Data Repository Item 2013074
Table DR1 – Detrital zircon U-Pb age results

Analytical Methods

Zircon U-Pb geochronology was conducted by laser ablation multicollector inductively coupled plasma mass spectrometry (LA-MC-ICPMS) at the Arizona LaserChron Center (Gehrels et al., 2006, 2008). The analyses involved the ablation of zircon with New Wave UP193HE Excimer laser using a spot diameter of 30 microns. The ablated material was carried in helium into the plasma source of a Nu HR ICPMS, which is equipped with a flight tube of sufficient width that U, Th, and Pb isotopes are measured simultaneously. All measurements were made in static mode, using Faraday detectors with $3x10^{11}$ ohm resistors for ^{238}U, ^{232}Th, ^{208}Pb-^{206}Pb, and discrete dynode ion counters for ^{204}Pb and ^{202}Hg. Ion yields are ~0.8 mv per ppm. Each analysis consisted of one 15-second integration on peaks with the laser off (for backgrounds), 15 one-second integrations with the laser firing, and a 30 second delay to purge the previous sample and prepare for the next analysis. The ablation pit is ~15 microns in depth.

For each analysis, the errors in determining $^{206}Pb/^{238}U$ and $^{206}Pb/^{204}Pb$ result in a measurement error of ~1-2% (at 2-sigma level) in the $^{206}Pb/^{238}U$ age. The errors in measurement of $^{206}Pb/^{207}Pb$ and $^{206}Pb/^{204}Pb$ also result in ~1-2% (at 2-sigma level) uncertainty in age for grains that are >1.0 Ga, but are substantially larger for younger grains due to low intensity of the ^{207}Pb signal. For most analyses, the cross-over in precision of $^{206}Pb/^{238}U$ and $^{206}Pb/^{207}Pb$ ages occurs at ~1.0 Ga.

^{204}Hg interference with ^{204}Pb is accounted for measurement of ^{202}Hg during laser ablation and subtraction of ^{204}Hg according to the natural $^{202}Hg/^{204}Hg$ of 4.35. This Hg is correction is not significant for most analyses because Hg backgrounds are low (generally ~150 cps at mass 204).

Common Pb correction is accomplished by using the Hg-corrected ^{204}Pb and assuming an initial Pb composition from Stacey and Kramers (1975). Uncertainties of 1.5 for $^{206}Pb/^{204}Pb$ and 0.3 for $^{207}Pb/^{204}Pb$ are applied to these compositional values based on the variation in Pb isotopic composition in modern crystal rocks.

Inter-element fractionation of Pb/U is generally ~5%, whereas apparent fractionation of Pb isotopes is generally <0.2%. In-run analysis of fragments of a large zircon crystal (generally every fifth measurement) with known age of 563.5 ± 3.2 Ma (2-sigma error) is used to correct for this fractionation. The uncertainty resulting from the calibration correction is generally 1-2% (2-sigma) for both $^{206}Pb/^{207}Pb$ and $^{206}Pb/^{238}U$ ages.

Concentrations of U and Th are calibrated relative to Sri Lanka zircon at the ALC, which contains ~518 ppm of U and 68 ppm Th.

The analytical data are reported in Table DR1. Uncertainties shown are at the 1-sigma level, and include only measurement errors. Analyses that are >20% discordant (by comparison of $^{206}Pb/^{238}U$ and $^{206}Pb/^{207}Pb$ ages) or >5% reverse discordant are not

considered further.

Notes for Table DR1

Analyses with >10% uncertainty (1-sigma) in $^{206}Pb/^{238}U$ age are not included.

Analyses with >10% uncertainty (1-sigma) in $^{206}Pb/^{207}Pb$ age are not included, unless $^{206}Pb/^{238}U$ age is <500 Ma.

Best age is determined from $^{206}Pb/^{238}U$ age for analyses with $^{206}Pb/^{238}U$ age <1000 Ma and from $^{206}Pb/^{207}Pb$ age for analyses with $^{206}Pb/^{238}U$age >1000 Ma.

Concordance is based on $^{206}Pb/^{238}U$ age / $^{206}Pb/^{207}Pb$ age. Value is not reported for $^{206}Pb/^{238}U$ ages <500 Ma (see "NA" in Conc. % column) because of large uncertainty in $^{206}Pb/^{207}Pb$ age.

Analyses with $^{206}Pb/^{238}U$ age >500 Ma and with >20% discordance (<80% concordance) are not included.

Analyses with $^{206}Pb/^{238}U$ age >500 Ma and with >5% reverse discordance (<105% concordance) are not included.

All uncertainties are reported at the 1-sigma level, and include only measurement errors.

Systematic errors are as follows (at 2-sigma level): [sample 1: 2.5% ($^{206}Pb/^{238}U$) & 1.4% ($^{206}Pb/^{207}Pb$)].

Analyses conducted by LA-MC-ICPMS, as described by Gehrels et al. (2008).

U concentration and U/Th are calibrated relative to Sri Lanka zircon standard and are accurate to ~20%.

Common Pb correction is from measured ^{204}Pb with common Pb composition interpreted from Stacey and Kramers (1975)

Common Pb composition assigned uncertainties of 1.5 for $^{206}Pb/^{204}Pb$, 0.3 for $^{207}Pb/^{204}Pb$, and 2.0 for $^{208}Pb/^{204}Pb$

U/Pb and $^{206}Pb/^{207}Pb$ fractionation is calibrated relative to fragments of a large Sri Lanka zircon of 563.5 ± 3.2 Ma (2-sigma).

U decay constants and composition as follows: ^{238}U = 9.8485 x 10-10, ^{235}U = 1.55125 x 10-10, $^{238}U/^{235}U$ = 137.88

References:

Gehrels, G.E., Valencia, V., Pullen, A., 2006, Detrital zircon geochronology by Laser-Ablation Multicollector ICPMS at the Arizona LaserChron Center, *in* Loszewski, T., and

Huff, W., eds., Geochronology: Emerging Opportunities, Paleontology Society Short Course: Paleontology Society Papers, v. 11, 10 p.

Gehrels, G.E., Valencia, V., Ruiz, J., 2008, Enhanced precision, accuracy, efficiency, and spatial resolution of U-Pb ages by laser ablation–multicollector–inductively coupled plasma–mass spectrometry: Geochemistry, Geophysics, Geosystems, v. 9, Q03017, doi:10.1029/2007GC001805.

Stacey, J.S., and Kramers, J.D., 1975, Approximation of terrestrial lead isotope evolution by a two‐stage model: Earth and Planetary Science Letters, v. 26, p. 207‐221.

Table DR1 - Results of LA-ICP-MS U-Pb analysis of detrital zircons

See attached Data Repository text for complete descriptions of methods and data analysis used at the Arizona Laserchron Center.

Sample 09VL26

07V 571102E 6773540N NAD 83

Southwestern Yukon, Canada

						Isotope ratios							Apparent ages (Ma)						
Analysis	U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
	(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
09LV26-3	251	29015	2.0	17.3083	5.7	0.6081	8.0	0.0763	5.7	0.71	474.2	26.0	482.4	30.9	521.2	124.8	474.2	26.0	NA
09LV26-5	255	66256	2.2	17.3544	5.4	0.6493	8.9	0.0817	7.0	0.79	506.4	34.2	508.1	35.5	515.4	119.6	506.4	34.2	98.3
09LV26-6	254	30739	2.2	18.5881	4.6	0.5671	7.5	0.0764	5.9	0.79	474.9	26.9	456.1	27.4	362.6	103.4	474.9	26.9	NA
09LV26-7	232	34272	2.3	17.8164	4.7	0.6021	8.6	0.0778	7.2	0.83	483.0	33.4	478.5	32.9	457.5	105.4	483.0	33.4	NA
09LV26-8	265	70126	2.3	18.2888	5.9	0.5834	7.4	0.0774	4.5	0.61	480.5	21.0	466.6	27.7	399.1	131.4	480.5	21.0	NA
09LV26-9	303	27557	1.8	17.8689	6.4	0.5720	7.3	0.0741	3.6	0.50	461.0	16.2	459.3	27.1	450.9	141.3	461.0	16.2	NA
09LV26-10	312	62576	1.8	17.8113	4.3	0.5936	8.6	0.0767	7.4	0.86	476.3	33.9	473.2	32.4	458.0	96.5	476.3	33.9	NA
09LV26-12	262	30383	1.8	17.7457	2.3	0.5927	7.0	0.0763	6.6	0.95	473.9	30.3	472.6	26.5	466.2	50.3	473.9	30.3	NA
09LV26-13	280	35305	1.8	17.9654	5.4	0.5747	7.6	0.0749	5.4	0.71	465.5	24.1	461.0	28.2	438.9	120.0	465.5	24.1	NA
09LV26-14	286	35247	1.8	17.2931	2.4	0.5944	6.6	0.0745	6.1	0.93	463.5	27.4	473.6	24.9	523.2	51.8	463.5	27.4	NA
09LV26-16	259	57695	2.0	17.3041	4.9	0.5821	5.9	0.0731	3.3	0.56	454.5	14.5	465.8	22.0	521.8	106.8	454.5	14.5	NA
09LV26-17	367	33090	1.7	17.8034	3.8	0.5586	8.2	0.0721	7.2	0.89	449.0	31.4	450.6	29.7	459.1	83.8	449.0	31.4	NA
09LV26-18	221	22885	2.3	17.4682	3.9	0.6015	6.9	0.0762	5.7	0.82	473.4	26.0	478.2	26.4	501.1	86.5	473.4	26.0	NA
09LV26-19	291	28110	2.0	17.3297	2.6	0.6057	7.0	0.0761	6.5	0.93	473.0	29.6	480.8	26.8	518.5	57.5	473.0	29.6	NA
09LV26-20	271	25444	1.5	17.0312	5.0	0.5417	9.9	0.0669	8.5	0.86	417.5	34.4	439.6	35.2	556.6	109.7	417.5	34.4	NA
09LV26-21	284	82142	1.8	17.1056	3.7	0.5698	9.0	0.0707	8.2	0.91	440.3	35.0	457.9	33.3	547.0	81.1	440.3	35.0	NA
09LV26-22	336	58328	1.7	17.5678	4.1	0.6156	7.5	0.0784	6.2	0.84	486.8	29.2	487.1	28.8	488.5	90.2	486.8	29.2	NA
09LV26-23	413	329391	6.3	9.8905	0.8	3.6477	6.9	0.2617	6.8	0.99	1498.3	91.4	1560.0	54.9	1644.5	15.2	1644.5	15.2	91.1
09LV26-24	247	44804	2.2	17.2480	4.3	0.6230	6.5	0.0779	4.9	0.75	483.8	22.8	491.7	25.3	528.9	93.9	483.8	22.8	91.5

						Isotope ratios							Apparent ages (Ma)						
Analysis	U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
	(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
09LV26-25	287	67552	2.5	18.2549	4.8	0.5390	6.8	0.0714	4.8	0.71	444.4	20.8	437.8	24.2	403.2	107.1	444.4	20.8	NA
09LV26-26	391	110389	1.7	17.2534	2.8	0.6140	7.2	0.0768	6.6	0.92	477.2	30.3	486.1	27.7	528.3	61.2	477.2	30.3	90.3
09LV26-27	262	36212	2.0	17.5312	6.8	0.5860	11.0	0.0745	8.6	0.78	463.2	38.2	468.3	41.1	493.1	151.1	463.2	38.2	NA
09LV26-28	256	41116	2.0	17.5735	4.6	0.5813	8.3	0.0741	6.9	0.84	460.8	30.9	465.3	31.0	487.8	100.5	460.8	30.9	NA
09LV26-29	272	55966	1.9	17.0768	3.3	0.6376	5.5	0.0790	4.4	0.81	490.0	21.0	500.8	21.8	550.7	71.4	489.9	20.9	89.0
09LV26-30	306	23512	2.2	17.6063	6.3	0.5318	9.9	0.0679	7.6	0.77	423.6	31.2	433.0	34.8	483.7	139.2	423.6	31.2	NA
09LV26-31	316	72793	1.8	17.4797	3.1	0.6271	3.4	0.0795	1.4	0.41	493.1	6.5	494.3	13.2	499.6	67.9	493.1	6.5	NA
09LV26-32	250	28618	2.1	18.4379	6.0	0.5499	8.9	0.0735	6.6	0.74	457.4	29.2	444.9	32.1	380.8	134.4	457.4	29.2	NA
09LV26-33	277	100302	2.1	17.7897	5.3	0.5937	7.8	0.0766	5.7	0.73	475.8	26.3	473.2	29.6	460.7	117.8	475.8	26.3	NA
09LV26-34	224	53187	1.9	17.0842	7.2	0.5724	9.3	0.0709	5.9	0.63	441.7	25.0	459.6	34.2	549.8	156.7	441.7	25.0	NA
09LV26-38	282	62714	2.3	16.0692	6.8	0.6925	11.4	0.0807	9.2	0.81	500.3	44.2	534.3	47.5	682.0	144.7	500.3	44.2	73.4

