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WHOLE ROCK GEOCHEMISTRY

Whole-rock samples with the prefix “P” were analyzed for 10 major oxides and 19 trace elements by X-ray fluorescence spectrometry (XRF) at the Spectrachem Analytical laboratories in Lower Hutt, New Zealand (www.crl.co.nz/services/analysis/spectrachem.htm). Samples selected for XRF analysis were crushed using a TEMA swing mill fitted with a WC head. Fused disks were produced for major element analyses and pressed powders for trace elements. Loss on ignition (LOI) was determined after heating to 1000 °C. The lower limit of detection is better than 0.004 wt% oxide (for Al₂O₃) and better than 1–3 ppm for trace elements.

Samples with the prefix “RG” were analyzed at ALS Minerals in Reno, NV (www.alsglobal.com). Samples were powdered, fluxed with lithium borate, and fused into beads. The homogenized and fused beads were dissolved in a 4% HNO₃ – 2% HCl mixture for solution analysis. Thirteen oxides and 38 trace elements were analyzed by inductively-coupled plasma (ICP) atomic emission spectrometry (AES) and ICP- mass spectrometry (MS), respectively. Reference materials, duplicate samples, and blank were measured with each batch of samples to assess accuracy and reproducibility. Whole-rock data are presented in Table DR1.

ZIRCON U-PB GEOCHRONOLOGY

Zircons were separated from whole-rock samples using standard crushing, sieving, hydrodynamic, density, and isodynamic techniques. For most samples, this step resulted in relatively pure zircon separates. Roughly 50–120 zircons from each sample were hand selected using a binocular microscope, care taken to select grains without large cracks, inclusions, or extensive metamictization. Selected zircons were mounted in epoxy resin disks and polished to expose median cross sections through the zircons.

Polished zircon mounts were carbon coated and imaged with a Cathodoluminescence (CL) detector attached to a FEI Quanta400F scanning electron microscope using a 20 kV accelerating voltage and a beam current of 5 nA. CL images of zircons were used to guide the placement of in situ U-Pb and Hf isotope analyses, avoiding overlapping compositional domains apparent in CL (Fig. 2).

U-Pb measurements were made on a Nu Plasma high-resolution multi collector-inductively-coupled plasma- mass spectrometer (MC-ICP-MS) (Nu Instruments, Wrexham, UK) at the University of California, Santa Barbara. A 193 nm ArF excimer laser (Photon Machines, San Diego, USA) was used to ablate domains 24 or 31 µm in diameter. Laser energy was typically 3–4 mJ and the ablation repetition rate 4 Hz. Analyses were conducted over 25 or 30 second ablation periods with 20 second washout periods between measurements to return the signal to background. Isotopes ²⁰⁴Pb, ²⁰⁶Pb, ²⁰⁷Pb, and ²⁰⁸Pb were measured on secondary electron multipliers, while ²³²Th and ²³⁸U were measured on Faraday cups equipped with 10¹¹- ohm resistors.

U-Th-Pb data were collected during seven analytical sessions. A primary reference material, “91500” zircon (1065.4 ± 0.3 Ma ²⁰⁷Pb/²⁰⁶Pb ID-TIMS age and 1062.4 ± 0.4 Ma ²⁰⁶Pb/²³⁸U ID-TIMS age, Wiedenbeck et al., 1995; 2004) was employed to monitor and correct for mass bias as well as Pb/U fractionation. To assess data accuracy, two secondary reference zircons “GJ-1” (608.5 ± 0.4 Ma ²⁰⁷Pb/²⁰⁶Pb ID-TIMS age; Jackson et al., 2004 and 601.7 ± 1.3

Ma $^{206}\text{Pb}/^{238}\text{U}$ ID-TIMS age; Condon, personal commun.) and “Plešovice” (337.13 ± 0.37 Ma $^{206}\text{Pb}/^{238}\text{U}$ ID-TIMS age Sláma et al., 2008) were analyzed concurrently (typically once every 5 unknowns) and mass bias- and fractionation-corrected based on measured isotopic ratios of the primary reference material. Analyses of the GJ-1 secondary reference zircon over all of the analytical sessions yield a mean $^{206}\text{Pb}/^{238}\text{U}$ age of 601.9 ± 6.8 Ma (2 s.d.; n = 395; MSWD = 0.96). Analyses of the Plešovice secondary reference zircon over all of the analytical sessions yield a mean $^{206}\text{Pb}/^{238}\text{U}$ age of 339.7 ± 4.3 Ma (2 s.d.; n = 257; 2 points rejected; MSWD = 1.05). Data reduction, including corrections for baseline subtraction, instrumental drift, mass bias, down-hole fractionation, and primary-reference normalization was carried out using Iolite version 2.31. Full details of the data reduction methodology can be found in Paton et al. (2010; 2011).

Uncertainties on individual analyses are quoted at the 95% confidence or 2σ level and include contributions from the external reproducibility of the secondary reference material for the $^{207}\text{Pb}/^{206}\text{Pb}$ and $^{206}\text{Pb}/^{238}\text{U}$ ratios. Weighted $^{206}\text{Pb}/^{238}\text{U}$ averages were calculated using Isoplot version 3.00 (Ludwig, 2003). Uncertainties on weighted mean ages are quadratic additions of the internal precision on the measurements and the long-term external reproducibility of GJ-1 and Plešovice (~1.2%; Fig. 4).

ZIRCON HF ISOTOPES

The zircons targeted for U-Pb dating were analyzed for Hf isotope composition by laser-ablation MC-ICP-MS. In an effort to obtain Hf compositions corresponding to a specific age domains in the zircon, ablation spots were placed directly over spots previously used for U-Pb age determination. When possible, spots from analyses used in the final age determination for each sample were re-analyzed for Hf.

A $53\text{ }\mu\text{m}$ beam diameter, 4–6.5 mJ energy, and an 6–8 Hz repetition rate were used for all ablations. Analyses were conducted over a 40–60 second ablation period with 20-second washout periods between measurements. Masses 171–180 were measured simultaneously on an array of 10 Faraday cups at 1-amu spacing. Data were collected and analyzed in time-resolved mode so that any changes in $^{176}(\text{Hf+Yb+Lu})/^{177}\text{Hf}$ corresponding to ablation though different growth zones could be identified. Data reduction was performed using Iolite version 2.31 (Paton et al., 2011).

There are three isobars of mass 176: ^{176}Yb , ^{176}Lu , ^{176}Hf . Zircons typically have Lu/Hf ratios of < 0.001 (Hawkesworth and Kemp, 2006), therefore the ^{176}Lu isobar generally has little effect on the corrected $^{176}\text{Hf}/^{177}\text{Hf}$ ratio. However, ^{176}Yb routinely contributes ~10% of the total mass 176 signal (Iizuka and Hirata, 2005), therefore, a ^{176}Yb correction is crucial to an accurate $^{176}\text{Hf}/^{177}\text{Hf}$ ratio. Natural $^{173}\text{Yb}/^{171}\text{Yb} = 1.123575$ (Thirlwall and Anczkiewicz, 2004) was used to calculate the Yb mass bias factor; this factor was used to correct for both Yb and Lu mass bias. Natural $^{179}\text{Hf}/^{177}\text{Hf} = 0.7325$ (Patchett and Tatsumoto, 1980a; 1980b) was used to calculate the Hf mass bias factor. Natural $^{176}\text{Yb}/^{173}\text{Yb} = 0.786847$ (Thirlwall and Anczkiewicz, 2004) and $^{176}\text{Lu}/^{175}\text{Lu} = 0.02656$ (Chu et al., 2002) were used for the subtraction of isobaric interferences on ^{176}Hf . Reference zircons “91500” (Blichert-Toft; 2008), “GJ-1” (Morel et al., 2008), and “Plešovice” (Sláma et al., 2008) were analyzed between every five to ten unknowns in order to assess the accuracy of the correction scheme. The reproducibility of the reference zircons was as follows: GJ-1: $^{176}\text{Hf}/^{177}\text{Hf} = 0.28202 \pm 0.00010$ (2 S.D.); Plešovice: $^{176}\text{Hf}/^{177}\text{Hf} = 0.28248 \pm 0.00011$ (2 S.D.); 91500: $^{176}\text{Hf}/^{177}\text{Hf} = 0.28232 \pm 0.00013$ (2 S.D.), corresponding to external

reproducibility of \sim 3.5–4.5 ε_{Hf} units. Internal 2 S.E. uncertainties calculated in Iolite range from \sim 4.5 to as high as 8.5 ε_{Hf} units, and are apparently overestimated in the Iolite data reduction scheme. This is evidenced by $\text{MSWD} \ll 1$ and more precise external reproducibility (3.5–4.5 ε_{Hf} units; 2 S.D.) on populations of standards. Therefore, it was necessary to take an empirical approach to estimating the internal uncertainty on individual analyses to avoid obscuring possible geological complexity in our samples (i.e., a set of unknown analyses with an $\text{MSWD} \gg 1$ might appear as a single population if uncertainty is overestimated). To address this issue, we scaled the internal uncertainties on individual analyses by a factor of 0.7, such that the populations of standards had $\text{MSWDs} = 1$. This same scaling factor was then applied to the uncertainties on the sample analyses; we take this to be a more robust estimate on internal uncertainty. The data with and without this additional correction are presented in Table DR3.

Samples with the prefix “RG11” were measured during a different analytical session when conditions resulted in more precise measurements (in-run statistics of \sim 1–1.5 ε_{Hf} units at the 2σ level). For these samples, the “estimated uncertainty” column in Table DR3 includes additional propagated uncertainty based on the external reproducibility of secondary reference zircons.

The $\varepsilon_{\text{Hf(i)}}$ values were calculated relative to CHUR (present-day $^{176}\text{Hf}/^{177}\text{Hf} = 0.282785$ and $^{176}\text{Lu}/^{177}\text{Hf} = 0.0336$; Bouvier et al., 2008) for each analysis using the corresponding $^{206}\text{Pb}/^{238}\text{U}$ age for the spot and $\lambda^{176}\text{Lu} = 1.867 \times 10^{-11} \text{ yr}^{-1}$ (Scherer et al., 2001; 2003; Söderlund et al., 2004). Uncertainties on the corrected $^{176}\text{Hf}/^{177}\text{Hf}$ and $^{176}\text{Lu}/^{177}\text{Hf}$ (for age correction) were propagated into the $\varepsilon_{\text{Hf(i)}}$ calculations, though the contribution of the $^{176}\text{Lu}/^{177}\text{Hf}$ uncertainties are typically negligible, due to the very low Lu/Hf ratios in zircons. The complete data set is presented in Table DR3.

Depleted-mantle model ages (T_{DM}) were calculated using the corrected present-day $^{176}\text{Hf}/^{177}\text{Hf}$ and $^{176}\text{Lu}/^{177}\text{Hf}$ for each sample. For depleted-mantle parameters, we used present-day $^{176}\text{Hf}/^{177}\text{Hf} = 0.28325$, a value similar to average MORB (Nowell et al., 1998; Griffin et al., 2000; Griffin et al., 2002), and present-day $^{176}\text{Lu}/^{177}\text{Lu} = 0.0384$ (Griffin et al., 2000). Two-stage depleted-mantle model ages (T_{DM}^{C}) were calculated using the same depleted mantle parameters and a crustal average $^{176}\text{Lu}/^{177}\text{Hf} = 0.015$ (Griffin et al., 2002) for the evolution of the crustal magma source after it separated from the depleted mantle.

REFERENCES CITED

- Blichert-Toft, J., 2008, The Hf isotopic composition of zircon reference material 91500: Chemical Geology, v. 253, p. 252–257, doi:10.1016/j.chemgeo.2008.05.014.
- Bouvier, A., Vervoort, J.D., and Patchett, P.J., 2008, The Lu–Hf and Sm–Nd isotopic composition of CHUR: constraints from unequilibrated chondrites and implications for the bulk composition of terrestrial planets: Earth and Planetary Science Letters, v. 273, p. 48–57, doi:10.1016/j.epsl.2008.06.010.
- Chu, N.C., Taylor, R.N., Chavagnac, V., Nesbitt, R.W., Boella, R.M., Milton, J.A., German, C.R., Bayon, G., and Burton, K., 2002, Hf isotope ratio analysis using multi-collector inductively coupled plasma mass spectrometry: an evaluation of isobaric interference corrections: Journal of Analytical Atomic Spectrometry, v. 17, p. 1567–1574, doi:10.1039/b206707b.
- Griffin, W.L., Pearson, N.J., Belousova, E., Jackson, S.E., van Achterbergh, E., O'Reilly, S.Y., and Shee, S.R., 2000, The Hf isotope composition of cratonic mantle: LAM-MC-ICPMS

- analysis of zircon megacrysts in kimberlites: *Geochimica et Cosmochimica Acta*, v. 64, p. 133–147, doi:10.1016/S0016-7037(99)00343-9.
- Griffin, W.L., Wang, X., Jackson, S.E., Pearson, N.J., O'Reilly, S.Y., Xu, X., and Zhou, X., 2002, Zircon chemistry and magma mixing, SE China: In-situ analysis of Hf isotopes, Tonglu and Pingtan igneous complexes: *Lithos*, v. 61, p. 237–269, doi:10.1016/S0024-4937(02)00082-8.
- Hawkesworth, C.J., and Kemp, A.I.S., 2006, Using hafnium and oxygen isotopes in zircons to unravel the record of crustal evolution: *Chemical Geology*, v. 226, p. 144–162, doi:10.1016/j.chemgeo.2005.09.018.
- Iizuka, T., and Hirata, T., 2005, Improvements of precision and accuracy in in situ Hf isotope microanalysis of zircon using the laser ablation-MC-ICPMS technique: *Chemical Geology*, v. 220, p. 121–137, doi:10.1016/j.chemgeo.2005.03.010.
- Jackson, S.E., Pearson, N.J., Griffin, W.L., and Belousova, E.A., 2004, The application of laser ablation-inductively coupled plasma-mass spectrometry to in situ U-Pb zircon geochronology: *Chemical Geology*, v. 211, p. 47–69, doi:10.1016/j.chemgeo.2004.06.017.
- Ludwig, K.R., 2003, Isoplot 3.0 A Geochronological Toolkit for Microsoft Excel: Berkeley Geochronology Center, California, 71 p.
- Morel, M.L.A., Nebel, O., Nebel-Jacobsen, Y.J., Miller, J.S., and Vroon, P.Z., 2008, Hafnium isotope characterization of the GJ-1 zircon reference material by solution and laser-ablation MC-ICPMS: *Chemical Geology*, v. 255, p. 231–235, doi:10.1016/j.chemgeo.2008.06.040.
- Nowell, G.M., Kempton, P.D., Noble, S.R., Fitton, J.G., Saunders, A.D., Mahoney, J.J., and Taylor, R.N., 1998, High precision Hf isotope measurements of MORB and OIB by thermal ionization mass spectrometry: Insights into the depleted mantle: *Chemical Geology*, v. 149, p. 211–233, doi:10.1016/S0009-2541(98)00036-9.
- Patchett, P.J., and Tatsumoto, M., 1980a, A routine high-precision method for Lu-Hf isotope geochemistry and chronology: *Contributions to Mineralogy and Petrology*, v. 75, p. 263–267, doi:10.1007/BF01166766.
- Patchett, P.J., and Tatsumoto, M., 1980b, Hafnium isotope variations in oceanic basalts: *Geophysical Research Letters*, v. 7, p. 1077–1080, doi:10.1029/GL007i012p01077.
- Paton, C., Woodhead, J.D., Hellstrom, J.C., Herdt, J.M., Greig, A., and Maas, R., 2010, Improved laser ablation U-Pb zircon geochronology through robust downhole fractionation correction: *Geochemistry, Geophysics, Geosystems: An Electronic Journal of the Earth Sciences*, v. 11, p. 1–36.
- Paton, C., Hellstrom, J., Paul, B., Woodhead, J., and Herdt, J., 2011, Iolite: Freeware for the visualisation and processing of mass spectrometric data: *Journal of Analytical Atomic Spectrometry*, v. 26, no. 12, p. 2508–2518, doi:10.1039/c1ja10172b.
- Scherer, E., Münker, C., and Mezger, K., 2001, Calibration of the lutetium-hafnium clock: *Science*, v. 293, p. 683–687, doi:10.1126/science.1061372.
- Scherer, E.E., Mezger, K., and Münker, C., 2003, The ^{176}Lu decay constant discrepancy: terrestrial samples vs. meteorites: *Meteoritics & Planetary Science*, v. 38, Supplement, p. 5263.
- Sláma, J., Kosler, J., Condon, D.J., Crowley, J.L., Gerdes, A., Hanchar, J.M., Horstwood, M.S., Morris, G.A., Nasdala, L., Norberg, N., Schaltegger, U., Schoene, B., Tubrett, M.N., and Whitehouse, M.J., 2008, Plešovice zircon—A new natural reference material for U-Pb and Hf isotopic microanalysis: *Chemical Geology*, v. 249, p. 1–35, doi:10.1016/j.chemgeo.2007.11.005.

- Söderlund, U., Patchett, P.J., Vervoort, J.D., and Isachsen, C.E., 2004, The ^{176}Lu 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, doi:10.1016/S0012-821X(04)00012-3.
- Thirlwall, M.F., and Anczkiewicz, R., 2004, Multidynamic isotope ratio analysis using MC–ICP–MS and the causes of secular drift in Hf, Nd and Pb isotope ratios: International Journal of Mass Spectrometry, v. 235, p. 59–81, doi:10.1016/j.ijms.2004.04.002.
- Wiedenbeck, M., Allé, P., Corfu, F., Griffin, W.L., Meier, M., Oberli, F., von Quadt, A.V., Roddick, J.C., and Spiegel, W., 1995, Three natural zircon standards for U–Th–Pb, Lu–Hf, trace element and REE analyses: Geostandards Newsletter, v. 19, p. 1–23, doi:10.1111/j.1751-908X.1995.tb00147.x.
- Wiedenbeck, M., Hanchar, J.M., Peck, W.H., Sylvester, P., Valley, J., Whitehouse, M., Kronz, A., Morishita, Y., Nasdala, L., Fiebig, J., Franchi, I., Girard, J.-P., Greenwood, R.C., Hinton, R., Kita, N., Mason, P.R.D., Norman, M., Ogasawara, M., Piccoli, P.M., Rhede, D., Satoh, H., Schulz-Dobrick, B., Skår, Ø., Spicuzza, M.J., Terada, K., Tindle, A., Togashi, S., Venneman, T., Xie, Q., and Zheng, Y.-F., 2004, Further characterisation of the of the 91500 zircon crystal: Geostandards and Geoanalytical Reasearch, v. 28, p. 9–39, doi:10.1111/j.1751-908X.2004.tb01041.x.

TABLE DR1. MAJOR ELEMENT COMPOSITION OF SAMPLES

Sample name	SiO ₂	TiO ₂	Al ₂ O ₃	Fe ₂ O ₃	MnO	MgO	CaO	Na ₂ O	K ₂ O	P ₂ O ₅	LOI [†]	SUM
<u>DV1a Suite</u>												
P68861	53.91	0.95	18.50	7.35	0.13	4.13	8.62	4.09	1.33	0.31	0.50	99.82
P62321	57.76	1.04	17.71	6.78	0.1	3.33	6.46	3.9	1.83	0.26	0.74	99.91
P62324	60.62	1.02	15.17	7.3	0.12	3.18	4.73	2.81	3.98	0.25	0.67	99.85
P68787	58.41	0.71	18.52	5.95	0.14	2.47	6.20	4.84	1.83	0.21	0.41	99.71
P68860	55.06	0.59	23.40	3.41	0.05	1.69	8.26	4.83	1.54	0.23	0.59	99.65
P68770	69.96	0.44	15.28	2.68	0.05	0.73	2.90	4.00	3.17	0.12	0.21	99.54
P68782	N.D. [§]	N.D. [§]	N.D. [§]	N.D. [§]	N.D. [§]	N.D. [§]	N.D. [§]	N.D. [§]	N.D. [§]	N.D. [§]	N.D. [§]	N.D. [§]
P49944	N.D. [§]	N.D. [§]	N.D. [§]	N.D. [§]	N.D. [§]	N.D. [§]	N.D. [§]	N.D. [§]	N.D. [§]	N.D. [§]	N.D. [§]	N.D. [§]
P64403	50.42	0.84	8.18	10.62	0.16	13.69	12.34	1.27	0.85	0.18	1.33	99.88
P68760	69.24	0.36	14.77	3.31	0.06	0.67	2.46	3.32	4.39	0.10	0.98	99.66
<u>DV1b Suite</u>												
P68756	71.97	0.24	14.73	1.83	0.04	0.40	1.82	3.59	4.60	0.06	0.65	99.91
P68758	N.D. [§]	N.D. [§]	N.D. [§]	N.D. [§]	N.D. [§]	N.D. [§]	N.D. [§]	N.D. [§]	N.D. [§]	N.D. [§]	N.D. [§]	N.D. [§]
P68851	71.42	0.27	14.75	1.43	0.02	0.47	1.86	3.26	5.13	0.07	0.74	99.41
P64424	72.14	0.18	14.40	1.67	0.04	0.33	2.01	3.64	4.09	0.04	0.67	99.20
P49945	71.45	0.24	14.67	2.03	0.03	0.4	2.41	3.22	4.43	0.04	0.59	98.88
P62325	74.16	0.11	14.05	1.19	0.05	0.12	1.46	3.6	4.5	bd	0.53	99.77
<u>DV2 Suite</u>												
P68878	55.41	1.06	17.04	8.29	0.16	3.79	6.67	3.87	1.92	0.29	1.26	99.76
P64422	48.95	1.48	18.84	10.66	0.14	3.78	7.95	3.17	2.58	0.50	1.34	99.38
P68802	70.69	0.29	14.82	2.45	0.04	0.46	1.73	3.48	5.42	0.07	0.48	99.92
P62293	70.51	0.34	14.66	2.73	0.05	0.62	2.13	3.45	4.77	0.09	0.62	99.97
P62101	74.5	0.17	13.1	1.68	0.04	0.14	1.09	3.5	4.92	0.02	0.27	99.43
P68766	74.75	0.11	12.99	1.46	0.02	0.11	0.70	2.92	6.23	0.01	0.33	99.61
P68843	71.77	0.27	14.41	2.04	0.04	0.42	1.81	3.43	4.72	0.06	0.87	99.84
P68844	72.14	0.20	14.44	2.13	0.05	0.34	1.63	3.88	4.64	0.06	0.47	99.98
P68796	71.59	0.30	14.05	2.83	0.06	0.51	1.90	3.61	4.40	0.08	0.50	99.82
P68845	71.83	0.25	14.14	2.43	0.05	0.41	1.67	3.73	4.64	0.07	0.61	99.82
P68775	72.82	0.17	14.11	2.07	0.05	0.27	1.29	4.05	4.63	0.05	0.42	99.94
P68826	71.02	0.28	14.36	2.57	0.05	0.46	1.92	3.71	4.44	0.07	0.84	99.72
RG11-224	55.3	0.94	18.35	6.68	0.09	2.06	5.76	4.21	4.09	0.29	0.88	99.06
RG11-233	56.4	1.17	18.15	7.32	0.09	2.15	5.68	4.33	2.98	0.37	0.8	99.72
RG11-234	49.4	1.62	19.1	10.35	0.15	3.73	7.7	3.81	3.15	0.59	0.95	100.86

TABLE DR1 (CONTINUED). TRACE ELEMENT COMPOSITION OF SAMPLES

Sample name	As [#]	Ba	Ce	Cr	Cu	Ga	La	Nb	Nd	Ni	Pb	Pr
<u>DV1a Suite</u>												
P68861	<1	138	59	16	<1	28	32	21	N.D. ^{\$}	7	19	N.D. ^{\$}
P62321	bd	592	55	42	17	21	33	12	N.D. ^{\$}	20	24	N.D. ^{\$}
P62324	7	1215	102	39	5	22	61	20	N.D. ^{\$}	15	17	N.D. ^{\$}
P68787	1	312	70	21	3	28	29	26	N.D. ^{\$}	5	17	N.D. ^{\$}
P68860	<1	526	44	9	<1	27	33	10	N.D. ^{\$}	5	19	N.D. ^{\$}
P68770	1	919	61	6	4	22	33	14	N.D. ^{\$}	1	20	N.D. ^{\$}
P68782	N.D. ^{\$}											
P49944	N.D. ^{\$}											
P64403	<1	257	31	825	31	12	13	<1	N.D. ^{\$}	120	10	N.D. ^{\$}
P68760	1	916	76	6	4	21	37	14	N.D. ^{\$}	<1	17	N.D. ^{\$}
<u>DV1b Suite</u>												
P68756	1	892	49	5	<1	22	41	14	N.D. ^{\$}	1	29	N.D. ^{\$}
P68758	N.D. ^{\$}											
P68851	1	1221	61	<1	<1	18	44	8	N.D. ^{\$}	1	37	N.D. ^{\$}
P64424	<1	1075	39	<1	<1	19	27	8	N.D. ^{\$}	1	26	N.D. ^{\$}
P49945		1044	94	5	2	8	43	9	23	4	20	10
P62325	bd	702	18	6	bd	18	6	11	N.D. ^{\$}	1	34	N.D. ^{\$}
<u>DV2 Suite</u>												
P68878	<1	496	39	74	<1	24	29	17	N.D. ^{\$}	15	14	N.D. ^{\$}
P64422	1	1452	82	7	22	28	42	18	N.D. ^{\$}	3	12	N.D. ^{\$}
P68802	1	751	72	5	1	22	39	17	N.D. ^{\$}	<1	27	N.D. ^{\$}
P62293	bd	904	77	7	3	20	47	13	N.D. ^{\$}	5	31	N.D. ^{\$}
P62101	bd	470	76	4	bd	16	35	14	N.D. ^{\$}	1	34	N.D. ^{\$}
P68766	<1	324	71	2	3	19	38	9	N.D. ^{\$}	<1	39	N.D. ^{\$}
P68843	<1	990	67	7	<1	21	46	13	N.D. ^{\$}	1	26	N.D. ^{\$}
P68844	1	569	73	2	1	23	39	14	N.D. ^{\$}	<1	23	N.D. ^{\$}
P68796	2	591	72	1	<1	20	34	14	N.D. ^{\$}	<1	19	N.D. ^{\$}
P68845	<1	571	81	4	1	21	44	15	N.D. ^{\$}	1	23	N.D. ^{\$}
P68775	<1	421	71	2	<1	23	46	17	N.D. ^{\$}	<1	23	N.D. ^{\$}
P68826	2	775	79	5	1	20	43	15	N.D. ^{\$}	<1	27	N.D. ^{\$}
RG11-224	--	2030	91	30	5	29	51	17	41	7	20	11
RG11-233	--	1080	102	30	<5	31	52	23	51	8	17	13
RG11-234	--	1325	96	20	17	31	47	22	51	7	13	13

TABLE DR1 (CONTINUED). TRACE ELEMENT COMPOSITION OF SAMPLES

Sample name	Rb	Sc	Sr	Th	U	V	Y	Zn	Zr
<u>DV1a Suite</u>									
P68861	62	32	760	4	2	115	93	111	87
P62321	51	11	544	4	bd	100	20	96	157
P62324	222	14	413	14	bd	90	21	109	246
P68787	125	18	598	10	<1	101	47	138	251
P68860	90	8	1372	8	2	46	26	54	110
P68770	123	3	467	20	<1	28	18	58	140
P68782	N.D. [§]								
P49944	N.D. [§]								
P64403	26	49	244	<1	2	236	29	105	87
P68760	161	6	324	12	<1	25	19	53	194
<u>DV1b Suite</u>									
P68756	177	2	402	8	<1	16	15	47	162
P68758	N.D. [§]								
P68851	170	<2	473	15	<1	18	5	40	128
P64424	126	<2	402	7	<1	6	8	37	127
P49945	121	N.D. [§]	445	6	N.D. [§]	10	9	52	145
P62325	124	4	197	3	N.D. [§]	5	10	33	69
<u>DV2 Suite</u>									
P68878	140	13	569	4	<1	115	27	145	159
P64422	83	21	816	3	1	132	37	131	216
P68802	221	2	258	17	<1	15	19	50	194
P62293	170	4	316	16	N.D. [§]	17	17	49	205
P62101	218	5	144	17.2	N.D. [§]	10	24	29	131
P68766	177	2	91	9	<1	1	13	30	102
P68843	177	<1	398	13	<1	13	19	41	186
P68844	142	<1	225	16	<1	9	24	51	170
P68796	152	4	236	15	<1	20	22	54	176
P68845	151	3	221	16	3	14	25	51	172
P68775	170	1	156	21	<1	9	31	48	184
P68826	144	5	235	19	<1	15	27	62	221
RG11-224	118	N.D. [§]	1310	6	1	58	16	111	670
RG11-233	117	N.D. [§]	1245	7	2	53	23	122	620
RG11-234	133	N.D. [§]	1195	2	1	104	25	149	430

* Major oxide concentrations are in weight percent.

