

## Cross Polarized

## Plane Polarized

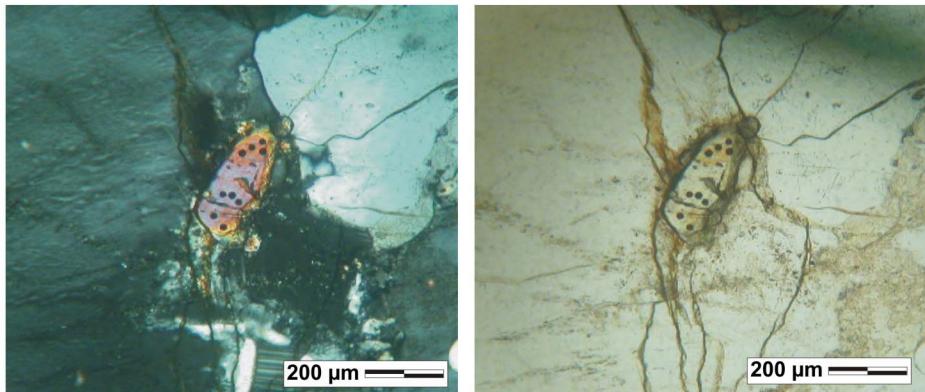
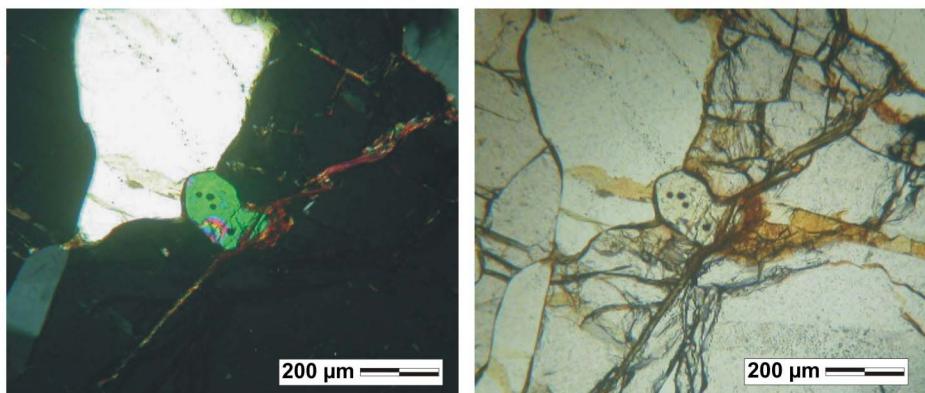
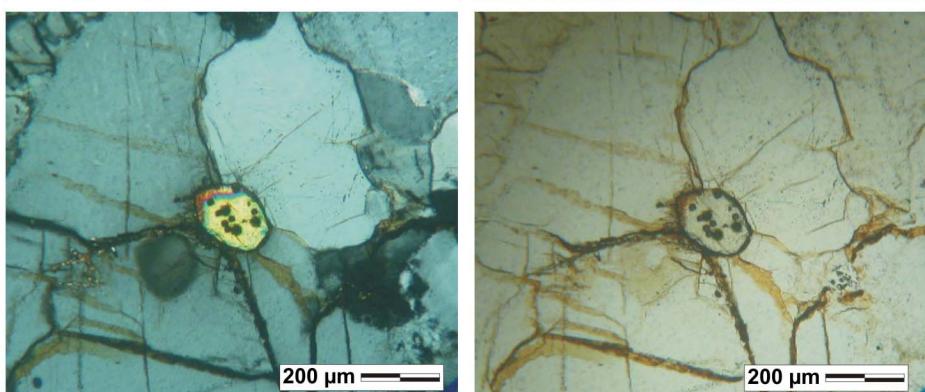
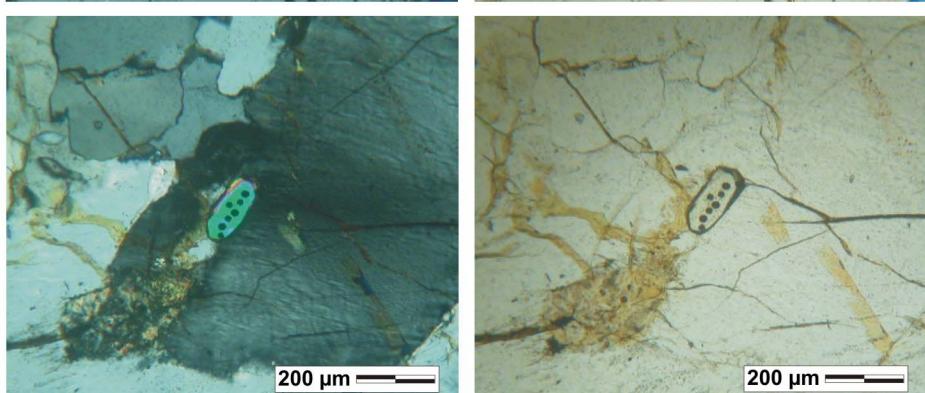
ST-3a  
Grain 2ST-3a  
Grain 2ST-3a  
Grain 2ST-3a  
Grain 2