Sample 09VL40

07V 664792E 6674463N NAD 83

Southwestern Yukon, Canada

09VL40-2	208	37075	3.3	17.8019	2.2	0.5546	3.3	0.0716	2.5	0.75	445.8	10.8	448.0	12.1	459.2	49.0	445.8	10.8	NA
09VL40-3	225	100858	1.7	9.4272	0.8	4.5493	1.7	0.3110	1.5	0.89	1745.9	23.7	1740.0	14.4	1733.0	14.4	1733.0	14.4	100.7
09VL40-4	217	8093	2.1	17.8079	4.6	0.5666	4.8	0.0732	1.5	0.31	455.3	6.6	455.8	17.7	458.5	101.8	455.3	6.6	NA
09VL40-6	185	98391	1.0	8.1790	0.4	6.0029	2.4	0.3561	2.4	0.98	1963.6	40.5	1976.3	21.2	1989.5	7.6	1989.5	7.6	98.7
09VL40-7	226	26849	1.5	18.6246	3.5	0.5077	3.6	0.0686	1.1	0.29	427.6	4.4	416.9	12.4	358.1	78.3	427.6	4.4	NA
09VL40-8	100	14185	1.0	18.9491	7.5	0.4932	8.3	0.0678	3.6	0.44	422.8	14.9	407.1	28.0	319.0	170.8	422.8	14.9	NA
09VL40-9	320	107910	3.9	8.0469	0.7	6.1689	4.2	0.3600	4.1	0.99	1982.3	70.5	2000.0	36.6	2018.4	12.7	2018.4	12.7	98.2
09VL40-10	287	220977	1.0	6.9383	0.3	8.0957	1.5	0.4074	1.5	0.98	2203.0	27.8	2241.8	13.7	2277.4	4.5	2277.4	4.5	96.7
09VL40-11	557	320320	1.9	11.6924	0.5	2.6696	1.6	0.2264	1.5	0.94	1315.5	18.2	1320.1	12.0	1327.5	10.4	1327.5	10.4	99.1
09VL40-12	433	32822	1.6	16.6515	3.2	0.7699	10.0	0.0930	9.5	0.95	573.1	52.3	579.7	44.4	605.5	68.8	573.1	52.3	94.7

						Isotope ratios							Apparent ages (Ma)						
Analysis	U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
	(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
09VL40-13	279	314504	3.6	8.2079	0.4	6.1182	1.0	0.3642	1.0	0.94	2002.1	16.9	1992.8	9.1	1983.2	6.6	1983.2	6.6	101.0
09VL40-14	376	73375	2.0	17.8556	3.1	0.5533	4.4	0.0717	3.2	0.71	446.1	13.6	447.2	16.0	452.5	68.9	446.1	13.6	NA
09VL40-15	402	45985	2.0	18.0226	2.1	0.5461	4.5	0.0714	3.9	0.88	444.5	16.9	442.5	16.0	431.8	46.7	444.5	16.9	NA
09VL40-16	209	60897	3.4	18.3881	8.5	0.5249	10.1	0.0700	5.4	0.54	436.2	22.9	428.4	35.4	386.9	191.8	436.2	22.9	NA
09VL40-18	115	114125	2.1	3.5493	0.5	26.7635	2.3	0.6890	2.2	0.97	3378.6	58.0	3374.9	22.2	3372.6	8.1	3372.6	8.1	100.2
09VL40-19	181	42599	1.6	18.2806	7.7	0.5291	8.1	0.0702	2.5	0.31	437.1	10.6	431.2	28.3	400.1	171.9	437.1	10.6	NA
09VL40-20	60	35026	1.0	8.7379	1.6	5.0441	2.9	0.3197	2.4	0.83	1788.1	37.8	1826.8	24.8	1871.1	29.6	1871.1	29.6	95.6
09VL40-21	126	92844	1.5	8.1330	0.6	6.0868	2.2	0.3590	2.1	0.97	1977.6	35.5	1988.4	18.8	1999.5	9.8	1999.5	9.8	98.9
09VL40-22	560	921387	14.6	8.4698	0.3	5.7131	1.7	0.3509	1.7	0.98	1939.1	28.6	1933.4	15.1	1927.2	6.1	1927.2	6.1	100.6
09VL40-23	129	143853	1.0	7.6027	0.7	6.9989	2.1	0.3859	2.0	0.94	2103.9	35.8	2111.3	18.9	2118.5	12.7	2118.5	12.7	99.3
09VL40-24	114	64633	1.5	11.5826	1.6	2.6693	2.6	0.2242	2.1	0.81	1304.2	25.3	1320.0	19.6	1345.7	30.1	1345.7	30.1	96.9
09VL40-25	456	171390	1.7	8.7257	0.5	5.1345	2.3	0.3249	2.2	0.97	1813.8	34.6	1841.8	19.1	1873.7	9.5	1873.7	9.5	96.8
09VL40-26	636	203048	2.2	17.8558	1.3	0.5711	2.6	0.0740	2.3	0.87	459.9	10.1	458.7	9.6	452.5	28.1	459.9	10.1	NA
09VL40-27	162	24375	2.4	18.6434	4.6	0.5328	5.2	0.0720	2.3	0.45	448.5	10.1	433.7	18.2	355.9	104.0	448.5	10.1	NA
09VL40-28	87	26314	1.4	20.7613	22.0	0.4597	22.4	0.0692	4.1	0.18	431.5	17.0	384.1	71.7	107.5	525.1	431.5	17.0	NA
09VL40-29	191	34315	1.6	18.2695	5.5	0.5309	5.7	0.0703	1.6	0.28	438.3	6.8	432.4	20.2	401.4	123.2	438.3	6.8	NA
09VL40-30	170	39754	1.6	18.4055	5.4	0.5409	6.2	0.0722	2.9	0.48	449.4	12.8	439.0	22.0	384.8	122.0	449.4	12.8	NA
09VL40-31	154	229747	1.6	4.6379	0.3	16.6042	4.9	0.5585	4.9	1.00	2860.5	112.2	2912.3	46.6	2948.2	4.7	2948.2	4.7	97.0
09VL40-32	142	41823	2.0	18.3479	6.1	0.5627	6.3	0.0749	1.5	0.23	465.5	6.6	453.3	23.1	391.8	137.6	465.5	6.6	NA
09VL40-33	176	55277	1.1	13.9711	1.9	1.5669	2.7	0.1588	2.0	0.72	949.9	17.3	957.2	16.9	973.9	38.8	973.9	38.8	97.5
09VL40-34	218	55649	0.9	17.7557	5.7	0.5409	6.3	0.0697	2.5	0.40	434.1	10.6	439.0	22.3	465.0	127.2	434.1	10.6	NA
09VL40-36	283	54104	1.7	18.2044	2.3	0.5392	3.4	0.0712	2.6	0.74	443.3	10.9	437.9	12.2	409.4	51.2	443.3	10.9	NA
09VL40-37	192	79589	1.3	18.1020	6.3	0.5432	7.0	0.0713	3.0	0.43	444.1	12.8	440.5	25.0	422.0	141.3	444.1	12.8	NA
09VL40-38	172	107789	1.5	18.2296	5.1	0.5307	5.6	0.0702	2.3	0.41	437.1	9.6	432.3	19.6	406.3	114.1	437.1	9.6	NA
09VL40-39	281	231196	0.7	5.2798	0.2	13.7850	2.1	0.5279	2.1	0.99	2732.4	46.0	2735.0	19.7	2737.0	3.9	2737.0	3.9	99.8

						Isotope ratios							Apparent ages (Ma)						
Analysis	U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
	(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
09VL40-40	216	143922	5.9	11.4103	0.9	2.8067	2.2	0.2323	2.0	0.90	1346.4	23.8	1357.3	16.3	1374.6	18.0	1374.6	18.0	97.9
09VL40-42	197	235205	1.8	9.3788	0.6	4.5645	3.1	0.3105	3.1	0.98	1743.1	46.7	1742.8	26.0	1742.5	11.5	1742.5	11.5	100.0
09VL40-43	73	30683	2.1	12.9434	4.9	1.9784	6.3	0.1857	4.0	0.63	1098.2	40.1	1108.2	42.5	1127.9	97.4	1127.9	97.4	97.4
09VL40-44	163	124551	0.6	10.7534	1.0	3.2620	2.8	0.2544	2.7	0.93	1461.2	34.7	1472.0	22.1	1487.7	19.3	1487.7	19.3	98.2
09VL40-45	365	619057	1.6	5.4126	0.3	13.3276	2.8	0.5232	2.7	0.99	2712.7	60.7	2703.1	26.1	2696.0	5.1	2696.0	5.1	100.6
09VL40-46	265	58001	1.5	18.2886	4.4	0.5130	5.4	0.0680	3.1	0.57	424.3	12.6	420.4	18.5	399.1	98.6	424.3	12.6	NA
09VL40-47	471	426099	1.7	17.6530	1.7	0.5046	4.2	0.0646	3.8	0.91	403.5	14.8	414.8	14.2	477.8	38.2	403.5	14.8	NA
09VL40-48	78	29604	0.9	9.2959	1.5	4.5207	3.6	0.3048	3.3	0.91	1715.0	49.7	1734.8	30.3	1758.7	27.9	1758.7	27.9	97.5
09VL40-49	253	237960	1.4	5.2082	0.6	13.3743	3.9	0.5052	3.8	0.99	2636.1	82.6	2706.4	36.5	2759.4	9.8	2759.4	9.8	95.5
09VL40-50	223	14153	1.3	16.7251	4.2	0.6624	5.9	0.0804	4.2	0.71	498.2	20.1	516.1	23.9	596.0	90.2	498.2	20.1	83.6
09VL40-51	288	38299	1.9	5.7010	0.3	10.9810	2.3	0.4540	2.3	0.99	2413.2	45.8	2521.5	21.4	2609.9	5.2	2609.9	5.2	92.5
09VL40-52	448	266858	1.0	7.7910	0.3	6.6784	0.8	0.3774	0.7	0.94	2064.0	13.0	2069.8	6.9	2075.5	4.6	2075.5	4.6	99.4
09VL40-53	99	60261	0.7	10.8505	2.3	3.2166	2.8	0.2531	1.7	0.59	1454.6	22.0	1461.2	22.0	1470.7	43.3	1470.7	43.3	98.9
09VL40-54	436	244531	6.2	8.5449	0.4	5.2060	2.4	0.3226	2.4	0.98	1802.6	37.5	1853.6	20.7	1911.3	7.8	1911.3	7.8	94.3
09VL40-55	399	90248	1.8	17.8813	3.1	0.5292	3.8	0.0686	2.3	0.60	427.9	9.6	431.3	13.5	449.4	68.1	427.9	9.6	NA
09VL40-56	123	129176	0.7	6.1146	0.4	10.6549	2.8	0.4725	2.7	0.99	2494.6	56.8	2493.5	25.7	2492.6	6.4	2492.6	6.4	100.1
09VL40-57	140	16275	1.7	18.0724	8.3	0.5168	8.5	0.0677	1.8	0.21	422.5	7.2	423.0	29.3	425.7	185.2	422.5	7.2	NA
09VL40-58	184	152123	1.5	6.2490	0.5	10.2698	2.1	0.4654	2.0	0.97	2463.6	41.9	2459.4	19.5	2455.9	8.6	2455.9	8.6	100.3
09VL40-59	184	47384	1.7	17.8932	7.3	0.5456	8.6	0.0708	4.5	0.53	441.0	19.2	442.1	30.7	447.9	161.9	441.0	19.2	NA
09VL40-60	337	54533	2.1	18.0333	1.8	0.5572	2.9	0.0729	2.4	0.80	453.5	10.3	449.7	10.7	430.5	39.1	453.5	10.3	NA
09VL40-61	217	73057	2.2	17.2253	3.4	0.5617	3.7	0.0702	1.6	0.42	437.2	6.6	452.6	13.6	531.8	73.8	437.2	6.6	NA
09VL40-62	352	68985	1.7	17.7959	2.7	0.5641	3.5	0.0728	2.2	0.64	453.0	9.7	454.2	12.7	460.0	59.5	453.0	9.7	NA
09VL40-63	143	235646	1.9	5.6273	0.5	10.2564	1.3	0.4186	1.3	0.93	2254.1	23.9	2458.2	12.5	2631.6	8.1	2631.6	8.1	85.7
09VL40-65	333	79208	1.5	17.7727	1.7	0.5578	2.5	0.0719	1.8	0.72	447.6	7.8	450.1	9.1	462.9	38.1	447.6	7.8	NA
09VL40-66	64	2389	1.4	20.4415	17.9	0.4822	18.1	0.0715	3.0	0.16	445.1	12.8	399.6	59.9	144.0	421.9	445.1	12.8	NA