† LOI = loss on ignition at 1000° C in weight percent.

§ N.D. = no data because the analysis was not performed or the concentration was below detection limit.

Trace element concentrations are in parts per million.

TABLE DR2. LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation ^a	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P49944</u>									
2 [†]	0.625	2.56	0.0777	2.57	0.977	0.05864	1.39	482	12
1	0.634	2.52	0.0799	2.50	0.991	0.05717	1.29	495	12
28	0.641	1.87	0.08	1.75	0.992	0.05825	1.28	495.7	8.6
16	0.625	1.76	0.0801	1.87	0.978	0.05744	1.31	496.4	8.7
5 [†]	0.6295	1.57	0.0808	1.49	0.964	0.05671	1.32	500.6	7.2
3	0.637	2.20	0.0811	2.10	0.955	0.05678	1.41	502	10
13	0.627	1.59	0.0809	1.48	0.944	0.05709	1.36	502.3	7.5
30	0.641	1.72	0.0811	1.73	0.980	0.05761	1.30	502.8	8.6
6	0.628	2.39	0.0813	2.21	0.903	0.05681	1.67	503	10
14	0.63	1.75	0.0813	1.60	0.945	0.05711	1.38	503.6	7.8
23	0.638	1.88	0.0817	1.84	0.975	0.0574	1.32	506.1	8.9
19	0.6419	1.51	0.0818	1.47	0.985	0.05784	1.28	506.7	7.4
7	0.637	1.57	0.0819	1.59	0.977	0.05697	1.29	507.5	7.6
25	0.645	1.86	0.0819	1.83	0.983	0.05774	1.30	508	8.7
12	0.6421	1.51	0.0822	1.34	0.967	0.05738	1.32	509.4	6.7
29	0.653	1.84	0.0823	1.82	0.954	0.05715	1.37	509.7	9.2
32	0.654	2.14	0.0824	1.94	0.988	0.05764	1.29	510.1	9.7
17	0.643	1.87	0.0824	1.70	0.972	0.0575	1.33	510.2	8.5
20	0.65	1.54	0.0824	1.46	0.963	0.05792	1.33	510.2	7
22	0.646	1.70	0.0824	1.70	0.973	0.05732	1.32	510.5	8.5
11	0.641	2.18	0.0827	2.18	0.981	0.05714	1.32	512	11
8	0.6387	1.55	0.0828	1.45	0.966	0.05681	1.31	512.8	7
21	0.653	2.60	0.0829	2.41	0.983	0.05751	1.32	513	12
10	0.6649	1.17	0.08287	1.15	0.965	0.05899	1.30	513.2	5.7
35	0.659	1.82	0.0831	1.68	0.976	0.05727	1.31	514.6	8.3
15	0.649	1.54	0.0832	1.56	0.968	0.05753	1.31	515.3	7.5
26	0.658	1.52	0.0833	1.56	0.985	0.05773	1.29	515.9	7.9
18	0.656	1.68	0.084	1.67	0.955	0.05741	1.35	519.9	8.2
34	0.703	1.71	0.0843	1.54	0.969	0.06018	1.32	521.4	7.9
24	0.659	1.82	0.0844	1.78	0.959	0.05765	1.34	522	8.8
27	0.675	1.78	0.0845	1.78	0.990	0.05803	1.27	522.9	8.9

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P49944 (cont.)</u>									
9	0.662	1.51	0.0848	1.53	0.967	0.05734	1.30	524.6	7.8
31	0.812	1.97	0.0855	1.64	0.873	0.06814	1.51	528.9	8.3
4	0.672	1.64	0.0867	1.61	0.967	0.05649	1.32	536	8.4
33	0.714	1.96	0.0869	1.96	0.986	0.05946	1.29	537	9.8
<u>P49945</u>									
27	0.5322	1.71	0.0667	1.65	0.940	0.0579	1.28	416.3	6.4
20	0.5582	1.61	0.0712	1.54	0.956	0.05706	1.24	443.3	6.4
32	0.575	1.91	0.0713	1.82	0.969	0.05846	1.24	444	7.9
28	0.5893	1.53	0.0752	1.46	0.951	0.05685	1.24	467.6	6.5
6	0.6	1.67	0.0766	1.70	0.960	0.05693	1.24	475.7	7.5
9	0.602	1.99	0.0774	1.94	0.977	0.05667	1.23	480.4	9.1
8	0.606	1.82	0.0775	1.81	0.974	0.05686	1.23	481.3	8.4
11	0.607	2.14	0.078	2.05	0.972	0.05671	1.26	483.8	9.6
21	0.6144	1.45	0.0781	1.41	0.922	0.05721	1.28	484.9	6.5
17	0.618	1.62	0.0782	1.66	0.971	0.05751	1.21	485.6	7.6
4	0.625	2.56	0.0788	1.90	0.763	0.05754	2.01	488.6	8.8
12	0.64	2.97	0.0794	1.64	0.468	0.0588	3.11	492.3	8
29	0.6254	1.52	0.0796	1.26	0.790	0.05697	1.49	493.7	6
13	0.625	2.40	0.0798	1.63	0.673	0.057	2.10	494.7	7.9
19	0.63	2.22	0.0799	1.75	0.809	0.05743	1.73	495.6	8.5
30	0.6324	1.53	0.08	1.50	0.943	0.05732	1.26	495.9	7.1
5	0.635	2.52	0.0802	2.00	0.801	0.05747	1.93	497.3	9.8
2	0.64	1.88	0.0803	1.62	0.748	0.0578	1.70	497.8	7.5
3	0.652	1.84	0.0808	1.86	0.972	0.05856	1.23	500.5	8.8
24	0.6372	1.30	0.08082	1.22	0.919	0.05732	1.26	501	5.9
18	0.637	2.20	0.0811	1.60	0.736	0.05718	1.85	502.5	7.7
26	0.642	2.02	0.0811	1.85	0.911	0.05743	1.42	502.8	9.1
16	0.6393	1.50	0.0812	1.48	0.920	0.05738	1.30	503.2	7.2
10	0.638	1.72	0.0813	1.60	0.959	0.05715	1.25	503.6	7.6
31	0.646	1.55	0.0815	1.60	0.936	0.05747	1.29	504.8	7.7

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P49945 (cont.)</u>									
14	0.641	1.56	0.0819	1.59	0.958	0.05702	1.24	507.2	7.8
25	0.652	1.53	0.0823	1.46	0.934	0.05754	1.29	509.7	7.2
22	0.649	2.00	0.0825	1.82	0.893	0.05721	1.44	510.8	9
15	0.667	1.80	0.0837	1.67	0.945	0.05801	1.30	518.3	8.5
7	0.667	1.95	0.0842	1.90	0.937	0.05761	1.34	521	9.4
23	0.701	2.71	0.0885	1.69	0.545	0.0576	2.53	546.7	8.8
1	1.42	9.15	0.0914	2.84	0.809	0.1091	7.78	563	16
<u>P62101</u>									
30	0.612	1.63	0.0787	1.52	0.800	0.05675	1.65	488	7.5
28	0.6194	1.60	0.0787	1.27	0.762	0.0572	1.67	488.2	6.2
32	0.627	1.59	0.0791	1.39	0.900	0.05777	1.45	490.7	6.5
23	0.628	1.27	0.07919	1.17	0.861	0.0576	1.41	491.2	5.5
19	0.6171	1.60	0.0792	1.26	0.873	0.05658	1.50	491.3	6.2
31	0.629	1.59	0.0794	1.51	0.827	0.05757	1.56	492.2	7.1
26	0.624	1.76	0.0794	1.39	0.876	0.05705	1.53	492.3	6.6
6	0.619	2.10	0.0795	1.64	0.818	0.05733	1.78	492.9	7.9
21	0.636	2.04	0.0796	1.38	0.678	0.05819	1.75	493.8	6.7
29	0.636	1.73	0.0797	1.38	0.850	0.05802	1.50	494	6.5
3	0.622	1.77	0.0797	1.51	0.886	0.05698	1.49	494.3	7.4
25	0.6264	1.48	0.07973	1.13	0.746	0.05726	1.50	494.4	5.4
18	0.621	1.61	0.0799	1.25	0.795	0.05717	1.64	495.2	6
11	0.622	1.32	0.08001	1.17	0.805	0.05666	1.48	496.1	5.6
4	0.632	1.90	0.0801	2.00	0.963	0.05709	1.36	496.9	9.5
12	0.626	1.60	0.0803	1.25	0.819	0.05705	1.56	498.1	6.1
22	0.635	1.73	0.0804	1.49	0.853	0.05742	1.52	498.1	7.4
1	0.6312	1.22	0.08042	1.11	0.910	0.05693	1.36	498.6	5.3
16	0.641	1.56	0.0807	1.49	0.952	0.05849	1.34	500.2	7.3
2	0.674	2.37	0.08064	0.95	0.490	0.0606	2.34	500.5	4.7
27	0.632	1.74	0.0809	1.36	0.870	0.05698	1.47	501.2	6.8
10	0.632	1.90	0.081	1.36	0.750	0.05749	1.78	501.8	6.4

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P62101 (cont.)</u>									
7	0.63	1.90	0.0812	1.97	0.974	0.05658	1.31	502.9	9.5
8	0.644	2.02	0.0812	1.72	0.835	0.05743	1.66	503.2	8.6
9	0.6406	1.44	0.08177	1.17	0.764	0.05703	1.54	506.6	5.7
5	0.661	1.97	0.0833	1.80	0.951	0.05762	1.37	515.7	9
17	0.68	1.62	0.0848	1.30	0.843	0.05836	1.55	524.8	6.6
<u>P62293</u>									
1	0.6185	1.34	0.07819	0.93	0.817	0.05703	1.33	485.8	4.5
24	0.6183	1.08	0.07892	1.04	0.891	0.05698	1.23	489.6	4.9
26	0.621	1.61	0.0791	1.39	0.797	0.05722	1.44	490.7	6.4
10	0.6123	1.18	0.07925	1.07	0.902	0.05654	1.23	491.6	5.1
12	0.6203	1.60	0.07941	1.23	0.842	0.05694	1.35	492.5	5.8
30	0.624	1.54	0.0793	1.51	0.898	0.05709	1.29	492.5	7.1
9	0.6181	1.12	0.07958	0.96	0.917	0.05666	1.21	493.6	4.5
14	0.6235	1.32	0.07974	1.14	0.918	0.0571	1.23	494.5	5.4
15	0.637	1.37	0.07985	1.06	0.824	0.05771	1.32	495.2	5
4	0.627	1.07	0.0799	0.93	0.864	0.05692	1.22	495.5	4.4
25	0.63	1.35	0.08	1.38	0.913	0.05725	1.25	495.8	6.6
20	0.6316	1.54	0.0801	1.50	0.964	0.05706	1.17	496.5	7
19	0.6278	1.37	0.0802	1.25	0.894	0.057	1.27	496.9	6
21	0.6337	1.40	0.08017	1.23	0.918	0.05753	1.22	497.1	5.9
29	0.6397	1.55	0.0802	1.62	0.934	0.05798	1.21	497.1	7.7
13	0.6309	1.17	0.08026	1.11	0.905	0.05729	1.20	497.6	5.3
2	0.6336	1.25	0.08035	1.10	0.855	0.05704	1.26	498.1	5.2
3	0.6398	1.23	0.08039	1.03	0.929	0.05772	1.20	498.4	4.9
28	0.645	1.86	0.0804	1.74	0.923	0.05781	1.29	498.4	8.6
6	0.6312	1.03	0.08077	1.00	0.916	0.05688	1.17	500.7	4.8
17	0.6356	1.23	0.08085	1.18	0.937	0.05743	1.18	501.1	5.7
31	0.65	1.54	0.081	1.48	0.933	0.0578	1.20	502.1	7.5
11	0.6388	1.36	0.08126	1.03	0.774	0.05734	1.39	503.6	5
18	0.6385	1.39	0.0813	1.35	0.942	0.05731	1.18	503.7	6.4

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P62293 (cont.)</u>									
5	0.6535	1.29	0.0814	1.11	0.817	0.05865	1.32	504.4	5.3
22	0.6626	1.33	0.08144	1.22	0.930	0.05911	1.18	504.7	5.9
32	0.754	3.18	0.0815	1.60	0.662	0.0672	2.49	504.9	8
16	0.6403	1.08	0.08157	0.98	0.880	0.05701	1.20	505.4	4.8
27	0.6481	1.45	0.0824	1.58	0.939	0.05731	1.22	510.4	7.5
23	0.655	1.68	0.0829	1.57	0.935	0.05768	1.22	513	7.7
8	0.7132	1.32	0.08896	1.05	0.854	0.05855	1.30	549.3	5.5
7	0.7089	1.17	0.08903	1.06	0.828	0.05805	1.28	550.4	5.7
<u>P62321</u>									
3	0.6347	1.50	0.0807	1.36	0.897	0.05696	1.43	500.3	6.6
12	0.633	1.31	0.0808	1.15	0.803	0.05679	1.45	500.8	5.6
26	0.646	1.70	0.081	1.60	0.882	0.05762	1.40	501.7	7.7
17	0.645	1.71	0.0813	1.48	0.805	0.05743	1.59	503.5	7
19	0.643	2.18	0.0815	1.60	0.801	0.05797	1.74	504.8	7.7
20	0.65	1.69	0.0816	1.35	0.792	0.05793	1.54	505.4	6.8
23	0.639	2.03	0.0816	1.72	0.837	0.05681	1.53	505.6	8.5
24	0.646	1.70	0.0816	1.47	0.894	0.05812	1.49	505.8	6.9
7	0.645	1.55	0.0817	1.35	0.723	0.05771	1.58	506.5	6.4
6	0.653	1.84	0.0818	1.22	0.643	0.05736	1.92	506.6	6.2
13	0.643	1.71	0.0818	1.59	0.780	0.0567	1.55	506.9	7.7
15	0.647	1.85	0.082	1.34	0.712	0.05753	1.84	507.7	6.6
9	0.641	2.03	0.0821	1.46	0.614	0.0574	2.12	508.5	6.9
28	0.659	2.12	0.0822	1.58	0.783	0.05775	1.79	509.3	8
2	0.664	1.51	0.08233	1.18	0.794	0.05817	1.56	509.9	5.8
25	0.657	1.83	0.0826	1.69	0.892	0.05768	1.42	511.8	8.6
22	0.6541	1.50	0.0827	1.21	0.745	0.05773	1.63	512.4	6.2
32	0.6591	1.18	0.08279	0.97	0.701	0.05794	1.50	512.7	4.8
10	0.653	1.84	0.0828	1.33	0.727	0.05763	1.83	512.8	6.6
30	0.657	1.67	0.0828	1.45	0.887	0.05727	1.42	512.9	7.3
27	0.666	1.80	0.083	1.45	0.830	0.05806	1.49	513.7	7.4

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P62321 (cont.)</u>									
31	0.664	1.66	0.0832	1.56	0.849	0.05772	1.48	514.9	7.7
4	0.678	1.77	0.0833	1.56	0.520	0.05871	1.97	515.8	7.5
5	0.672	1.93	0.0836	1.44	0.658	0.05811	1.87	517.8	7.3
18	0.647	2.01	0.0837	1.67	0.606	0.0566	2.14	518	8.6
33	0.671	1.79	0.084	1.55	0.828	0.05801	1.49	519.9	7.7
8	0.6621	1.50	0.0841	1.19	0.863	0.05689	1.46	520.7	6
1	0.68	1.76	0.0842	1.31	0.694	0.05907	1.80	520.8	6.3
34	0.672	1.79	0.0843	1.54	0.929	0.05796	1.35	521.9	7.9
29	0.673	1.78	0.0844	1.42	0.851	0.05753	1.56	522.3	7.4
14	0.699	2.58	0.0845	1.66	0.675	0.06	2.19	522.8	8.2
21	0.672	1.49	0.0847	1.53	0.978	0.05755	1.24	524.3	7.6
11	0.688	1.74	0.0867	1.38	0.762	0.05691	1.66	536.2	7
35	0.698	1.72	0.0875	1.37	0.895	0.05791	1.41	540.9	7.4
16	0.693	1.44	0.0876	1.26	0.908	0.05757	1.39	541.3	6.7
<u>P62324</u>									
12	0.628	2.39	0.0781	2.18	0.980	0.05966	1.12	485	10
8	0.631	2.22	0.0784	2.04	0.978	0.05897	1.09	486.2	9.8
16	0.644	2.33	0.0818	2.32	0.986	0.05762	1.07	507	12
5	0.629	2.38	0.0821	2.56	0.979	0.05639	1.10	508	12
11	0.644	2.02	0.0822	1.95	0.987	0.05777	1.05	508.9	9.5
23	0.647	1.70	0.0821	1.71	0.968	0.05743	1.11	509.3	8
13	0.64	1.56	0.0823	1.58	0.955	0.0576	1.10	509.5	7.8
21	0.653	1.99	0.0824	2.06	0.991	0.05755	1.04	510	10
34	0.652	2.30	0.0821	2.19	0.972	0.05713	1.11	510	11
19	0.647	2.01	0.0822	1.95	0.976	0.05747	1.11	510.2	9.6
10	0.642	1.71	0.0824	1.70	0.975	0.05757	1.08	510.5	8.6
18	0.65	1.85	0.0826	1.94	0.975	0.05728	1.11	511.2	9.4
33	0.662	1.96	0.0827	1.93	0.979	0.05759	1.08	512.9	9.5
6	0.639	2.03	0.083	1.81	0.974	0.0573	1.11	513.9	8.7
31	0.661	1.97	0.0831	2.05	0.977	0.05752	1.10	514.4	9.9

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P62324 (cont.)</u>									
32	0.661	1.97	0.0831	1.81	0.983	0.05739	1.06	515.1	9.1
7	0.651	1.84	0.0836	1.79	0.943	0.05767	1.16	517.4	8.7
20	0.661	2.27	0.0837	2.15	0.977	0.05745	1.14	518	11
29	0.67	3.28	0.0838	3.34	0.960	0.05808	1.51	519	17
17	0.658	2.28	0.084	2.38	0.980	0.05745	1.10	520	12
14	0.656	1.98	0.0842	2.02	0.982	0.05772	1.06	520.9	9.8
27	0.667	5.25	0.0844	4.98	0.932	0.05759	1.41	522	25
15	0.662	1.96	0.0845	1.89	0.982	0.05775	1.07	522.7	9.8
30	0.671	3.43	0.0846	3.66	0.977	0.05764	1.23	523	18
35	0.674	2.08	0.0846	2.13	0.962	0.05732	1.14	523	10
25	0.683	5.12	0.0849	5.06	0.960	0.05779	1.37	525	25
26	0.673	4.46	0.0849	4.36	0.981	0.05754	1.18	525	22
28	0.684	4.53	0.085	4.59	0.959	0.05795	1.30	525	23
2	0.669	2.54	0.0851	2.59	0.986	0.05712	1.07	526	13
9	0.662	1.81	0.0851	1.88	0.970	0.05747	1.06	526	9.2
4	0.67	2.69	0.0852	2.58	0.984	0.05732	1.10	527	13
22	0.681	1.62	0.0858	1.63	0.969	0.05786	1.08	530.3	8.3
24	0.683	3.51	0.0861	3.37	0.929	0.05775	1.39	532	17
3	0.684	2.63	0.0863	2.55	0.989	0.05765	1.07	533	13
1	0.706	3.12	0.0876	3.08	0.993	0.05828	1.08	546	16
<u>P62325</u>									
5	0.639	2.50	0.0782	1.92	0.905	0.05971	1.71	485.3	8.9
15	0.726	2.07	0.0811	1.60	0.841	0.06506	1.97	502.4	7.6
14	0.6487	1.37	0.0826	1.33	0.971	0.05711	1.54	511.6	6.8
8	0.72	1.94	0.083	1.93	0.916	0.06304	1.70	513.9	9.7
13	0.716	1.82	0.0831	1.56	0.830	0.06232	1.59	515.2	7.8
18	0.6683	1.18	0.08389	1.16	0.950	0.05804	1.54	519.2	5.8
7	0.687	1.89	0.0846	1.65	0.915	0.05924	1.62	523.1	8.4
23	0.858	2.33	0.0852	2.00	0.920	0.07282	1.79	527	9.9
12	0.726	1.65	0.0852	1.64	0.951	0.06223	1.60	527.1	8

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P62325 (cont.)</u>									
9	0.74	2.43	0.0854	2.69	0.939	0.06296	1.73	528	14
17	0.739	1.89	0.0856	1.99	0.974	0.06287	1.55	529.1	9.9
25	0.688	1.74	0.0862	1.74	0.961	0.0578	1.56	533.1	9
10	0.916	2.07	0.0867	1.96	0.889	0.07736	1.82	536	10
21	0.869	2.76	0.0886	2.26	0.741	0.07071	1.76	547	12
11	0.721	1.53	0.0897	1.56	0.955	0.05856	1.57	553.7	8.4
16	0.917	2.18	0.0898	1.67	0.692	0.0745	2.30	554.2	8.7
2	0.744	1.75	0.0904	1.66	0.961	0.05993	1.54	557.7	8.9
20	0.786	2.42	0.0924	2.38	0.936	0.06162	1.71	569	13
19	0.803	1.74	0.0935	1.93	0.951	0.06263	1.59	576	11
4	0.959	3.23	0.0966	3.21	0.979	0.07242	1.61	597	18
22	2.41	3.53	0.098	1.94	0.752	0.1771	2.76	602	11
<u>P64403</u>									
13	0.777	2.70	0.0791	1.64	0.493	0.072	2.63	490.9	8
29	0.629	1.75	0.0796	1.63	0.881	0.05717	1.62	493.9	7.6
30	0.631	1.58	0.0797	1.38	0.850	0.05727	1.64	494.5	6.7
28	0.631	1.90	0.08	1.63	0.851	0.05716	1.72	496.2	7.6
25	0.633	1.42	0.0802	1.37	0.951	0.05749	1.47	497	6.7
24	0.6313	1.54	0.0804	1.49	0.909	0.05725	1.55	498.2	7.2
11	0.6287	1.30	0.0806	1.24	0.968	0.05708	1.44	499.6	6.2
1	0.637	1.73	0.0806	1.61	0.909	0.05722	1.57	499.8	7.8
27	0.6372	1.27	0.08082	0.92	0.683	0.05718	1.68	501	4.4
8	0.6282	1.53	0.0811	1.36	0.955	0.05652	1.47	502.4	6.5
16	0.636	1.73	0.0811	1.73	0.919	0.05738	1.60	502.6	8.5
19	0.6346	1.48	0.0812	1.48	0.922	0.0572	1.53	503	7.2
21	0.6439	1.46	0.0813	1.35	0.982	0.05778	1.43	503.8	6.8
18	0.635	1.89	0.0814	1.72	0.935	0.0571	1.55	504.5	8.4
9	0.6328	1.47	0.0815	1.35	0.923	0.05667	1.52	505.1	6.5
17	0.707	2.97	0.0815	1.72	0.704	0.0634	2.48	505.1	8.4
2	0.648	1.70	0.0816	1.59	0.896	0.0575	1.59	505.6	8

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P64403 (cont.)</u>									
20	0.643	1.71	0.0817	1.59	0.969	0.0576	1.46	506	8
26	0.6573	1.48	0.0818	1.34	0.957	0.05833	1.46	506.5	6.6
10	0.664	1.96	0.0818	1.59	0.685	0.05932	2.02	507	7.5
5	0.63	2.22	0.0819	1.59	0.788	0.05587	1.93	507.1	8
4	0.644	1.71	0.0821	1.58	0.854	0.05693	1.65	508.7	8
3	0.647	2.01	0.0821	1.95	0.982	0.05706	1.45	508.8	9.4
7	0.638	1.72	0.0825	1.70	0.956	0.05644	1.49	510.8	8.3
14	0.6651	1.49	0.0829	1.33	0.919	0.05872	1.51	513.4	6.5
23	0.6745	1.44	0.083	1.45	0.986	0.05919	1.42	514.2	6.9
22	0.676	1.63	0.0838	1.55	0.981	0.0589	1.44	518.4	7.7
6	0.696	2.01	0.0877	1.94	0.898	0.05784	1.65	541.6	9.8
15	0.764	1.96	0.0905	2.10	0.819	0.06192	1.85	558	11
12	0.724	1.80	0.0915	1.75	0.979	0.05788	1.45	564.4	9.3
<u>P64422</u>									
4	0.619	2.26	0.0779	1.93	0.956	0.05777	1.19	483.3	9.2
25	0.613	1.79	0.0784	1.79	0.948	0.05709	1.14	486.7	8.2
28	0.626	1.92	0.0787	1.91	0.914	0.05778	1.29	488.4	8.9
17	0.611	1.80	0.0788	1.65	0.947	0.0569	1.16	488.6	7.8
12	0.615	1.95	0.079	2.03	0.936	0.05676	1.23	490.2	9.6
29	0.626	2.08	0.0791	2.02	0.959	0.05694	1.16	490.3	9.5
27	0.613	1.96	0.0791	2.02	0.941	0.05693	1.24	490.5	9.4
5	0.638	2.35	0.0791	1.90	0.838	0.05849	1.67	490.7	9
35	0.632	1.74	0.0793	1.77	0.896	0.05773	1.28	491.5	8.6
8	0.612	1.96	0.0793	1.64	0.915	0.05667	1.24	491.6	8
13	0.611	1.96	0.0793	1.77	0.930	0.05685	1.26	491.6	8.4
15	0.617	1.78	0.0793	1.64	0.924	0.05727	1.22	492	8
14	0.617	1.78	0.0792	1.89	0.957	0.05691	1.13	492.1	8.8
34	0.63	1.90	0.0794	1.64	0.869	0.05739	1.41	492.2	7.8
19	0.618	1.62	0.0792	1.64	0.937	0.05718	1.15	492.3	7.6
33	0.627	2.23	0.0793	1.89	0.939	0.05683	1.24	492.6	9.2