Figure DR4: Photomicrographs displaying *in situ* textural relationships of monazite analyzed in metapelitic sample ST-3a. The column on the left displays monazite grains in cross polarized light, the column on the right in plane polarized light. The grain labels correspond to analyses listed in Online Appendix 2. Grain 1 is contained largely within a potassium feldspar crystal, Grain 2 is contained largely within garnet, Grain 3 occurs on quartz grain boundaries and Grain 4 is contained wholly within a potassium feldspar crystal. Both garnet and potassium feldspar are minerals characterizing granulite-facies metamorphism of this rock.

Table DR1. GEOCHRONOLOGY AND Sm-Nd ISOTOPE SUMMARY FOR ROCKS OF THE QUEEN MAUD BLOCK AND RAE DOMAIN

Sample	Rock Type*	n =	Age (Ma)	MSWD <sup>†</sup>	Age <sup>§</sup> Calculation	Age Interpretation	$\epsilon_{\text{Nd}}$ ( $T_{\text{cryst}}$ )	$T_{\text{DM}}^{\#}$ (Ga)
<b>Queen Maud Block U-Pb Zircon Results</b>								
ST-4b	grt opx bt ± mag monzogranite	3	2476 ± 10	0.1	WM $^{207}\text{Pb}/^{206}\text{Pb}$	igneous crystallization	-1.5	3.0
ST-7	mag cpx opx bt hbl granodiorite	3	2457 ± 24	0.6	Model 1	igneous crystallization	-0.2	2.8
NT-3a	mag hbl bt monzogranite	8	2490 ± 29	3.0	Model 2	igneous crystallization	-1.2	3.1
NT-7	hbl bt grt opx granodiorite	5	2497 ± 19	3.1	WM $^{207}\text{Pb}/^{206}\text{Pb}$	igneous crystallization	-1.3	3.0
<b>Sherman Group Detrital Zircon Results</b>								
ST-3	grt bt pelitic metasedimentary	41	2432-2608					
		18	2496 ± 4	0.5	WM $^{207}\text{Pb}/^{206}\text{Pb}$	primary age node		
BT-5d	opx bt pelitic metasedimentary	48	2345-2513					
		20	2480 ± 4	0.5	WM $^{207}\text{Pb}/^{206}\text{Pb}$	primary age node		
<b>Queen Maud Block U-Pb Monazite Results</b>								
ST-3a	grt-crd-sil-Kfs ± bt leucosome	13	2385 ± 5	0.1	WM $^{207}\text{Pb}/^{206}\text{Pb}$	metamorphic		
		3	2474 ± 10	0.7	WM $^{207}\text{Pb}/^{206}\text{Pb}$	igneous detrital		
		3	2487 ± 10	0.3	WM $^{207}\text{Pb}/^{206}\text{Pb}$	igneous detrital		
ST-4a	grt ± bt leucosome	1	2388 ± 17		$^{207}\text{Pb}/^{206}\text{Pb}$	metamorphic		
		1	2428 ± 17		$^{207}\text{Pb}/^{206}\text{Pb}$	igneous detrital		
NT-8	bt grt lecosome	2	2408 ± 12	0.4	WM $^{207}\text{Pb}/^{206}\text{Pb}$	metamorphic		
		1	2515 ± 17		$^{207}\text{Pb}/^{206}\text{Pb}$	igneous detrital		
<b>Rae Domain U-Pb Zircon Results</b>								
ST-1a	ep mag bt ± musc monzogranite	4	2636 ± 11**	0.8	Model 1	igneous crystallization		
NT-1	mag bt hbl granodiorite	6	2595 ± 10	0.1	Model 1	igneous crystallization	-0.5	3.0
BT-3	ep hbl bt granodiorite	5	2689 ± 11**	0.8	Model 1	igneous crystallization	0.7	2.9
BT-4	bt monzogranite	3	2702 ± 16**	1.2	Model 1	igneous crystallization	1.2	2.9

\*bt = biotite; cpx=clinopyroxene; ep=epidote; grt=garnet; hbl=hornblende; mag=magnetite; opx=orthopyroxene; crd=cordierite; sil=sillimanite;

Kfs=potassium feldspar

<sup>†</sup> MSWD = Mean Square Weighted Deviate

<sup>§</sup> WM = weighted mean; Further information can be obtained in Ludwig (2003).