						Isotope ratios							Apparent ages (Ma)						
Analysis	U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
	(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
09VL40-67	83	37637	2.1	9.3425	1.6	4.5675	2.5	0.3095	2.0	0.78	1738.2	30.0	1743.4	21.0	1749.6	28.7	1749.6	28.7	99.3
09VL40-68	70	19905	1.8	11.2152	3.2	2.9873	4.0	0.2430	2.5	0.61	1402.2	31.0	1404.4	30.7	1407.7	61.4	1407.7	61.4	99.6
09VL40-69	76	79642	2.1	8.4733	1.2	5.5380	1.9	0.3403	1.5	0.79	1888.3	24.5	1906.5	16.3	1926.4	21.0	1926.4	21.0	98.0
09VL40-71	226	39037	1.7	18.0324	6.1	0.5130	6.7	0.0671	2.8	0.41	418.6	11.1	420.5	22.9	430.6	135.3	418.6	11.1	NA
09VL40-72	303	63606	2.1	18.0387	2.5	0.5329	3.5	0.0697	2.4	0.69	434.5	10.1	433.7	12.4	429.8	56.6	434.5	10.1	NA
09VL40-73	228	307620	1.5	4.3654	0.4	18.9341	2.1	0.5995	2.1	0.98	3027.7	50.8	3038.5	20.7	3045.6	6.8	3045.6	6.8	99.4
09VL40-74	105	103495	2.2	8.5693	1.0	5.5670	1.9	0.3460	1.6	0.85	1915.4	26.7	1911.0	16.3	1906.2	18.0	1906.2	18.0	100.5
09VL40-75	115	87683	1.9	7.9451	0.6	6.5877	2.4	0.3796	2.3	0.96	2074.4	40.2	2057.7	20.8	2041.0	11.4	2041.0	11.4	101.6
09VL40-76	154	212065	3.4	5.2721	0.5	13.7812	1.7	0.5270	1.7	0.96	2728.6	37.3	2734.8	16.6	2739.3	8.0	2739.3	8.0	99.6
09VL40-77	179	54697	1.2	17.8368	4.6	0.5561	5.3	0.0719	2.7	0.51	447.8	11.8	449.0	19.4	454.9	102.0	447.8	11.8	NA
09VL40-78	232	129765	2.1	18.0570	5.4	0.5479	5.8	0.0718	2.1	0.35	446.7	8.9	443.6	20.9	427.6	121.5	446.7	8.9	NA
09VL40-79	411	34080	1.5	17.9300	2.1	0.5365	3.9	0.0698	3.2	0.83	434.7	13.5	436.1	13.7	443.3	47.6	434.7	13.5	NA
09VL40-81	75	70567	2.1	4.8249	0.4	15.6649	2.3	0.5482	2.3	0.99	2817.6	52.4	2856.6	22.2	2884.2	6.0	2884.2	6.0	97.7
09VL40-82	824	56926	8.8	17.8669	1.3	0.5625	4.6	0.0729	4.4	0.96	453.5	19.4	453.1	16.9	451.1	28.1	453.5	19.4	NA
09VL40-83	96	28320	1.2	14.6379	3.7	1.4321	4.0	0.1520	1.4	0.35	912.4	11.8	902.4	23.7	878.1	76.9	912.4	11.8	103.9
09VL40-85	489	82136	2.8	17.8686	2.4	0.5420	3.1	0.0702	2.0	0.64	437.6	8.3	439.7	10.9	450.9	52.2	437.6	8.3	NA
09VL40-86	193	118304	1.5	9.3826	0.8	4.6290	2.2	0.3150	2.1	0.94	1765.3	31.8	1754.5	18.4	1741.7	14.2	1741.7	14.2	101.4
09VL40-88	447	266979	1.7	12.2998	0.7	2.2495	1.3	0.2007	1.1	0.84	1178.9	11.7	1196.6	9.1	1228.7	13.9	1228.7	13.9	95.9
09VL40-89	390	89869	1.2	17.8206	1.9	0.5743	4.4	0.0742	4.0	0.90	461.6	17.6	460.8	16.2	456.9	42.2	461.6	17.6	NA
09VL40-90	111	16761	1.4	18.6643	5.0	0.5145	6.3	0.0696	3.9	0.61	434.0	16.2	421.5	21.7	353.4	112.1	434.0	16.2	NA
09VL40-91	73	71832	1.4	5.0104	0.9	15.2424	2.3	0.5539	2.1	0.91	2841.3	47.3	2830.5	21.5	2822.8	15.3	2822.8	15.3	100.7
09VL40-92	79	9571	1.4	16.9366	10.7	0.5758	12.8	0.0707	7.0	0.54	440.5	29.6	461.8	47.4	568.7	233.9	440.5	29.6	77.5
09VL40-93	259	100351	1.5	14.9118	1.1	1.2405	3.8	0.1342	3.7	0.96	811.6	28.1	819.1	21.5	839.7	21.9	811.6	28.1	96.7
09VL40-94	82	11760	1.7	16.7184	14.8	0.5802	15.5	0.0703	4.4	0.28	438.2	18.6	464.6	57.8	596.9	323.0	438.2	18.6	73.4
09VL40-95	456	231513	3.0	11.1856	1.8	3.0041	3.9	0.2437	3.4	0.88	1405.9	43.0	1408.7	29.5	1412.7	35.1	1412.7	35.1	99.5

						Isotope ratios							Apparent ages (Ma)						
Analysis	U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
	(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
09VL40-96	208	21495	1.7	17.8951	4.0	0.5491	5.4	0.0713	3.7	0.68	443.7	15.9	444.4	19.5	447.6	88.0	443.7	15.9	NA
09VL40-97	159	75118	1.7	10.9315	1.0	3.1538	2.8	0.2500	2.6	0.94	1438.7	34.0	1445.9	21.7	1456.6	18.3	1456.6	18.3	98.8
09VL40-99	148	164097	3.0	8.8571	1.4	5.1779	2.7	0.3326	2.3	0.85	1851.0	36.7	1849.0	22.8	1846.7	25.4	1846.7	25.4	100.2
09VL40-100	291	286727	1.0	5.2912	0.3	13.7251	1.2	0.5267	1.1	0.98	2727.6	25.5	2730.9	11.1	2733.4	4.2	2733.4	4.2	99.8

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09VL42-2	114	61843	1.9	8.3189	0.9	5.9490	1.9	0.3589	1.7	0.88	1977.1	28.7	1968.4	16.6	1959.3	16.0	1959.3	16.0	100.9
09VL42-3	115	134317	2.1	5.4285	0.5	13.8495	3.1	0.5453	3.0	0.99	2805.5	69.0	2739.5	29.0	2691.2	7.5	2691.2	7.5	104.2
09VL42-4	254	49800	1.5	17.5920	2.8	0.5505	3.1	0.0702	1.5	0.48	437.6	6.3	445.3	11.3	485.5	60.8	437.6	6.3	NA
09VL42-5	112	11140	2.0	18.4491	7.9	0.5309	8.1	0.0710	1.8	0.23	442.4	7.8	432.4	28.4	379.5	177.0	442.4	7.8	NA
09VL42-6	26	28963	0.8	6.7422	3.0	8.6035	3.8	0.4207	2.4	0.63	2263.7	46.0	2296.9	35.0	2326.6	51.3	2326.6	51.3	97.3
09VL42-7	232	236235	1.8	5.3538	0.2	13.8130	2.7	0.5364	2.7	1.00	2768.2	60.7	2737.0	25.6	2714.0	3.5	2714.0	3.5	102.0
09VL42-8	267	39133	1.9	17.9728	3.0	0.5322	3.9	0.0694	2.5	0.63	432.4	10.3	433.3	13.7	438.0	67.0	432.4	10.3	NA
09VL42-9	228	43081	1.8	16.6542	1.9	0.7379	6.3	0.0891	6.0	0.96	550.4	31.7	561.2	27.1	605.2	40.1	550.4	31.7	90.9
09VL42-10	106	38950	1.9	9.2807	1.5	4.6644	2.5	0.3140	2.0	0.80	1760.2	30.7	1760.9	20.8	1761.7	27.3	1761.7	27.3	99.9
09VL42-11	167	138675	1.5	8.0956	0.6	5.8292	6.0	0.3423	5.9	1.00	1897.5	97.7	1950.8	51.8	2007.7	9.8	2007.7	9.8	94.5
09VL42-12	509	135880	7.9	6.3374	1.2	8.9258	3.3	0.4103	3.0	0.93	2216.1	56.9	2330.4	30.0	2432.1	21.0	2432.1	21.0	91.1
09VL42-13	154	16233	1.0	17.7519	8.4	0.5524	8.9	0.0711	2.7	0.30	442.9	11.5	446.6	32.0	465.5	187.2	442.9	11.5	NA
09VL42-14	348	67692	2.2	17.4312	3.1	0.5756	4.4	0.0728	3.1	0.71	452.8	13.7	461.6	16.4	505.7	69.1	452.8	13.7	NA
09VL42-15	240	72588	3.4	17.5844	2.8	0.6365	2.9	0.0812	1.0	0.33	503.1	4.7	500.1	11.6	486.5	61.5	503.1	4.7	NA
09VL42-16	102	64272	1.7	9.3141	0.7	4.5076	1.5	0.3045	1.3	0.89	1713.6	20.3	1732.4	12.5	1755.1	12.4	1755.1	12.4	97.6
09VL42-17	122	34383	2.0	12.3769	1.6	2.3251	2.8	0.2087	2.3	0.81	1222.0	25.5	1220.0	20.0	1216.5	32.3	1216.5	32.3	100.5
09VL42-18	33	14827	2.2	10.9073	5.1	3.2011	6.1	0.2532	3.3	0.55	1455.1	43.4	1457.4	47.3	1460.8	97.5	1460.8	97.5	99.6

						Isotope ratios							Apparent ages (Ma)						
Analysis	U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
	(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
09VL42-19	173	88307	1.2	9.9038	1.3	3.6963	7.0	0.2655	6.9	0.98	1517.9	92.7	1570.6	55.8	1642.0	24.4	1642.0	24.4	92.4
09VL42-20	347	42580	1.0	17.7879	1.7	0.5453	2.5	0.0703	1.8	0.72	438.2	7.5	441.9	8.9	461.0	38.1	438.2	7.5	NA
09VL42-21	149	24075	1.1	16.8637	5.9	0.6742	6.4	0.0825	2.5	0.39	510.8	12.2	523.2	26.4	578.1	129.4	510.8	12.2	88.4
09VL42-22	140	25386	1.3	17.6477	8.7	0.5533	9.4	0.0708	3.6	0.38	441.1	15.3	447.2	34.0	478.5	192.1	441.1	15.3	NA
09VL42-23	463	100154	2.7	17.6535	2.7	0.5685	3.7	0.0728	2.5	0.67	453.0	10.8	457.1	13.5	477.8	60.0	453.0	10.8	NA
09VL42-24	188	23299	1.6	16.8545	6.5	0.5976	7.7	0.0731	4.0	0.52	454.5	17.5	475.7	29.1	579.3	142.4	454.5	17.5	78.5
09VL42-25	107	34733	1.6	13.2717	3.3	1.8536	3.9	0.1784	2.2	0.57	1058.3	21.8	1064.7	26.1	1077.8	65.4	1077.8	65.4	98.2
09VL42-27	386	159479	2.1	11.6212	0.4	2.7097	2.0	0.2284	1.9	0.98	1326.0	23.0	1331.1	14.5	1339.3	7.6	1339.3	7.6	99.0
09VL42-28	287	24834	2.0	17.5357	3.2	0.5849	3.9	0.0744	2.3	0.59	462.6	10.3	467.6	14.8	492.6	70.3	462.6	10.3	NA
09VL42-30	78	125171	1.5	5.1027	0.6	14.4224	2.4	0.5338	2.3	0.97	2757.2	52.7	2777.9	23.0	2792.9	9.9	2792.9	9.9	98.7
09VL42-31	54	61197	1.4	8.1874	1.9	5.8873	2.9	0.3496	2.3	0.77	1932.7	37.8	1959.4	25.4	1987.7	33.1	1987.7	33.1	97.2
09VL42-32	97	60042	1.7	8.1669	1.0	6.2027	2.3	0.3674	2.1	0.90	2017.1	36.1	2004.8	20.3	1992.2	18.2	1992.2	18.2	101.3
09VL42-33	551	103904	3.7	17.6276	1.9	0.5429	2.5	0.0694	1.6	0.65	432.6	6.8	440.4	9.1	481.0	42.8	432.6	6.8	NA
09VL42-34	309	105750	5.7	9.6071	1.6	3.4746	4.7	0.2421	4.4	0.94	1397.6	55.0	1521.5	36.7	1698.3	29.3	1698.3	29.3	82.3
09VL42-35	72	53011	1.8	9.4019	1.6	4.4841	2.1	0.3058	1.3	0.62	1719.8	19.3	1728.0	17.2	1738.0	29.8	1738.0	29.8	99.0
09VL42-36	685	73585	1.7	18.0284	1.4	0.5611	2.5	0.0734	2.1	0.84	456.4	9.2	452.2	9.1	431.1	30.6	456.4	9.2	NA
09VL42-37	433	43616	2.2	17.9531	2.1	0.5449	3.1	0.0710	2.3	0.73	441.9	9.7	441.7	11.2	440.4	47.7	441.9	9.7	NA
09VL42-38	165	25620	1.9	17.4367	7.4	0.5871	8.1	0.0742	3.2	0.40	461.7	14.4	469.0	30.5	505.0	164.1	461.7	14.4	NA
09VL42-39	306	135269	1.8	8.3400	0.7	5.9362	1.9	0.3591	1.8	0.94	1977.7	30.3	1966.5	16.6	1954.8	12.1	1954.8	12.1	101.2
09VL42-40	594	125200	2.2	14.8856	0.9	1.2143	1.4	0.1311	1.1	0.80	794.1	8.6	807.2	8.0	843.3	17.7	794.1	8.6	94.2
09VL42-41	740	98224	1.1	17.8751	1.8	0.5480	4.1	0.0710	3.7	0.90	442.5	15.8	443.7	14.8	450.1	40.7	442.5	15.8	NA
09VL42-42	423	24774	1.1	15.3304	1.3	1.0969	2.6	0.1220	2.2	0.87	741.9	15.7	751.9	13.7	781.7	26.3	741.9	15.7	94.9
09VL42-43	319	37347	1.2	17.9636	2.3	0.5294	4.5	0.0690	3.9	0.86	429.9	16.1	431.4	15.7	439.1	50.3	429.9	16.1	NA
09VL42-44	38	29184	0.7	11.8891	5.0	2.5410	5.7	0.2191	2.8	0.48	1277.1	32.1	1283.9	41.8	1295.1	97.5	1295.1	97.5	98.6
09VL42-45	72	119202	0.9	5.4731	0.5	12.1882	1.7	0.4838	1.6	0.96	2543.8	34.1	2619.0	15.9	2677.6	8.0	2677.6	8.0	95.0

