR
SiO ₂	65.84	73.96	73.93	68.11	69.33	67.92
TiO ₂	0.89	0.23	0.20	0.49	0.43	0.45
Al ₂ O ₃	15.96	13.16	13.06	14.94	15.43	15.48
Fe ₂ O ₃	5.64	2.25	2.29	3.21	3.05	3.01
MnO	0.08	0.03	0.03	0.05	0.11	0.05
MgO	2.18	0.34	0.20	1.83	1.54	1.96
CaO	3.54	1.14	1.08	3.58	2.75	3.64
Na ₂ O	3.94	4.59	4.71	4.09	4.40	4.20
K ₂ O	2.09	3.12	3.11	2.05	1.75	2.06
P ₂ O ₅	0.20	0.04	0.04	0.09	0.09	0.11
Total (wt%)	100.35	98.87	98.64	98.44	98.87	98.88
FeO*/MgO	2.33	5.97	10.28	1.58	1.78	1.38
K ₂ O+Na ₂ O	6.00	7.81	7.93	6.24	6.22	6.33
Sc	16	5	6	10	7	10
V	128	15	11	54	44	59
Co	74	107	102	76	69	79
Zn	68	35	29	33	161	42
Ga	20	16	15	16	18	18
Rb	89	132	137	68	41	77
Sr	212	55	53	169	188	271
Y	29	36	39	23	19	17
Zr	215	217	223	168	160	157
Nb	12	10	9	7	7	8
Ba	424	475	459	465	489	377
Pb	18	11	10	11	15	10
Th	8	12	15	11	11	8

*Rock types: TM; Tres Montes granodiorite-tonalite, SH; Seno Hoppner granite, EC: Estero Cono granodiorite, BB; Bahia Barrientos tonalite-trondhjemite, CR; Cabo Raper tonalite-granodiorite. Concentration of trace elements are shown in ppm.