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P64422 (cont.)</u>									
20	0.62	1.77	0.0795	1.64	0.928	0.05714	1.19	492.8	7.8
23	0.62	1.77	0.0795	1.76	0.931	0.05718	1.18	492.9	8.5
7	0.615	2.11	0.0794	2.14	0.965	0.05685	1.15	493	10
21	0.618	2.27	0.0796	2.01	0.959	0.05705	1.17	493.3	9.8
26	0.622	2.09	0.0796	2.01	0.940	0.05729	1.24	493.4	9.7
10	0.611	2.29	0.0796	2.01	0.957	0.05629	1.20	493.7	9.6
22	0.622	1.93	0.0796	1.63	0.959	0.05688	1.14	493.7	7.7
3	0.63	1.90	0.0797	1.88	0.956	0.05723	1.18	494.2	8.7
1	0.623	2.09	0.0797	1.88	0.899	0.05671	1.33	494.3	8.8
2	0.629	2.23	0.0798	2.01	0.922	0.05721	1.29	494.7	9.6
31	0.626	2.08	0.0798	2.01	0.948	0.05708	1.20	494.9	9.5
30	0.629	1.91	0.0798	1.88	0.963	0.0576	1.14	495.1	8.7
16	0.623	1.77	0.0799	1.63	0.938	0.05703	1.19	495.2	7.9
24	0.623	1.77	0.08	1.63	0.934	0.0571	1.21	497	7.8
18	0.62	1.77	0.0802	1.75	0.960	0.05689	1.12	497.2	8.3
11	0.621	1.93	0.0802	1.87	0.949	0.05661	1.16	498	8.6
6	0.643	1.87	0.0806	1.74	0.935	0.05826	1.20	499.7	8.4
9	0.63	1.90	0.0811	1.85	0.957	0.05686	1.16	502.7	9
32	0.637	2.51	0.0811	2.34	0.969	0.05699	1.18	503	11
<u>P64424</u>									
16	0.5298	1.64	0.0678	1.77	0.969	0.05689	1.05	422.8	7
14	0.6177	1.49	0.0776	1.42	0.985	0.05829	1.03	481.9	6.6
6	0.6143	0.94	0.07878	0.90	0.963	0.05734	1.03	488.8	4.2
8	0.6219	0.93	0.07933	0.93	0.957	0.05749	1.04	492.1	4.4
13	0.6418	1.54	0.08	1.38	0.946	0.05875	1.12	495.9	6.7
7	0.636	0.91	0.08001	0.85	0.958	0.05839	1.04	496.2	4.1
1	0.6313	1.47	0.0803	1.49	0.969	0.05703	1.07	497.6	7.1
10	0.6275	1.05	0.08028	1.00	0.951	0.05746	1.05	497.7	4.8
11	0.6327	1.36	0.0805	1.37	0.974	0.05783	1.04	499.3	6.3
3	0.6322	1.42	0.0805	1.37	0.985	0.05712	1.03	499.5	6.9

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P64424 (cont.)</u>									
15	0.6658	1.10	0.08077	1.09	0.953	0.06025	1.05	500.7	5.3
2	0.669	1.64	0.0812	1.48	0.974	0.05991	1.07	503.1	7.2
20	0.655	1.98	0.0813	1.35	0.732	0.05822	1.62	504.1	6.6
9	0.6397	1.11	0.08192	1.06	0.911	0.05754	1.10	507.5	5.2
19	0.6543	1.38	0.0826	1.19	0.894	0.05744	1.19	511.5	5.8
17	0.6552	1.24	0.08291	1.19	0.954	0.05752	1.06	514.1	6
5	0.6394	1.35	0.0832	1.20	0.966	0.05657	1.07	515.2	6.1
12	0.6532	1.12	0.08341	1.03	0.939	0.05742	1.07	516.4	5.1
18	0.681	1.31	0.0854	1.29	0.963	0.0579	1.06	528.1	6.5
4	0.671	2.09	0.0855	1.75	0.896	0.0572	1.38	528.6	9.2
<u>P68756</u>									
9	0.537	2.05	0.0461	2.00	0.918	0.08557	1.54	290.5	5.7
22	0.942	4.56	0.0782	2.56	0.215	0.0892	5.27	486	12
3	0.653	2.60	0.0802	1.50	0.512	0.0595	2.45	497.4	7
1	0.636	2.20	0.0807	1.73	0.780	0.05731	1.67	500	8.5
2	0.638	2.82	0.0812	1.48	0.444	0.0581	2.65	503.1	7
13	0.668	3.59	0.0817	2.08	0.569	0.0594	3.07	508	11
19	0.666	1.65	0.0826	1.57	0.931	0.059	1.18	511.3	7.7
24	0.664	1.66	0.0826	1.69	0.977	0.05838	1.15	511.3	8.1
16	0.657	2.13	0.0827	2.18	0.963	0.0581	1.17	512	11
17	0.689	2.03	0.083	1.57	0.765	0.06039	1.71	513.8	7.9
25	0.663	1.81	0.0831	1.56	0.945	0.05814	1.22	514.2	7.9
11	0.66	1.82	0.0831	1.93	0.899	0.05807	1.21	514.4	9.4
23	0.673	1.63	0.0832	1.56	0.941	0.05884	1.17	515.3	7.5
14	0.65	1.85	0.0834	1.68	0.883	0.05727	1.30	516	8.1
21	0.662	1.81	0.0837	1.67	0.919	0.05755	1.27	517.9	8.5
18	0.668	1.50	0.084	1.55	0.970	0.05835	1.16	520	7.6
15	0.76	1.84	0.0841	1.90	0.966	0.06584	1.19	520.4	9.3
4	0.675	1.35	0.085	1.53	0.950	0.05816	1.17	525.6	7.5
8	0.682	1.61	0.0859	1.63	0.960	0.0582	1.17	531	8.5

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P68756 (cont.)</u>									
6	0.679	1.77	0.086	1.74	0.922	0.05784	1.17	531.9	9
7	0.735	1.90	0.0861	1.74	0.929	0.06186	1.24	532	8.7
5	0.692	1.73	0.0864	1.97	0.963	0.05811	1.16	533.7	9.8
20	0.692	1.59	0.0871	1.61	0.879	0.05837	1.21	538.3	8
10	0.863	1.62	0.0899	1.78	0.921	0.07043	1.29	554.6	9.7
12	0.906	1.77	0.1064	1.69	0.954	0.06219	1.19	651	11
<u>P68758</u>									
17	0.5348	1.55	0.04937	1.30	0.952	0.07895	0.69	310.6	3.9
41	0.5005	1.62	0.0567	1.94	0.857	0.06334	1.04	355.3	6.4
51	0.595	1.11	0.0721	1.07	0.984	0.05989	0.54	448.7	4.6
23	0.808	1.86	0.0729	3.16	0.072	0.0815	3.71	454	14
22	0.6429	1.32	0.0773	1.29	0.992	0.06028	0.53	480.1	6
20	0.6724	1.06	0.07759	1.20	0.892	0.06289	0.80	481.6	5.5
48	0.6441	1.23	0.078	1.41	0.972	0.05992	0.64	484.1	6.4
42	0.7294	1.22	0.07811	1.13	0.954	0.06777	0.61	484.8	5.3
5	0.6477	1.13	0.07879	1.13	0.992	0.059632	0.52	488.8	5.3
27	0.737	1.63	0.0798	2.01	0.123	0.0685	2.67	494.7	9.3
58	0.658	1.67	0.08	1.75	0.991	0.05975	0.57	495.7	8.6
18	0.646	1.86	0.0803	1.99	0.996	0.05857	0.55	497.5	9.7
13	0.7105	1.32	0.0803	1.37	0.939	0.06403	0.70	497.8	6.5
6	0.6773	1.21	0.08042	1.19	0.834	0.06099	0.76	498.6	5.7
36	0.747	1.47	0.08091	1.19	0.847	0.0661	0.67	501.5	5.7
59	0.6543	1.05	0.08094	1.05	0.967	0.05856	0.56	501.6	5
2	0.6487	1.28	0.0813	1.23	0.989	0.0579	0.53	503.6	6.1
37	0.6564	1.23	0.08143	1.19	0.987	0.05855	0.53	504.6	5.8
26	0.7246	1.37	0.08137	1.12	0.939	0.06461	0.69	504.8	5.4
30	0.6526	1.00	0.08182	0.98	0.984	0.05794	0.53	506.9	4.8
45	0.729	1.04	0.08181	1.06	0.907	0.0643	0.61	506.9	5.2
7	0.6466	1.07	0.08192	1.11	0.986	0.05737	0.54	507.5	5.4
25	0.719	1.39	0.08222	1.14	0.857	0.06362	0.91	509.3	5.6

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P68758 (cont.)</u>									
55	0.851	1.29	0.08226	1.01	0.855	0.07494	0.81	509.6	4.9
34	0.6934	1.20	0.0824	1.21	0.938	0.06108	0.66	510.2	6
47	0.6566	1.14	0.0825	1.14	0.973	0.05772	0.57	510.9	5.6
39	0.6617	1.21	0.0825	1.21	0.992	0.058138	0.52	511.1	6
40	0.6617	1.24	0.083	1.20	0.987	0.05785	0.54	513.8	6
33	0.809	1.36	0.083	1.45	0.983	0.07059	0.60	513.9	7.2
29	0.6576	1.14	0.08305	1.12	0.965	0.05755	0.57	514.2	5.5
9	0.6808	1.15	0.08326	1.12	0.983	0.0593	0.54	515.5	5.5
53	0.6662	1.07	0.08327	1.03	0.980	0.05811	0.55	515.6	5.1
8	0.7838	1.12	0.08336	1.14	0.813	0.06814	0.90	516.1	5.6
4	0.6688	1.33	0.0834	1.32	0.992	0.058311	0.53	517	6.5
32	0.677	1.24	0.0835	1.20	0.988	0.05881	0.53	517.2	6.2
3	0.6617	1.21	0.0836	1.20	0.984	0.05743	0.55	517.3	6.2
31	0.7079	1.13	0.0837	1.16	0.941	0.06134	0.63	518.1	5.8
38	0.6696	1.21	0.0837	1.19	0.986	0.058	0.53	518.2	6
60	0.675	1.16	0.08374	1.12	0.989	0.05843	0.53	518.3	5.6
54	0.6716	1.06	0.08377	1.03	0.983	0.05812	0.54	518.5	5.1
52	0.7086	1.11	0.08383	1.01	0.869	0.06099	0.62	518.9	5.1
49	0.6871	1.06	0.08394	1.06	0.978	0.05948	0.55	519.6	5.3
21	0.6853	1.14	0.08398	1.08	0.978	0.0592	0.55	519.7	5.4
11	0.6691	1.11	0.08434	1.09	0.988	0.05769	0.54	521.9	5.5
16	0.6731	1.35	0.0844	1.30	0.990	0.05779	0.54	522.3	6.8
19	0.6796	1.24	0.0845	1.18	0.992	0.058266	0.53	522.6	6.1
35	0.726	1.79	0.08462	1.17	0.711	0.06211	1.41	523.6	5.9
28	0.6929	1.17	0.08467	1.16	0.981	0.05937	0.56	523.8	5.8
14	0.6836	1.27	0.0847	1.30	0.988	0.05852	0.55	524.2	6.4
10	0.6762	1.18	0.0847	1.18	0.979	0.05785	0.56	524.5	6
24	0.7558	1.12	0.08485	1.13	0.984	0.06459	0.54	524.9	5.7
46	0.6774	1.08	0.08518	1.06	0.972	0.05781	0.56	526.9	5.3
50	0.6833	0.97	0.08521	0.97	0.981	0.05819	0.54	527.1	4.9
15	0.698	1.20	0.0872	1.26	0.985	0.05803	0.55	538.7	6.3

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P68760</u>									
21	0.696	2.16	0.0728	2.06	0.136	0.07	3.25	452.7	9
20	0.622	2.09	0.0782	1.79	0.827	0.05716	1.54	485.5	8.5
18	0.623	1.77	0.0791	1.52	0.914	0.05744	1.41	490.4	7
8	0.616	1.62	0.0794	1.64	0.840	0.05623	1.52	492.2	7.5
1	0.621	2.25	0.0795	2.39	0.893	0.0569	1.49	493	11
17	0.703	3.84	0.0801	2.00	0.622	0.0624	3.14	496.5	9.5
25	0.633	1.58	0.0801	1.50	0.903	0.05743	1.41	496.9	7
23	0.642	1.56	0.0803	1.62	0.935	0.05811	1.35	497.6	7.5
22	0.653	1.84	0.0803	1.87	0.953	0.05895	1.38	498	8.7
12	0.629	2.86	0.0803	2.24	0.779	0.0573	2.15	499	10
15	0.635	2.52	0.0805	2.11	0.853	0.05801	1.70	499	10
5	0.624	1.92	0.0806	1.86	0.927	0.05661	1.51	499.6	9
24	0.644	1.55	0.0809	1.48	0.865	0.0579	1.46	501.5	7.3
10	0.624	2.08	0.081	2.22	0.956	0.05628	1.37	502	10
13	0.632	2.22	0.0811	2.10	0.940	0.05692	1.39	502	10
2	0.63	2.06	0.081	1.73	0.878	0.05677	1.57	502.1	8.4
9	0.667	4.05	0.0811	1.97	0.572	0.0601	3.40	502.7	9.7
3	0.639	2.03	0.0811	2.22	0.943	0.0573	1.42	503	11
19	0.641	1.87	0.081	1.85	0.923	0.05758	1.42	503	8.9
14	0.637	2.04	0.0814	1.47	0.861	0.05673	1.58	504.4	7.1
11	0.635	2.20	0.0819	1.71	0.801	0.05622	1.76	507.3	8.6
4	0.645	2.17	0.082	2.20	0.922	0.05703	1.50	508	11
7	0.639	1.88	0.0822	1.82	0.926	0.05639	1.38	509.4	8.7
6	0.644	1.71	0.0826	1.82	0.941	0.05704	1.36	511.6	8.7
16	0.797	2.38	0.0968	2.17	0.875	0.06034	1.82	596	12
<u>P68766</u>									
26	0.927	3.67	0.0658	2.13	0.363	0.0996	3.17	411.9	8.4
6	0.633	1.58	0.0793	1.39	0.932	0.05858	1.36	491.9	6.7
8	0.6129	1.37	0.0797	1.38	0.928	0.05648	1.36	494.1	6.7
24	0.648	2.16	0.0798	1.88	0.896	0.05922	1.57	494.6	9.1

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P68766 (cont.)</u>									
15	0.638	2.51	0.0802	2.24	0.971	0.05865	1.37	497	11
4	0.631	1.90	0.0806	1.86	0.981	0.05699	1.30	499.8	8.7
20	0.639	1.72	0.0807	1.73	0.965	0.05795	1.33	500.4	8.3
9	0.638	1.72	0.0808	1.49	0.898	0.05765	1.45	500.5	7.2
5	0.635	1.89	0.0807	1.49	0.921	0.05718	1.47	500.9	7.2
23	0.638	1.88	0.0808	1.73	0.949	0.0574	1.36	501.7	8.4
11	0.675	2.22	0.0808	1.49	0.749	0.06112	1.75	501.9	7.3
28	0.639	1.88	0.0809	1.85	0.960	0.05698	1.37	502	9.3
25	0.635	1.73	0.0812	1.72	0.953	0.0571	1.36	503.2	8.3
12	0.636	1.73	0.0813	1.72	0.943	0.05723	1.39	503.5	8.2
7	0.771	1.82	0.0812	1.72	0.877	0.07012	1.53	504.2	8.1
21	0.85	5.88	0.0816	1.84	0.343	0.0743	4.87	506.5	9
3	0.648	2.16	0.082	2.07	0.945	0.05716	1.47	508	10
30	0.659	1.97	0.0822	1.82	0.963	0.05751	1.35	509.2	9
19	0.683	1.90	0.0822	1.82	0.976	0.06028	1.31	509.8	8.7
27	0.721	3.19	0.0825	2.06	0.618	0.0628	2.42	510.7	9.9
22	0.822	1.95	0.0825	1.70	0.862	0.07346	1.57	511.7	8.6
2	0.752	2.39	0.0828	2.42	0.965	0.06556	1.40	514	12
16	0.671	1.79	0.0836	1.67	0.963	0.059	1.35	517.2	8.6
14	0.918	1.74	0.0838	1.79	0.884	0.07955	1.47	518.6	8.8
18	0.662	1.81	0.0841	1.78	0.971	0.05766	1.32	520.5	9.1
10	0.797	1.63	0.0846	1.54	0.825	0.06913	1.59	524.1	7.8
13	0.872	5.73	0.0857	1.87	0.553	0.0747	5.11	529.6	9.5
17	0.744	2.42	0.0876	2.17	0.861	0.06137	1.69	541	11
29	0.733	2.05	0.0911	1.87	0.979	0.05805	1.32	562	10
<u>P68770</u>									
16	0.673	2.82	0.0712	1.83	0.922	0.06826	1.50	444.5	8.2
2	0.583	2.06	0.0742	2.02	0.995	0.05725	0.83	461.5	9
17	0.6187	1.54	0.0774	1.42	0.973	0.05806	0.89	480.5	6.7
33	0.63	1.59	0.0778	1.41	0.986	0.05871	0.83	482.8	6.8

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P68770 (cont.)</u>									
7	0.627	1.53	0.0794	1.39	0.950	0.05716	0.92	492.4	6.8
11	0.635	1.73	0.0796	1.76	0.990	0.05795	0.84	493.3	8.3
6	0.626	1.76	0.0797	1.76	0.967	0.05716	0.90	494.4	8.2
5	0.627	1.20	0.0801	1.19	0.974	0.05699	0.84	496.7	5.7
36	0.638	1.72	0.0801	1.75	0.970	0.05752	0.89	496.7	8.3
4	0.635	1.43	0.0804	1.37	0.978	0.05746	0.84	498.3	6.4
20	0.651	1.69	0.0806	1.74	0.963	0.05849	0.88	499.6	8.1
8	0.743	2.42	0.0806	1.61	0.815	0.067	1.69	499.9	7.5
35	0.654	1.68	0.0807	1.73	0.967	0.0585	0.92	500.1	8.3
21	0.637	1.88	0.0807	1.73	0.890	0.05741	1.18	500.4	8.1
3	0.643	1.32	0.0811	1.23	0.979	0.05752	0.83	502.9	6.2
13	0.646	1.70	0.0813	1.60	0.984	0.05781	0.85	503.8	8
15	0.686	1.75	0.0814	1.72	0.961	0.06099	0.90	504.1	8.3
29	0.643	1.87	0.0816	1.84	0.980	0.05729	0.90	505.4	8.7
18	0.6578	1.41	0.0817	1.35	0.976	0.05845	0.86	506.1	6.8
12	0.642	1.87	0.0818	1.71	0.973	0.05709	0.90	506.9	8.6
26	0.648	1.70	0.0819	1.71	0.970	0.05751	0.89	507.1	8.2
34	0.648	1.70	0.082	1.71	0.977	0.05761	0.89	508.1	8.6
31	0.6518	1.49	0.0821	1.46	0.961	0.05778	0.92	508.5	7.1
9	0.756	1.72	0.0821	1.71	0.965	0.06653	0.89	508.6	8.5
25	0.648	1.70	0.0826	1.69	0.886	0.05719	1.10	511.8	8.3
19	0.665	1.50	0.0829	1.45	0.985	0.05822	0.84	513.4	7.3
1	0.6617	1.47	0.0831	1.44	0.966	0.05764	0.87	514.7	6.9
30	0.666	1.65	0.0838	1.55	0.869	0.05746	1.22	518.5	7.8
24	0.671	1.79	0.0845	1.78	0.990	0.0577	0.83	523	8.7
10	0.683	3.07	0.0849	2.71	0.963	0.05859	1.12	525	13
28	0.682	1.47	0.0855	1.52	0.985	0.05797	0.84	528.8	7.4
27	0.696	1.44	0.0881	1.48	0.969	0.0575	0.89	544.4	7.9
22	0.723	1.66	0.0894	1.57	0.978	0.05878	0.86	551.7	8.4
23	0.722	1.52	0.0895	1.56	0.987	0.05869	0.84	552.4	8.5
14	1.69	1.72	0.167	1.62	0.983	0.07367	0.84	995	15

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P68770 (cont.)</u>									
32	3.007	1.66	0.2419	1.57	0.987	0.08993	0.84	1396	20
<u>P68775</u>									
22	0.626	2.56	0.0771	2.08	0.889	0.05833	1.63	478.6	9.4
1	0.6145	1.14	0.07795	0.78	0.776	0.05681	1.36	483.9	3.7
28	0.625	2.08	0.0784	1.79	0.954	0.05757	1.32	486.7	8.7
25	0.621	2.25	0.0785	2.04	0.929	0.05708	1.41	486.8	9.4
38	0.623	2.57	0.0785	2.29	0.870	0.05754	1.69	487	11
29	0.614	2.12	0.0787	2.03	0.953	0.05682	1.35	487.9	9.5
3	0.6248	1.17	0.07898	0.92	0.824	0.05769	1.33	490	4.3
18	0.624	2.72	0.079	2.66	0.987	0.05742	1.22	490	12
20	0.675	2.81	0.0792	2.27	0.803	0.0634	2.08	491	11
12	0.6258	1.13	0.07917	1.10	0.907	0.05782	1.25	491.1	5.2
33	0.625	2.08	0.0793	2.02	0.976	0.05702	1.26	491.5	9.8
21	0.632	2.37	0.0793	2.02	0.795	0.05779	1.80	492	9.4
4	0.6302	1.14	0.07944	1.01	0.793	0.0576	1.36	492.7	4.8
27	0.627	2.23	0.0794	2.27	0.946	0.05736	1.43	493	11
13	0.6295	1.48	0.07958	1.22	0.877	0.05756	1.33	493.6	5.8
37	0.634	2.21	0.0796	2.01	0.911	0.05791	1.46	493.6	9.7
26	0.629	2.23	0.0796	2.14	0.982	0.05715	1.22	493.7	9.9
24	0.632	2.06	0.0797	1.88	0.885	0.05754	1.55	494.4	8.8
2	0.6306	1.14	0.07983	0.95	0.854	0.0572	1.30	495.1	4.5
17	0.632	2.37	0.0801	2.12	0.928	0.05744	1.45	496.3	9.9
14	0.6729	1.25	0.08017	1.17	0.908	0.06142	1.28	497	5.6
5	0.632	1.01	0.08024	0.92	0.842	0.0572	1.29	497.5	4.4
31	0.635	2.52	0.0803	2.49	0.978	0.05728	1.26	498	12
8	0.6274	1.31	0.08037	0.93	0.817	0.05721	1.35	498.3	4.5
9	0.634	1.58	0.08045	1.04	0.735	0.05763	1.56	499.3	5.1
19	0.632	2.22	0.0808	2.10	0.980	0.05711	1.22	500	10
30	0.641	2.34	0.0805	2.36	0.955	0.05752	1.34	500	11
32	0.638	2.51	0.0807	2.48	0.950	0.05696	1.39	500	12

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P68775 (cont.)</u>									
16	0.6344	1.40	0.08076	1.15	0.836	0.05747	1.38	500.6	5.5
7	0.6342	1.45	0.08077	0.98	0.445	0.05737	1.45	500.7	4.7
35	0.657	2.28	0.081	2.22	0.963	0.05823	1.27	502	11
34	0.648	2.31	0.0812	2.34	0.926	0.05748	1.42	503	11
10	0.662	1.51	0.08132	1.18	0.783	0.05934	1.50	503.9	5.7
15	0.6388	1.35	0.08135	1.06	0.877	0.05764	1.33	504.1	5.1
39	0.654	2.45	0.0817	2.20	0.966	0.05756	1.32	506	11
40	0.683	2.34	0.0818	2.44	0.975	0.06048	1.27	508	12
36	0.808	5.57	0.0823	2.19	0.491	0.0699	4.72	510	10
23	0.654	2.14	0.0826	2.06	0.995	0.05755	1.17	511	10
6	0.7301	1.19	0.08272	0.99	0.719	0.0642	1.39	512.9	4.8
11	0.6702	1.18	0.08405	1.12	0.939	0.05848	1.23	520.8	5.5
<u>P68782</u>									
15	0.3975	2.19	0.04751	1.66	0.943	0.06121	1.17	299.2	4.9
29	0.658	1.98	0.0739	2.03	0.775	0.06339	1.52	459.7	8.8
2	0.611	1.80	0.0784	1.79	0.988	0.0566	0.90	486.1	8.3
28	0.65	2.00	0.0786	1.91	0.952	0.05967	1.04	489	8.9
24	0.627	2.07	0.079	1.77	0.838	0.05768	1.43	489.9	8.6
27	0.638	1.72	0.0804	1.62	0.940	0.05747	1.04	498.5	7.8
17	0.632	1.90	0.0807	1.86	0.957	0.05732	1.01	500	9
10	0.634	1.74	0.0808	1.61	0.950	0.05712	1.00	501	8
31	0.64	2.19	0.0809	2.22	0.971	0.05728	1.01	501	11
25	0.693	1.88	0.0812	1.60	0.904	0.06202	1.17	503.1	7.6
14	0.639	2.03	0.0816	1.84	0.821	0.05739	1.50	505.7	8.7
22	0.647	1.70	0.0817	1.59	0.930	0.0575	1.07	505.9	7.5
3	0.647	1.70	0.0815	1.60	0.953	0.05773	0.99	506.1	7.8
4	0.639	1.88	0.0818	1.83	0.989	0.05668	0.90	506.7	8.9
16	0.645	1.55	0.0818	1.59	0.892	0.05738	1.16	506.8	7.7
32	0.648	2.16	0.0819	2.08	0.974	0.05731	0.98	507	10
19	0.642	1.71	0.082	1.59	0.962	0.05726	0.97	507.7	7.8