						Isotope ratios							Apparent ages (Ma)						
Analysis	U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
	(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
09VL42-51	247	106821	2.9	16.9667	2.1	0.7767	2.9	0.0956	1.9	0.67	588.4	10.9	583.6	12.8	564.8	46.5	588.4	10.9	104.2
09VL42-52	81	132670	1.3	8.1953	1.5	6.1361	2.2	0.3647	1.6	0.73	2004.5	27.8	1995.4	19.2	1986.0	26.7	1986.0	26.7	100.9
09VL42-53	193	54879	3.0	11.3302	1.4	3.0384	2.1	0.2497	1.5	0.73	1436.8	19.9	1417.3	16.1	1388.1	27.4	1388.1	27.4	103.5
09VL42-54	137	9349	3.3	17.9517	10.0	0.5442	11.6	0.0709	5.8	0.50	441.3	24.8	441.2	41.5	440.6	223.8	441.3	24.8	NA
09VL42-55	318	43050	1.4	18.3335	3.7	0.5472	4.8	0.0728	3.0	0.64	452.8	13.2	443.2	17.1	393.6	82.4	452.8	13.2	NA
09VL42-56	131	19103	2.0	18.2310	8.3	0.5141	8.6	0.0680	2.3	0.27	424.0	9.5	421.2	29.7	406.2	185.6	424.0	9.5	NA
09VL42-57	47	27606	0.5	8.2481	1.4	5.6572	1.9	0.3384	1.2	0.65	1879.0	19.8	1924.9	16.1	1974.5	25.1	1974.5	25.1	95.2
09VL42-58	118	56864	2.0	9.3936	1.0	4.3487	2.0	0.2963	1.7	0.87	1672.8	25.7	1702.6	16.6	1739.6	18.3	1739.6	18.3	96.2
09VL42-59	134	113691	1.6	5.8644	0.3	10.6985	2.5	0.4550	2.5	0.99	2417.6	50.2	2497.3	23.4	2562.7	5.8	2562.7	5.8	94.3
09VL42-60	144	54682	2.5	12.7793	1.9	2.1695	2.4	0.2011	1.4	0.60	1181.1	15.4	1171.3	16.6	1153.2	38.1	1153.2	38.1	102.4

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27LB09-1	457	215000	1.7	17.7679	1.5	0.5804	2.1	0.0748	1.6	0.72	465.0	7.0	464.7	8.0	463.5	32.9	465.0	7.0	NA
27LB09-2	348	44815	1.4	17.5974	1.4	0.5908	2.6	0.0754	2.3	0.85	468.7	10.2	471.4	10.0	484.8	30.3	468.7	10.2	NA
27LB09-3	363	96112	2.2	17.8631	2.9	0.5526	3.5	0.0716	2.0	0.58	445.8	8.8	446.7	12.7	451.6	63.9	445.8	8.8	NA
27LB09-4	274	85986	2.2	17.9925	1.4	0.5340	4.0	0.0697	3.7	0.93	434.3	15.5	434.5	14.0	435.6	31.4	434.3	15.5	NA
27LB09-5	417	77253	1.7	17.7820	1.1	0.5590	1.6	0.0721	1.1	0.72	448.7	4.9	450.9	5.8	461.7	24.4	448.7	4.9	NA
27LB09-9	457	159308	1.8	17.6655	1.8	0.5578	3.7	0.0715	3.2	0.86	445.0	13.6	450.1	13.3	476.3	40.6	445.0	13.6	NA
27LB09-10	513	198048	1.7	17.8679	1.0	0.5582	3.3	0.0723	3.1	0.95	450.2	13.6	450.3	12.0	451.0	22.7	450.2	13.6	NA
27LB09-11	486	78443	2.5	17.8293	1.1	0.5248	1.9	0.0679	1.6	0.81	423.2	6.5	428.3	6.8	455.8	25.2	423.2	6.5	NA
27LB09-14	368	100866	2.0	17.9172	2.1	0.4823	9.3	0.0627	9.0	0.97	391.9	34.4	399.7	30.6	444.9	46.1	391.9	34.4	NA
27LB09-16	129	71564	1.2	14.9418	2.0	1.3416	3.1	0.1454	2.4	0.77	875.0	19.8	863.9	18.3	835.5	41.9	875.0	19.8	104.7
27LB09-18	481	30213	1.5	17.9728	1.1	0.5557	2.6	0.0724	2.3	0.91	450.8	10.1	448.7	9.3	438.0	24.1	450.8	10.1	NA

						Isotope ratios							Apparent ages (Ma)						
Analysis	U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
	(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
27LB09-19	660	640121	1.2	17.7938	1.0	0.5668	1.9	0.0732	1.5	0.83	455.1	6.8	456.0	6.8	460.2	23.1	455.1	6.8	NA
27LB09-23	657	85403	2.7	17.8315	1.5	0.5511	5.8	0.0713	5.6	0.97	443.8	23.9	445.7	20.8	455.6	33.1	443.8	23.9	NA
27LB09-25	767	143568	3.1	17.8437	0.7	0.5525	3.6	0.0715	3.5	0.98	445.2	15.2	446.7	13.0	454.1	16.0	445.2	15.2	NA
27LB09-27	792	118747	2.0	17.8944	0.6	0.5696	2.7	0.0739	2.6	0.97	459.7	11.5	457.8	9.8	447.7	13.8	459.7	11.5	NA
27LB09-34	499	153067	1.6	17.8604	1.0	0.5756	4.5	0.0746	4.4	0.98	463.6	19.6	461.6	16.7	451.9	22.2	463.6	19.6	NA
27LB09-36	567	84350	2.2	18.0529	3.3	0.5640	5.7	0.0738	4.6	0.81	459.3	20.5	454.1	20.9	428.1	74.5	459.3	20.5	NA
27LB09-37	538	67123	1.7	17.9434	3.3	0.5354	5.4	0.0697	4.3	0.80	434.2	18.0	435.4	19.1	441.6	72.7	434.2	18.0	NA
27LB09-38	496	36841	1.8	17.6431	2.5	0.5690	10.2	0.0728	9.9	0.97	453.1	43.2	457.4	37.5	479.1	56.3	453.1	43.2	NA
27LB09-40	557	63303	1.4	17.4394	2.1	0.5824	3.8	0.0737	3.1	0.83	458.2	13.9	466.0	14.2	504.7	46.7	458.2	13.9	NA
27LB09-41	1399	302536	1.2	17.8024	0.9	0.5502	4.0	0.0710	3.9	0.97	442.4	16.7	445.1	14.5	459.2	20.0	442.4	16.7	NA
27LB09-42	701	85618	2.7	17.7987	2.0	0.5838	5.3	0.0754	5.0	0.93	468.4	22.4	466.9	20.0	459.7	43.7	468.4	22.4	NA
27LB09-46	765	129217	2.8	17.7477	1.5	0.6066	6.6	0.0781	6.5	0.97	484.7	30.1	481.4	25.4	466.0	32.7	484.7	30.1	NA
27LB09-48	353	66814	1.9	17.4720	3.9	0.5675	4.8	0.0719	2.9	0.60	447.7	12.5	456.4	17.7	500.6	85.1	447.7	12.5	NA
27LB09-50	593	113217	1.8	17.6315	2.1	0.5929	3.7	0.0758	3.1	0.83	471.1	14.1	472.7	14.2	480.5	46.4	471.1	14.1	NA
27LB09-52	820	132886	2.2	17.6102	2.0	0.5703	4.7	0.0728	4.2	0.91	453.2	18.6	458.2	17.3	483.2	43.9	453.2	18.6	NA
27LB09-54	533	74795	1.6	18.0754	2.8	0.5749	4.5	0.0754	3.6	0.79	468.4	16.1	461.2	16.7	425.3	61.4	468.4	16.1	NA
27LB09-55	1113	94856	3.2	17.5845	1.5	0.5821	9.2	0.0742	9.0	0.99	461.7	40.2	465.8	34.2	486.4	33.5	461.7	40.2	NA
27LB09-56	765	740449	1.1	17.5177	1.4	0.5793	5.5	0.0736	5.4	0.97	457.8	23.7	464.0	20.7	494.8	31.7	457.8	23.7	NA
27LB09-57	320	37255	2.3	17.9278	2.9	0.5765	4.9	0.0750	4.0	0.81	466.0	18.0	462.2	18.3	443.6	63.8	466.0	18.0	NA
27LB09-58	665	184536	1.7	18.0244	1.3	0.5638	5.0	0.0737	4.8	0.96	458.4	21.3	454.0	18.2	431.6	29.7	458.4	21.3	NA
27LB09-59	353	110480	2.1	17.5779	3.3	0.5633	7.4	0.0718	6.6	0.90	447.0	28.4	453.6	26.9	487.2	72.2	447.0	28.4	NA
27LB09-62	643	125250	1.2	17.4408	1.2	0.5664	4.1	0.0716	3.9	0.96	446.1	17.0	455.7	15.1	504.5	26.5	446.1	17.0	NA
27LB09-63	811	129769	2.9	17.8522	1.8	0.5779	5.9	0.0748	5.6	0.95	465.2	25.3	463.1	22.0	453.0	39.2	465.2	25.3	NA
27LB09-69	611	59258	1.5	17.7564	1.8	0.5361	10.0	0.0690	9.9	0.98	430.4	41.1	435.9	35.6	464.9	39.3	430.4	41.1	NA
27LB09-71	1157	127114	1.9	17.7773	2.2	0.5633	4.6	0.0726	4.1	0.88	452.0	17.7	453.7	16.9	462.3	48.1	452.0	17.7	NA

						Isotope ratios							Apparent ages (Ma)						
Analysis	U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
	(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
27LB09-73	289	55559	2.5	18.3712	3.1	0.5513	4.7	0.0735	3.5	0.74	456.9	15.3	445.9	16.9	389.0	70.0	456.9	15.3	NA
27LB09-74	718	165228	1.4	17.8593	2.2	0.5773	3.3	0.0748	2.5	0.74	464.9	11.1	462.7	12.4	452.1	49.4	464.9	11.1	NA
27LB09-76	551	79333	1.5	17.7986	2.9	0.5565	8.2	0.0718	7.7	0.94	447.2	33.1	449.3	29.7	459.7	63.3	447.2	33.1	NA
27LB09-77	305	76736	2.4	17.8346	4.2	0.5621	6.4	0.0727	4.8	0.76	452.5	21.1	452.9	23.4	455.2	93.1	452.5	21.1	NA
27LB09-78	904	62692	1.5	17.8139	2.1	0.5503	5.6	0.0711	5.1	0.92	442.7	22.0	445.2	20.1	457.7	47.1	442.7	22.0	NA
27LB09-80	445	58939	2.5	17.7790	2.7	0.5559	3.9	0.0717	2.8	0.71	446.3	12.0	448.9	14.2	462.1	60.9	446.3	12.0	NA
27LB09-82	453	92871	1.6	17.4968	2.8	0.5368	5.9	0.0681	5.2	0.88	424.8	21.3	436.3	21.0	497.5	62.7	424.8	21.3	NA
27LB09-83	505	72335	1.3	18.0766	3.5	0.5348	8.2	0.0701	7.4	0.90	436.8	31.3	435.0	29.0	425.2	78.1	436.8	31.3	NA
27LB09-85	475	56949	1.5	17.6699	3.6	0.5616	7.1	0.0720	6.2	0.87	448.0	26.7	452.6	26.1	475.7	79.2	448.0	26.7	NA
27LB09-86	368	61614	2.0	17.8986	3.9	0.5786	5.7	0.0751	4.1	0.72	466.8	18.5	463.5	21.2	447.2	87.7	466.8	18.5	NA
27LB09-87	452	61869	1.8	17.7764	1.2	0.5541	2.8	0.0714	2.5	0.90	444.8	10.9	447.7	10.2	462.4	26.8	444.8	10.9	NA
27LB09-89	1481	245995	1.2	17.7370	0.9	0.5473	4.4	0.0704	4.3	0.98	438.6	18.1	443.3	15.7	467.4	20.6	438.6	18.1	NA
27LB09-95	460	23225	1.4	17.8301	2.7	0.5534	7.4	0.0716	6.9	0.93	445.6	29.5	447.2	26.7	455.7	60.2	445.6	29.5	NA
27LB09-49	540	107471	4.6	17.0792	1.1	0.7567	8.8	0.0937	8.7	0.99	577.6	48.1	572.1	38.4	550.4	24.1	577.6	48.1	104.9
27LB09-96	448	16942	1.9	17.5134	4.7	0.4979	6.2	0.0632	4.0	0.65	395.3	15.5	410.3	20.8	495.4	102.8	395.3	15.5	NA
27LB09-98	388	81201	2.0	17.4634	1.9	0.5787	4.2	0.0733	3.8	0.90	456.0	16.6	463.6	15.7	501.7	41.5	456.0	16.6	NA
27LB09-99	366	89595	2.0	17.7021	5.3	0.5394	6.5	0.0692	3.7	0.57	431.6	15.5	438.0	23.0	471.7	117.4	431.6	15.5	NA
27LB09-100	1177	103898	1.3	17.6979	1.4	0.5677	3.8	0.0729	3.5	0.93	453.4	15.3	456.6	13.9	472.2	31.6	453.4	15.3	NA