<sup>#</sup> Calculated using the depleted mantle model of Goldstein et al. 1984

\*\* Regressions were anchored at 0 ± 20 Ma. Free regressions could not be calculated or gave negative lower intercepts.

**Table DR2. LA-MC-ICP-MS U-Pb Results**

The quoted errors are reported at 2-sigma, and represent the propagation of the measurement error and the external reproducibility ( $\pm 3\%$  relative for  $^{207}\text{Pb}/^{235}\text{U}$  and  $^{206}\text{Pb}/^{238}\text{U}$  and  $\pm 1\%$  relative for  $^{207}\text{Pb}/^{206}\text{Pb}$ ). Grains denoted with an asterisk were not used in age treatments. A laser spot size of 30 microns was used for zircon analyses and 20 to 15 microns for monazite analyses. All analyses performed at the University of Alberta Radiogenic Isotope Facility in Edmonton, Canada. Details on the *in-situ* LA-MC-ICP-MS method in Simonetti et al. (2006).

Sample	Analysis	$^{204}\text{Pb}$ (cps)	$^{206}\text{Pb}$ (cps)	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$	rho	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$	% Disc
<b><i>In-situ</i> petrographic thin section (zircon)</b>																	
BT-3	Gr 1.1	0	189800	13.0992	0.39	0.51388	0.020	0.994	0.18518	0.00192	2686	28	2675	86	2700	17	1.2
	Gr 2.1	0	301590	13.2411	0.40	0.52506	0.020	0.980	0.18291	0.00188	2697	28	2723	83	2679	17	-1.9
	Gr 3.1	0	192623	12.8617	0.39	0.50374	0.024	0.634	0.18539	0.00192	2669	28	2632	102	2702	17	3.2
	Gr 4.1	0	174891	12.3903	0.37	0.48272	0.021	0.700	0.18656	0.00193	2634	28	2541	89	2712	17	7.7
	Gr 5.1	0	318119	12.4249	0.37	0.49340	0.022	0.675	0.18298	0.00189	2637	28	2587	94	2680	17	4.3
BT-4	Gr 1.1*	0	581913	12.2207	0.37	0.49323	0.018	0.974	0.17996	0.00182	2621	28	2587	78	2653	17	3.1
	Gr 2.1	0	1978067	13.3840	0.40	0.53544	0.023	0.706	0.18154	0.00183	2707	28	2767	95	2667	17	-4.5
	Gr 3.1	0	933203	12.7115	0.38	0.49420	0.020	0.731	0.18683	0.00188	2658	28	2591	87	2714	17	5.6
	Gr 4.1	0	189224	12.1280	0.36	0.47352	0.019	0.990	0.18551	0.00206	2614	28	2501	82	2703	18	9.1
	Gr 5.1*	0	399043	11.1914	0.34	0.47076	0.017	0.967	0.17288	0.00189	2539	28	2489	76	2586	18	4.6
NT-1	Gr 2.1	0	228668	10.6378	0.32	0.44220	0.017	0.980	0.17449	0.00183	2492	27	2362	75	2601	18	11.0
	Gr 3.1	0	262435	9.3039	0.28	0.38864	0.017	0.701	0.17364	0.00178	2368	27	2118	77	2593	17	21.5
	Gr 5.1	0	174678	11.1693	0.34	0.46555	0.016	0.957	0.17424	0.00182	2537	28	2466	70	2599	17	6.2
	Gr 8.1	0	231948	12.1932	0.37	0.50902	0.019	0.979	0.17410	0.00181	2619	28	2655	82	2597	17	-2.6
	Gr 8.2	0	290176	11.2756	0.34	0.47126	0.017	0.975	0.17420	0.00179	2546	28	2491	76	2598	17	5.1
	Gr 10.2	0	857412	11.5965	0.35	0.48325	0.016	0.952	0.17403	0.00176	2572	28	2543	69	2597	17	2.6
NT-3a	Gr 1.1	0	135388	4.4531	0.13	0.19513	0.009	0.646	0.16582	0.00172	1722	25	1150	49	2516	17	59.1
	Gr 1.2	0	994354	8.0592	0.24	0.35386	0.013	0.972	0.16416	0.00166	2237	27	1955	61	2499	17	25.3
	Gr 2.1	0	276567	6.4358	0.19	0.28696	0.011	0.978	0.16273	0.00168	2037	26	1628	54	2484	17	39.0
	Gr 4.1	0	309324	6.8515	0.21	0.30840	0.013	0.698	0.16121	0.00168	2092	26	1734	65	2468	18	33.9
	Gr 5.1	0	240520	6.6651	0.20	0.29805	0.010	0.952	0.16249	0.00168	2068	26	1683	49	2482	17	36.5
	Gr 6.1	0	202307	8.2689	0.25	0.37303	0.014	0.976	0.16154	0.00168	2261	27	2045	65	2472	18	20.2