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P68782 (cont.)</u>									
12	0.647	1.70	0.0821	1.58	0.960	0.05739	0.97	508.4	7.7
30	0.657	2.13	0.0821	1.83	0.814	0.05783	1.51	508.7	8.8
7	0.6465	1.31	0.0822	1.34	0.973	0.05729	0.90	509.3	6.5
20	0.653	1.99	0.0827	1.81	0.969	0.05742	0.98	511.8	8.9
13	0.6527	1.49	0.0825	1.45	0.946	0.05732	1.00	512.1	7
21	0.752	3.46	0.0828	1.93	0.671	0.0664	2.84	514.7	9.5
9	0.65	1.69	0.0832	1.56	0.980	0.05687	0.91	515.3	8
6	0.654	1.53	0.0834	1.32	0.895	0.05711	1.14	516.3	6.7
8	0.6623	1.48	0.0846	1.42	0.959	0.057	0.95	523.6	7.2
18	0.677	1.77	0.0861	1.86	0.966	0.05722	0.96	532.3	9.3
1	0.704	1.56	0.0873	1.37	0.982	0.05849	0.90	540.4	7.5
5	0.874	3.89	0.0983	3.05	0.986	0.06449	1.32	604	17
23	2.89	11.42	0.0995	3.42	0.918	0.2	9.04	611	20
11	1.99	1.66	0.1829	1.64	0.994	0.07895	0.87	1082	16
<u>P68787</u>									
20	0.6274	1.20	0.07957	1.18	0.980	0.05724	0.36	493.5	5.6
24	0.6346	1.28	0.0802	1.25	0.959	0.05714	0.49	497.2	6.3
6	0.6324	1.30	0.08031	1.21	0.938	0.0569	0.48	497.9	5.8
44	0.6366	1.48	0.0803	1.37	0.946	0.05748	0.53	497.9	6.5
41	0.6365	1.54	0.0812	1.48	0.974	0.05725	0.42	504	7.3
21	0.6428	1.28	0.08141	1.20	0.969	0.05722	0.39	504.5	5.9
18	0.6411	1.39	0.0815	1.35	0.976	0.05708	0.40	505	6.5
23	0.64	1.56	0.0814	1.35	0.892	0.05718	0.71	505.2	6.5
12	0.6459	1.18	0.08157	1.19	0.976	0.0575	0.35	505.4	5.8
39	0.641	1.56	0.0815	1.60	0.984	0.05725	0.39	505.7	7.6
7	0.6493	1.09	0.08183	1.05	0.955	0.05754	0.40	507	5.1
34	0.65	1.85	0.0819	1.71	0.943	0.05744	0.66	507.4	8.2
10	0.6507	1.12	0.08194	1.11	0.979	0.05757	0.35	507.7	5.4
28	0.6499	1.23	0.082	1.22	0.961	0.05748	0.46	507.7	6
35	0.657	1.98	0.0823	1.82	0.948	0.05765	0.69	509.8	8.8

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P68787 (cont.)</u>									
16	0.6506	1.37	0.0824	1.33	0.987	0.0573	0.34	510.1	6.6
25	0.654	1.68	0.0825	1.58	0.989	0.05743	0.36	510.7	7.8
11	0.6602	1.21	0.08264	1.15	0.977	0.05797	0.37	511.8	5.7
8	0.6549	1.30	0.08273	1.18	0.972	0.05735	0.40	512.4	5.8
22	0.6451	1.47	0.0828	1.45	0.872	0.05702	0.73	512.5	7.1
43	0.658	1.67	0.0828	1.57	0.992	0.05773	0.33	512.6	8
13	0.6584	1.35	0.0828	1.33	0.978	0.05762	0.36	512.8	6.6
37	0.661	1.66	0.0831	1.56	0.983	0.05737	0.39	514.4	7.5
36	0.655	1.98	0.0833	1.92	0.864	0.05731	1.09	515.8	9.4
38	0.659	1.67	0.0835	1.56	0.983	0.05715	0.40	516.9	8
29	0.6602	1.42	0.0835	1.44	0.973	0.05757	0.43	517	7
15	0.6769	1.29	0.08357	1.14	0.922	0.05828	0.59	517.3	5.6
31	0.6629	1.39	0.0836	1.44	0.968	0.05761	0.44	517.3	7.4
9	0.6595	1.29	0.0836	1.32	0.982	0.05735	0.36	517.7	6.6
42	0.662	1.47	0.0837	1.43	0.979	0.05731	0.39	518	7.2
30	0.664	1.66	0.0837	1.55	0.987	0.05757	0.35	518.3	7.8
32	0.666	1.65	0.0838	1.55	0.974	0.05766	0.44	518.7	7.7
40	0.669	1.49	0.0842	1.43	0.974	0.05738	0.41	520.9	7.4
19	0.668	1.42	0.0843	1.42	0.941	0.05724	0.50	521.4	7
33	0.676	1.92	0.085	1.76	0.928	0.05728	0.77	525.8	9.1
26	0.6843	1.24	0.0866	1.15	0.969	0.05721	0.42	535.4	6.1
27	0.685	1.75	0.0867	1.50	0.956	0.05697	0.54	535.7	7.8
14	0.699	1.43	0.0892	1.23	0.926	0.05717	0.58	550.7	6.8
17	1.475	1.22	0.1434	1.19	0.984	0.07445	0.36	863.5	9.4
<u>P68796</u>									
17	0.61	2.46	0.0785	2.55	0.850	0.05725	1.46	487	12
29	0.624	1.76	0.0795	1.64	0.964	0.05697	1.11	493	7.6
18	0.627	2.87	0.0795	2.52	0.903	0.05754	1.50	494	12
27	0.627	1.75	0.0797	1.76	0.970	0.05723	1.09	494.4	8.4
2	0.622	2.41	0.0798	2.13	0.982	0.05671	1.10	495	10

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P68796 (cont.)</u>									
32	0.633	1.90	0.0801	1.87	0.971	0.0572	1.10	496.6	9
30	0.629	1.75	0.0802	1.75	0.961	0.05705	1.11	497.1	8.1
6	0.619	2.58	0.0806	2.48	0.983	0.05639	1.10	499	12
31	0.639	1.88	0.0804	1.87	0.948	0.05763	1.18	499.2	9.2
9	0.636	2.20	0.0806	1.86	0.810	0.05787	1.31	499.5	8.9
13	0.6359	1.20	0.08061	1.22	0.960	0.05714	1.07	499.7	5.8
26	0.6369	1.54	0.0808	1.36	0.814	0.05744	1.37	500.6	6.5
8	0.636	1.89	0.0809	1.61	0.903	0.05719	1.26	501.4	7.7
11	0.692	2.31	0.081	2.35	0.980	0.0624	1.10	502	11
12	0.642	2.18	0.081	2.22	0.980	0.0576	1.10	502	11
7	0.639	1.72	0.0811	1.73	0.979	0.05798	1.06	502.4	8.3
35	0.641	1.87	0.0814	1.97	0.974	0.05714	1.09	504.1	9.4
15	0.6456	1.49	0.0816	1.59	0.970	0.05736	1.07	505.3	7.5
1	0.74	2.70	0.0817	2.69	0.981	0.0659	1.12	506	13
20	0.647	2.32	0.082	2.32	0.961	0.05716	1.14	508	11
34	0.644	2.02	0.082	2.07	0.977	0.05707	1.11	508	9.9
14	0.649	1.85	0.0823	1.70	0.961	0.05727	1.08	510.6	8.5
5	0.632	2.22	0.0825	2.18	0.989	0.05628	1.06	511	11
19	0.646	2.01	0.0825	2.06	0.979	0.05678	1.07	511	10
16	0.845	4.85	0.0829	2.53	0.563	0.0741	4.17	513	13
21	0.648	2.31	0.0829	2.29	0.931	0.05707	1.07	513	11
22	0.649	2.16	0.0829	2.17	0.963	0.05701	1.11	513	11
25	0.65	1.69	0.0829	1.57	0.972	0.05715	1.09	513.1	8
3	0.639	1.56	0.0831	1.44	0.992	0.05632	1.02	514.4	7.3
4	0.6353	1.45	0.0834	1.44	0.945	0.05616	1.10	516	6.9
23	0.655	1.98	0.0834	1.80	0.961	0.05738	1.14	516.3	8.9
33	0.671	2.24	0.0845	2.25	0.992	0.05769	1.03	523	11
24	0.673	1.63	0.0852	1.53	0.970	0.05717	1.08	526.7	7.8
10	0.714	2.10	0.0854	1.99	0.987	0.06126	1.06	528.1	9.9

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
P68802									
33	0.6265	1.56	0.07849	0.50	0.395	0.05778	1.72	487.1	7
21	0.63	1.59	0.0786	1.65	0.947	0.05877	1.14	487.9	7.6
11	0.619	1.78	0.0789	1.65	0.972	0.0572	1.08	489.6	7.5
9	0.621	1.93	0.079	1.77	0.907	0.05751	1.26	489.9	8.3
14	0.621	1.61	0.0793	1.39	0.812	0.05662	1.44	491.9	6.7
6	0.64	2.19	0.0793	1.64	0.762	0.05818	1.54	492	8
8	0.622	2.09	0.0793	1.51	0.831	0.05729	1.58	492	7.5
16	0.6193	1.42	0.0793	1.39	0.970	0.05705	1.05	492.8	6.7
37	0.6378	0.61	0.07945	0.43	0.717	0.05801	1.08	492.8	7
7	0.628	1.91	0.0794	1.51	0.777	0.05771	1.61	492.9	7.2
3	0.624	1.76	0.0795	1.51	0.890	0.05702	1.28	493.2	7.4
36	0.6358	1.10	0.07954	0.49	0.442	0.05778	1.45	493.4	7
5	0.617	1.62	0.0797	1.63	0.882	0.05662	1.29	494.2	7.5
27	0.627	0.81	0.0797	0.45	0.529	0.05734	1.23	494.3	7
12	0.6234	1.57	0.08	1.38	0.891	0.05727	1.20	495.8	6.4
10	0.6236	1.36	0.08	1.38	0.853	0.05715	1.26	496.3	6.4
24	0.66	2.12	0.0801	1.62	0.765	0.05984	1.76	496.7	7.7
38	0.6322	0.81	0.08011	0.49	0.528	0.0571	1.20	496.8	7
34	0.6295	0.67	0.08014	0.36	0.382	0.05683	1.17	496.9	7
1	0.629	2.07	0.0804	1.62	0.810	0.05718	1.61	498.2	7.9
13	0.625	1.60	0.0805	1.49	0.942	0.05683	1.13	498.8	7.1
4	0.633	1.74	0.0805	1.61	0.955	0.0572	1.11	498.9	8
17	0.632	1.74	0.0807	1.61	0.934	0.05738	1.19	499.9	7.6
39	0.6402	1.47	0.0807	1.36	0.904	0.0573	1.19	500.6	6.2
35	0.6456	1.01	0.08082	0.42	0.465	0.05769	1.32	501	7
29	0.6434	1.54	0.08083	0.57	0.351	0.05804	1.86	501.1	7
22	0.634	1.58	0.0809	1.61	0.947	0.05728	1.15	501.2	7.7
18	0.635	1.89	0.081	1.36	0.749	0.05761	1.60	501.8	6.3
25	0.645	2.02	0.081	1.85	0.930	0.05751	1.25	502.1	8.7
30	0.6527	0.78	0.08103	0.38	0.670	0.05863	1.16	502.2	1.9
32	0.6439	0.70	0.08104	0.35	0.509	0.05763	1.14	502.3	7

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P68802 (cont.)</u>									
28	0.698	2.15	0.08114	0.57	0.445	0.0629	2.15	502.9	2.7
20	0.642	1.56	0.0812	1.48	0.939	0.05757	1.14	504.1	7.1
26	0.64	1.88	0.0815	1.60	0.867	0.05761	1.43	504.9	7.5
23	0.654	1.99	0.0819	1.71	0.885	0.05815	1.33	507.5	8.4
2	0.654	2.75	0.0821	2.07	0.815	0.0574	1.79	508.7	9.8
31	0.6501	0.58	0.08212	0.32	0.594	0.05754	1.08	508.7	7
40	0.675	1.78	0.0826	1.57	0.954	0.05878	1.12	511.5	7.9
15	0.645	2.02	0.0828	1.57	0.906	0.05714	1.29	512.8	7.5
19	3.748	2.16	0.2563	1.91	0.987	0.10753	1.06	1470	25
<u>P68826</u>									
11	0.602	1.83	0.0773	1.68	0.916	0.05676	1.66	479.8	7.9
12	0.62	2.58	0.0781	1.66	0.735	0.0577	2.29	484.4	8
9	0.6098	1.62	0.0783	1.53	0.907	0.0568	1.65	485.9	7
20	0.641	2.03	0.0784	1.28	0.609	0.059	2.21	486.6	6
17	0.623	1.77	0.0785	1.27	0.684	0.05796	2.02	486.9	6.1
27	0.622	1.59	0.0785	1.40	0.921	0.0572	1.64	486.9	6.8
16	0.626	2.24	0.0788	1.52	0.734	0.05726	2.01	488.9	7.5
14	0.615	1.95	0.079	1.65	0.901	0.05694	1.71	490.3	7.8
8	0.61	2.30	0.0791	1.52	0.543	0.0568	2.45	490.8	7
33	0.629	1.91	0.079	1.65	0.903	0.05736	1.69	491	8
10	0.627	2.07	0.0793	1.51	0.652	0.05757	2.22	491.7	7.4
5	0.6195	1.50	0.0793	1.26	0.883	0.05657	1.64	491.8	6.3
7	0.625	2.56	0.0793	1.51	0.665	0.0578	2.42	491.8	7.4
35	0.63	1.59	0.07937	1.16	0.729	0.05752	1.87	492.3	5.5
13	0.6221	1.49	0.07947	1.21	0.768	0.05689	1.77	492.9	5.7
15	0.63	2.22	0.0795	1.64	0.728	0.0575	2.03	493	8
31	0.625	1.76	0.0795	1.64	0.860	0.05716	1.84	493	7.8
30	0.619	1.78	0.0798	1.38	0.855	0.05662	1.76	494.7	6.5
26	0.634	2.05	0.0798	1.75	0.876	0.0573	1.80	495	8.2
19	0.63	1.90	0.0799	1.75	0.744	0.05743	1.98	495.2	8.1

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P68826 (cont.)</u>									
6	0.628	1.75	0.0801	1.50	0.849	0.05737	1.77	496.4	7.3
21	0.642	2.18	0.0801	1.50	0.591	0.05813	1.82	496.5	7.4
29	0.642	1.71	0.0802	1.62	0.926	0.05819	1.63	497.3	7.7
4	0.6255	1.29	0.08022	1.21	0.963	0.05671	1.55	497.4	5.8
18	0.636	2.04	0.0802	1.62	0.700	0.05718	2.11	497.9	7.4
25	0.633	1.74	0.0804	1.49	0.824	0.05731	1.79	498.3	7.1
22	0.6359	1.53	0.0804	1.37	0.863	0.05751	1.68	498.7	6.5
34	0.654	1.68	0.0805	1.37	0.886	0.05876	1.70	499.1	6.6
3	0.6274	1.37	0.08064	1.09	0.780	0.05664	1.73	499.9	5.2
23	0.638	1.72	0.0805	1.37	0.869	0.05731	1.69	500.4	6.6
24	0.639	1.88	0.0809	1.48	0.876	0.0573	1.78	501.1	7.4
1	0.643	2.02	0.08087	1.10	0.389	0.0577	2.56	501.2	5.3
2	0.6314	1.22	0.08108	0.99	0.844	0.0569	1.63	502.5	4.8
32	0.653	2.30	0.0825	1.82	0.852	0.05723	1.95	510.8	8.7
36	0.6528	1.50	0.08258	1.17	0.919	0.05733	1.61	511.4	5.8
28	0.652	1.99	0.0826	1.57	0.921	0.05745	1.66	511.7	7.8
<u>P68843</u>									
26	0.636	2.36	0.0762	2.23	0.976	0.06041	1.11	473.4	9.9
29	0.609	1.81	0.0794	1.51	0.713	0.05619	1.75	492.4	7
12	0.623	2.89	0.0798	2.26	0.837	0.05749	1.89	496	11
31	0.643	2.33	0.0806	1.86	0.716	0.05721	1.91	499.3	9.2
23	0.636	1.73	0.0806	1.49	0.849	0.05744	1.38	499.4	7.1
34	0.649	2.62	0.0807	2.23	0.771	0.05786	1.79	500	11
22	0.629	1.75	0.0807	1.49	0.842	0.05689	1.40	500.1	7.4
9	0.648	3.09	0.0809	2.47	0.736	0.0585	2.44	501	12
36	0.646	2.32	0.0806	2.23	0.835	0.05736	1.66	501	10
30	0.631	2.22	0.0809	1.73	0.783	0.05689	1.68	501.1	8.4
2	0.639	2.35	0.0809	2.10	0.925	0.05701	1.32	502	10
10	0.644	2.48	0.0811	2.34	0.983	0.05844	1.10	502	11
6	0.628	3.18	0.0812	2.46	0.737	0.057	2.33	503	12

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P68843 (cont.)</u>									
13	0.645	2.48	0.0812	2.59	0.993	0.05848	1.04	503	12
24	0.639	1.88	0.0814	1.84	0.946	0.05742	1.16	504.1	8.8
33	0.666	1.50	0.0818	1.59	0.969	0.05839	1.07	506.8	7.7
7	0.637	2.67	0.082	2.56	0.910	0.05718	1.51	508	12
25	0.652	2.15	0.0821	2.07	0.938	0.05738	1.26	508.6	9.8
20	0.654	1.53	0.0823	1.58	0.986	0.058	1.03	509.6	7.6
8	0.635	2.36	0.0824	2.43	0.945	0.05747	1.23	510	12
11	0.659	2.43	0.0825	2.06	0.815	0.05842	1.64	511	10
32	0.646	1.86	0.0824	1.70	0.790	0.05638	1.57	511.3	8.3
1	0.658	2.13	0.0828	2.05	0.968	0.05748	1.13	514	10
18	0.66	1.52	0.0833	1.56	0.990	0.05794	1.02	515.4	7.5
15	0.6632	1.36	0.0836	1.32	0.963	0.0583	1.07	518.1	6.6
35	0.672	2.53	0.084	2.26	0.953	0.05733	1.23	519	11
19	0.781	1.54	0.0839	1.19	0.703	0.06924	1.53	519.1	6.1
4	0.678	1.92	0.084	1.90	0.982	0.05873	1.06	519.6	9.7
16	0.667	1.65	0.0843	1.54	0.957	0.05789	1.11	521.3	7.8
21	0.746	1.88	0.0849	1.53	0.851	0.06406	1.44	525.3	7.5
28	0.694	2.02	0.0857	1.98	0.989	0.0586	1.06	530	10
5	0.708	2.26	0.0891	2.24	0.988	0.05812	1.06	550	12
14	0.878	1.71	0.0943	1.70	0.923	0.06803	1.24	580.9	9.3
3	0.963	2.39	0.1039	2.21	0.985	0.06749	1.09	637	14
17	4.352	1.88	0.2722	1.80	0.989	0.11702	1.04	1553	25
27	6.02	2.66	0.3236	2.60	0.997	0.13497	1.02	1804	41
<u>P68844</u>									
38	0.618	2.43	0.0779	1.93	0.878	0.05683	1.73	483.6	9.2
25	0.638	2.19	0.0784	1.79	0.817	0.05899	1.75	486.4	8.2
17	0.659	1.82	0.0788	1.65	0.920	0.06133	1.53	488.9	7.8
29	0.63	2.38	0.0789	1.90	0.834	0.05779	1.96	489.5	9.1
24	0.622	2.41	0.0791	1.90	0.694	0.0577	2.17	490.8	8.8
23	0.627	2.55	0.0792	1.77	0.772	0.05747	1.83	491.3	8.3

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P68844 (cont.)</u>									
22	0.626	2.24	0.0793	1.89	0.765	0.05738	1.86	492.1	8.8
39	0.632	2.06	0.0794	1.89	0.837	0.05732	1.74	492.1	8.8
20	0.631	1.74	0.0795	1.51	0.956	0.0578	1.41	493.3	7
10	0.63	1.75	0.0796	1.63	0.939	0.05775	1.42	493.7	7.8
1	0.6208	1.42	0.0795	1.38	0.940	0.05684	1.39	493.9	6.5
18	0.627	2.55	0.0797	1.88	0.752	0.05742	2.10	494	8.9
2	0.6208	1.48	0.07969	1.24	0.785	0.0569	1.62	494.2	5.9
5	0.617	1.78	0.0798	1.38	0.730	0.05654	1.74	494.6	6.3
30	0.636	1.73	0.0798	1.63	0.932	0.05751	1.42	495	7.6
13	0.619	2.10	0.08	1.88	0.839	0.05694	1.71	496.2	8.7
14	0.627	1.91	0.0803	1.74	0.920	0.05716	1.49	497.6	8.1
33	0.629	2.07	0.0803	1.87	0.960	0.05677	1.40	497.6	9.2
8	0.619	2.10	0.0803	1.99	0.814	0.05757	1.82	498.6	9.7
7	0.629	2.54	0.0805	1.99	0.681	0.05722	2.15	498.7	9.4
26	0.641	2.50	0.0805	2.24	0.890	0.0578	1.75	499	11
37	0.633	2.37	0.0805	2.11	0.901	0.05672	1.68	499	10
36	0.656	1.98	0.0806	1.99	0.942	0.05864	1.47	499.4	9.3
6	0.618	1.78	0.0807	1.61	0.906	0.0562	1.51	500.1	7.6
35	0.633	2.05	0.0808	1.98	0.894	0.05655	1.61	500.5	9.3
4	0.628	1.75	0.0808	1.49	0.907	0.05663	1.48	500.7	6.9
31	0.634	1.89	0.0807	1.73	0.946	0.05693	1.45	501.2	8.5
19	0.644	2.02	0.081	1.85	0.855	0.05773	1.72	501.6	8.7
15	0.627	1.91	0.081	1.73	0.934	0.05714	1.46	501.7	8.4
16	0.6343	1.51	0.0813	1.35	0.902	0.05765	1.48	503.5	6.8
3	0.654	1.99	0.0813	1.60	0.816	0.05873	1.64	503.7	7.8
9	0.822	5.72	0.0814	1.97	0.543	0.0739	5.04	504.1	9.6
40	0.641	1.87	0.0817	1.84	0.914	0.05672	1.50	506.3	8.7
32	0.647	1.85	0.0822	1.82	0.985	0.05694	1.34	508.9	9.1
12	0.636	1.89	0.0823	1.70	0.885	0.05688	1.56	509.5	8.4
34	0.707	2.26	0.0822	2.07	0.956	0.06179	1.44	510	10
11	0.64	1.88	0.0828	1.69	0.961	0.05699	1.41	512.7	8.5

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P68844 (cont.)</u>									
21	0.652	1.69	0.0828	1.69	0.935	0.05726	1.47	512.7	8.6
28	0.935	4.39	0.0828	2.05	0.560	0.0832	3.95	513	10
27	0.666	2.40	0.083	1.93	0.724	0.05835	2.08	513.7	9.8
<u>P68845</u>									
18	0.616	1.95	0.0785	1.53	0.851	0.05766	1.49	487	7.4
33	0.624	1.76	0.0784	1.53	0.919	0.05768	1.27	487	7.4
10	0.624	2.08	0.0787	1.52	0.703	0.05868	1.92	488.4	7.2
37	0.6591	1.46	0.0787	1.40	0.909	0.06069	1.25	488.5	6.7
20	0.612	2.12	0.0791	2.02	0.941	0.05714	1.30	490.3	9.4
25	0.6336	1.53	0.0791	1.39	0.880	0.05847	1.30	490.6	6.7
38	0.6681	1.47	0.0792	1.39	0.914	0.06075	1.24	491.5	6.5
5	0.616	1.95	0.0794	1.13	0.627	0.05739	1.76	492.5	5.3
16	0.617	1.62	0.0794	1.64	0.945	0.05684	1.24	492.6	7.8
27	0.626	1.76	0.0793	1.64	0.938	0.0576	1.28	492.7	8
35	0.6262	1.36	0.0795	1.38	0.899	0.05734	1.23	492.8	6.5
29	0.6238	1.52	0.0796	1.51	0.876	0.05729	1.33	493.5	7
6	0.6153	1.27	0.07964	1.18	0.948	0.05665	1.19	493.9	5.6
21	0.627	2.07	0.0797	1.88	0.933	0.0581	1.31	494.4	8.8
4	0.628	1.75	0.07973	1.14	0.648	0.05741	1.68	494.5	5.4
30	0.6242	1.44	0.0798	1.38	0.923	0.05697	1.24	494.6	6.8
15	0.621	1.77	0.0798	1.75	0.946	0.05717	1.23	494.8	8.3
13	0.619	2.42	0.0798	2.13	0.931	0.05696	1.38	495	10
28	0.6269	1.29	0.0799	1.25	0.878	0.05722	1.27	495.2	6.1
17	0.627	2.07	0.0799	1.88	0.955	0.05773	1.22	495.3	8.9
22	0.621	1.77	0.0799	1.88	0.955	0.05723	1.23	495.5	8.9
11	0.628	1.91	0.0798	1.75	0.945	0.05757	1.27	495.6	8.1
3	0.6261	1.25	0.08001	1.02	0.886	0.05695	1.24	496.1	4.9
7	0.6191	1.47	0.08	1.38	0.857	0.05645	1.34	496.1	6.3
1	0.6341	1.21	0.08007	0.96	0.740	0.05736	1.39	496.5	4.6
19	0.65	1.85	0.0802	1.87	0.977	0.05975	1.18	496.9	8.9

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P68845 (cont.)</u>									
39	0.6544	1.36	0.0802	1.17	0.878	0.05884	1.30	497.3	5.6
24	0.629	2.07	0.0805	1.99	0.951	0.05744	1.25	498.9	9.3
12	0.853	1.64	0.0805	1.61	0.937	0.07809	1.25	499.1	7.7
14	0.628	1.59	0.0806	1.49	0.922	0.05717	1.24	499.7	7
9	0.625	1.92	0.0806	1.36	0.559	0.05682	1.91	499.8	6.9
31	0.6372	1.22	0.08108	1.05	0.908	0.05739	1.25	502.5	5.1
8	0.6326	1.26	0.08114	1.17	0.864	0.0569	1.27	502.9	5.6
34	0.6408	1.54	0.081	1.48	0.918	0.05745	1.28	503	7.3
2	0.79	1.27	0.08206	1.01	0.776	0.07038	1.44	508.4	4.9
23	0.643	1.71	0.0821	1.71	0.928	0.05741	1.28	508.4	8.3
40	0.663	1.66	0.0823	1.58	0.973	0.05787	1.15	509.8	8
36	0.659	1.52	0.0823	1.46	0.935	0.05788	1.22	510.4	6.8
26	0.646	1.86	0.0826	1.57	0.827	0.05716	1.28	511.8	7.9
32	0.862	2.90	0.0858	1.75	0.697	0.0729	2.21	530.6	9
<u>P68851</u>									
13	0.751	2.00	0.0772	1.30	0.525	0.0706	2.01	479.4	6.2
30	0.889	1.91	0.0778	2.19	0.468	0.0838	2.29	482.6	9.9
23	0.851	1.53	0.0795	1.51	0.947	0.07719	0.93	493.8	7.2
33	0.648	1.70	0.08	1.63	0.958	0.05884	0.96	496.1	8
18	0.6401	1.47	0.0803	1.37	0.940	0.05755	0.92	497.8	6.4
15	0.642	2.02	0.0806	1.49	0.704	0.05818	1.67	499.5	7.4
29	0.642	1.71	0.0808	1.61	0.967	0.05747	0.89	500.6	7.6
2	0.6351	1.24	0.0808	1.24	0.977	0.0572	0.84	501.1	6
12	0.793	2.02	0.0811	1.36	0.496	0.0711	2.00	502.6	6.5
6	0.782	1.53	0.08114	1.12	0.757	0.06975	1.27	502.9	5.4
22	0.648	1.85	0.0813	1.72	0.990	0.05767	0.84	503.6	8.3
21	0.646	1.55	0.0814	1.60	0.954	0.05734	0.93	504.2	7.6
4	0.6361	1.27	0.08153	1.04	0.814	0.05673	1.11	505.2	5.1
19	0.69	1.45	0.0815	1.47	0.941	0.06162	0.98	505.5	6.8
35	0.646	1.55	0.0816	1.59	0.984	0.05739	0.86	505.6	7.8