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07V 649893E 6647727N NAD 83

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						Isotope ratios							Apparent ages (Ma)						
Analysis	U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
	(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
28LB09-3	914	820746	8.1	9.0875	0.7	4.2777	2.5	0.2819	2.4	0.96	1601.1	34.5	1689.1	20.8	1800.1	12.8	1800.1	12.8	88.9
28LB09-4	232	54530	1.8	15.0712	2.5	1.1118	7.2	0.1215	6.8	0.94	739.3	47.3	759.0	38.7	817.5	53.1	739.3	47.3	90.4
28LB09-5	465	67863	0.9	14.4758	1.3	1.4352	5.1	0.1507	4.9	0.96	904.8	41.1	903.7	30.3	901.1	27.8	901.1	27.8	100.4
28LB09-6	401	25766	2.4	17.6040	5.3	0.5127	5.9	0.0655	2.6	0.44	408.7	10.1	420.2	20.3	484.0	117.2	408.7	10.1	NA
28LB09-7	259	39483	1.9	18.0712	4.2	0.5063	4.9	0.0664	2.6	0.52	414.2	10.3	416.0	16.7	425.8	93.2	414.2	10.3	NA
28LB09-8	1324	102643	0.5	18.2467	0.9	0.5097	2.0	0.0674	1.8	0.89	420.8	7.3	418.2	7.0	404.2	21.2	420.8	7.3	NA
28LB09-9	422	41369	1.9	18.1670	1.6	0.5020	2.4	0.0661	1.7	0.72	412.9	6.8	413.0	8.0	414.0	36.4	412.9	6.8	NA
28LB09-10	657	120066	1.5	18.0486	1.8	0.5167	4.3	0.0676	3.9	0.91	421.9	15.8	423.0	14.7	428.6	39.7	421.9	15.8	NA
28LB09-11	334	56199	2.1	17.5902	3.3	0.5223	4.0	0.0666	2.2	0.56	415.9	9.0	426.7	13.9	485.7	73.1	415.9	9.0	NA
28LB09-12	382	42315	2.2	18.3039	2.6	0.5062	3.3	0.0672	2.0	0.60	419.2	8.0	415.9	11.2	397.2	59.0	419.2	8.0	NA
28LB09-13	225	18356	1.9	18.5809	5.3	0.4686	5.4	0.0631	0.9	0.17	394.7	3.4	390.2	17.4	363.5	119.2	394.7	3.4	NA
28LB09-14	367	55109	2.6	18.2356	5.0	0.5014	5.5	0.0663	2.3	0.41	413.9	9.0	412.7	18.7	405.6	112.4	413.9	9.0	NA
28LB09-15	121	186024	2.4	5.2558	0.4	13.7241	1.8	0.5231	1.8	0.97	2712.5	39.5	2730.9	17.3	2744.5	6.9	2744.5	6.9	98.8
28LB09-16	229	52840	2.5	18.1563	4.2	0.5169	5.4	0.0681	3.4	0.63	424.5	14.0	423.1	18.7	415.3	94.0	424.5	14.0	NA
28LB09-17	470	15082	1.9	17.3724	3.1	0.6571	3.9	0.0828	2.3	0.59	512.8	11.2	512.8	15.6	513.1	68.8	512.8	11.2	99.9
28LB09-18	151	34395	4.3	6.2210	5.8	8.8341	8.0	0.3986	5.5	0.69	2162.5	101.2	2321.0	73.3	2463.5	98.5	2463.5	98.5	87.8
28LB09-19	303	30250	0.8	15.0388	1.4	1.2360	5.0	0.1348	4.8	0.96	815.3	37.1	817.1	28.3	822.0	29.1	815.3	37.1	99.2
28LB09-20	234	38971	1.1	16.5676	2.6	0.8130	3.4	0.0977	2.1	0.63	600.9	12.1	604.1	15.3	616.4	56.7	600.9	12.1	97.5
28LB09-21	363	33558	2.2	18.2198	1.8	0.5186	3.1	0.0685	2.6	0.82	427.3	10.6	424.2	10.9	407.5	39.9	427.3	10.6	NA
28LB09-22	583	114297	2.2	18.0632	2.4	0.5013	3.0	0.0657	1.7	0.57	410.1	6.8	412.6	10.1	426.8	54.5	410.1	6.8	NA
28LB09-23	571	105476	1.0	18.1050	2.1	0.5141	2.3	0.0675	1.0	0.41	421.1	3.9	421.2	8.1	421.7	47.8	421.1	3.9	NA
28LB09-24	257	33973	0.9	17.9966	2.9	0.5087	3.7	0.0664	2.3	0.62	414.4	9.3	417.6	12.7	435.0	64.4	414.4	9.3	NA
28LB09-25	558	89712	2.5	18.0634	1.4	0.5012	2.1	0.0657	1.6	0.74	409.9	6.2	412.5	7.1	426.8	31.4	409.9	6.2	NA

						Isotope ratios							Apparent ages (Ma)						
Analysis	U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
	(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
28LB09-26	134	19478	1.4	16.0569	3.6	0.8810	4.1	0.1026	2.0	0.49	629.6	11.9	641.5	19.4	683.7	76.0	629.6	11.9	92.1
28LB09-27	153	86319	1.0	15.0969	2.1	1.2446	3.0	0.1363	2.2	0.72	823.6	16.8	821.0	17.0	813.9	43.9	823.6	16.8	101.2
28LB09-28	123	26485	2.9	14.8170	2.9	1.1908	3.7	0.1280	2.2	0.61	776.2	16.3	796.3	20.3	852.9	60.9	776.2	16.3	91.0
28LB09-29	304	144594	3.3	12.2954	1.7	2.0940	2.4	0.1867	1.7	0.71	1103.6	17.4	1146.8	16.7	1229.4	33.7	1229.4	33.7	89.8
28LB09-30	240	59596	1.1	15.2813	2.4	1.1760	2.9	0.1303	1.6	0.57	789.8	12.2	789.5	15.7	788.5	49.4	789.8	12.2	100.2
28LB09-31	554	39817	1.8	18.2915	2.5	0.5076	2.7	0.0673	1.0	0.38	420.1	4.1	416.8	9.1	398.7	55.2	420.1	4.1	NA
28LB09-32	218	35687	3.0	17.2617	3.9	0.5465	5.7	0.0684	4.0	0.72	426.6	16.7	442.7	20.3	527.2	86.6	426.6	16.7	NA
28LB09-33	681	53964	1.9	18.4480	1.2	0.5150	3.5	0.0689	3.3	0.94	429.6	13.7	421.8	12.2	379.6	28.1	429.6	13.7	NA
28LB09-34	378	19578	3.2	17.6076	3.4	0.5173	3.8	0.0661	1.6	0.43	412.4	6.6	423.3	13.2	483.5	75.9	412.4	6.6	NA
28LB09-35	463	81627	2.9	17.9165	1.7	0.5195	4.1	0.0675	3.8	0.91	421.1	15.3	424.8	14.3	445.0	37.7	421.1	15.3	NA
28LB09-36	991	282392	10.7	8.4663	0.2	5.3684	1.6	0.3296	1.6	0.99	1836.6	25.6	1879.8	13.8	1927.9	3.6	1927.9	3.6	95.3
28LB09-37	185	3560	1.8	17.4733	8.2	0.5193	8.4	0.0658	2.1	0.25	410.9	8.4	424.7	29.2	500.4	179.8	410.9	8.4	NA
28LB09-38	244	57787	2.7	18.5351	4.7	0.4876	4.8	0.0656	1.3	0.28	409.3	5.3	403.3	16.1	369.0	104.8	409.3	5.3	NA
28LB09-39	575	95840	2.2	17.8672	2.0	0.5011	2.3	0.0649	1.0	0.45	405.5	4.0	412.4	7.7	451.1	45.1	405.5	4.0	NA
28LB09-40	498	82117	1.8	17.8859	1.6	0.4991	2.2	0.0647	1.5	0.69	404.4	6.1	411.1	7.5	448.8	35.6	404.4	6.1	NA
28LB09-41	426	69905	1.8	18.4507	3.0	0.4866	3.2	0.0651	1.2	0.37	406.7	4.6	402.6	10.6	379.3	66.7	406.7	4.6	NA
28LB09-42	410	64997	2.5	18.0274	2.2	0.5088	3.0	0.0665	2.0	0.68	415.2	8.2	417.6	10.2	431.2	48.5	415.2	8.2	NA
28LB09-43	489	81595	2.4	18.2442	1.4	0.5135	2.5	0.0679	2.1	0.83	423.8	8.6	420.8	8.7	404.5	31.6	423.8	8.6	NA
28LB09-44	208	96311	3.3	18.1031	5.2	0.5118	5.7	0.0672	2.4	0.42	419.2	9.6	419.7	19.5	421.9	115.4	419.2	9.6	NA
28LB09-45	678	266516	2.3	18.0717	2.0	0.5152	2.4	0.0675	1.3	0.56	421.3	5.5	422.0	8.3	425.8	44.2	421.3	5.5	NA
28LB09-46	367	24037	3.1	17.7382	2.9	0.5236	3.4	0.0674	1.8	0.53	420.2	7.3	427.5	11.8	467.2	63.6	420.2	7.3	NA
28LB09-47	181	29161	2.4	17.2194	2.3	0.6325	3.1	0.0790	2.1	0.68	490.1	10.1	497.6	12.3	532.6	50.0	490.1	10.1	92.0
28LB09-48	611	70394	12.1	13.1104	2.8	1.6024	10.0	0.1524	9.6	0.96	914.2	81.5	971.1	62.3	1102.3	55.6	1102.3	55.6	82.9
28LB09-49	133	223329	1.8	5.2938	0.3	14.3469	1.2	0.5508	1.2	0.96	2828.7	27.0	2772.9	11.7	2732.6	5.7	2732.6	5.7	103.5
28LB09-50	415	75147	2.0	16.8475	2.0	0.7210	2.2	0.0881	0.8	0.38	544.3	4.4	551.3	9.4	580.2	44.2	544.3	4.4	93.8