NT-7	Gr 7.1	0	244740	9.3824	0.28	0.41295	0.015	0.963	0.16504	0.00169	2376	27	2230	66	2508	17	13.2	
	Gr 9.2	0	517837	8.8735	0.27	0.39388	0.014	0.956	0.16284	0.00171	2325	27	2143	62	2485	18	16.3	
	Gr 2.1	0	166874	9.3948	0.28	0.41542	0.015	0.960	0.16425	0.00173	2377	27	2241	66	2500	18	12.3	
	Gr 3.2*	0	769340	9.8192	0.30	0.44989	0.025	0.532	0.15829	0.00161	2418	27	2397	112	2437	17	2.1	
	Gr 4.1*	0	195726	9.5145	0.29	0.42901	0.018	0.719	0.16101	0.00168	2389	27	2303	80	2466	18	7.9	
	Gr 7.1	0	711099	9.6162	0.29	0.42950	0.016	0.971	0.16179	0.00163	2398	27	2305	70	2474	17	8.2	
	Gr 7.2	0	691940	10.3070	0.31	0.45722	0.017	0.983	0.16367	0.00168	2462	27	2429	77	2494	17	3.2	
ST-1a	Gr 9.1	0	186835	9.7998	0.29	0.42802	0.015	0.961	0.16507	0.00180	2416	27	2299	69	2508	18	10.0	
	Gr 9.2	0	99035	9.6086	0.29	0.42161	0.014	0.950	0.16563	0.00179	2398	27	2270	65	2514	18	11.6	
	Gr 1.1	0	1416226	10.4874	0.31	0.42935	0.015	0.963	0.17723	0.00190	2478	27	2305	69	2627	18	14.7	
	Gr 2.1	0	1060297	11.1518	0.33	0.45194	0.021	0.640	0.17918	0.00187	2536	28	2406	94	2645	17	10.9	
	Gr 3.1	0	753640	12.1203	0.36	0.49661	0.022	0.669	0.17704	0.00184	2613	28	2601	95	2625	17	1.2	
	Gr 6.1	0	688472	11.0327	0.33	0.44692	0.018	0.996	0.17929	0.00182	2526	28	2383	79	2646	17	11.9	
	Gr 1.1*	0	1046570	10.4195	0.31	0.46739	0.017	0.877	0.15895	0.00274	2472	27	2474	73	2445	29	-1.4	
ST-4b	Gr 4.1	0	796753	11.2982	0.34	0.50558	0.019	0.984	0.16221	0.00164	2548	28	2640	82	2479	17	-7.8	
	Gr 4.2	0	867231	10.9085	0.33	0.48895	0.016	0.950	0.16186	0.00165	2515	28	2568	69	2475	17	-4.5	
	Gr 5.1*	0	891851	10.1864	0.31	0.46465	0.015	0.947	0.15915	0.00171	2451	27	2462	65	2447	18	-0.7	
	Gr 7.1	0	286902	10.7507	0.32	0.48183	0.020	0.709	0.16180	0.00172	2501	28	2537	88	2475	18	-3.0	
	Gr 14.1	0	655854	8.5315	0.26	0.38544	0.015	0.983	0.16156	0.00166	2289	27	2103	68	2472	17	17.5	
	Gr 17.1	0	1352600	9.0403	0.27	0.41046	0.014	0.962	0.15982	0.00161	2342	27	2219	65	2454	17	11.4	
	Gr 18.1*	0	2215574	8.5001	0.26	0.39551	0.013	0.950	0.15594	0.00158	2286	27	2150	59	2412	17	12.8	
ST-7	Gr 19.1*	0	2204104	9.2115	0.28	0.42237	0.013	0.947	0.15811	0.00159	2359	27	2273	60	2436	17	8.0	
	Gr 20.1	0	1828725	9.6881	0.29	0.43807	0.014	0.952	0.16061	0.00161	2405	27	2344	64	2462	17	5.8	
<b><i>In-situ petrographic thin section (monazite)</i></b>																		
ST-3a	Gr 1.4	0	1117737	8.9391	0.27	0.42358	0.016	0.977	0.15309	0.00157	2331	27	2279	71	2381	17	5.2	
	Gr 1.5	0	2016729	9.3149	0.28	0.43821	0.014	0.954	0.15424	0.00155	2369	27	2345	65	2394	17	2.5	
	Gr 1.6	0	1728835	9.2486	0.28	0.43787	0.016	0.967	0.15329	0.00154	2363	27	2343	70	2383	17	2.1	
	Gr 1.7	0	1722542	9.2437	0.28	0.43744	0.015	0.963	0.15336	0.00154	2362	27	2341	68	2384	17	2.2	
	Gr 1.9	0	1350243	9.4298	0.28	0.44623	0.015	0.953	0.15331	0.00155	2380	27	2380	65	2383	17	0.2	
	Gr 2.3	0	1262285	9.1431	0.27	0.43313	0.020	0.652	0.15315	0.00159	2352	27	2322	89	2381	18	3.1	
	Gr 2.4	0	1546549	9.2401	0.28	0.43878	0.014	0.947	0.15272	0.00154	2362	27	2347	62	2377	17	1.6	
	Gr 3.4	0	1998724	10.0697	0.30	0.45327	0.015	0.953	0.16114	0.00165	2441	27	2412	67	2468	17	2.8	
	Gr 3.6	0	1800729	10.3013	0.31	0.45956	0.014	0.945	0.16254	0.00166	2462	27	2440	63	2482	17	2.2	
	Gr 3.7	0	2284983	10.2972	0.31	0.46196	0.014	0.942	0.16162	0.00167	2461	27	2450	63	2473	17	1.2	
	Gr 3.9	0	1385241	9.2990	0.28	0.44015	0.014	0.945	0.15328	0.00156	2368	27	2353	61	2383	17	1.6	
	Gr 3.10	0	1280531	9.4299	0.28	0.44662	0.018	0.737	0.15320	0.00156	2380	27	2382	81	2382	17	0.1	
	Gr 4.4	0	1422891	10.2183	0.31	0.45653	0.014	0.946	0.16259	0.00167	2454	27	2426	64	2483	17	2.8	