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P68851 (cont.)</u>									
7	0.6432	1.27	0.0817	1.22	0.982	0.05737	0.84	505.9	6
17	0.64	1.88	0.0815	1.60	0.884	0.0571	1.12	506.1	7.7
5	0.6505	1.17	0.08213	1.16	0.967	0.0578	0.85	508.7	5.6
25	0.656	1.68	0.082	1.83	0.992	0.05778	0.84	508.9	8.9
3	0.6507	1.46	0.0822	1.34	0.821	0.05734	1.12	509.1	6.5
16	0.657	1.67	0.0823	1.46	0.965	0.05772	0.87	509.6	7.4
36	0.702	1.99	0.0823	1.94	0.946	0.06207	1.05	509.6	9.3
9	0.673	1.47	0.0825	1.45	0.949	0.05922	0.90	510.9	7.1
11	0.649	1.85	0.0826	1.69	0.937	0.0573	1.01	511.4	8.5
10	0.6494	1.42	0.0827	1.33	0.970	0.05725	0.87	511.9	6.3
1	0.6536	1.24	0.0832	1.20	0.961	0.05722	0.88	515.4	6.1
27	0.827	2.42	0.0835	1.56	0.571	0.0723	2.22	516.8	7.7
14	0.6609	1.41	0.0836	1.32	0.968	0.0575	0.87	517.7	6.7
31	0.681	1.47	0.084	1.55	0.988	0.05849	0.84	519.9	7.6
34	0.667	1.80	0.0842	1.66	0.980	0.05752	0.90	521.1	8.2
32	0.69	1.88	0.0864	1.74	0.904	0.05757	1.14	533.8	8.8
28	0.694	1.59	0.0879	1.59	0.956	0.05727	0.93	542.8	8.1
20	0.76	2.24	0.0886	1.92	0.942	0.06213	1.12	547.1	9.9
8	0.707	2.12	0.0903	1.33	0.779	0.05744	1.44	557.1	7.3
24	0.726	1.65	0.0904	1.66	0.971	0.05834	0.90	558.8	8.9
26	1.536	2.08	0.1374	2.04	0.982	0.08101	0.89	829	16
<u>P68860</u>									
29	0.594	1.68	0.0697	1.72	0.968	0.06176	0.77	434.4	7.1
30	0.622	1.77	0.077	1.82	0.991	0.05865	0.65	477.8	8.1
1	0.6176	1.54	0.0786	1.40	0.900	0.05712	0.91	487.7	6.3
7	0.6436	1.27	0.07959	1.22	0.970	0.05869	0.68	493.6	5.8
23	0.6428	1.34	0.0802	1.37	0.965	0.05797	0.71	497.2	6.4
3	0.6372	1.19	0.08079	1.11	0.904	0.05722	0.81	500.8	5.3
9	0.6369	1.24	0.08093	1.21	0.978	0.05742	0.65	501.6	5.8
28	0.723	1.80	0.081	1.73	0.914	0.06479	0.94	501.9	8.6

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P68860 (cont.)</u>									
2	0.6374	1.26	0.08124	1.11	0.907	0.05707	0.82	503.5	5.4
26	0.6448	1.54	0.0813	1.48	0.985	0.05746	0.65	503.8	7.3
27	0.6466	1.41	0.0813	1.35	0.985	0.05753	0.65	503.9	6.7
12	0.6407	1.26	0.0814	1.23	0.978	0.05722	0.67	504.5	6.2
35	0.663	1.81	0.0816	1.72	0.986	0.05866	0.67	505.3	8.4
18	0.665	1.65	0.0818	1.59	0.973	0.05896	0.73	506.6	7.9
4	0.6469	1.38	0.0818	1.34	0.986	0.05746	0.64	506.8	6.4
22	0.6485	1.28	0.0818	1.15	0.954	0.05751	0.71	506.8	5.6
17	0.656	1.83	0.0821	1.34	0.847	0.05752	1.17	508.4	6.4
34	0.6583	1.44	0.0821	1.34	0.939	0.05801	0.80	508.8	6.8
13	0.6447	1.47	0.0824	1.46	0.964	0.05714	0.73	510.3	7
5	0.6521	1.52	0.0823	1.46	0.983	0.05739	0.66	510.4	7.5
36	0.6632	1.37	0.0827	1.33	0.985	0.05794	0.65	511.8	6.7
16	0.657	1.83	0.0827	1.57	0.885	0.05801	1.08	512.1	7.6
19	0.654	1.53	0.0827	1.33	0.934	0.05737	0.80	512.1	6.8
10	0.66	1.33	0.0831	1.32	0.981	0.05756	0.65	514.4	6.4
6	0.6557	1.19	0.0833	1.20	0.981	0.05739	0.65	515.9	6.2
32	0.67	1.64	0.0835	1.56	0.990	0.05828	0.63	516.9	7.9
14	0.664	1.51	0.0835	1.44	0.990	0.05755	0.64	517.2	7.2
24	0.673	1.63	0.085	1.65	0.960	0.05742	0.74	525.9	8.2
8	0.674	1.48	0.0852	1.53	0.991	0.0575	0.64	527.2	7.5
15	0.706	1.98	0.0877	1.82	0.972	0.05841	0.75	541.7	9.6
11	0.71	1.55	0.0881	1.59	0.980	0.05832	0.69	544	8.1
25	0.716	1.54	0.0886	1.47	0.980	0.05855	0.67	547.2	7.4
21	0.723	1.52	0.0894	1.57	0.990	0.05871	0.64	552.1	8.3
20	0.7247	1.28	0.0899	1.22	0.974	0.05859	0.67	555.1	6.7
33	0.727	1.93	0.0903	1.88	0.978	0.05805	0.71	559	10
31	4.323	2.27	0.2816	2.06	0.992	0.11102	0.67	1598	29
<u>P68861</u>									
17	0.617	1.62	0.0789	1.52	0.863	0.05718	0.98	489.4	7

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P68861 (cont.)</u>									
11	0.615	1.79	0.0789	1.65	0.820	0.05677	1.15	489.6	7.6
10	0.621	1.61	0.0791	1.26	0.754	0.05651	1.13	491.7	6.3
16	0.6398	1.45	0.0793	1.39	0.983	0.05852	0.58	492.1	6.6
35	0.635	1.73	0.0801	1.50	0.901	0.05735	0.89	496.7	7
4	0.634	1.89	0.0803	1.49	0.873	0.05725	0.99	497.8	6.9
33	0.639	1.72	0.0807	1.61	0.905	0.05735	0.89	500.5	7.5
14	0.6461	1.45	0.0807	1.36	0.993	0.058249	0.53	500.7	6.4
13	0.6447	1.23	0.0809	1.24	0.992	0.05793	0.53	501.3	5.9
5	0.74	2.43	0.0811	1.36	0.634	0.0651	1.62	502.4	6.7
34	0.641	1.87	0.081	1.73	0.917	0.0572	0.89	503	8.4
12	0.6464	1.47	0.0812	1.48	0.992	0.05768	0.54	503.2	7
25	0.643	2.02	0.0813	1.60	0.828	0.05765	1.12	503.6	7.5
32	0.903	5.20	0.0813	1.60	0.163	0.0804	5.37	503.9	7.7
37	0.645	1.71	0.0813	1.35	0.885	0.0576	0.90	503.9	6.8
18	0.6543	1.50	0.0814	1.47	0.989	0.05816	0.55	504.5	7
20	0.6508	1.31	0.0813	1.35	0.990	0.05803	0.53	504.7	6.4
1	0.6494	1.29	0.0815	1.23	0.990	0.05778	0.53	504.8	6.1
15	0.647	1.70	0.0815	1.47	0.920	0.05738	0.80	504.8	7.3
30	0.647	1.85	0.0815	1.60	0.848	0.05734	1.16	505	7.6
38	0.6535	1.35	0.0815	1.35	0.994	0.058093	0.52	505.2	6.6
8	0.6577	1.38	0.0816	1.47	0.991	0.05848	0.54	505.4	6.9
19	0.6449	1.54	0.0816	1.47	0.990	0.05731	0.54	505.7	7.1
2	0.6499	1.40	0.0817	1.35	0.993	0.057652	0.53	506.2	6.6
3	0.654	1.53	0.082	1.59	0.995	0.05784	0.53	507.8	7.6
7	0.683	1.61	0.0821	1.34	0.935	0.05976	0.66	508.3	6.8
36	0.655	1.53	0.0822	1.58	0.988	0.05775	0.56	509.1	7.8
40	0.664	1.51	0.0822	1.46	0.993	0.05831	0.53	509.1	7.2
9	0.6518	1.43	0.0822	1.46	0.928	0.05719	0.75	509.2	7.3
29	0.6534	1.52	0.0822	1.34	0.984	0.05742	0.57	509.2	6.8
22	0.651	1.69	0.0823	1.58	0.984	0.05747	0.58	509.8	7.9
39	0.69	1.45	0.0826	1.45	0.954	0.06025	0.69	511.6	7.1

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P68861 (cont.)</u>									
23	0.652	1.53	0.0827	1.57	0.977	0.05722	0.59	512.3	7.8
31	0.653	1.53	0.0828	1.45	0.859	0.05741	0.93	512.6	7.1
6	0.6621	1.47	0.0829	1.33	0.972	0.05773	0.60	513.6	6.8
26	0.6612	1.50	0.0831	1.44	0.992	0.05777	0.54	514.4	7.2
27	0.6958	1.31	0.08312	1.18	0.937	0.06051	0.66	514.7	5.9
21	0.6667	1.42	0.0835	1.44	0.975	0.05769	0.60	516.8	6.9
28	0.677	1.62	0.0836	1.56	0.992	0.05865	0.53	517.5	7.6
24	0.665	1.65	0.0839	1.55	0.900	0.05741	0.89	519.3	7.9
<u>P68878</u>									
6	0.612	1.80	0.0765	1.70	0.976	0.05807	0.98	475	7.8
23	0.625	1.92	0.078	1.67	0.785	0.05838	1.51	483.9	7.9
22	0.619	2.58	0.0783	1.92	0.788	0.05747	1.85	485.8	9.1
10	0.62	2.74	0.0785	1.91	0.779	0.0574	1.96	487.2	8.9
34	0.628	2.07	0.0791	1.64	0.865	0.0575	1.36	490.4	7.6
33	0.624	1.60	0.0791	1.52	0.947	0.05716	1.05	490.6	7
7	0.621	1.93	0.0791	1.64	0.799	0.05705	1.47	490.8	8
14	0.624	1.76	0.0793	1.64	0.939	0.05728	1.08	491.9	7.7
30	0.654	3.36	0.0801	2.37	0.809	0.0591	2.22	497	11
4	0.6283	1.42	0.0803	1.37	0.939	0.05674	1.03	498.1	6.6
18	0.6489	1.51	0.0805	1.49	0.982	0.05865	0.95	499	7.1
1	0.6336	1.42	0.0807	1.49	0.952	0.05695	1.00	500	6.9
24	0.6369	1.44	0.0807	1.49	0.979	0.05739	0.95	500.2	7
15	0.642	1.71	0.0807	1.49	0.810	0.05788	1.32	500.5	7
29	0.783	1.92	0.0811	1.48	0.880	0.07004	1.31	502.3	6.9
36	0.641	2.18	0.0811	1.97	0.921	0.05724	1.22	502.7	9.5
28	0.6423	1.46	0.0811	1.36	0.962	0.05751	0.98	502.8	6.7
21	0.6403	1.48	0.0812	1.48	0.980	0.05735	0.94	503.3	7
26	0.6406	1.45	0.0813	1.48	0.949	0.05726	1.01	503.9	7
8	0.6416	1.48	0.0815	1.47	0.935	0.05722	1.05	504.9	7.3
9	0.649	2.31	0.0816	1.72	0.825	0.05782	1.62	505.4	8.5

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>P68878 (cont.)</u>									
17	0.648	1.54	0.0816	1.59	0.988	0.05776	0.94	505.5	7.5
20	0.653	2.45	0.0816	1.96	0.647	0.0583	2.09	505.6	9.5
32	0.647	2.01	0.082	1.71	0.943	0.05722	1.12	507.8	8.5
5	0.648	1.70	0.0821	1.46	0.884	0.05729	1.19	508.7	7.2
11	0.6522	1.43	0.0825	1.33	0.971	0.0575	0.96	510.9	6.7
19	0.6554	1.39	0.0826	1.33	0.972	0.0577	0.96	511.8	6.5
31	0.655	1.83	0.0826	1.82	0.989	0.05748	0.94	511.8	8.8
25	0.659	1.97	0.0829	1.93	0.989	0.05781	0.94	513.1	9.6
16	0.703	1.56	0.083	1.45	0.925	0.06164	1.08	514	7.2
2	0.652	1.53	0.0832	1.56	0.929	0.05684	1.08	515.2	7.8
27	0.66	1.97	0.0835	1.80	0.949	0.05746	1.09	516.6	9
3	0.6569	1.48	0.0838	1.31	0.944	0.05687	1.03	518.5	6.8
12	0.665	1.50	0.0844	1.54	0.987	0.05736	0.93	522	7.5
13	0.6703	1.40	0.0845	1.42	0.972	0.0577	0.96	523	6.9
35	0.672	1.79	0.0846	1.89	0.982	0.05762	0.96	523.1	9.4
<u>RG11-224</u>									
29	0.631	1.49	0.0797	1.25	0.918	0.05735	1.11	494.2	6.1
25	0.6252	1.04	0.07973	0.80	0.775	0.05676	1.20	494.5	3.8
6	0.631	1.58	0.07985	1.15	0.831	0.05716	1.42	495.2	5.5
5	0.6347	1.50	0.0802	1.37	0.808	0.0573	1.34	497.1	6.6
8	0.6342	1.45	0.0802	1.37	0.852	0.05721	1.22	497.4	6.6
20	0.6419	1.00	0.0803	1.02	0.828	0.05754	1.21	497.9	4.9
3	0.636	1.57	0.0803	1.25	0.829	0.05706	1.30	498	6.1
23	0.636	1.49	0.0804	1.14	0.787	0.05727	1.39	498.5	5.5
9	0.642	1.56	0.08042	1.16	0.783	0.05755	1.27	498.6	5.6
11	0.637	1.30	0.08057	1.10	0.882	0.05714	1.18	499.5	5.3
27	0.6335	1.25	0.0806	1.07	0.870	0.05726	1.14	499.7	5.1
30	0.647	1.70	0.0807	1.36	0.817	0.05828	1.44	500	6.8
1	0.6407	1.17	0.08067	1.10	0.869	0.05734	1.16	500.1	5.3
28	0.6345	1.28	0.08082	1.22	0.819	0.05713	1.26	501	5.9

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>RG11-224 (cont.)</u>									
4	0.635	1.57	0.0809	1.48	0.868	0.05683	1.30	501.2	7
17	0.6378	1.24	0.08093	1.20	0.913	0.0572	1.13	501.6	5.8
13	0.6432	1.03	0.08098	0.86	0.840	0.05742	1.14	502	4.2
14	0.6379	1.47	0.08101	0.96	0.854	0.05703	1.23	502.1	4.6
22	0.6389	1.30	0.08103	0.89	0.684	0.05719	1.35	502.2	4.3
26	0.6382	1.28	0.08116	1.12	0.870	0.05693	1.19	503	5.5
2	0.6411	1.26	0.08106	1.18	0.849	0.05747	1.20	503.2	5.6
12	0.6429	1.54	0.0813	1.35	0.850	0.05721	1.25	503.6	6.6
19	0.6385	1.27	0.0813	1.35	0.846	0.05704	1.20	503.7	6.5
7	0.6387	1.52	0.08152	1.13	0.765	0.05659	1.37	505.2	5.5
10	0.6475	1.42	0.08152	1.18	0.813	0.05731	1.36	505.2	5.7
16	0.639	1.56	0.0815	1.35	0.911	0.05687	1.18	505.2	6.8
24	0.6461	1.07	0.08199	1.02	0.901	0.05671	1.07	507.9	5
15	0.655	1.68	0.0822	1.58	0.904	0.05745	1.24	509.4	7.5
18	0.6513	1.23	0.08234	1.13	0.917	0.05712	1.11	510	5.5
21	0.6476	1.33	0.0826	1.13	0.925	0.05677	1.12	511.6	5.5
<u>RG11-233</u>									
21	0.6235	1.52	0.0782	1.28	0.671	0.05751	1.46	485.5	6
1	0.6203	1.32	0.07828	1.16	0.920	0.05746	1.04	485.8	5.4
24	0.625	1.92	0.07846	1.21	0.703	0.058	1.51	486.9	5.7
7	0.622	1.77	0.07847	0.92	0.533	0.05752	1.66	487	4.3
19	0.634	1.58	0.07858	1.21	0.837	0.05825	1.24	487.6	5.7
2	0.6265	1.23	0.07892	1.22	0.907	0.05744	1.02	489.6	5.7
4	0.6296	1.35	0.07896	0.99	0.801	0.05789	1.26	489.9	4.6
25	0.627	1.59	0.079	1.39	0.799	0.05742	1.54	490.3	6.8
5	0.6263	1.34	0.07894	1.15	0.647	0.05747	1.35	490.5	5.3
11	0.623	2.25	0.07908	1.23	0.574	0.0575	2.11	490.6	5.8
20	0.6278	1.13	0.07911	1.02	0.845	0.05764	1.11	490.8	4.8
26	0.62	1.94	0.0791	1.52	0.720	0.05697	1.49	490.9	7
8	0.6183	1.50	0.07924	1.21	0.778	0.05686	1.33	491.5	5.7

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>RG11-233 (cont.)</u>									
27	0.621	1.77	0.0793	1.26	0.363	0.05678	1.96	491.8	6.1
14	0.6316	1.33	0.0793	1.26	0.852	0.05748	1.16	492.1	6.3
13	0.6258	1.28	0.07936	1.20	0.944	0.05723	0.98	492.3	5.7
12	0.624	1.76	0.07945	1.20	0.718	0.05723	1.49	492.8	5.7
9	0.6277	1.07	0.07947	0.93	0.875	0.05719	1.03	493	4.4
15	0.627	1.75	0.07949	1.16	0.750	0.05735	1.38	493.1	5.5
16	0.625	1.49	0.0797	1.25	0.782	0.05686	1.31	494.5	6.1
18	0.6334	1.52	0.07976	1.24	0.896	0.05751	1.11	494.7	5.9
6	0.6285	1.35	0.07989	1.01	0.822	0.057	1.17	495.4	4.9
23	0.6306	1.44	0.0801	1.25	0.931	0.05743	1.03	496.8	6.1
10	0.6347	1.10	0.08018	1.07	0.907	0.05746	0.99	497.2	5.1
3	0.6346	1.48	0.0802	1.37	0.843	0.05758	1.22	497.5	6.8
30	0.637	1.57	0.0804	1.37	0.846	0.05752	1.20	498.3	6.8
22	0.652	1.69	0.0805	1.37	0.724	0.05853	1.33	498.8	6.6
17	0.6393	1.50	0.0807	1.36	0.911	0.05722	1.09	500.1	6.3
28	0.6308	1.52	0.0807	1.49	0.952	0.05666	1.00	500.5	7.3
29	0.646	1.55	0.082	1.34	0.821	0.05718	1.24	509.1	6.5
<u>RG11-234</u>									
9	0.3909	1.71	0.04781	1.72	0.986	0.05911	1.14	301	5
7	0.4608	0.87	0.05875	0.92	0.922	0.05688	1.14	368	3.3
18	0.6162	1.44	0.0783	1.40	0.967	0.05713	1.14	486.1	6.8
16	0.637	1.73	0.07933	1.05	0.476	0.05775	1.51	492.1	4.9
3	0.6291	1.22	0.07959	1.04	0.852	0.05735	1.25	493.7	5
15	0.6307	1.33	0.07999	1.09	0.818	0.05722	1.33	496	5.2
6	0.637	1.13	0.08002	0.91	0.785	0.0575	1.33	496.2	4.3
17	0.6492	1.03	0.08018	0.90	0.915	0.05879	1.20	497.2	4.3
1	0.6402	1.34	0.0802	1.25	0.888	0.0575	1.22	497.5	6.1
10	0.64	1.56	0.0802	1.62	0.971	0.05771	1.16	497.5	7.7
4	0.6327	1.07	0.08041	0.98	0.941	0.05714	1.14	498.5	4.7
11	0.6421	1.15	0.08044	1.08	0.945	0.05793	1.17	498.7	5.2

TABLE DR2 (CONTINUED). LASER-ABLATION ICP-MS U-Pb ISOTOPIC RESULTS

Sample/ spot number	$^{207}\text{Pb}/^{235}\text{U}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$	$\pm 2\sigma$ (%)	error correlation	$^{207}\text{Pb}/^{206}\text{Pb}$	$\pm 2\sigma$ (%)	$^{206}\text{Pb}/^{238}\text{U}$ age (Ma)	$\pm 2\sigma$ (Ma)
<u>RG11-234 (cont.)</u>									
14	0.6346	1.28	0.0805	1.24	0.880	0.05705	1.24	498.8	6.1
12	0.6464	1.24	0.08106	1.04	0.818	0.05794	1.30	502.4	5
5	0.6433	0.99	0.08149	1.09	0.877	0.0576	1.19	505	5.3
8	0.6487	1.43	0.0815	1.35	0.971	0.05752	1.13	505	6.4
13	0.6497	1.45	0.08135	1.17	0.871	0.05753	1.28	505	5.5
2	0.6506	1.44	0.08253	1.13	0.859	0.0573	1.34	511.2	5.6

* Error correlations are required to plot correlated error ellipses on "normal" concordia diagrams in Isoplot (Ludwig, 2003).

† Bold rows are analyses included in the calculation of the mean ages summarized in the text. Fine print rows in italics are analyses excluded from the calculations.

TABLE DR3. LASER-ABLATION ICP-MS Hf ISOTOPIC RESULTS

Sample name	Hf beam (V)	β Hf	β Yb	$^{176}\text{Hf}/^{177}\text{Hf}$	$\pm 2\sigma$	$^{176}\text{Lu}/^{177}\text{Hf}$	$\pm 2\sigma$	spot age* $^{176}\text{Hf}/^{177}\text{Hf}_{\text{initia}}$ (Ma)	$\pm 2\sigma$	Estimated [†] uncertainty	$\varepsilon_{\text{Hf}} (\text{T})$	$\pm 2\sigma$	Estimated uncertainty	$T_{\text{DM}}^{\$} (\text{Ga})$	$T_{\text{DM}}^{\text{C}} (\text{Ga})$	
P49945 [#]	6.2	-1.64	-2.16	0.282420	0.000230	0.000943	0.000014	518	0.282411	0.000230	0.000161	-1.7	8.1	5.7	1.2	1.6
P49945	7.0	-1.65	-2.23	0.282290	0.000160	0.000432	0.000007	518	0.282286	0.000160	0.000112	-6.1	5.7	4.0	1.3	1.8
P49945	7.2	-1.58	-2.13	0.282280	0.000160	0.000698	0.000017	475	0.282274	0.000160	0.000112	-7.5	5.7	4.0	1.3	1.9
P49945	6.8	-1.59	-2.12	0.282340	0.000170	0.001338	0.000007	480	0.282328	0.000170	0.000119	-5.5	6.0	4.2	1.3	1.8
P49945	7.2	-1.61	-2.15	0.282410	0.000220	0.001981	0.000015	483	0.282392	0.000220	0.000154	-3.1	7.8	5.5	1.2	1.6
P49945	6.3	-1.63	-2.17	0.282310	0.000140	0.000399	0.000002	498	0.282306	0.000140	0.000098	-5.8	5.0	3.5	1.3	1.8
P49945	5.0	-1.63	-2.19	0.282290	0.000160	0.000874	0.000004	490	0.282282	0.000160	0.000112	-6.9	5.7	4.0	1.3	1.9
P49945	5.0	-1.64	-2.16	0.282320	0.000170	0.000886	0.000002	500	0.282312	0.000170	0.000119	-5.6	6.0	4.2	1.3	1.8
P49945	7.2	-1.65	-2.11	0.282470	0.000150	0.000632	0.000008	504	0.282464	0.000150	0.000105	-0.1	5.3	3.7	1.1	1.4
P49945	7.6	-1.63	-2.18	0.282280	0.000140	0.000518	0.000001	503	0.282275	0.000140	0.000098	-6.8	5.0	3.5	1.3	1.9
P62101	6.1	-1.58	-2.12	0.282390	0.000200	0.000817	0.000004	497	0.282382	0.000200	0.000140	-3.2	7.1	5.0	1.2	1.6
P62101	6.2	-1.61	-2.20	0.282390	0.000210	0.000672	0.000012	492	0.282384	0.000210	0.000147	-3.2	7.4	5.2	1.2	1.6
P62101	6.3	-1.64	-2.18	0.282450	0.000210	0.000671	0.000003	497	0.282444	0.000210	0.000147	-1.0	7.4	5.2	1.1	1.5
P62101	5.9	-1.62	-2.19	0.282450	0.000210	0.001211	0.000006	491	0.282439	0.000210	0.000147	-1.3	7.4	5.2	1.1	1.5
P62101	6.1	-1.60	-2.16	0.282400	0.000170	0.000638	0.000008	506	0.282394	0.000170	0.000119	-2.5	6.0	4.2	1.2	1.6
P62101	7.1	-1.60	-2.11	0.282630	0.000210	0.003503	0.000065	496	0.282597	0.000210	0.000147	4.4	7.4	5.2	0.9	1.2
P62101	5.8	-1.60	-2.15	0.282370	0.000170	0.000671	0.000003	496	0.282364	0.000170	0.000119	-3.8	6.0	4.2	1.2	1.7
P62101	7.3	-1.61	-2.16	0.282420	0.000160	0.001399	0.000052	502	0.282407	0.000160	0.000112	-2.2	5.7	4.0	1.2	1.6
P62101	5.6	-1.59	-2.12	0.282350	0.000200	0.000700	0.000002	491	0.282344	0.000200	0.000140	-4.7	7.1	5.0	1.2	1.7
P62101	6.4	-1.60	-2.10	0.282390	0.000190	0.000536	0.000006	495	0.282385	0.000190	0.000133	-3.1	6.7	4.7	1.2	1.6
P62101	5.8	-1.59	-2.20	0.282250	0.000270	0.000973	0.000006	493	0.282241	0.000270	0.000189	-8.3	9.6	6.7	1.4	1.9
P62293	5.8	-1.55	-2.13	0.282330	0.000210	0.000802	0.000013	499	0.282322	0.000210	0.000147	-5.2	7.4	5.2	1.3	1.8
P62293	6.3	-1.59	-2.15	0.282310	0.000190	0.001101	0.000006	496	0.282300	0.000190	0.000133	-6.1	6.7	4.7	1.3	1.8
P62293	6.0	-1.60	-2.20	0.282270	0.000210	0.000872	0.000013	497	0.282262	0.000210	0.000147	-7.4	7.4	5.2	1.4	1.9
P62293	5.7	-1.58	-2.13	0.282330	0.000180	0.000761	0.000013	503	0.282323	0.000180	0.000126	-5.1	6.4	4.5	1.3	1.8
P62293	6.6	-1.60	-2.14	0.282450	0.000220	0.000725	0.000003	497	0.282443	0.000220	0.000154	-1.0	7.8	5.5	1.1	1.5
P62293	5.9	-1.64	-2.19	0.282480	0.000270	0.001261	0.000012	495	0.282468	0.000270	0.000189	-0.2	9.6	6.7	1.1	1.4
P62293	6.4	-1.61	-2.19	0.282380	0.000190	0.000867	0.000011	496	0.282372	0.000190	0.000133	-3.6	6.7	4.7	1.2	1.7
P62293	6.1	-1.61	-2.15	0.282460	0.000220	0.001171	0.000008	502	0.282449	0.000220	0.000154	-0.7	7.8	5.5	1.1	1.5
P62293	6.3	-1.59	-2.17	0.282370	0.000210	0.000841	0.000006	497	0.282362	0.000210	0.000147	-3.9	7.4	5.2	1.2	1.7
P62293	4.1	-1.60	-2.18	0.282360	0.000220	0.001564	0.000015	497	0.282345	0.000220	0.000154	-4.5	7.8	5.5	1.2	1.7
P62293	5.7	-1.60	-2.19	0.282410	0.000300	0.000943	0.000004	489	0.282401	0.000300	0.000210	-2.7	10.6	7.4	1.2	1.6
P62293	6.8	-1.59	-2.20	0.282320	0.000170	0.000701	0.000005	496	0.282313	0.000170	0.000119	-5.6	6.0	4.2	1.3	1.8
P68845	5.8	-1.59	-2.15	0.282450	0.000170	0.001214	0.000003	497	0.282439	0.000170	0.000119	-1.2	6.0	4.2	1.1	1.5
P68845	5.4	-1.60	-2.14	0.282400	0.000190	0.001300	0.000008	495	0.282388	0.000190	0.000133	-3.0	6.7	4.7	1.2	1.6
P68845	4.4	-1.58	-2.09	0.282380	0.000180	0.000816	0.000007	490	0.282372	0.000180	0.000126	-3.7	6.4	4.5	1.2	1.7
P68845	3.9	-1.62	-2.19	0.282360	0.000250	0.001822	0.000022	492	0.282343	0.000250	0.000175	-4.7	8.9	6.2	1.3	1.7
P68845	5.8	-1.60	-2.17	0.282280	0.000180	0.000936	0.000004	503	0.282271	0.000180	0.000126	-7.0	6.4	4.5	1.3	1.9
P68845	4.8	-1.60	-2.22	0.282260	0.000160	0.001024	0.000030	499	0.282250	0.000160	0.000112	-7.8	5.7	4.0	1.4	1.9
P68845	5.8	-1.62	-2.17	0.282380	0.000140	0.001489	0.000016	494	0.282366	0.000140	0.000098	-3.8	5.0	3.5	1.2	1.7