						Isotope ratios							Apparent ages (Ma)						
Analysis	U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
	(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
28LB09-51	455	43734	2.9	18.0179	1.9	0.5177	2.8	0.0677	2.1	0.73	422.0	8.4	423.6	9.8	432.4	43.4	422.0	8.4	NA
28LB09-52	430	103571	2.6	11.5967	1.5	2.3240	6.7	0.1955	6.5	0.97	1150.9	68.3	1219.6	47.3	1343.4	29.5	1343.4	29.5	85.7
28LB09-54	332	81442	2.1	14.4002	1.2	1.4426	2.9	0.1507	2.6	0.91	904.7	22.1	906.8	17.3	911.9	24.6	911.9	24.6	99.2
28LB09-55	504	18388	1.4	17.3128	2.0	0.6285	2.6	0.0789	1.6	0.62	489.7	7.5	495.2	10.1	520.7	44.3	489.7	7.5	94.0
28LB09-56	377	51699	1.9	18.0204	2.0	0.5145	3.4	0.0672	2.8	0.81	419.6	11.3	421.5	11.8	432.1	44.2	419.6	11.3	NA
28LB09-57	614	65560	2.0	17.9044	2.2	0.5357	3.4	0.0696	2.6	0.76	433.6	10.9	435.6	12.1	446.5	49.9	433.6	10.9	NA
28LB09-58	394	37397	2.6	18.2897	3.1	0.5211	4.1	0.0691	2.6	0.64	430.9	10.9	425.9	14.2	399.0	70.2	430.9	10.9	NA
28LB09-59	567	20944	2.0	17.4066	6.0	0.5188	6.4	0.0655	2.1	0.33	408.9	8.3	424.3	22.2	508.8	132.8	408.9	8.3	NA
28LB09-60	423	63407	2.3	17.7706	2.7	0.5209	3.7	0.0671	2.5	0.68	418.9	10.3	425.8	13.0	463.2	60.8	418.9	10.3	NA
28LB09-61	87	20808	6.9	15.3261	5.4	1.1892	5.9	0.1322	2.5	0.41	800.3	18.4	795.6	32.7	782.3	113.7	800.3	18.4	102.3
28LB09-62	191	96563	2.0	15.2110	1.6	1.1550	2.8	0.1274	2.3	0.82	773.1	17.0	779.6	15.4	798.1	33.6	773.1	17.0	96.9
28LB09-63	1427	79549	3.0	8.4236	0.3	4.8809	1.8	0.2982	1.8	0.99	1682.3	26.4	1799.0	15.2	1936.9	5.0	1936.9	5.0	86.9
28LB09-64	765	234220	0.8	16.8359	0.6	0.7619	2.1	0.0930	2.0	0.96	573.4	10.9	575.1	9.1	581.7	12.9	573.4	10.9	98.6
28LB09-66	882	181439	2.3	11.4912	0.6	2.6169	3.0	0.2181	3.0	0.98	1271.8	34.1	1305.4	22.2	1361.0	12.2	1361.0	12.2	93.4
28LB09-67	107	88144	1.9	15.2460	3.6	1.1454	4.2	0.1266	2.2	0.52	768.7	15.9	775.0	23.0	793.3	76.3	768.7	15.9	96.9
28LB09-68	53	25845	14.2	8.3813	2.4	5.6814	3.7	0.3454	2.8	0.76	1912.4	46.7	1928.5	31.9	1946.0	42.5	1946.0	42.5	98.3
28LB09-71	251	27843	3.7	18.1315	3.9	0.5077	4.4	0.0668	2.1	0.48	416.6	8.5	416.9	15.0	418.4	86.3	416.6	8.5	NA
28LB09-72	235	23707	2.0	18.2685	4.4	0.4998	5.6	0.0662	3.5	0.63	413.4	14.1	411.6	18.9	401.6	97.7	413.4	14.1	NA
28LB09-73	430	88140	1.8	17.8014	2.1	0.4838	7.6	0.0625	7.3	0.96	390.6	27.9	400.7	25.3	459.3	46.8	390.6	27.9	NA
28LB09-74	449	80158	3.2	17.9322	1.7	0.5188	2.7	0.0675	2.1	0.78	420.9	8.5	424.3	9.3	443.0	36.9	420.9	8.5	NA
28LB09-75	515	88690	2.8	18.0365	1.8	0.5070	2.5	0.0663	1.7	0.69	413.9	7.0	416.4	8.6	430.1	40.5	413.9	7.0	NA
28LB09-77	505	120790	2.8	15.1018	1.1	1.2275	1.7	0.1344	1.3	0.77	813.2	9.7	813.2	9.2	813.3	22.2	813.2	9.7	100.0
28LB09-79	176	124821	3.6	12.7911	1.1	2.0533	2.3	0.1905	2.0	0.87	1124.0	20.8	1133.4	15.8	1151.5	22.5	1151.5	22.5	97.6
28LB09-80	532	106048	2.6	18.0459	2.9	0.4964	4.0	0.0650	2.8	0.70	405.8	11.0	409.3	13.5	429.0	63.8	405.8	11.0	NA
28LB09-81	153	40325	4.3	14.9346	2.7	1.2106	4.5	0.1311	3.6	0.80	794.3	27.1	805.5	25.1	836.5	56.0	794.3	27.1	95.0

						Isotope ratios							Apparent ages (Ma)						
Analysis	U	206Pb	U/Th	206Pb*	±	207Pb*	±	206Pb*	±	error	206Pb*	±	207Pb*	±	206Pb*	±	Best age	±	Conc
	(ppm)	204Pb		207Pb*	(%)	235U*	(%)	238U	(%)	corr.	238U*	(Ma)	235U	(Ma)	207Pb*	(Ma)	(Ma)	(Ma)	(%)
28LB09-83	567	145635	1.2	16.2759	2.7	0.8200	3.7	0.0968	2.5	0.68	595.6	14.3	608.0	17.1	654.7	58.9	595.6	14.3	91.0
28LB09-85	189	56657	1.9	15.0078	2.4	1.1538	3.0	0.1256	1.8	0.60	762.7	12.8	779.0	16.1	826.3	49.4	762.7	12.8	92.3
28LB09-86	435	126472	2.6	8.5899	0.4	5.5286	5.5	0.3444	5.5	1.00	1908.0	90.6	1905.1	47.3	1901.9	6.4	1901.9	6.4	100.3
28LB09-87	439	146349	4.3	6.2851	0.5	8.3836	1.9	0.3822	1.9	0.97	2086.3	33.3	2273.4	17.5	2446.2	8.0	2446.2	8.0	85.3
28LB09-90	193	52521	2.3	11.1446	1.1	2.8898	3.5	0.2336	3.3	0.95	1353.2	40.1	1379.3	26.2	1419.8	21.7	1419.8	21.7	95.3
28LB09-91	251	53915	2.2	18.2750	4.5	0.4889	6.2	0.0648	4.2	0.68	404.7	16.6	404.2	20.5	400.8	100.6	404.7	16.6	NA
28LB09-92	596	88715	2.3	18.2748	1.7	0.4922	2.6	0.0652	1.9	0.75	407.4	7.6	406.4	8.7	400.8	38.5	407.4	7.6	NA
28LB09-93	1049	146208	1.2	17.9502	2.2	0.4846	2.6	0.0631	1.3	0.52	394.4	5.1	401.2	8.6	440.8	49.2	394.4	5.1	NA
28LB09-94	580	88415	1.3	18.0685	1.4	0.5553	1.8	0.0728	1.2	0.64	452.8	5.1	448.4	6.5	426.2	30.7	452.8	5.1	NA
28LB09-97	257	210735	2.0	9.0938	0.6	4.4175	2.3	0.2914	2.2	0.96	1648.3	31.7	1715.6	18.8	1798.8	11.2	1798.8	11.2	91.6
28LB09-98	297	61700	1.6	18.3167	3.9	0.5004	4.8	0.0665	2.9	0.60	414.9	11.5	412.0	16.3	395.6	86.5	414.9	11.5	NA
28LB09-99	118	65433	1.2	14.8029	2.4	1.2299	3.0	0.1320	1.7	0.58	799.5	12.9	814.3	16.5	854.9	49.8	799.5	12.9	93.5
28LB09-100	537	213027	1.2	14.4790	0.7	1.3462	4.3	0.1414	4.3	0.99	852.4	34.0	865.9	25.1	900.7	13.5	852.4	34.0	94.6

Data Repository Item 2013074
Table DR2 – Detrital zircon Hf isotope results

Analytical Methods

Hf isotope analyses were conducted with a Nu HR ICPMS connected to a New Wave UP193HE laser. Instrument settings were established first by analysis of 10 ppb solutions of JMC475 and a Spex Hf solution, and then by analysis of 10 ppb solutions containing Spex Hf, Yb, and Lu. The mixtures range in concentration of Yb and Lu, with ^{176}(Yb+Lu) up to 70% of the ^{176}Hf. When all solutions yield ^{176}Hf/^{177}Hf of ~0.28216, instrument settings are optimized for laser ablation analyses and seven different standard zircons (Mud Tank, 91500, Temora, R33, FC52, Plesovice, and Sri Lanka) are analyzed. These standards are included with unknowns on the same epoxy mounts. When precision and accuracy are acceptable, unknowns are analyzed using exactly the same acquisition parameters.

Laser ablation analyses were conducted with a laser beam diameter of 40 microns, with most of the ablation pits located on top of the U-Pb analysis pits. CL images were used to ensure that the ablation pits do not overlap multiple age domains or inclusions. Each acquisition consisted of one 40-second integration on backgrounds (on peaks with no laser firing) followed by 60 one-second integrations with the laser firing. Using a typical laser fluence of ~5 J/cm2 and pulse rate of 7 hz, the ablation rate is ~0.8 microns per second. Each standard was analyzed once for every ~20 unknowns.

Isotope fractionation was accounted for using the method of Woodhead et al. (2004): βHf is determined from the measured ^{179}Hf/^{177}Hf; βYb is determined from the measured ^{173}Yb/^{171}Yb (except for very low Yb signals); βLu is assumed to be the same as βYb; and an exponential formula is used for fractionation correction. Yb and Lu interferences were corrected by measurement of ^{176}Yb/^{171}Yb and ^{176}Lu/^{175}Lu (respectively), as advocated by Woodhead et al. (2004). Critical isotope ratios are ^{179}Hf/^{177}Hf =0.73250 (Patchett & Tatsumoto, 1980); ^{173}Yb/^{171}Yb = 1.132338 (Vervoort et al. 2004); ^{176}Yb/^{171}Yb =0.901691 (Vervoort et al., 2004; Amelin and Davis, 2005); ^{176}Lu/^{175}Lu = 0.02653 (Patchett, 1983). All corrections are done line-by-line. For very low Yb signals, βHf is used for fractionation of Yb isotopes. The corrected ^{176}Hf/^{177}Hf values are filtered for outliers (2-sigma filter), and the average and standard error are calculated from the resulting ~58 integrations. There is no capability to use only a portion of the acquired data.

All solutions, standards, and unknowns analyzed during a session were reduced together. The cutoff for using βHf versus βYb is determined by monitoring the average offset of the standards from their known values, and the cutoff is set at the minimum offset. For most data sets, this is achieved at ~6 mv of ^{171}Yb. For sessions in which the standards yield ^{176}Hf/^{177}Hf values that are shifted consistently from the know values, a correction factor is applied to the ^{176}Hf/^{177}Hf of all standards and unknowns. This correction factor, which is not necessary for most sessions, averages 1 epsilon unit.

The $^{176}Hf/^{177}Hf$ at time of crystallization is calculated from measurement of present-day $^{176}Hf/^{177}Hf$ and $^{176}Lu/^{177}Hf$, using the decay constant of ^{176}Lu ($\lambda = 1.867e^{-11}$) from Scherer et al. (2001) and Söderlund et al. (2004).

References:

Amelin, Y., and Davis, W.J., 2005, Geochemical test for branching decay of ^{176}Lu: Geochimica et Cosmochimica Acta, v. 69, p. 465-473.

Patchett, P.J., 1983, Importance of the Lu-Hf isotopic system in studies of planetary chronology and chemical evolution: Geochimica and Cosmochimica Acta, v. 47, p. 81-91.

Patchett, P.J., and Tatsumoto, M., 1980, A routine high-precision method for Lu-Hf isotope geochemistry and chronology: Contributions to Mineralogy and Petrology, v. 75, 263-267.

Scherer, E., Münker, C., and Mezger, K., 2001, Calibration of the Lutetium-Hafnium Clock: Science, v. , p. 683–687.

Söderlund, U., Patchett, P.J., Vervoort, J.D., and Isachsen, C.E., 2004, The 176Lu decay constant determined by Lu-Hf and U-Pb isotope systematics of Precambrian mafic intrusions: Earth and Planetary Science Letters, v. 219, p. 311-324.

Vervoort, J.D., Patchett, P.J., Söderlund, U. & Baker, M., 2004, The isotopic composition of Yb and the precise and accurate determination of Lu concentrations and Lu/Hf ratios by isotope dilution using MC-ICPMS. Geochem Geophys Geosyst. DOI 2004GC000721RR.

Woodhead, J., Hergt, J., Shelley, M., Eggins, S., and Kemp, R., 2004, Zircon Hf-isotope analysis with an excimer laser, depth profiling, ablation of complex geometries, and concomitant age estimation: Chemical Geology, v. 209, p. 121-135.

Table DR2 - Results of LA-ICP-MS Hf isotope analysis of detrital zircons

See attached Data Repository text for complete descriptions of Hf isotope methods and data analysis used at the Arizona Laserchron Center.