Gr 4.5	0	1402247	10.3015	0.31	0.45680	0.016	0.958	0.16353	0.00166	2462	27	2427	69	2492	17	3.2		
Gr 4.6	0	1320995	10.0907	0.30	0.44803	0.014	0.948	0.16294	0.00165	2443	27	2388	63	2486	17	4.8		
Gr 4.7	0	1627700	8.9641	0.27	0.42149	0.015	0.959	0.15430	0.00159	2334	27	2269	66	2394	18	6.3		
Gr 6.3	0	1021080	9.0061	0.27	0.42372	0.018	0.690	0.15405	0.00162	2338	27	2279	83	2391	18	5.7		
Gr 6.4	0	976991	9.1535	0.27	0.43132	0.014	0.946	0.15349	0.00156	2353	27	2314	61	2385	17	3.7		
Gr 6.5	0	1025864	9.0447	0.27	0.42772	0.013	0.945	0.15341	0.00157	2342	27	2297	60	2384	17	4.4		
ST-4a	Gr 1.1	128	2748913	9.2789	0.28	0.43534	0.018	0.739	0.15374	0.00155	2366	27	2332	79	2388	17	2.9	
	Gr 3.1	40	2235400	8.8866	0.27	0.40736	0.013	0.953	0.15740	0.00158	2326	27	2205	61	2428	17	10.9	
NT-8	Gr 1.1	71	2543900	9.3875	0.28	0.43440	0.014	0.953	0.15589	0.00156	2376	27	2327	64	2412	17	4.2	
	Gr 1.2	41	3008192	9.4437	0.28	0.43892	0.014	0.946	0.15520	0.00158	2382	27	2348	61	2404	17	2.9	
	Gr 2.1	47	1257906	10.5892	0.32	0.46093	0.015	0.950	0.16572	0.00167	2487	27	2446	65	2515	17	3.4	
<b>Detrital zircon Mounts</b>																		
BT-5d	E5	0	307118	10.4871	0.31	0.47080	0.015	0.946	0.16181	0.00168	2478	27	2489	66	2475	17	-0.6	
	E6	0	718154	10.7598	0.32	0.48158	0.016	0.950	0.16231	0.00164	2502	27	2536	67	2480	17	-2.7	
	E8	0	337349	10.6633	0.32	0.47832	0.017	0.964	0.16184	0.00167	2494	27	2522	74	2475	17	-2.2	
	E10	0	414563	10.8500	0.33	0.48445	0.016	0.955	0.16253	0.00169	2510	28	2549	71	2482	18	-3.1	
	E11	0	494694	10.8476	0.33	0.48777	0.017	0.956	0.16157	0.00165	2510	28	2563	71	2472	17	-4.4	
	E15	0	302723	10.6466	0.32	0.47746	0.016	0.951	0.16264	0.00168	2492	27	2518	69	2483	17	-1.6	
	E16	0	662055	10.3235	0.31	0.47114	0.015	0.944	0.15928	0.00165	2464	27	2491	65	2448	18	-2.0	
	E17	0	617769	10.6574	0.32	0.47826	0.016	0.956	0.16186	0.00164	2493	27	2522	70	2475	17	-2.2	
	E18	0	500513	10.5601	0.32	0.47324	0.016	0.958	0.16217	0.00165	2485	27	2500	71	2478	17	-0.9	
	E20	0	575629	9.8427	0.30	0.45625	0.015	0.951	0.15690	0.00162	2420	27	2425	66	2422	17	0.0	
	E21	0	367511	10.3107	0.31	0.45892	0.015	0.953	0.16326	0.00168	2463	27	2437	68	2490	17	2.6	
	E22	0	359110	10.1048	0.30	0.45928	0.015	0.948	0.16001	0.00167	2444	27	2438	66	2456	18	0.9	
	E23	0	1680984	10.6656	0.32	0.48463	0.016	0.953	0.15978	0.00163	2494	27	2549	69	2453	17	-4.6	
	E24	0	449287	10.2248	0.31	0.46484	0.016	0.962	0.16111	0.00163	2455	27	2463	71	2467	17	0.3	
	E25	0	922580	10.7032	0.32	0.48041	0.016	0.946	0.16163	0.00173	2497	27	2531	68	2473	18	-2.7	
	E26	0	508616	9.9949	0.30	0.45647	0.016	0.968	0.15917	0.00162	2434	27	2426	72	2447	17	1.1	
	E27	0	892802	10.5182	0.32	0.47824	0.016	0.956	0.16034	0.00163	2481	27	2522	70	2459	17	-3.0	
	E28	0	503769	10.7146	0.32	0.48066	0.017	0.959	0.16249	0.00166	2498	27	2532	72	2482	17	-2.4	
	E29	0	708633	9.5011	0.29	0.45501	0.015	0.952	0.15171	0.00154	2387	27	2419	66	2365	17	-2.6	
	E30	0	814739	10.6458	0.32	0.47572	0.017	0.963	0.16263	0.00165	2492	27	2511	72	2483	17	-1.2	
	F5	0	689327	9.9549	0.30	0.46155	0.018	0.993	0.15661	0.00167	2430	27	2448	81	2419	18	-1.3	
	F8	0	1010583	9.8172	0.29	0.45880	0.017	0.967	0.15548	0.00165	2417	27	2436	73	2407	18	-1.4	
	F14	0	433237	10.8233	0.32	0.48254	0.016	0.953	0.16291	0.00166	2508	28	2540	69	2486	17	-2.5	
	F15	0	414851	10.7936	0.32	0.48168	0.016	0.951	0.16314	0.00173	2505	28	2537	70	2489	18	-2.2	
	F16	0	407733	10.3231	0.31	0.47330	0.017	0.961	0.15830	0.00170	2464	27	2500	73	2438	18	-3.0	