TABLE DR3 (CONTINUED). LASER-ABLATION ICP-MS Hf ISOTOPIC RESULTS

Sample name	Hf beam (V)	βHf	βYb	$^{176}\text{Hf}/^{177}\text{Hf}$	$\pm 2\sigma$	$^{176}\text{Lu}/^{177}\text{Hf}$	$\pm 2\sigma$	spot age (Ma)	$^{176}\text{Hf}/^{177}\text{Hf}_{\text{initial}}$	$\pm 2\sigma$	Estimated uncertainty	$\varepsilon_{\text{Hf}} (\text{T})$	$\pm 2\sigma$	Estimated uncertainty	$T_{\text{DM}} (\text{Ga})$	$T_{\text{DM}}^{\text{C}} (\text{Ga})$
P68845	6.6	-1.60	-2.16	0.282390	0.000180	0.001072	0.000009	497	0.282380	0.000180	0.000126	-3.3	6.4	4.5	1.2	1.6
P68845	4.9	-1.60	-2.19	0.282330	0.000160	0.000845	0.000003	486	0.282322	0.000160	0.000112	-5.5	5.7	4.0	1.3	1.8
P68845	4.7	-1.60	-2.20	0.282390	0.000230	0.001283	0.000003	492	0.282378	0.000230	0.000161	-3.4	8.1	5.7	1.2	1.6
P68845	6.4	-1.60	-2.17	0.282310	0.000190	0.000979	0.000004	499	0.282301	0.000190	0.000133	-6.0	6.7	4.7	1.3	1.8
P68845	6.6	-1.60	-2.13	0.282390	0.000210	0.001387	0.000010	495	0.282377	0.000210	0.000147	-3.4	7.4	5.2	1.2	1.6
P49944	7.5	-1.59	-2.13	0.282420	0.000170	0.000620	0.000004	513	0.282414	0.000170	0.000119	-1.7	6.0	4.2	1.2	1.6
P49944	5.6	-1.55	-2.11	0.282420	0.000170	0.001058	0.000022	498	0.282410	0.000170	0.000119	-2.2	6.0	4.2	1.2	1.6
P49944	4.4	-1.55	-2.15	0.282310	0.000180	0.001159	0.000008	511	0.282299	0.000180	0.000126	-5.8	6.4	4.5	1.3	1.8
P49944	6.0	-1.61	-2.17	0.282490	0.000160	0.000637	0.000024	507	0.282484	0.000160	0.000112	0.7	5.7	4.0	1.1	1.4
P49944	5.4	-1.61	-2.14	0.282450	0.000130	0.001158	0.000005	500	0.282439	0.000130	0.000091	-1.1	4.6	3.2	1.1	1.5
P49944	6.0	-1.59	-2.20	0.282340	0.000170	0.000744	0.000003	504	0.282333	0.000170	0.000119	-4.8	6.0	4.2	1.3	1.7
P49944	5.5	-1.62	-2.15	0.282380	0.000170	0.001012	0.000008	503	0.282370	0.000170	0.000119	-3.4	6.0	4.2	1.2	1.7
P49944	6.3	-1.60	-2.17	0.282450	0.000170	0.000733	0.000011	495	0.282443	0.000170	0.000119	-1.0	6.0	4.2	1.1	1.5
P49944	6.7	-1.61	-2.13	0.282500	0.000140	0.000846	0.000013	508	0.282492	0.000140	0.000098	1.0	5.0	3.5	1.0	1.4
P49944	6.0	-1.59	-2.16	0.282360	0.000170	0.000957	0.000007	516	0.282351	0.000170	0.000119	-3.9	6.0	4.2	1.2	1.7
P62324	5.8	-1.55	-2.09	0.282390	0.000160	0.000678	0.000009	530	0.282383	0.000160	0.000112	-2.4	5.7	4.0	1.2	1.6
P62324	6.1	-1.55	-2.06	0.282400	0.000140	0.000490	0.000001	525	0.282395	0.000140	0.000098	-2.1	5.0	3.5	1.2	1.6
P62324	6.5	-1.56	-2.11	0.282450	0.000150	0.000502	0.000003	508	0.282445	0.000150	0.000105	-0.7	5.3	3.7	1.1	1.5
P62324	6.7	-1.61	-2.22	0.282370	0.000150	0.000458	0.000002	508	0.282366	0.000150	0.000105	-3.5	5.3	3.7	1.2	1.7
P62324	6.5	-1.61	-2.14	0.282520	0.000140	0.000615	0.000001	517	0.282514	0.000140	0.000098	1.9	5.0	3.5	1.0	1.3
P62324	5.9	-1.62	-2.17	0.282430	0.000150	0.000740	0.000004	511	0.282423	0.000150	0.000105	-1.4	5.3	3.7	1.1	1.5
P62324	7.9	-1.61	-2.20	0.282360	0.000140	0.000521	0.000011	527	0.282355	0.000140	0.000098	-3.5	5.0	3.5	1.2	1.7
P62324	6.0	-1.62	-2.14	0.282420	0.000150	0.000601	0.000007	532	0.282414	0.000150	0.000105	-1.3	5.3	3.7	1.2	1.5
P62324	6.5	-1.62	-2.12	0.282440	0.000150	0.000691	0.000011	524	0.282433	0.000150	0.000105	-0.8	5.3	3.7	1.1	1.5
P62324	5.8	-1.62	-2.13	0.282470	0.000200	0.000695	0.000003	522	0.282463	0.000200	0.000140	0.2	7.1	5.0	1.1	1.4
P62324	6.3	-1.62	-2.24	0.282400	0.000130	0.000602	0.000007	519	0.282394	0.000130	0.000091	-2.2	4.6	3.2	1.2	1.6
P62324	6.8	-1.62	-2.20	0.282350	0.000140	0.000592	0.000008	512	0.282344	0.000140	0.000098	-4.2	5.0	3.5	1.2	1.7
P64422	4.7	-1.60	-2.25	0.282320	0.000140	0.000707	0.000011	494	0.282313	0.000140	0.000098	-5.7	5.0	3.5	1.3	1.8
P64422	4.9	-1.61	-2.16	0.282570	0.000170	0.001354	0.000007	484	0.282558	0.000170	0.000119	2.7	6.0	4.2	1.0	1.3
P64422	4.6	-1.61	-2.09	0.282490	0.000170	0.000712	0.000024	492	0.282483	0.000170	0.000119	0.3	6.0	4.2	1.1	1.4
P64422	4.3	-1.62	-2.22	0.282460	0.000210	0.000789	0.000002	500	0.282453	0.000210	0.000147	-0.6	7.4	5.2	1.1	1.5
P64422	5.5	-1.64	-2.21	0.282420	0.000170	0.000667	0.000009	494	0.282414	0.000170	0.000119	-2.1	6.0	4.2	1.2	1.6
P64422	4.4	-1.64	-2.16	0.282390	0.000160	0.001183	0.000016	492	0.282379	0.000160	0.000112	-3.4	5.7	4.0	1.2	1.6
P64422	4.4	-1.64	-2.18	0.282530	0.000180	0.001568	0.000017	502	0.282515	0.000180	0.000126	1.6	6.4	4.5	1.0	1.3
P64422	4.4	-1.64	-2.18	0.282420	0.000230	0.000520	0.000002	496	0.282415	0.000230	0.000161	-2.0	8.1	5.7	1.2	1.6
P64422	4.6	-1.64	-2.16	0.282500	0.000180	0.001464	0.000003	493	0.282486	0.000180	0.000126	0.4	6.4	4.5	1.1	1.4
P64422	4.7	-1.62	-2.17	0.282390	0.000160	0.001070	0.000006	493	0.282380	0.000160	0.000112	-3.3	5.7	4.0	1.2	1.6
P64422	4.8	-1.61	-2.20	0.282370	0.000150	0.001066	0.000009	498	0.282360	0.000150	0.000105	-3.9	5.3	3.7	1.2	1.7
P64422	4.9	-1.63	-2.21	0.282430	0.000160	0.001123	0.000021	493	0.282420	0.000160	0.000112	-1.9	5.7	4.0	1.1	1.6

TABLE DR3 (CONTINUED). LASER-ABLATION ICP-MS Hf ISOTOPIC RESULTS

Sample name	Hf beam (V)	βHf	βYb	$^{176}\text{Hf}/^{177}\text{Hf}$	$\pm 2\sigma$	$^{176}\text{Lu}/^{177}\text{Hf}$	$\pm 2\sigma$	spot age (Ma)	$^{176}\text{Hf}/^{177}\text{Hf}_{\text{initial}}$	$\pm 2\sigma$	Estimated uncertainty	$\varepsilon_{\text{Hf}} (\text{ppm})$	$\pm 2\sigma$	Estimated uncertainty	$T_{\text{DM}} (\text{Ga})$	$T_{\text{DM}}^{\text{C}} (\text{Ga})$
P68766	5.7	-1.64	-2.17	0.282490	0.000150	0.000980	0.000014	509	0.282481	0.000150	0.000105	0.6	5.3	3.7	1.1	1.4
P68766	5.7	-1.62	-2.19	0.282390	0.000190	0.000707	0.000006	500	0.282383	0.000190	0.000133	-3.1	6.7	4.7	1.2	1.6
P68766	7.0	-1.61	-2.15	0.282370	0.000160	0.000934	0.000002	499	0.282361	0.000160	0.000112	-3.9	5.7	4.0	1.2	1.7
P68766	6.8	-1.62	-2.17	0.282400	0.000150	0.001048	0.000012	499	0.282390	0.000150	0.000105	-2.8	5.3	3.7	1.2	1.6
P68766	6.2	-1.61	-2.16	0.282430	0.000180	0.001235	0.000002	504	0.282418	0.000180	0.000126	-1.7	6.4	4.5	1.1	1.5
P68766	6.4	-1.61	-2.15	0.282440	0.000160	0.001153	0.000004	503	0.282429	0.000160	0.000112	-1.4	5.7	4.0	1.1	1.5
P68766	6.4	-1.61	-2.15	0.282400	0.000150	0.001093	0.000002	504	0.282390	0.000150	0.000105	-2.7	5.3	3.7	1.2	1.6
P68766	6.1	-1.60	-2.18	0.282420	0.000140	0.001486	0.000015	502	0.282406	0.000140	0.000098	-2.2	5.0	3.5	1.2	1.6
P68796	5.9	-1.58	-2.11	0.282450	0.000150	0.001243	0.000018	502	0.282438	0.000150	0.000105	-1.1	5.3	3.7	1.1	1.5
P68796	4.2	-1.59	-2.14	0.282410	0.000140	0.001527	0.000038	500	0.282396	0.000140	0.000098	-2.6	5.0	3.5	1.2	1.6
P68796	6.1	-1.61	-2.17	0.282360	0.000180	0.001040	0.000002	505	0.282350	0.000180	0.000126	-4.1	6.4	4.5	1.2	1.7
P68796	6.4	-1.58	-2.13	0.282300	0.000140	0.001270	0.000006	500	0.282288	0.000140	0.000098	-6.4	5.0	3.5	1.3	1.8
P68796	6.8	-1.59	-2.10	0.282440	0.000150	0.001168	0.000003	506	0.282429	0.000150	0.000105	-1.3	5.3	3.7	1.1	1.5
P68796	6.5	-1.60	-2.15	0.282370	0.000160	0.001291	0.000034	508	0.282358	0.000160	0.000112	-3.8	5.7	4.0	1.2	1.7
P68796	6.4	-1.61	-2.14	0.282380	0.000150	0.001280	0.000007	513	0.282368	0.000150	0.000105	-3.3	5.3	3.7	1.2	1.7
P68796	5.9	-1.60	-2.14	0.282400	0.000140	0.000921	0.000003	500	0.282391	0.000140	0.000098	-2.8	5.0	3.5	1.2	1.6
P68796	5.7	-1.59	-2.12	0.282250	0.000170	0.000755	0.000034	497	0.282243	0.000170	0.000119	-8.1	6.0	4.2	1.4	1.9
P68796	5.7	-1.61	-2.18	0.282300	0.000150	0.001132	0.000006	497	0.282289	0.000150	0.000105	-6.5	5.3	3.7	1.3	1.8
P68796	5.8	-1.59	-2.11	0.282380	0.000150	0.000902	0.000001	500	0.282372	0.000150	0.000105	-3.5	5.3	3.7	1.2	1.7
P68796	6.7	-1.59	-2.06	0.282280	0.000210	0.000705	0.000002	498	0.282273	0.000210	0.000147	-7.0	7.4	5.2	1.3	1.9
P62321	5.6	-1.62	-2.06	0.282450	0.000150	0.000314	0.000002	511	0.282447	0.000150	0.000105	-0.6	5.3	3.7	1.1	1.5
P62321	4.9	-1.62	-2.24	0.282430	0.000140	0.000318	0.000004	518	0.282427	0.000140	0.000098	-1.1	5.0	3.5	1.1	1.5
P62321	4.8	-1.62	-2.10	0.282440	0.000150	0.000589	0.000001	507	0.282434	0.000150	0.000105	-1.1	5.3	3.7	1.1	1.5
P62321	4.4	-1.62	-2.21	0.282390	0.000200	0.000451	0.000006	512	0.282386	0.000200	0.000140	-2.7	7.1	5.0	1.2	1.6
P62321	4.1	-1.62	-2.13	0.282510	0.000170	0.000754	0.000007	511	0.282503	0.000170	0.000119	1.4	6.0	4.2	1.0	1.4
P62321	5.4	-1.63	-2.16	0.282480	0.000160	0.000514	0.000004	507	0.282475	0.000160	0.000112	0.3	5.7	4.0	1.1	1.4
P62321	5.2	-1.62	-2.18	0.282410	0.000180	0.000858	0.000015	507	0.282402	0.000180	0.000126	-2.2	6.4	4.5	1.2	1.6
P62321	5.4	-1.60	-2.17	0.282420	0.000170	0.000363	0.000010	504	0.282417	0.000170	0.000119	-1.8	6.0	4.2	1.2	1.6
P62321	5.3	-1.62	-2.18	0.282400	0.000160	0.000371	0.000001	505	0.282396	0.000160	0.000112	-2.5	5.7	4.0	1.2	1.6
P62321	5.3	-1.62	-2.16	0.282380	0.000170	0.000364	0.000006	506	0.282377	0.000170	0.000119	-3.2	6.0	4.2	1.2	1.6
P62321	5.2	-1.63	-2.09	0.282470	0.000150	0.000472	0.000002	507	0.282466	0.000150	0.000105	0.0	5.3	3.7	1.1	1.4
P62321	5.1	-1.62	-2.12	0.282460	0.000160	0.000678	0.000015	506	0.282454	0.000160	0.000112	-0.4	5.7	4.0	1.1	1.5
P62325	8.0	-1.57	-2.10	0.282390	0.000150	0.000666	0.000006	558	0.282383	0.000150	0.000105	-1.8	5.3	3.7	1.2	1.6
P62325	9.6	-1.56	-2.05	0.282160	0.000240	0.000631	0.000002	519	0.282154	0.000240	0.000168	-10.8	8.5	5.9	1.5	2.1
P62325	6.8	-1.59	-2.10	0.282410	0.000190	0.000616	0.000002	533	0.282404	0.000190	0.000133	-1.6	6.7	4.7	1.2	1.6
P62325	9.8	-1.60	-2.13	0.282380	0.000180	0.001895	0.000018	537	0.282361	0.000180	0.000126	-3.0	6.4	4.5	1.2	1.7
P62325	5.8	-1.62	-2.14	0.282540	0.000160	0.001008	0.000020	527	0.282530	0.000160	0.000112	2.7	5.7	4.0	1.0	1.3
P64424	6.8	-1.59	-2.11	0.282410	0.000170	0.001265	0.000010	496	0.282398	0.000170	0.000119	-2.6	6.0	4.2	1.2	1.6
P64424	7.1	-1.59	-2.12	0.282260	0.000200	0.001301	0.000006	482	0.282248	0.000200	0.000140	-8.3	7.1	5.0	1.4	1.9

TABLE DR3 (CONTINUED). LASER-ABLATION ICP-MS Hf ISOTOPIC RESULTS

Sample name	Hf beam (V)	βHf	βYb	$^{176}\text{Hf}/^{177}\text{Hf}$	$\pm 2\sigma$	$^{176}\text{Lu}/^{177}\text{Hf}$	$\pm 2\sigma$	spot age (Ma)	$^{176}\text{Hf}/^{177}\text{Hf}_{\text{initial}}$	$\pm 2\sigma$	Estimated uncertainty	$\varepsilon_{\text{Hf}} (\text{T})$	$\pm 2\sigma$	Estimated uncertainty	$T_{\text{DM}} (\text{Ga})$	$T_{\text{DM}}^{\text{C}} (\text{Ga})$
P64424	5.3	-1.60	-2.10	0.282340	0.000210	0.001085	0.000009	500	0.282330	0.000210	0.000147	-5.0	7.4	5.2	1.3	1.7
P64424	5.9	-1.61	-2.12	0.282330	0.000150	0.000787	0.000003	517	0.282322	0.000150	0.000105	-4.9	5.3	3.7	1.3	1.8
P64424	6.2	-1.60	-2.14	0.282480	0.000220	0.000890	0.000007	498	0.282472	0.000220	0.000154	0.0	7.8	5.5	1.1	1.4
P64424	6.1	-1.59	-2.16	0.282210	0.000140	0.000749	0.000002	493	0.282203	0.000140	0.000098	-9.6	5.0	3.5	1.4	2.0
P64424	5.3	-1.59	-2.16	0.282270	0.000180	0.000624	0.000003	504	0.282264	0.000180	0.000126	-7.2	6.4	4.5	1.4	1.9
P64424	5.7	-1.60	-2.15	0.282400	0.000190	0.000781	0.000004	497	0.282393	0.000190	0.000133	-2.8	6.7	4.7	1.2	1.6
P68756	5.8	-1.58	-2.11	0.282370	0.000130	0.000776	0.000001	500	0.282363	0.000130	0.000091	-3.8	4.6	3.2	1.2	1.7
P68756	4.9	-1.59	-2.13	0.282380	0.000140	0.000644	0.000006	500	0.282374	0.000140	0.000098	-3.4	5.0	3.5	1.2	1.7
P68756	7.0	-1.61	-2.15	0.282370	0.000130	0.000781	0.000007	524	0.282362	0.000130	0.000091	-3.3	4.6	3.2	1.2	1.7
P68756	5.9	-1.60	-2.14	0.282410	0.000150	0.001305	0.000009	517	0.282397	0.000150	0.000105	-2.2	5.3	3.7	1.2	1.6
P68756	4.5	-1.59	-2.14	0.282500	0.000180	0.000673	0.000001	512	0.282494	0.000180	0.000126	1.1	6.4	4.5	1.0	1.4
P68756	6.7	-1.58	-2.16	0.282370	0.000190	0.001083	0.000010	515	0.282360	0.000190	0.000133	-3.6	6.7	4.7	1.2	1.7
P68756	5.6	-1.61	-2.16	0.282490	0.000180	0.001344	0.000009	518	0.282477	0.000180	0.000126	0.6	6.4	4.5	1.1	1.4
P68756	5.3	-1.60	-2.14	0.282540	0.000150	0.001020	0.000015	513	0.282530	0.000150	0.000105	2.4	5.3	3.7	1.0	1.3
P68756	5.1	-1.59	-2.16	0.282510	0.000170	0.001173	0.000004	540	0.282498	0.000170	0.000119	1.9	6.0	4.2	1.0	1.4
P68756	6.5	-1.59	-2.18	0.282390	0.000150	0.000545	0.000002	533	0.282385	0.000150	0.000105	-2.3	5.3	3.7	1.2	1.6
P68760	5.9	-1.60	-2.16	0.282310	0.000150	0.001124	0.000032	491	0.282300	0.000150	0.000105	-6.2	5.3	3.7	1.3	1.8
P68760	6.0	-1.60	-2.15	0.282320	0.000160	0.001066	0.000019	504	0.282310	0.000160	0.000112	-5.6	5.7	4.0	1.3	1.8
P68760	5.3	-1.58	-2.15	0.282380	0.000230	0.001855	0.000010	498	0.282363	0.000230	0.000161	-3.8	8.1	5.7	1.2	1.7
P68760	4.7	-1.59	-2.06	0.282410	0.000240	0.001151	0.000008	497	0.282399	0.000240	0.000168	-2.6	8.5	5.9	1.2	1.6
P68760	4.6	-1.60	-2.18	0.282350	0.000200	0.001583	0.000002	503	0.282335	0.000200	0.000140	-4.7	7.1	5.0	1.3	1.7
P68760	4.2	-1.61	-2.15	0.282320	0.000170	0.000557	0.000005	502	0.282315	0.000170	0.000119	-5.5	6.0	4.2	1.3	1.8
P68760	5.3	-1.61	-2.19	0.282410	0.000250	0.001210	0.000010	504	0.282399	0.000250	0.000175	-2.4	8.9	6.2	1.2	1.6
P68760	4.8	-1.59	-2.16	0.282460	0.000170	0.001398	0.000023	505	0.282447	0.000170	0.000119	-0.7	6.0	4.2	1.1	1.5
P68760	5.3	-1.60	-2.13	0.282440	0.000150	0.001071	0.000018	496	0.282430	0.000150	0.000105	-1.5	5.3	3.7	1.1	1.5
P68760	5.3	-1.62	-2.16	0.282410	0.000200	0.001159	0.000006	493	0.282399	0.000200	0.000140	-2.7	7.1	5.0	1.2	1.6
P68758	5.6	-1.30	-1.89	0.282320	0.000210	0.000384	0.000009	517	0.282316	0.000210	0.000147	-5.1	7.4	5.2	1.3	1.8
P68758	5.7	-1.30	-1.92	0.282330	0.000190	0.000942	0.000009	522	0.282321	0.000190	0.000133	-4.8	6.7	4.7	1.3	1.8
P68758	5.8	-1.31	-1.89	0.282360	0.000220	0.000722	0.000008	521	0.282353	0.000220	0.000154	-3.7	7.8	5.5	1.2	1.7
P68758	6.4	-1.31	-1.84	0.282450	0.000240	0.000836	0.000014	523	0.282442	0.000240	0.000168	-0.5	8.5	5.9	1.1	1.5
P68758	4.0	-1.30	-1.94	0.282380	0.000320	0.000747	0.000003	514	0.282373	0.000320	0.000224	-3.1	11.3	7.9	1.2	1.6
P68758	5.5	-1.34	-1.84	0.282510	0.000230	0.000947	0.000003	517	0.282501	0.000230	0.000161	1.5	8.1	5.7	1.0	1.4
P68758	5.9	-1.31	-1.87	0.282350	0.000200	0.000730	0.000011	514	0.282343	0.000200	0.000140	-4.2	7.1	5.0	1.3	1.7
P68758	4.6	-1.31	-1.84	0.282450	0.000200	0.000873	0.000026	511	0.282442	0.000200	0.000140	-0.8	7.1	5.0	1.1	1.5
P68758	5.4	-1.32	-1.86	0.282410	0.000210	0.000872	0.000007	526	0.282401	0.000210	0.000147	-1.8	7.4	5.2	1.2	1.6
P68758	4.9	-1.31	-1.91	0.282300	0.000230	0.001253	0.000012	519	0.282288	0.000230	0.000161	-6.0	8.1	5.7	1.3	1.8
P68782	5.1	-1.30	-1.97	0.282360	0.000180	0.000330	0.000001	503	0.282357	0.000180	0.000126	-3.9	6.4	4.5	1.2	1.7
P68782	5.7	-1.30	-1.92	0.282410	0.000180	0.000349	0.000003	507	0.282407	0.000180	0.000126	-2.1	6.4	4.5	1.2	1.6
P68782	4.6	-1.29	-1.94	0.282280	0.000190	0.000249	0.000001	514	0.282278	0.000190	0.000133	-6.5	6.7	4.7	1.3	1.9