Sample 09VL26
07V 571102E 6773540N NAD 83
Southwestern Yukon, Canada

Sample name	(^{176}Yb + ^{176}Lu) / ^{176}Hf (%)	Volts Hf	^{176}Hf/^{177}Hf	± (1s)	^{176}Lu/^{177}Hf	^{176}Hf/^{177}Hf (T)	E-Hf (0)	E-Hf (0) ± (1s)	E-Hf (T)	Age (Ma)	TDM (Ma)
09VL26-20	13.6	1.9	0.282297	0.000088	0.000760	0.282291	-17.3	3.1	-8.2	418	1300.8
09VL26-21	22.5	1.9	0.282363	0.000072	0.001223	0.282352	-14.9	2.5	-5.5	440	1224.7
09VL26-34	22.2	1.9	0.282298	0.000072	0.001203	0.282288	-17.2	2.6	-7.7	442	1314.8
09VL26-17	20.1	1.8	0.282232	0.000082	0.001099	0.282223	-19.5	2.9	-9.9	449	1402.6
09VL26-16	18.7	1.9	0.282352	0.000068	0.001034	0.282343	-15.3	2.4	-5.5	455	1233.1
09VL26-32	20.3	2.0	0.282295	0.000094	0.001131	0.282285	-17.3	3.3	-7.5	457	1316.5
09VL26-14	26.2	1.9	0.282311	0.000061	0.001559	0.282297	-16.8	2.2	-6.9	464	1309
09VL26-13	23.1	1.9	0.282448	0.000062	0.001421	0.282436	-11.9	2.2	-2.0	466	1110.2
09VL26-18	17.9	2.0	0.282294	0.000059	0.000938	0.282286	-17.4	2.1	-7.1	473	1310.7
09VL26-12	20.2	1.6	0.282305	0.000084	0.001111	0.282295	-17.0	3.0	-6.8	474	1302.1
09VL26-3	17.8	1.5	0.282323	0.000093	0.000967	0.282315	-16.3	3.3	-6.1	474	1271.3
09VL26-10	30.5	1.5	0.282348	0.000077	0.001641	0.282333	-15.5	2.7	-5.4	476	1259.8
09VL26-33	16.3	2.0	0.282473	0.000069	0.000919	0.282465	-11.0	2.5	-0.7	476	1060.7
09VL26-26	20.8	2.1	0.282258	0.000062	0.001161	0.282248	-18.6	2.2	-8.4	477	1369.1
09VL26-22	26.4	2.3	0.282410	0.000059	0.001560	0.282395	-13.3	2.1	-2.9	487	1169.2
09VL26-23	22.8	2.7	0.281909	0.000059	0.001454	0.281864	-31.0	2.1	4.5	1644	1869.3

Sample 09VL40

07V 664792E 6674463N NAD 83

Southwestern Yukon, Canada

Sample name	(^{176}Yb + ^{176}Lu) / ^{176}Hf (%)	Volts Hf	^{176}Hf/^{177}Hf	± (1s)	^{176}Lu/^{177}Hf	^{176}Hf/^{177}Hf (T)	E-Hf (0)	E-Hf (0) ± (1s)	E-Hf (T)	Age (Ma)	TDM (Ma)
09VL40-71	14.0	2.2	0.282178	0.000068	0.000829	0.282171	-21.5	2.4	-12.4	419	1468
09VL40-57	16.7	1.8	0.281924	0.000077	0.001047	0.281915	-30.5	2.7	-21.4	423	1828.8
09VL40-8	10.5	1.8	0.282531	0.000095	0.000650	0.282525	-9.0	3.3	0.2	423	973.45
09VL40-46	12.3	2.5	0.282055	0.000081	0.000737	0.282049	-25.8	2.9	-16.6	424	1633.8
09VL40-90	17.2	1.8	0.282019	0.000111	0.001066	0.282010	-27.1	3.9	-17.7	434	1698
09VL40-79	19.6	2.5	0.282077	0.000081	0.001279	0.282067	-25.0	2.9	-15.7	435	1626.3
09VL40-16	15.8	2.3	0.282369	0.000080	0.001041	0.282361	-14.7	2.8	-5.3	436	1209.3
09VL40-19	8.4	2.2	0.282278	0.000064	0.000521	0.282274	-17.9	2.3	-8.4	437	1318.8
09VL40-38	8.4	2.4	0.282220	0.000082	0.000507	0.282216	-20.0	2.9	-10.4	437	1397.8
09VL40-85	29.3	1.8	0.282614	0.000087	0.001781	0.282600	-6.0	3.1	3.2	438	883.38
09VL40-59	17.6	1.9	0.282007	0.000072	0.001152	0.281997	-27.5	2.6	-18.1	441	1719
09VL40-92	16.4	1.9	0.282697	0.000073	0.000991	0.282689	-3.1	2.6	6.4	441	747.8
09VL40-36	19.7	1.4	0.282235	0.000137	0.001197	0.282225	-19.4	4.8	-9.9	443	1402
09VL40-37	17.2	2.4	0.282620	0.000051	0.001250	0.282609	-5.8	1.8	3.7	444	862.88
09VL40-15	14.6	2.3	0.282376	0.000081	0.000909	0.282369	-14.5	2.9	-4.8	445	1195.4
09VL40-14	13.2	2.1	0.282312	0.000073	0.000872	0.282304	-16.7	2.6	-7.1	446	1284.2
09VL40-78	16.1	2.1	0.282702	0.000077	0.001117	0.282693	-2.9	2.7	6.7	447	743.65
09VL40-77	14.2	1.9	0.282105	0.000078	0.000871	0.282098	-24.0	2.7	-14.3	448	1570.3
09VL40-62	12.3	2.7	0.282210	0.000074	0.000778	0.282203	-20.3	2.6	-10.5	453	1422.2
09VL40-60	12.7	2.0	0.282432	0.000088	0.000893	0.282425	-12.5	3.1	-2.6	454	1117.2
09VL40-82	21.5	2.7	0.282034	0.000073	0.001561	0.282021	-26.6	2.6	-16.9	454	1699.3
09VL40-4	8.7	1.8	0.282258	0.000076	0.000731	0.282252	-18.6	2.7	-8.7	455	1353.6
09VL40-26	12.7	2.0	0.282009	0.000102	0.000983	0.282001	-27.4	3.6	-17.5	460	1707.7

Sample name	(^{176}Yb + ^{176}Lu) / ^{176}Hf (%)	Volts Hf	^{176}Hf/^{177}Hf	± (1s)	^{176}Lu/^{177}Hf	^{176}Hf/^{177}Hf (T)	E-Hf (0)	E-Hf (0) ± (1s)	E-Hf (T)	Age (Ma)	TDM (Ma)
09VL40-93	21.9	2.2	0.282464	0.000077	0.001446	0.282442	-11.4	2.7	6.0	812	1088.8
09VL40-33	18.2	2.2	0.282024	0.000059	0.001063	0.282005	-26.9	2.1	-5.8	974	1690.4
09VL40-11	30.3	2.2	0.281817	0.000090	0.001607	0.281777	-34.2	3.2	-5.9	1328	2005.6
09VL40-24	42.0	2.0	0.282046	0.000056	0.002639	0.281979	-26.1	2.0	1.8	1346	1731.4
09VL40-68	12.9	1.8	0.281849	0.000074	0.000733	0.281830	-33.1	2.6	-2.2	1407	1915.7
09VL40-95	16.3	2.1	0.282033	0.000063	0.001073	0.282004	-26.6	2.2	4.1	1412	1678.9
09VL40-97	15.7	2.6	0.281926	0.000058	0.000979	0.281899	-30.4	2.0	1.4	1456	1821.8
09VL40-53	6.0	2.1	0.281693	0.000086	0.000346	0.281684	-38.6	3.1	-5.9	1470	2107.5
09VL40-44	24.7	1.8	0.281990	0.000077	0.001468	0.281949	-28.1	2.7	3.9	1487	1756.5
09VL40-3	23.2	2.0	0.281661	0.000071	0.001598	0.281609	-39.7	2.5	-2.5	1733	2222.3
09VL40-42	15.5	2.5	0.281600	0.000071	0.000862	0.281572	-41.9	2.5	-3.6	1742	2262.9
09VL40-86	16.2	1.8	0.281707	0.000068	0.001166	0.281669	-38.1	2.4	-0.2	1742	2133.5
09VL40-67	12.6	1.9	0.281615	0.000064	0.000865	0.281586	-41.4	2.3	-3.0	1749	2242.9
09VL40-13	21.8	2.1	0.281572	0.000079	0.001307	0.281523	-42.9	2.8	0.2	1983	2327.8
09VL40-21	7.2	2.1	0.281614	0.000110	0.000412	0.281599	-41.4	3.9	3.3	2000	2217.9
09VL40-52	0.8	2.2	0.281128	0.000124	0.000040	0.281127	-58.6	4.4	-11.8	2075	2842.1
09VL40-56	14.6	1.8	0.281152	0.000088	0.000762	0.281116	-57.7	3.1	-2.5	2492	2863.2
09VL40-45	13.0	2.2	0.280944	0.000070	0.000697	0.280908	-65.1	2.5	-5.1	2696	3137.2
09VL40-100	7.1	2.3	0.281102	0.000065	0.000430	0.281079	-59.5	2.3	1.9	2733	2906.3
09VL40-39	28.8	2.2	0.280933	0.000068	0.001629	0.280848	-65.5	2.4	-6.3	2737	3229
09VL40-76	3.7	2.6	0.281025	0.000071	0.000270	0.281011	-62.2	2.5	-0.4	2739	2995.5
09VL40-49	14.7	2.1	0.281016	0.000082	0.000817	0.280973	-62.5	2.9	-1.3	2759	3049.8
09VL40-31	16.9	2.0	0.280916	0.000072	0.000953	0.280862	-66.1	2.6	-0.8	2948	3195.7
09VL40-18	17.3	1.9	0.280663	0.000105	0.001064	0.280594	-75.0	3.7	-0.2	3377	3544.2

Sample 09VL42

07V 664766E 6674421N NAD 83

Southwestern Yukon, Canada

Sample name	(^{176}Yb + ^{176}Lu) / ^{176}Hf (%)	Volts Hf	^{176}Hf/^{177}Hf	± (1s)	^{176}Lu/^{177}Hf	^{176}Hf/^{177}Hf (T)	E-Hf (0)	E-Hf (0) ± (1s)	E-Hf (T)	Age (Ma)	TDM (Ma)
09VL42-8	15.2	1.5	0.282736	0.000076	0.000938	0.282728	-1.7	2.7	7.6	432	692
09VL42-33	28.8	1.6	0.282586	0.000065	0.001784	0.282572	-7.0	2.3	2.1	433	923
09VL42-20	43.6	1.5	0.282321	0.000048	0.002301	0.282303	-16.4	1.7	-7.3	438	1320
09VL42-4	15.4	1.6	0.282211	0.000083	0.000996	0.282203	-20.3	2.9	-10.8	438	1428
09VL42-22	18.2	2.4	0.282064	0.000054	0.001129	0.282055	-25.5	1.9	-16.0	441	1638
09VL42-54	20.7	1.3	0.282498	0.000106	0.001312	0.282487	-10.2	3.7	-0.7	441	1037
09VL42-37	9.9	1.8	0.282259	0.000065	0.000633	0.282254	-18.6	2.3	-9.0	442	1349
09VL42-5	7.7	1.9	0.282204	0.000065	0.000430	0.282200	-20.5	2.3	-10.8	442	1417
09VL42-23	27.4	1.4	0.282718	0.000077	0.001498	0.282705	-2.4	2.7	7.3	453	729
09VL42-55	16.6	2.0	0.282070	0.000063	0.001043	0.282061	-25.3	2.2	-15.5	453	1627
09VL42-24	18.0	1.3	0.282177	0.000062	0.001091	0.282168	-21.5	2.2	-11.7	454	1479
09VL42-36	25.6	1.6	0.282077	0.000055	0.001629	0.282063	-25.1	1.9	-15.4	456	1642
09VL42-38	12.9	1.5	0.282265	0.000086	0.000699	0.282259	-18.4	3.0	-8.3	462	1343
09VL42-1	9.6	2.1	0.282073	0.000097	0.000519	0.282068	-25.2	3.4	-15.0	466	1600
09VL42-9	13.2	1.4	0.282006	0.000077	0.000721	0.281998	-27.6	2.7	-15.6	550	1701
09VL42-51	7.2	1.8	0.282668	0.000103	0.000407	0.282664	-4.1	3.6	8.8	588	777
09VL42-25	20.3	1.5	0.282122	0.000098	0.001055	0.282101	-23.4	3.5	0.0	1078	1554
09VL42-17	18.8	1.3	0.281912	0.000156	0.001325	0.281882	-30.9	5.5	-4.7	1216	1858
09VL42-27	19.1	1.9	0.281909	0.000061	0.000996	0.281884	-31.0	2.2	-1.8	1339	1846
09VL42-18	10.2	1.5	0.281905	0.000089	0.000631	0.281887	-31.1	3.2	1.1	1461	1835
09VL42-19	18.3	1.9	0.281646	0.000086	0.001147	0.281610	-40.3	3.0	-4.6	1642	2218
09VL42-58	12.9	1.7	0.281613	0.000066	0.000676	0.281591	-41.5	2.3	-3.0	1739	2235
09VL42-16	17.5	1.6	0.281600	0.000064	0.001257	0.281558	-41.9	2.2	-3.8	1755	2287
09VL42-39	2.0	1.4	0.281252	0.000141	0.000106	0.281248	-54.2	5.0	-10.2	1954	2683
09VL42-2	22.0	1.9	0.281597	0.000158	0.001180	0.281553	-42.0	5.6	0.7	1959	2286