F18	0	396694	10.7051	0.32	0.47467	0.016	0.958	0.16317	0.00169	2497	27	2506	71	2489	17	-0.7				
F20	0	710812	10.3115	0.31	0.47093	0.017	0.967	0.15901	0.00162	2463	27	2490	73	2445	17	-2.1				
F23	0	620052	9.4890	0.28	0.45466	0.015	0.945	0.15141	0.00167	2386	27	2418	67	2362	19	-2.7				
G2	0	364706	10.5949	0.32	0.47549	0.015	0.947	0.16185	0.00167	2488	27	2510	66	2475	17	-1.6				
G4	0	375870	9.5254	0.29	0.45007	0.015	0.952	0.15413	0.00165	2390	27	2397	68	2392	18	-0.2				
G10	0	661258	10.4457	0.31	0.47265	0.018	0.984	0.16056	0.00163	2475	27	2497	79	2462	17	-1.6				
G11	0	436769	5.8959	0.18	0.36337	0.012	0.947	0.11785	0.00123	1960	26	2000	55	1924	19	-4.5				
G13	0	421029	9.6957	0.29	0.45442	0.015	0.955	0.15499	0.00162	2406	27	2417	68	2402	18	-0.7				
G15	0	328153	9.1919	0.28	0.43822	0.015	0.961	0.15226	0.00157	2357	27	2345	69	2371	18	1.4				
G20	0	901652	9.3489	0.28	0.45315	0.016	0.957	0.14994	0.00156	2372	27	2411	69	2345	18	-3.3				
G21	0	854513	9.8775	0.30	0.46824	0.016	0.955	0.15334	0.00157	2423	27	2478	69	2384	17	-4.7				
G22	0	1007758	10.5983	0.32	0.48350	0.017	0.962	0.15922	0.00161	2488	27	2545	73	2447	17	-4.7				
G23	0	1007758	10.5983	0.32	0.48350	0.017	0.962	0.15922	0.00161	2488	27	2545	73	2447	17	-4.7				
G25	0	693925	10.6696	0.32	0.47878	0.016	0.959	0.16194	0.00164	2494	27	2524	71	2476	17	-2.2				
G26	0	772828	7.6394	0.23	0.41111	0.015	0.969	0.13485	0.00138	2189	27	2222	68	2162	18	-3.2				
G28	0	821799	10.8604	0.33	0.49010	0.017	0.964	0.16157	0.00163	2511	28	2573	74	2472	17	-4.9				
Gr 8	0	910163	11.1815	0.34	0.49459	0.017	0.959	0.16486	0.00170	2538	28	2593	73	2506	17	-4.1				
Gr 16	0	927897	11.0255	0.33	0.48795	0.018	0.972	0.16431	0.00166	2525	28	2564	76	2500	17	-3.0				
Gr 18	0	410769	10.5911	0.32	0.46595	0.015	0.951	0.16469	0.00168	2488	27	2468	67	2504	17	1.9				
Gr 20	0	662488	10.5039	0.32	0.46751	0.017	0.966	0.16322	0.00168	2480	27	2475	73	2489	17	0.8				
Gr 21	0	404481	10.1863	0.31	0.45492	0.017	0.985	0.16265	0.00168	2451	27	2419	77	2483	17	3.2				
Gr 25	0	1258219	11.0034	0.33	0.48808	0.018	0.977	0.16396	0.00167	2523	28	2564	78	2497	17	-3.2				
Gr 26	0	630597	11.3718	0.34	0.49957	0.016	0.947	0.16556	0.00171	2554	28	2614	69	2513	17	-4.8				
ST-3	C2	0	209906	11.9522	0.36	0.49896	0.016	0.945	0.17413	0.00180	2600	28	2611	67	2598	17	-0.5			
	C3	0	268256	10.8880	0.33	0.48351	0.015	0.943	0.16319	0.00173	2513	28	2545	66	2489	18	-2.6			
	C6	0	76928	10.2332	0.31	0.46041	0.015	0.864	0.16222	0.00273	2456	27	2443	67	2479	28	1.8			
	C9	0	77320	9.7321	0.29	0.44439	0.016	0.953	0.16018	0.00191	2409	27	2372	72	2458	20	4.2			
	C12	0	155731	10.2172	0.31	0.45871	0.016	0.963	0.16215	0.00171	2454	27	2436	72	2478	18	2.1			
	C16	0	96788	11.3701	0.34	0.48693	0.019	0.980	0.16964	0.00183	2554	28	2559	81	2554	18	-0.2			
	C17	0	166021	10.7110	0.32	0.47510	0.015	0.942	0.16413	0.00173	2498	27	2508	65	2499	18	-0.3			
	C18	0	191182	10.8831	0.33	0.48211	0.016	0.955	0.16381	0.00169	2513	28	2539	71	2495	17	-2.0			
	C25	0	700041	11.1547	0.33	0.49403	0.016	0.948	0.16352	0.00171	2536	28	2590	70	2492	18	-4.7			
	C26	0	289028	11.7701	0.35	0.50395	0.016	0.939	0.16910	0.00181	2586	28	2633	67	2549	18	-3.9			
	C27	0	300900	11.1603	0.33	0.49321	0.017	0.937	0.16449	0.00200	2536	28	2587	73	2502	20	-4.0			
	C30	0	120294	10.4626	0.31	0.45734	0.016	0.963	0.16585	0.00174	2476	27	2430	72	2516	18	4.2			
	B2	0	125384	26.8543	0.81	0.67743	0.023	0.957	0.28764	0.00301	3378	29	3337	89	3405	16	2.6			
	B3	0	123460	11.3255	0.34	0.48075	0.016	0.956	0.17090	0.00178	2550	28	2533	71	2566	17	1.7			