TABLE DR3 (CONTINUED). LASER-ABLATION ICP-MS Hf ISOTOPIC RESULTS

Sample name	Hf beam (V)	βHf	βYb	$^{176}\text{Hf}/^{177}\text{Hf}$	$\pm 2\sigma$	$^{176}\text{Lu}/^{177}\text{Hf}$	$\pm 2\sigma$	spot age (Ma)	$^{176}\text{Hf}/^{177}\text{Hf}_{\text{initial}}$	$\pm 2\sigma$	Estimated uncertainty	$\varepsilon_{\text{Hf}} (\text{T})$	$\pm 2\sigma$	Estimated uncertainty	$T_{\text{DM}} (\text{Ga})$	$T_{\text{DM}}^{\text{C}} (\text{Ga})$
P68782	5.5	-1.30	-1.86	0.282140	0.000170	0.001244	0.000008	507	0.282128	0.000170	0.000119	-11.9	6.0	4.2	1.5	2.2
P68782	5.3	-1.29	-1.86	0.282300	0.000220	0.000405	0.000005	500	0.282296	0.000220	0.000154	-6.1	7.8	5.5	1.3	1.8
P68782	5.0	-1.29	-1.80	0.282340	0.000190	0.000299	0.000005	499	0.282337	0.000190	0.000133	-4.7	6.7	4.7	1.3	1.7
P68782	4.9	-1.30	-1.80	0.282510	0.000220	0.000588	0.000015	505	0.282504	0.000220	0.000154	1.3	7.8	5.5	1.0	1.4
P68782	5.1	-1.31	-1.86	0.282460	0.000190	0.000516	0.000015	500	0.282455	0.000190	0.000133	-0.5	6.7	4.7	1.1	1.5
P68782	4.5	-1.30	-1.88	0.282320	0.000190	0.000429	0.000002	504	0.282316	0.000190	0.000133	-5.4	6.7	4.7	1.3	1.8
P68787	4.0	-1.29	-1.87	0.282370	0.000260	0.003658	0.000044	513	0.282335	0.000260	0.000182	-4.5	9.2	6.4	1.3	1.7
P68787	5.9	-1.30	-1.89	0.282440	0.000190	0.000495	0.000001	506	0.282435	0.000190	0.000133	-1.1	6.7	4.7	1.1	1.5
P68787	6.2	-1.31	-1.86	0.282470	0.000190	0.000847	0.000004	514	0.282462	0.000190	0.000133	0.0	6.7	4.7	1.1	1.4
P68787	5.9	-1.32	-1.81	0.282520	0.000210	0.000819	0.000002	509	0.282512	0.000210	0.000147	1.7	7.4	5.2	1.0	1.3
P68787	6.0	-1.32	-1.85	0.282410	0.000180	0.000554	0.000001	504	0.282405	0.000180	0.000126	-2.2	6.4	4.5	1.2	1.6
P68787	5.8	-1.31	-1.88	0.282410	0.000190	0.000424	0.000003	504	0.282406	0.000190	0.000133	-2.2	6.7	4.7	1.2	1.6
P68787	4.2	-1.30	-1.96	0.282310	0.000230	0.000714	0.000009	502	0.282303	0.000230	0.000161	-5.9	8.1	5.7	1.3	1.8
P68787	4.3	-1.30	-1.93	0.282340	0.000230	0.000912	0.000033	497	0.282331	0.000230	0.000161	-5.0	8.1	5.7	1.3	1.7
P68787	5.7	-1.30	-1.88	0.282400	0.000150	0.001048	0.000012	512	0.282390	0.000150	0.000105	-2.6	5.3	3.7	1.2	1.6
P68787	5.4	-1.30	-1.94	0.282420	0.000160	0.000368	0.000003	507	0.282417	0.000160	0.000112	-1.7	5.7	4.0	1.2	1.6
P68787	4.8	-1.30	-1.93	0.282300	0.000180	0.000774	0.000002	514	0.282293	0.000180	0.000126	-6.0	6.4	4.5	1.3	1.8
P68787	6.3	-1.31	-1.92	0.282420	0.000190	0.000413	0.000007	516	0.282416	0.000190	0.000133	-1.5	6.7	4.7	1.2	1.5
P68860	4.9	-1.30	-1.88	0.282330	0.000160	0.000499	0.000002	503	0.282325	0.000160	0.000112	-5.0	5.7	4.0	1.3	1.8
P68860	5.7	-1.30	-1.90	0.282390	0.000190	0.000549	0.000004	500	0.282385	0.000190	0.000133	-3.0	6.7	4.7	1.2	1.6
P68860	6.4	-1.30	-1.94	0.282270	0.000220	0.000762	0.000002	502	0.282263	0.000220	0.000154	-7.3	7.8	5.5	1.4	1.9
P68860	5.8	-1.30	-1.91	0.282380	0.000170	0.000731	0.000002	504	0.282373	0.000170	0.000119	-3.3	6.0	4.2	1.2	1.6
P68860	6.0	-1.30	-1.87	0.282370	0.000210	0.000934	0.000010	508	0.282361	0.000210	0.000147	-3.7	7.4	5.2	1.2	1.7
P68860	5.4	-1.30	-1.88	0.282310	0.000180	0.000876	0.000003	514	0.282302	0.000180	0.000126	-5.6	6.4	4.5	1.3	1.8
P68860	5.1	-1.31	-1.87	0.282530	0.000210	0.000933	0.000004	516	0.282521	0.000210	0.000147	2.2	7.4	5.2	1.0	1.3
P68860	4.0	-1.30	-1.87	0.282490	0.000190	0.000900	0.000025	508	0.282481	0.000190	0.000133	0.6	6.7	4.7	1.1	1.4
P68860	5.4	-1.30	-1.82	0.282470	0.000200	0.001063	0.000004	510	0.282460	0.000200	0.000140	-0.1	7.1	5.0	1.1	1.5
P68860	5.2	-1.35	-1.82	0.282730	0.000280	0.000767	0.000014	505	0.282723	0.000280	0.000196	9.1	9.9	6.9	0.7	0.9
P68861	6.9	-1.29	-1.80	0.282410	0.000200	0.000827	0.000004	504	0.282402	0.000200	0.000140	-2.3	7.1	5.0	1.2	1.6
P68861	6.5	-1.31	-1.84	0.282480	0.000210	0.000598	0.000013	507	0.282474	0.000210	0.000147	0.3	7.4	5.2	1.1	1.4
P68861	6.5	-1.31	-1.84	0.282440	0.000190	0.000392	0.000004	509	0.282436	0.000190	0.000133	-1.0	6.7	4.7	1.1	1.5
P68861	5.5	-1.29	-1.85	0.282410	0.000220	0.001620	0.000011	516	0.282394	0.000220	0.000154	-2.3	7.8	5.5	1.2	1.6
P68861	4.2	-1.30	-1.92	0.282420	0.000210	0.000486	0.000003	510	0.282415	0.000210	0.000147	-1.7	7.4	5.2	1.2	1.6
P68861	6.4	-1.31	-1.87	0.282440	0.000220	0.000394	0.000003	505	0.282436	0.000220	0.000154	-1.1	7.8	5.5	1.1	1.5
P68861	6.3	-1.30	-1.86	0.282380	0.000190	0.000571	0.000006	515	0.282374	0.000190	0.000133	-3.1	6.7	4.7	1.2	1.6
P68861	3.8	-1.31	-1.84	0.282520	0.000220	0.000950	0.000005	506	0.282511	0.000220	0.000154	1.6	7.8	5.5	1.0	1.3
P68861	4.2	-1.31	-1.76	0.282610	0.000200	0.000612	0.000002	499	0.282604	0.000200	0.000140	4.7	7.1	5.0	0.9	1.1
P68861	4.2	-1.29	-1.85	0.282530	0.000200	0.000706	0.000005	503	0.282523	0.000200	0.000140	2.0	7.1	5.0	1.0	1.3
P68861	6.7	-1.31	-1.82	0.282430	0.000230	0.000375	0.000003	513	0.282426	0.000230	0.000161	-1.2	8.1	5.7	1.1	1.5
P68861	4.1	-1.30	-1.84	0.282480	0.000220	0.001036	0.000010	505	0.282470	0.000220	0.000154	0.1	7.8	5.5	1.1	1.4

TABLE DR3 (CONTINUED). LASER-ABLATION ICP-MS Hf ISOTOPIC RESULTS

Sample name	Hf beam (V)	β_{Hf}	β_{Yb}	$^{176}\text{Hf}/^{177}\text{Hf}$	$\pm 2\sigma$	$^{176}\text{Lu}/^{177}\text{Hf}$	$\pm 2\sigma$	spot age (Ma)	$^{176}\text{Hf}/^{177}\text{Hf}_{\text{initial}}$	$\pm 2\sigma$	Estimated uncertainty	$\varepsilon_{\text{Hf}} (\text{t})$	$\pm 2\sigma$	Estimated uncertainty	$T_{\text{DM}} (\text{Ga})$	$T_{\text{DM}}^{\text{C}} (\text{Ga})$
P68775	5.6	-1.62	-2.17	0.282370	0.000130	0.000869	0.000004	495	0.282362	0.000130	0.000091	-3.9	4.6	3.2	1.2	1.7
P68775	4.6	-1.63	-2.14	0.282410	0.000170	0.001125	0.000003	493	0.282399	0.000170	0.000119	-2.6	6.0	4.2	1.2	1.6
P68775	5.5	-1.62	-2.15	0.282390	0.000170	0.002331	0.000039	498	0.282368	0.000170	0.000119	-3.6	6.0	4.2	1.2	1.7
P68775	5.4	-1.61	-2.17	0.282350	0.000160	0.001051	0.000008	501	0.282340	0.000160	0.000112	-4.6	5.7	4.0	1.3	1.7
P68775	5.0	-1.61	-2.20	0.282370	0.000170	0.001457	0.000019	499	0.282356	0.000170	0.000119	-4.0	6.0	4.2	1.2	1.7
P68775	5.0	-1.61	-2.16	0.282340	0.000220	0.001229	0.000003	505	0.282328	0.000220	0.000154	-4.9	7.8	5.5	1.3	1.7
P68775	4.6	-1.62	-2.22	0.282250	0.000150	0.000931	0.000005	500	0.282241	0.000150	0.000105	-8.1	5.3	3.7	1.4	1.9
P68775	5.0	-1.62	-2.20	0.282310	0.000150	0.000877	0.000003	499	0.282302	0.000150	0.000105	-6.0	5.3	3.7	1.3	1.8
P68775	6.9	-1.61	-2.14	0.282430	0.000210	0.002091	0.000015	490	0.282411	0.000210	0.000147	-2.3	7.4	5.2	1.2	1.6
P68775	4.8	-1.63	-2.16	0.282370	0.000140	0.000721	0.000012	493	0.282363	0.000140	0.000098	-3.9	5.0	3.5	1.2	1.7
P68775	2.9	-1.63	-2.14	0.282500	0.000220	0.002850	0.000066	488	0.282474	0.000220	0.000154	-0.1	7.8	5.5	1.1	1.4
P68775	5.0	-1.59	-2.17	0.282290	0.000150	0.000898	0.000004	494	0.282282	0.000150	0.000105	-6.8	5.3	3.7	1.3	1.9
P68802	4.6	-1.61	-2.16	0.282380	0.000140	0.000983	0.000020	501	0.282371	0.000140	0.000098	-3.5	5.0	3.5	1.2	1.7
P68802	5.7	-1.62	-2.14	0.282430	0.000140	0.000634	0.000001	494	0.282424	0.000140	0.000098	-1.8	5.0	3.5	1.1	1.5
P68802	6.6	-1.60	-2.12	0.282410	0.000140	0.000717	0.000002	499	0.282403	0.000140	0.000098	-2.4	5.0	3.5	1.2	1.6
P68802	4.3	-1.60	-2.14	0.282360	0.000130	0.000934	0.000008	491	0.282351	0.000130	0.000091	-4.4	4.6	3.2	1.2	1.7
P68802	6.2	-1.62	-2.16	0.282460	0.000140	0.000706	0.000009	496	0.282453	0.000140	0.000098	-0.7	5.0	3.5	1.1	1.5
P68802	7.6	-1.63	-2.16	0.282430	0.000130	0.000802	0.000004	489	0.282423	0.000130	0.000091	-1.9	4.6	3.2	1.1	1.5
P68802	5.5	-1.63	-2.11	0.282480	0.000150	0.000986	0.000009	496	0.282471	0.000150	0.000105	-0.1	5.3	3.7	1.1	1.4
P68802	8.2	-1.63	-2.16	0.282300	0.000140	0.001201	0.000007	501	0.282289	0.000140	0.000098	-6.4	5.0	3.5	1.3	1.8
P68802	5.5	-1.65	-2.17	0.282460	0.000150	0.000964	0.000003	502	0.282451	0.000150	0.000105	-0.6	5.3	3.7	1.1	1.5
P68802	6.1	-1.63	-2.17	0.282440	0.000130	0.000707	0.000003	501	0.282433	0.000130	0.000091	-1.3	4.6	3.2	1.1	1.5
P68826	4.2	-1.64	-2.19	0.282310	0.000150	0.001021	0.000017	500	0.282300	0.000150	0.000105	-6.0	5.3	3.7	1.3	1.8
P68826	5.0	-1.63	-2.15	0.282320	0.000160	0.000777	0.000009	499	0.282313	0.000160	0.000112	-5.6	5.7	4.0	1.3	1.8
P68826	6.2	-1.63	-2.17	0.282290	0.000160	0.001104	0.000010	497	0.282280	0.000160	0.000112	-6.8	5.7	4.0	1.3	1.9
P68826	4.6	-1.63	-2.18	0.282310	0.000150	0.001669	0.000038	491	0.282295	0.000150	0.000105	-6.4	5.3	3.7	1.3	1.8
P68826	5.1	-1.64	-2.18	0.282300	0.000130	0.000567	0.000007	495	0.282295	0.000130	0.000091	-6.3	4.6	3.2	1.3	1.8
P68826	5.3	-1.63	-2.12	0.282340	0.000190	0.000452	0.000004	492	0.282336	0.000190	0.000133	-4.9	6.7	4.7	1.3	1.7
P68826	5.8	-1.64	-2.20	0.282360	0.000160	0.000379	0.000004	492	0.282357	0.000160	0.000112	-4.2	5.7	4.0	1.2	1.7
P68826	4.4	-1.65	-2.12	0.282330	0.000150	0.000521	0.000002	486	0.282325	0.000150	0.000105	-5.4	5.3	3.7	1.3	1.8
P68826	4.4	-1.65	-2.14	0.282300	0.000130	0.000515	0.000006	498	0.282295	0.000130	0.000091	-6.2	4.6	3.2	1.3	1.8
P68826	4.2	-1.67	-2.18	0.282410	0.000170	0.000599	0.000003	497	0.282404	0.000170	0.000119	-2.4	6.0	4.2	1.2	1.6
P68826	5.0	-1.63	-2.17	0.282260	0.000150	0.000693	0.000009	499	0.282254	0.000150	0.000105	-7.7	5.3	3.7	1.4	1.9
P68826	4.5	-1.64	-2.16	0.282280	0.000160	0.000860	0.000011	500	0.282272	0.000160	0.000112	-7.0	5.7	4.0	1.3	1.9
P68843	5.2	-1.63	-2.21	0.282300	0.000210	0.001821	0.000034	513	0.282282	0.000210	0.000147	-6.3	7.4	5.2	1.3	1.8
P68843	6.0	-1.64	-2.20	0.282310	0.000150	0.001128	0.000020	502	0.282299	0.000150	0.000105	-6.0	5.3	3.7	1.3	1.8
P68843	5.0	-1.64	-2.24	0.282390	0.000150	0.000555	0.000014	499	0.282385	0.000150	0.000105	-3.0	5.3	3.7	1.2	1.6
P68843	5.9	-1.62	-2.14	0.282400	0.000140	0.000607	0.000002	501	0.282394	0.000140	0.000098	-2.7	5.0	3.5	1.2	1.6
P68843	5.5	-1.63	-2.20	0.282410	0.000160	0.001362	0.000017	501	0.282397	0.000160	0.000112	-2.6	5.7	4.0	1.2	1.6
P68843	5.2	-1.63	-2.21	0.282380	0.000140	0.000717	0.000008	506	0.282373	0.000140	0.000098	-3.3	5.0	3.5	1.2	1.6

TABLE DR3 (CONTINUED). LASER-ABLATION ICP-MS Hf ISOTOPIC RESULTS

Sample name	Hf beam (V)	β Hf	β Yb	$^{176}\text{Hf}/^{177}\text{Hf}$	$\pm 2\sigma$	$^{176}\text{Lu}/^{177}\text{Hf}$	$\pm 2\sigma$	spot age (Ma)	$^{176}\text{Hf}/^{177}\text{Hf}_{\text{initial}}$	$\pm 2\sigma$	Estimated uncertainty	$\varepsilon_{\text{Hf}} (\text{T})$	$\pm 2\sigma$	Estimated uncertainty	$T_{\text{DM}} (\text{Ga})$	$T_{\text{DM}}^{\text{C}} (\text{Ga})$
P68843	5.0	-1.61	-2.16	0.282310	0.000160	0.000918	0.000008	508	0.282301	0.000160	0.000112	-5.8	5.7	4.0	1.3	1.8
P68843	5.7	-1.63	-2.15	0.282380	0.000150	0.000981	0.000018	497	0.282371	0.000150	0.000105	-3.6	5.3	3.7	1.2	1.7
P68843	5.0	-1.63	-2.15	0.282360	0.000200	0.000727	0.000005	497	0.282353	0.000200	0.000140	-4.2	7.1	5.0	1.2	1.7
P68843	6.0	-1.63	-2.17	0.282430	0.000140	0.000457	0.000002	514	0.282426	0.000140	0.000098	-1.3	5.0	3.5	1.1	1.5
P68844	6.9	-1.62	-2.16	0.282350	0.000150	0.001472	0.000003	493	0.282336	0.000150	0.000105	-4.9	5.3	3.7	1.3	1.7
P68844	1.9	-1.67	-2.24	0.282580	0.000220	0.000996	0.000010	496	0.282571	0.000220	0.000154	3.5	7.8	5.5	0.9	1.2
P68844	5.6	-1.60	-2.17	0.282270	0.000140	0.001423	0.000013	493	0.282257	0.000140	0.000098	-7.7	5.0	3.5	1.4	1.9
P68844	5.9	-1.62	-2.18	0.282350	0.000140	0.001022	0.000011	497	0.282340	0.000140	0.000098	-4.6	5.0	3.5	1.3	1.7
P68844	4.7	-1.60	-2.15	0.282260	0.000220	0.001526	0.000005	502	0.282246	0.000220	0.000154	-7.9	7.8	5.5	1.4	1.9
P68844	4.6	-1.63	-2.17	0.282420	0.000160	0.000848	0.000010	496	0.282412	0.000160	0.000112	-2.1	5.7	4.0	1.2	1.6
P68844	4.6	-1.63	-2.16	0.282350	0.000150	0.001226	0.000010	498	0.282339	0.000150	0.000105	-4.7	5.3	3.7	1.3	1.7
P68844	5.5	-1.61	-2.15	0.282410	0.000160	0.001537	0.000004	493	0.282396	0.000160	0.000112	-2.8	5.7	4.0	1.2	1.6
P68844	4.4	-1.61	-2.18	0.282230	0.000160	0.001183	0.000017	490	0.282219	0.000160	0.000112	-9.1	5.7	4.0	1.4	2.0
P68844	4.1	-1.61	-2.20	0.282320	0.000170	0.001720	0.000080	494	0.282304	0.000170	0.000119	-6.0	6.0	4.2	1.3	1.8
P68844	5.2	-1.61	-2.22	0.282260	0.000230	0.000955	0.000018	492	0.282251	0.000230	0.000161	-7.9	8.1	5.7	1.4	1.9
P64403	5.2	-1.55	-2.13	0.282420	0.000180	0.001219	0.000015	507	0.282408	0.000180	0.000126	-2.0	6.4	4.5	1.2	1.6
P64403	5.5	-1.55	-2.05	0.282530	0.000290	0.001057	0.000011	509	0.282520	0.000290	0.000203	2.0	10.3	7.2	1.0	1.3
P64403	5.6	-1.57	-2.17	0.282380	0.000210	0.000849	0.000004	511	0.282372	0.000210	0.000147	-3.2	7.4	5.2	1.2	1.6
P64403	5.8	-1.60	-2.19	0.282440	0.000200	0.000426	0.000006	542	0.282436	0.000200	0.000140	-0.3	7.1	5.0	1.1	1.5
P64403	5.9	-1.61	-2.14	0.282540	0.000220	0.001755	0.000057	506	0.282523	0.000220	0.000154	2.0	7.8	5.5	1.0	1.3
P64403	6.3	-1.59	-2.15	0.282470	0.000160	0.001304	0.000004	502	0.282458	0.000160	0.000112	-0.4	5.7	4.0	1.1	1.5
P64403	6.6	-1.54	-2.12	0.282450	0.000190	0.001127	0.000013	500	0.282439	0.000190	0.000133	-1.1	6.7	4.7	1.1	1.5
P64403	6.7	-1.59	-2.12	0.282550	0.000240	0.001621	0.000018	505	0.282535	0.000240	0.000168	2.4	8.5	5.9	1.0	1.3
P64403	7.1	-1.60	-2.14	0.282470	0.000170	0.001273	0.000005	507	0.282458	0.000170	0.000119	-0.3	6.0	4.2	1.1	1.5
P64403	7.1	-1.59	-2.15	0.282420	0.000160	0.001015	0.000001	509	0.282410	0.000160	0.000112	-1.9	5.7	4.0	1.2	1.6
P68851	5.1	-1.57	-2.14	0.282400	0.000220	0.000992	0.000012	514	0.282390	0.000220	0.000154	-2.5	7.8	5.5	1.2	1.6
P68851	5.4	-1.55	-2.11	0.282510	0.000180	0.001118	0.000007	507	0.282499	0.000180	0.000126	1.2	6.4	4.5	1.0	1.4
P68851	5.8	-1.53	-2.10	0.282420	0.000230	0.001800	0.000031	507	0.282403	0.000230	0.000161	-2.2	8.1	5.7	1.2	1.6
P68851	5.9	-1.53	-2.05	0.282460	0.000230	0.000851	0.000014	513	0.282452	0.000230	0.000161	-0.3	8.1	5.7	1.1	1.5
P68851	6.6	-1.55	-2.12	0.282420	0.000140	0.000686	0.000008	508	0.282413	0.000140	0.000098	-1.8	5.0	3.5	1.2	1.6
P68851	7.2	-1.56	-2.10	0.282400	0.000200	0.000656	0.000002	504	0.282394	0.000200	0.000140	-2.6	7.1	5.0	1.2	1.6
P68851	7.2	-1.55	-2.10	0.282430	0.000190	0.001309	0.000005	507	0.282418	0.000190	0.000133	-1.7	6.7	4.7	1.1	1.6
P68851	7.6	-1.55	-2.07	0.282470	0.000150	0.000381	0.000017	506	0.282466	0.000150	0.000105	0.0	5.3	3.7	1.1	1.4
P68851	7.8	-1.54	-2.10	0.282430	0.000220	0.001431	0.000005	513	0.282416	0.000220	0.000154	-1.6	7.8	5.5	1.2	1.5
P68851	8.8	-1.55	-2.08	0.282380	0.000190	0.001034	0.000021	510	0.282370	0.000190	0.000133	-3.3	6.7	4.7	1.2	1.7
P68870	8.5	-1.59	-2.12	0.282100	0.000190	0.001532	0.000024	504	0.282086	0.000190	0.000133	-13.5	6.7	4.7	1.6	2.3
P68870	7.7	-1.58	-2.04	0.282430	0.000160	0.000420	0.000005	504	0.282426	0.000160	0.000112	-1.5	5.7	4.0	1.1	1.5
P68870	5.9	-1.57	-2.13	0.282360	0.000180	0.000515	0.000020	500	0.282355	0.000180	0.000126	-4.1	6.4	4.5	1.2	1.7
P68870	8.0	-1.58	-2.07	0.282400	0.000180	0.000519	0.000011	496	0.282395	0.000180	0.000126	-2.7	6.4	4.5	1.2	1.6