Sample name	(^{176}Yb + ^{176}Lu) / ^{176}Hf (%)	Volts Hf	^{176}Hf/^{177}Hf	± (1s)	^{176}Lu/^{177}Hf	^{176}Hf/^{177}Hf (T)	E-Hf (0)	E-Hf (0) ± (1s)	E-Hf (T)	Age (Ma)	TDM (Ma)
09VL42-57	6.4	1.7	0.281446	0.000062	0.000325	0.281434	-47.4	2.2	-3.2	1974	2439
09VL42-52	13.2	1.5	0.281598	0.000088	0.000671	0.281573	-42.0	3.1	2.0	1986	2255
09VL42-31	6.5	2.1	0.281309	0.000086	0.000345	0.281296	-52.2	3.0	-7.8	1987	2624
09VL42-32	15.1	1.8	0.281622	0.000084	0.000786	0.281592	-41.1	3.0	2.8	1992	2229
09VL42-59	12.4	1.9	0.281021	0.000058	0.000624	0.280991	-62.4	2.0	-5.3	2562	3028
09VL42-45	16.8	1.5	0.280979	0.000075	0.000859	0.280935	-63.9	2.7	-4.6	2677	3103
09VL42-3	4.3	1.7	0.281099	0.000137	0.000246	0.281086	-59.6	4.8	1.1	2691	2897
09VL42-7	23.2	1.4	0.280949	0.000075	0.001189	0.280887	-64.9	2.7	-5.4	2714	3170

Sample 09VLB27

07V 414476E 6604401N NAD 83

Northwestern British Columbia, Canada

Sample name	(^{176}Yb + ^{176}Lu) / ^{176}Hf (%)	Volts Hf	^{176}Hf/^{177}Hf	± (1s)	^{176}Lu/^{177}Hf	^{176}Hf/^{177}Hf (T)	E-Hf (0)	E-Hf (0) ± (1s)	E-Hf (T)	Age (Ma)	TDM (Ma)
27LB09-14	20.7	2.1	0.282621	0.000081	0.001300	0.282612	-5.8	2.9	2.6	392	861.87
27LB09-96	32.1	1.7	0.282686	0.000079	0.002376	0.282668	-3.5	2.8	4.7	395	793.55
27LB09-11	30.4	2.0	0.282653	0.000078	0.001970	0.282637	-4.7	2.8	4.2	423	831.75
27LB09-82	35.0	1.9	0.282587	0.000066	0.002493	0.282567	-7.0	2.3	1.8	425	939.96
27LB09-69	34.1	2.0	0.282609	0.000078	0.002136	0.282592	-6.2	2.8	2.8	430	899.02
27LB09-99	19.7	2.4	0.282718	0.000053	0.001167	0.282709	-2.4	1.9	6.9	431	721.81
27LB09-37	19.3	1.7	0.282734	0.000089	0.001404	0.282722	-1.8	3.2	7.5	434	704.41
27LB09-4	22.1	2.0	0.282674	0.000096	0.001361	0.282663	-3.9	3.4	5.4	434	788.53
27LB09-83	26.4	1.9	0.282544	0.000071	0.001658	0.282530	-8.5	2.5	0.7	437	981.32
27LB09-89	46.6	2.3	0.282607	0.000065	0.003246	0.282580	-6.3	2.3	2.5	439	930.57
27LB09-23	19.9	2.0	0.282404	0.000083	0.001370	0.282393	-13.5	2.9	-4.0	444	1171
27LB09-25	26.3	1.9	0.282451	0.000105	0.001856	0.282435	-11.8	3.7	-2.4	445	1119.2
27LB09-87	23.8	2.1	0.282602	0.000085	0.001503	0.282590	-6.5	3.0	3.0	445	893.47

Sample name	(^{176}Yb + ^{176}Lu) / ^{176}Hf (%)	Volts Hf	^{176}Hf/^{177}Hf	± (1s)	^{176}Lu/^{177}Hf	^{176}Hf/^{177}Hf (T)	E-Hf (0)	E-Hf (0) ± (1s)	E-Hf (T)	Age (Ma)	TDM (Ma)
27LB09-9	18.3	1.0	0.282667	0.000127	0.001436	0.282655	-4.2	4.5	5.3	445	800.3
27LB09-3	43.1	1.6	0.282564	0.000091	0.002709	0.282542	-7.8	3.2	1.3	446	979.57
27LB09-62	43.4	2.0	0.282523	0.000066	0.002470	0.282502	-9.3	2.3	-0.1	446	1033.1
27LB09-80	35.4	1.6	0.282711	0.000066	0.002546	0.282690	-2.6	2.3	6.6	446	760.33
27LB09-95	39.8	0.7	0.283860	0.001527	0.003444	0.283832	38.0	54.0	47.0	446	979.33
27LB09-48	26.0	1.8	0.282688	0.000060	0.001890	0.282672	-3.4	2.1	6.0	448	779.67
27LB09-5	28.4	1.8	0.282563	0.000094	0.001765	0.282549	-7.8	3.3	1.6	449	955.64
27LB09-10	25.3	2.2	0.282717	0.000082	0.001591	0.282703	-2.4	2.9	7.1	450	732.28
27LB09-18	42.3	1.9	0.282576	0.000073	0.002548	0.282554	-7.4	2.6	1.9	451	957.97
27LB09-71	57.7	0.7	0.284288	0.002154	0.004540	0.284250	53.2	76.2	61.9	452	1703.6
27LB09-100	33.7	2.0	0.282401	0.000066	0.002508	0.282379	-13.6	2.3	-4.3	453	1212.4
27LB09-52	26.4	2.5	0.282510	0.000041	0.002108	0.282492	-9.7	1.5	-0.3	453	1042.1
27LB09-77	26.8	1.6	0.282663	0.000100	0.001968	0.282646	-4.3	3.5	5.2	453	817.24
27LB09-19	34.2	2.0	0.282535	0.000096	0.002164	0.282516	-8.8	3.4	0.6	455	1007.5
27LB09-98	24.2	2.1	0.282635	0.000077	0.001597	0.282621	-5.3	2.7	4.4	456	849.7
27LB09-73	18.8	2.0	0.282671	0.000053	0.001359	0.282659	-4.0	1.9	5.7	457	792.92
27LB09-40	47.0	1.1	0.282519	0.000180	0.003671	0.282487	-9.4	6.4	-0.3	458	1074.8
27LB09-27	42.1	1.8	0.282362	0.000070	0.002824	0.282337	-15.0	2.5	-5.6	460	1280.2
27LB09-1	35.3	1.8	0.282630	0.000080	0.002192	0.282611	-5.5	2.8	4.2	465	869.77
27LB09-63	24.6	2.1	0.282357	0.000110	0.001632	0.282343	-15.1	3.9	-5.3	465	1245.4
27LB09-57	24.2	2.2	0.282638	0.000086	0.001493	0.282625	-5.2	3.0	4.7	466	843.09
27LB09-54	38.0	2.0	0.282578	0.000047	0.002460	0.282557	-7.3	1.7	2.4	468	952.08
27LB09-2	43.3	1.8	0.282614	0.000070	0.002599	0.282591	-6.0	2.5	3.6	469	903.14

Sample 09VLB28

07V 649893E 6647727N NAD 83

Northwestern British Columbia, Canada

Sample name	(^{176}Yb + ^{176}Lu) / ^{176}Hf (%)	Volts Hf	^{176}Hf/^{177}Hf	± (1s)	^{176}Lu/^{177}Hf	^{176}Hf/^{177}Hf (T)	E-Hf (0)	E-Hf (0) ± (1s)	E-Hf (T)	Age (Ma)	TDM (Ma)
28LB09-73	37.2	1.0	0.282725	0.000065	0.002162	0.282709	-2.1	2.3	6.0	391	732.37
28LB09-13	21.1	1.1	0.282847	0.000078	0.001185	0.282838	2.2	2.8	10.6	394	540.35
28LB09-93	34.3	1.2	0.282784	0.000101	0.002546	0.282765	0.0	3.6	8.1	394	652.39
28LB09-91	47.4	1.1	0.282815	0.000104	0.002590	0.282795	1.1	3.7	9.4	405	607.94
28LB09-41	23.0	1.3	0.282613	0.000069	0.001278	0.282603	-6.1	2.4	2.6	407	873.09
28LB09-59	27.8	1.5	0.282743	0.000079	0.001536	0.282732	-1.5	2.8	7.2	409	693.24
28LB09-22	23.0	1.4	0.282765	0.000098	0.001280	0.282755	-0.7	3.5	8.1	410	657.61
28LB09-25	27.1	1.6	0.282842	0.000092	0.001515	0.282831	2.0	3.3	10.8	410	550.92
28LB09-37	44.6	0.9	0.282706	0.000102	0.002411	0.282687	-2.8	3.6	5.7	411	765.25
28LB09-9	33.3	1.2	0.282822	0.000081	0.001917	0.282807	1.3	2.9	10.0	413	586.71
28LB09-24	76.4	0.9	0.282560	0.000086	0.004262	0.282527	-8.0	3.0	0.1	414	1030.5
28LB09-7	19.3	1.4	0.282765	0.000066	0.001191	0.282756	-0.7	2.3	8.2	414	656.48
28LB09-42	30.8	1.3	0.282656	0.000064	0.001681	0.282643	-4.6	2.3	4.2	415	821.32
28LB09-11	6.7	1.4	0.282960	0.000093	0.000471	0.282956	6.2	3.3	15.3	416	371.96
28LB09-44	6.2	1.4	0.282684	0.000078	0.000417	0.282681	-3.6	2.8	5.7	419	755.01
28LB09-31	14.1	1.7	0.282763	0.000060	0.000791	0.282757	-0.8	2.1	8.4	420	651.36
28LB09-35	22.0	1.4	0.282695	0.000068	0.001301	0.282685	-3.2	2.4	5.8	421	757.04
28LB09-74	14.4	1.4	0.282816	0.000095	0.000897	0.282809	1.1	3.3	10.2	421	578.6
28LB09-10	23.2	1.6	0.282674	0.000077	0.001311	0.282664	-3.9	2.7	5.1	422	786.82
28LB09-16	6.9	1.3	0.282721	0.000072	0.000556	0.282717	-2.3	2.6	7.1	425	706.33
28LB09-21	20.8	1.3	0.282696	0.000098	0.001180	0.282686	-3.1	3.5	6.0	427	753.74
28LB09-33	26.0	1.6	0.282815	0.000082	0.001438	0.282803	1.0	2.9	10.2	430	589.56
28LB09-47	23.9	1.4	0.282320	0.000075	0.001371	0.282307	-16.4	2.7	-6.0	490	1289.4

Sample name	(^{176}Yb + ^{176}Lu) / ^{176}Hf (%)	Volts Hf	^{176}Hf/^{177}Hf	± (1s)	^{176}Lu/^{177}Hf	^{176}Hf/^{177}Hf (T)	E-Hf (0)	E-Hf (0) ± (1s)	E-Hf (T)	Age (Ma)	TDM (Ma)
28LB09-64	42.0	1.2	0.282851	0.000100	0.002817	0.282821	2.3	3.5	14.1	573	558.06
28LB09-83	30.8	1.4	0.282617	0.000064	0.002357	0.282591	-5.9	2.3	6.4	596	892.7
28LB09-20	23.0	1.2	0.282480	0.000095	0.001585	0.282462	-10.8	3.4	2.0	601	1070.2
28LB09-4	36.2	1.0	0.282329	0.000341	0.002268	0.282297	-16.1	12.1	-0.8	739	1308.7
28LB09-85	17.8	1.7	0.282376	0.000081	0.001048	0.282361	-14.4	2.9	2.1	763	1199.7
28LB09-67	25.7	1.2	0.282114	0.000060	0.001323	0.282095	-23.7	2.1	-7.2	769	1576.8
28LB09-62	38.1	1.3	0.282391	0.000095	0.002728	0.282351	-13.9	3.4	1.9	773	1233.9
28LB09-28	54.1	2.1	0.282591	0.000060	0.003416	0.282541	-6.9	2.1	8.7	776	958.71
28LB09-30	35.0	1.1	0.281826	0.000085	0.002018	0.281796	-33.9	3.0	-17.3	790	2014.3
28LB09-81	94.2	1.1	0.282309	0.001558	0.004461	0.282242	-16.8	55.1	-1.5	794	1422.2
28LB09-99	12.4	1.2	0.282001	0.000088	0.000906	0.281987	-27.7	3.1	-10.3	800	1715.8
28LB09-77	39.4	1.2	0.281992	0.000128	0.002543	0.281953	-28.1	4.5	-11.3	813	1805.6
28LB09-19	20.7	1.4	0.282360	0.000115	0.001304	0.282340	-15.0	4.1	2.5	815	1230.3
28LB09-100	39.5	1.3	0.282515	0.000077	0.002481	0.282475	-9.6	2.7	8.1	852	1045.6
28LB09-54	16.7	1.9	0.282059	0.000071	0.001045	0.282041	-25.7	2.5	-5.9	912	1641.8
28LB09-36	17.7	1.5	0.281665	0.000095	0.001036	0.281627	-39.6	3.4	2.6	1927	2184.5
28LB09-63	13.1	0.8	0.281785	0.000146	0.001239	0.281739	-35.4	5.2	6.8	1937	2031
28LB09-68	0.3	1.5	0.281149	0.000067	0.000017	0.281148	-57.9	2.4	-14.0	1946	2813.3
28LB09-87	6.4	2.0	0.281988	0.000109	0.000444	0.281967	-28.2	3.8	26.7	2446	1713.4
28LB09-49	7.0	1.3	0.280900	0.000078	0.000453	0.280876	-66.7	2.8	-5.3	2733	3176.2
28LB09-15	16.3	1.2	0.281050	0.000095	0.000971	0.280999	-61.4	3.4	-0.7	2745	3017.2