B5	0	276251	11.5607	0.35	0.49735	0.017	0.962	0.16843	0.00171	2569	28	2604	74	2542	17	-2.9
B6core	0	970318	11.7395	0.35	0.50603	0.016	0.948	0.16827	0.00170	2583	28	2642	69	2541	17	-4.8
B7	0	184324	11.2057	0.34	0.47934	0.020	0.726	0.16941	0.00177	2540	28	2526	86	2552	17	1.3
D1	0	239276	10.9917	0.33	0.48658	0.016	0.940	0.16398	0.00180	2522	28	2558	67	2497	18	-2.8
D2	0	479483	10.8287	0.32	0.48193	0.015	0.936	0.16262	0.00184	2508	28	2538	67	2483	19	-2.6
D4	0	198411	10.6855	0.32	0.46842	0.016	0.956	0.16504	0.00172	2496	27	2479	70	2508	17	1.5
D5	0	480659	10.4481	0.31	0.47610	0.015	0.943	0.15963	0.00166	2475	27	2512	65	2452	18	-2.9
A5	0	208158	11.1142	0.33	0.48385	0.015	0.941	0.16690	0.00175	2532	28	2546	64	2527	18	-0.8
A6	0	54298	10.6368	0.32	0.46418	0.016	0.939	0.16639	0.00207	2492	27	2460	71	2522	21	3.0
A7	0	231611	11.1739	0.34	0.48272	0.016	0.956	0.16797	0.00171	2537	28	2541	70	2538	17	-0.1
A8	0	178809	10.6003	0.32	0.46937	0.016	0.956	0.16394	0.00175	2488	27	2483	71	2497	18	0.8
A11	0	307847	10.0945	0.30	0.46681	0.017	0.966	0.15777	0.00164	2443	27	2472	73	2432	18	-1.9
A12	0	271305	11.0019	0.33	0.49085	0.016	0.944	0.16300	0.00179	2523	28	2576	70	2487	18	-4.3
A14	0	292317	10.8789	0.33	0.48252	0.015	0.945	0.16364	0.00167	2512	28	2540	65	2494	17	-2.2
A15	0	61304	10.3870	0.31	0.45792	0.016	0.946	0.16475	0.00191	2470	27	2432	70	2505	20	3.6
A16	0	122070	10.7212	0.32	0.47442	0.016	0.945	0.16353	0.00178	2499	27	2505	68	2492	18	-0.5
A17	0	235243	10.3771	0.31	0.46042	0.015	0.948	0.16357	0.00169	2469	27	2443	66	2493	17	2.5
A19	0	230013	10.4917	0.31	0.46654	0.016	0.954	0.16318	0.00166	2479	27	2470	68	2489	17	1.0
A25	0	181355	10.4539	0.31	0.45542	0.015	0.951	0.16611	0.00176	2475	27	2421	68	2519	18	4.7
Gr 5	0	311353	10.3468	0.31	0.46246	0.015	0.951	0.16210	0.00166	2466	27	2452	66	2478	17	1.3
Gr 6	0	411631	10.6636	0.32	0.47220	0.018	0.975	0.16475	0.00179	2494	27	2495	78	2505	18	0.6
Gr 11	0	102462	10.4451	0.31	0.46330	0.018	0.981	0.16383	0.00174	2475	27	2456	78	2496	18	2.0
Gr 15	0	111636	10.5347	0.32	0.46282	0.018	0.985	0.16530	0.00186	2483	27	2454	80	2511	19	2.8
Gr 20	0	284154	11.9029	0.36	0.49568	0.016	0.950	0.17519	0.00182	2596	28	2597	70	2608	17	0.6
Gr 22	0	540185	11.9916	0.36	0.50031	0.020	0.994	0.17420	0.00180	2603	28	2617	85	2598	17	-0.8
Gr 23	0	436162	10.6498	0.32	0.46502	0.015	0.943	0.16677	0.00174	2493	27	2464	64	2525	18	3.0
Gr 27	0	220564	10.6494	0.32	0.47124	0.021	0.687	0.16422	0.00175	2493	27	2491	90	2500	18	0.5

**Table DR3. Sm-Nd Isotopic Ratios**

All analyses performed at the University of Alberta Radiogenic Isotope Facility in Edmonton, Canada.  $T_{DM}$  values are calculated using the depleted mantle model of Goldstein et al., 1984.

Sample	Sm ppm	Nd ppm	$^{147}\text{Sm}/^{144}\text{Nd}$	$^{143}\text{Nd}/^{144}\text{Nd}$	uncert.	$T_{DM}$ Ga	actual $T_{Ma}$	$\epsilon_{\text{Nd}T}$	$T_{Ma}$	$\epsilon_{\text{Nd}T}$
ST-4b	4.586	24.75	0.1120	0.511179	0.000006	3.0	2476	-1.5	2480	-1.5
ST-7	9.297	53.24	0.1056	0.511151	0.000008	2.8	2458	-0.2	2480	0.0
NT-3a	7.526	34.64	0.1314	0.5111504	0.000008	3.1	2490	-1.2	2480	-1.3
NT-7	11.699	61.13	0.1157	0.511244	0.000004	3.0	2491	-1.3	2480	-1.4
NT-1	7.632	43.19	0.1068	0.511073	0.000009	3.0	2595	-0.5	2480	-1.9
BT-3	8.969	57.41	0.0945	0.510862	0.000006	2.9	2689	0.7	2480	-2.0
BT-4	11.211	82.60	0.0821	0.510655	0.000006	2.9	2702	1.2	2480	-2.1