TABLE DR3 (CONTINUED). LASER-ABLATION ICP-MS Hf ISOTOPIC RESULTS

Sample name	Hf beam (V)	β Hf	β Yb	$^{176}\text{Hf}/^{177}\text{Hf}$	$\pm 2\sigma$	$^{176}\text{Lu}/^{177}\text{Hf}$	$\pm 2\sigma$	spot age (Ma)	$^{176}\text{Hf}/^{177}\text{Hf}_{\text{initial}}$	$\pm 2\sigma$	Estimated uncertainty	$\epsilon_{\text{Hf}} (\text{t})$	$\pm 2\sigma$	Estimated uncertainty	$T_{\text{DM}} (\text{Ga})$	$T_{\text{DM}}^{\text{C}} (\text{Ga})$
P68870	7.7	-1.56	-2.06	0.282390	0.000150	0.000326	0.000007	494	0.282387	0.000150	0.000105	-3.1	5.3	3.7	1.2	1.6
P68870	7.8	-1.57	-2.11	0.282410	0.000160	0.000435	0.000006	493	0.282406	0.000160	0.000112	-2.4	5.7	4.0	1.2	1.6
P68870	7.3	-1.57	-2.11	0.282410	0.000230	0.000413	0.000003	506	0.282406	0.000230	0.000161	-2.1	8.1	5.7	1.2	1.6
P68870	8.1	-1.56	-2.15	0.282370	0.000170	0.000380	0.000005	506	0.282366	0.000170	0.000119	-3.5	6.0	4.2	1.2	1.7
P68870	7.7	-1.59	-2.12	0.282290	0.000160	0.000552	0.000021	508	0.282285	0.000160	0.000112	-6.4	5.7	4.0	1.3	1.8
P68870	8.6	-1.57	-2.10	0.282400	0.000240	0.001080	0.000026	508	0.282390	0.000240	0.000168	-2.7	8.5	5.9	1.2	1.6
P68878	7.0	-1.59	-2.20	0.282430	0.000150	0.000527	0.000012	499	0.282425	0.000150	0.000105	-1.6	5.3	3.7	1.1	1.5
P68878	6.5	-1.60	-2.24	0.282440	0.000180	0.000398	0.000005	498	0.282436	0.000180	0.000126	-1.2	6.4	4.5	1.1	1.5
P68878	5.4	-1.62	-2.16	0.282520	0.000190	0.000973	0.000043	508	0.282511	0.000190	0.000133	1.6	6.7	4.7	1.0	1.3
P68878	7.5	-1.60	-2.14	0.282310	0.000140	0.000513	0.000001	491	0.282305	0.000140	0.000098	-6.0	5.0	3.5	1.3	1.8
P68878	6.2	-1.57	-2.13	0.282370	0.000230	0.000747	0.000015	486	0.282363	0.000230	0.000161	-4.1	8.1	5.7	1.2	1.7
P68878	7.9	-1.61	-2.06	0.282370	0.000390	0.000796	0.000009	522	0.282362	0.000390	0.000273	-3.3	13.8	9.7	1.2	1.7
P68878	7.0	-1.58	-2.16	0.282050	0.000180	0.001013	0.000018	493	0.282041	0.000180	0.000126	-15.3	6.4	4.5	1.7	2.4
P68878	7.3	-1.59	-2.11	0.282480	0.000160	0.000873	0.000006	506	0.282472	0.000160	0.000112	0.2	5.7	4.0	1.1	1.4
P68878	7.0	-1.58	-2.12	0.282410	0.000150	0.000477	0.000005	502	0.282406	0.000150	0.000105	-2.2	5.3	3.7	1.2	1.6
P68878	6.4	-1.63	-2.08	0.282220	0.000290	0.002422	0.000036	503	0.282197	0.000290	0.000203	-9.6	10.3	7.2	1.4	2.0
RG11-224	6.9	-1.386	-1.935	0.282353	0.000043	0.000435	0.000017	500	0.282349	0.000043	0.000052**	-4.3	1.5	1.9	1.2	1.7
RG11-224	6.5	-1.386	-1.921	0.282390	0.000034	0.0004248	0.000003	503	0.282386	0.000034	0.000045	-2.9	1.2	1.6	1.2	1.6
RG11-224	6.4	-1.387	-1.909	0.282385	0.000040	0.000355	0.000016	505	0.282382	0.000040	0.000050	-3.0	1.4	1.8	1.2	1.6
RG11-224	6.3	-1.388	-1.812	0.282404	0.000044	0.0003245	0.000002	500	0.282401	0.000044	0.000053	-2.4	1.6	1.9	1.2	1.6
RG11-224	5.9	-1.39	-1.879	0.282360	0.000033	0.0003715	0.000002	504	0.282356	0.000033	0.000045	-3.9	1.2	1.6	1.2	1.7
RG11-224	6.7	-1.384	-1.81	0.282385	0.000032	0.0003918	0.000003	502	0.282381	0.000032	0.000044	-3.1	1.1	1.6	1.2	1.6
RG11-224	7.4	-1.383	-1.817	0.282407	0.000031	0.0004251	0.000002	502	0.282403	0.000031	0.000043	-2.3	1.1	1.5	1.2	1.6
RG11-224	6.6	-1.388	-1.876	0.282388	0.000032	0.0003884	0.000005	501	0.282384	0.000032	0.000044	-3.0	1.1	1.6	1.2	1.6
RG11-224	6.4	-1.383	-1.942	0.282359	0.000040	0.0003993	0.000006	502	0.282355	0.000040	0.000050	-4.0	1.4	1.8	1.2	1.7
RG11-224	7.1	-1.388	-1.964	0.282350	0.000034	0.00038414	0.000001	504	0.282346	0.000034	0.000045	-4.3	1.2	1.6	1.2	1.7
RG11-233	7.1	-1.39	-1.982	0.282343	0.000032	0.000345	0.000013	486	0.282340	0.000032	0.000044	-4.9	1.1	1.6	1.3	1.7
RG11-233	6.5	-1.391	-1.948	0.282364	0.000039	0.0003518	0.000006	498	0.282361	0.000039	0.000049	-3.9	1.4	1.7	1.2	1.7
RG11-233	5.9	-1.391	-1.85	0.282418	0.000042	0.0005464	0.000010	491	0.282413	0.000042	0.000052	-2.2	1.5	1.8	1.2	1.6
RG11-233	5.8	-1.393	-1.981	0.282335	0.000037	0.000566	0.000019	495	0.282330	0.000037	0.000048	-5.1	1.3	1.7	1.3	1.8
RG11-233	5.3	-1.395	-1.962	0.282401	0.000046	0.000975	0.000019	493	0.282392	0.000046	0.000055	-2.9	1.6	1.9	1.2	1.6
RG11-233	5.9	-1.394	-2.024	0.282355	0.000042	0.000392	0.000031	492	0.282351	0.000042	0.000052	-4.4	1.5	1.8	1.2	1.7
RG11-233	6.9	-1.396	-2.111	0.282346	0.000033	0.000194	0.000004	493	0.282344	0.000033	0.000045	-4.6	1.2	1.6	1.2	1.7
RG11-233	7.2	-1.398	-1.95	0.282387	0.000038	0.0002216	0.000007	495	0.282385	0.000038	0.000048	-3.1	1.3	1.7	1.2	1.6
RG11-234	5.9	-1.411	-1.935	0.282432	0.000047	0.001584	0.000090	498	0.282417	0.000047	0.000056	-1.9	1.7	2.0	1.1	1.6
RG11-234	6.0	-1.415	-1.943	0.282433	0.000053	0.00206	0.000200	499	0.282414	0.000053	0.000061	-2.0	1.9	2.2	1.2	1.6
RG11-234	5.5	-1.404	-1.941	0.282422	0.000049	0.00181	0.000200	505	0.282405	0.000049	0.000057	-2.2	1.7	2.0	1.2	1.6
RG11-234	6.1	-1.423	-1.956	0.282376	0.000044	0.00086	0.000210	496	0.282368	0.000044	0.000053	-3.7	1.6	1.9	1.2	1.7

TABLE DR3 (CONTINUED). LASER-ABLATION ICP-MS Hf ISOTOPIC RESULTS

TABLE DR3 (CONTINUED). LASER-ABLATION ICP-MS Hf ISOTOPIC RESULTS

TABLE DR3 (CONTINUED). LASER-ABLATION ICP-MS Hf ISOTOPIC RESULTS

Sample name	Hf beam (V)	βHf	βYb	$^{176}\text{Hf}/^{177}\text{Hf}$	$\pm 2\sigma$	$^{176}\text{Lu}/^{177}\text{Hf}$	$\pm 2\sigma$	spot age (Ma)	$^{176}\text{Hf}/^{177}\text{Hf}_{\text{initial}}$	$\pm 2\sigma$	Estimated uncertainty	$\varepsilon_{\text{Hf}}(\text{T})$	$\pm 2\sigma$	Estimated uncertainty	T_{DM} (Ga)	T_{DM}^{C} (Ga)
91500	3.3	-1.56	-2.07	0.282370	0.000160	0.000363	0.000001	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
91500	3.2	-1.58	-2.19	0.282320	0.000150	0.000361	0.000001	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
91500	3.2	-1.57	-2.22	0.282250	0.000160	0.000354	0.000001	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
91500	3.3	-1.57	-2.27	0.282300	0.000140	0.000363	0.000001	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
91500	3.5	-1.49	-2.10	0.282320	0.000160	0.000360	0.000001	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
91500	3.5	-1.52	-2.11	0.282320	0.000190	0.000366	0.000001	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
91500	3.4	-1.49	-2.09	0.282300	0.000190	0.000362	0.000001	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
91500	3.6	-1.47	-1.87	0.282360	0.000190	0.000362	0.000001	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.

* From the corresponding U-Pb measurement on the same location.

† The empirical approach to estimating uncertainty is outlined in section DR1 of the supplementary data file. The estimated uncertainties on individual spots were used in the mean $\varepsilon_{\text{Hf}}(\text{T})$ calculations.

‡ The parameters for the depleted-mantle model ages are outlined in section DR1.

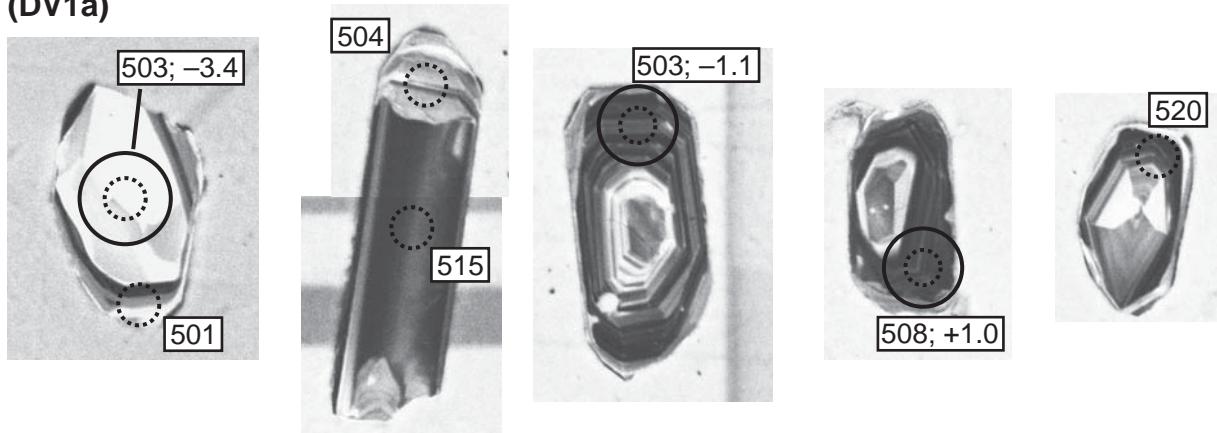
Bold rows are analyses included in the calculation of the mean $\varepsilon_{\text{Hf}}(\text{T})$ summarized in the text. Fine print rows in italics are analyses excluded from the calculations.

** Samples with the prefix RG11 were run during a different analytical session in which the external reproducibility of the reference zircons was less precise than the internal 2 S.E. of individual analyses. Therefore in this case, the "estimated uncertainty" includes additional uncertainty added to account for external reproducibility.

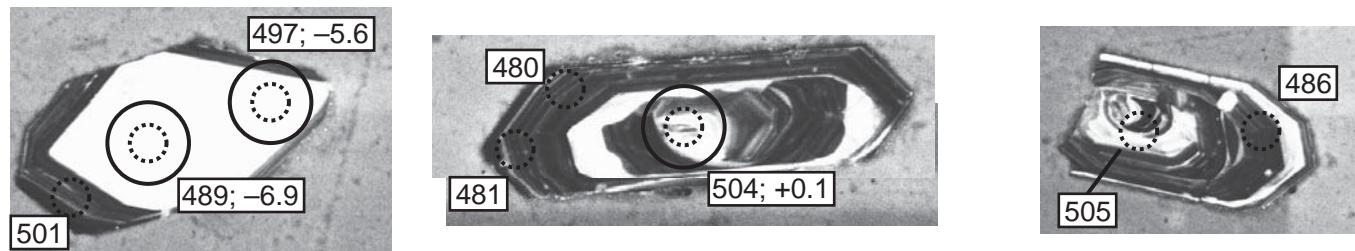
†† N.A. = not applicable. Only the present-day isotopic composition of the reference zircons are included here.

FIGURE DR1.– Representative cathodoluminescence (CL) images of several grains from each sample showing different types of compositional zoning. The location of laser-ablation pits are also shown. Small dashed circles (~24 μm diameter) mark the locations of U-Pb analyses, and solid circles (~53 μm diameter) mark the locations of Hf analyses. The numbers indicate the $^{206}\text{Pb}/^{238}\text{U}$ age (in Ma) and the $\varepsilon_{\text{Hf(i)}}$ value corresponding to each pit.

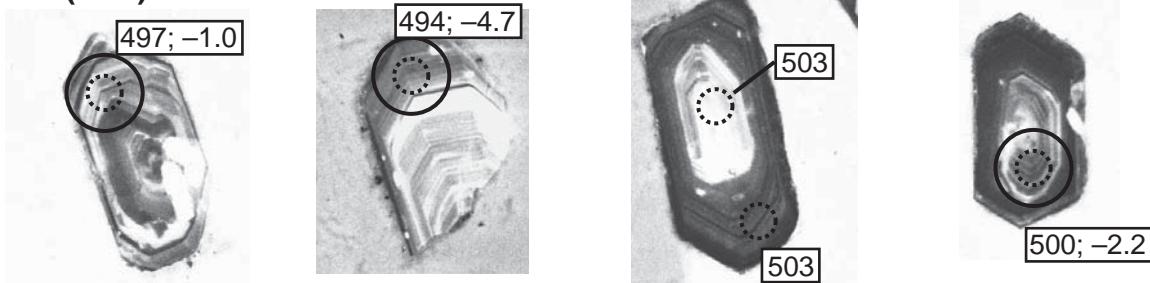
P49944
(DV1a)



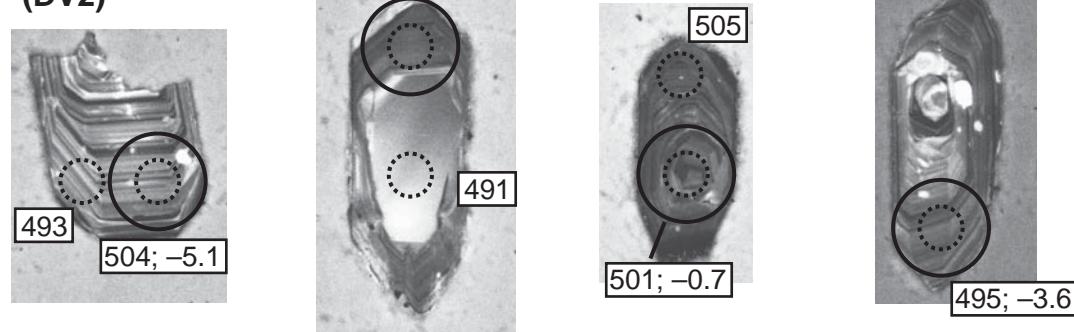
P49945
(DVb)



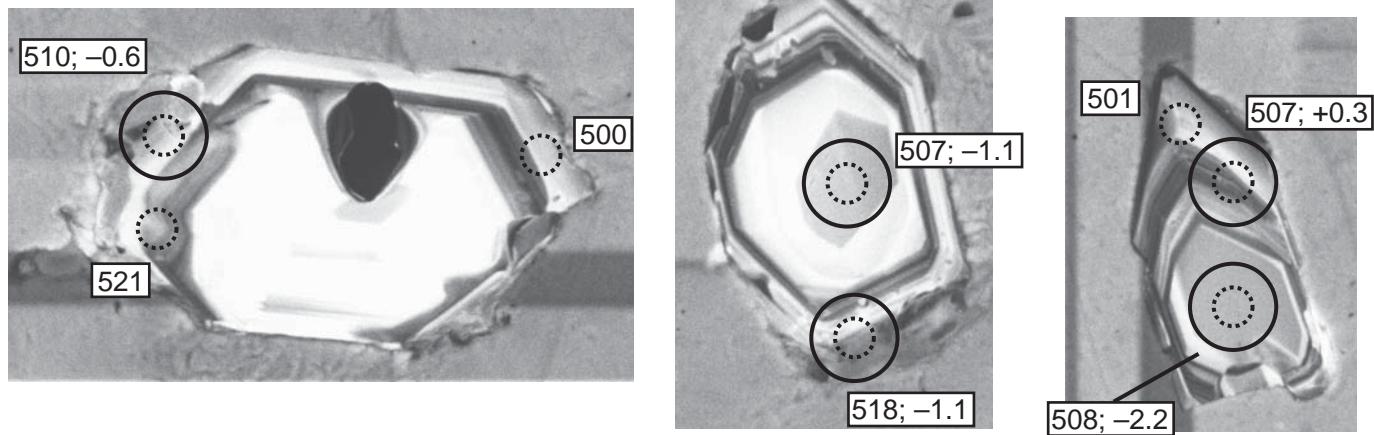
P62101
(DV2)



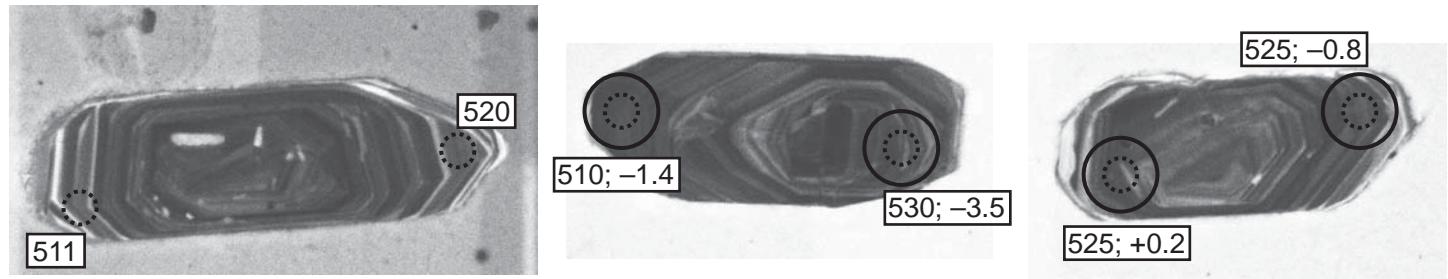
P62293
(DV2)



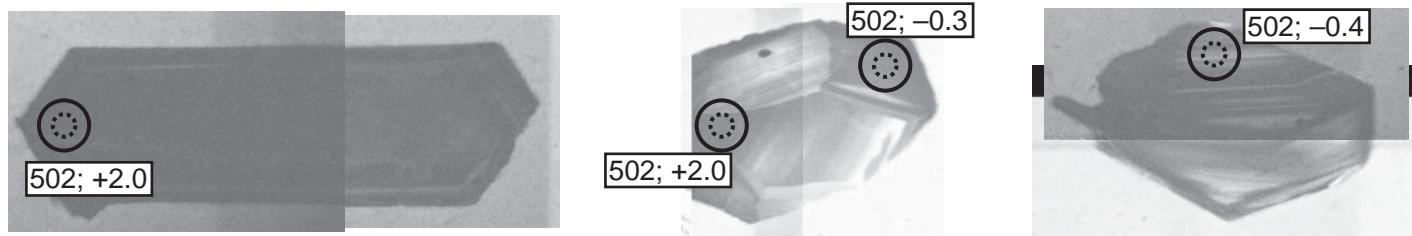
P62321
(DV1a)



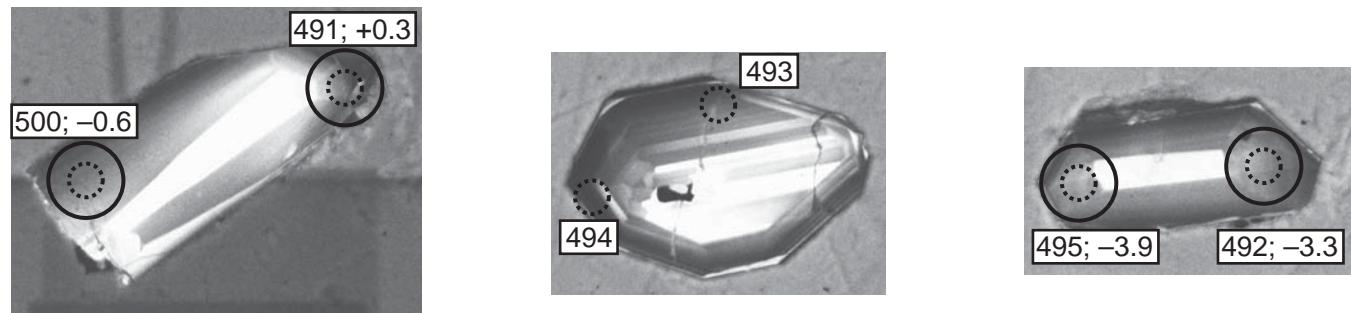
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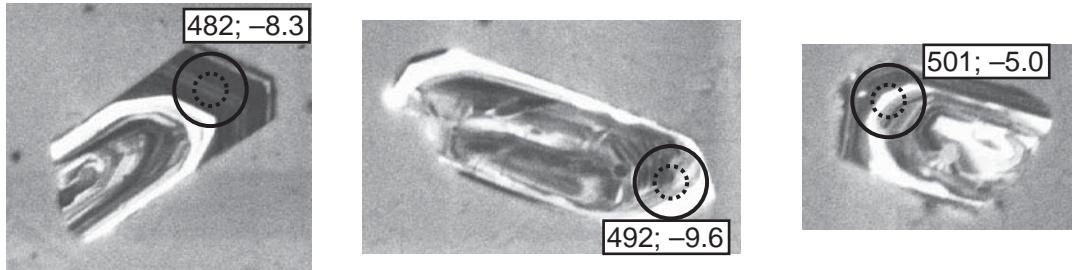
P64403
(DV1a)



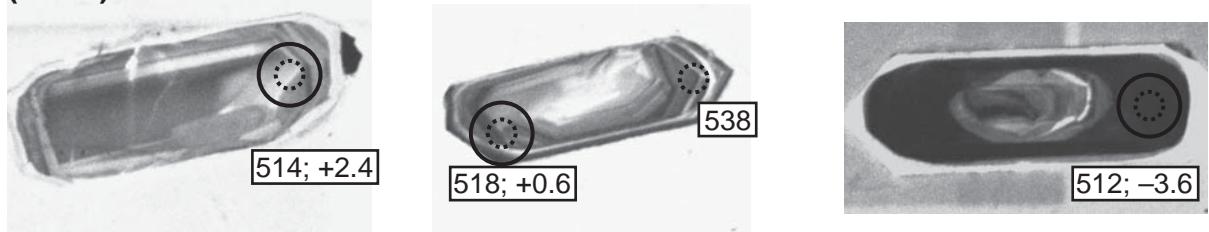
P64422
(DV2)



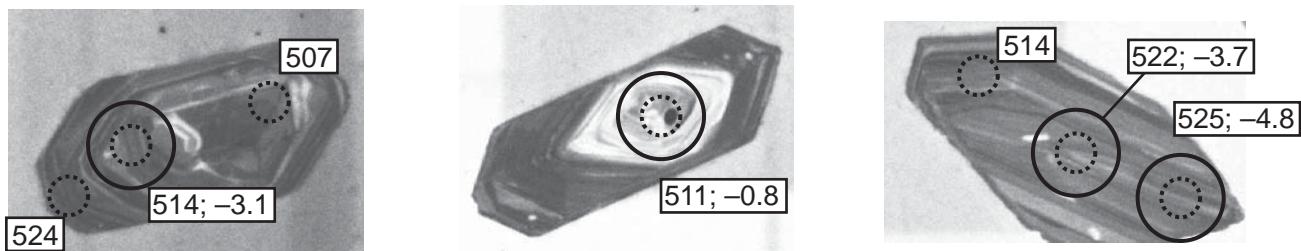
P64424
(DV1b)



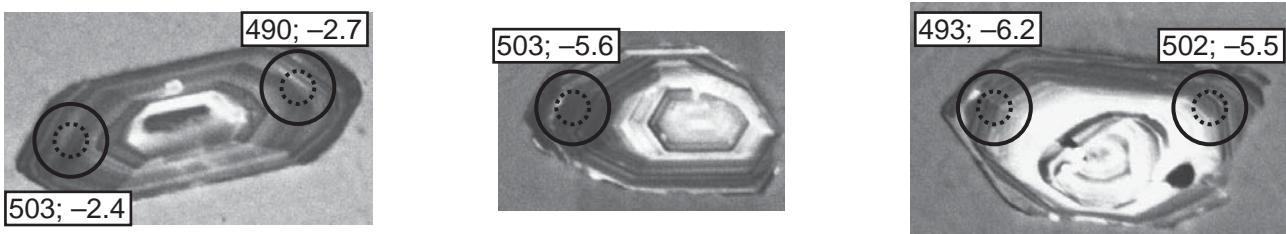
P68756
(DV1b)



P68758
(DV1b)



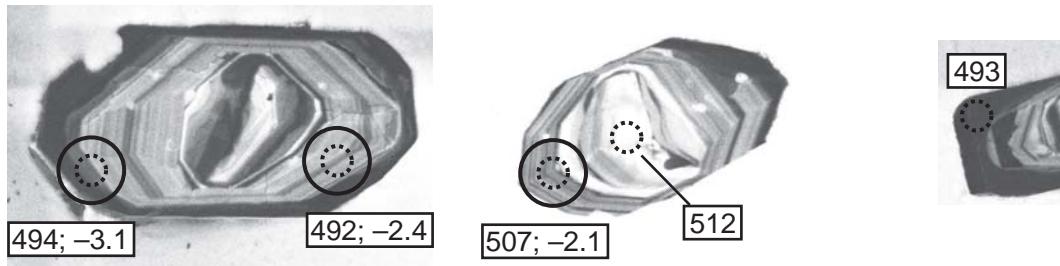
P68760
(DV1a)



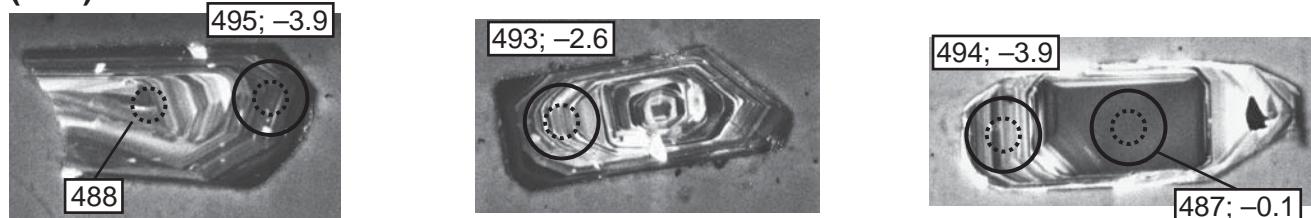
P68766
(DV2)



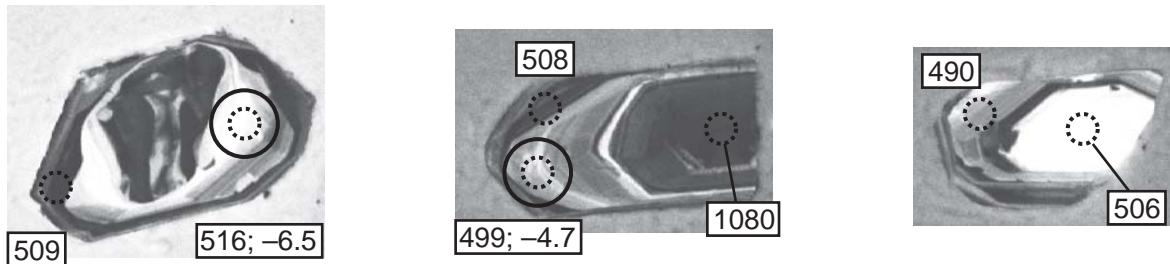
P68770
(DV1a)



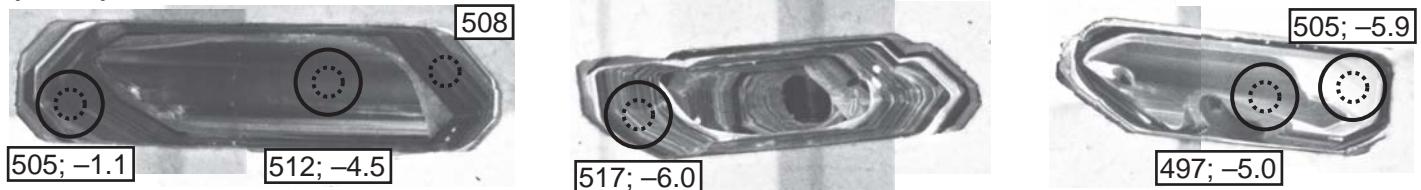
P68775
(DV2)



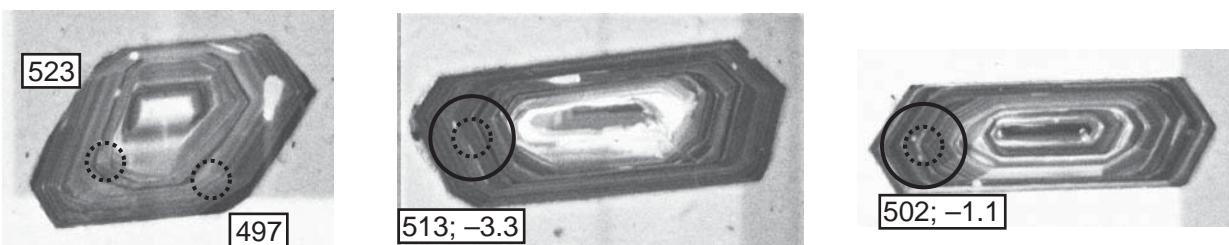
P68782
(DV1a)



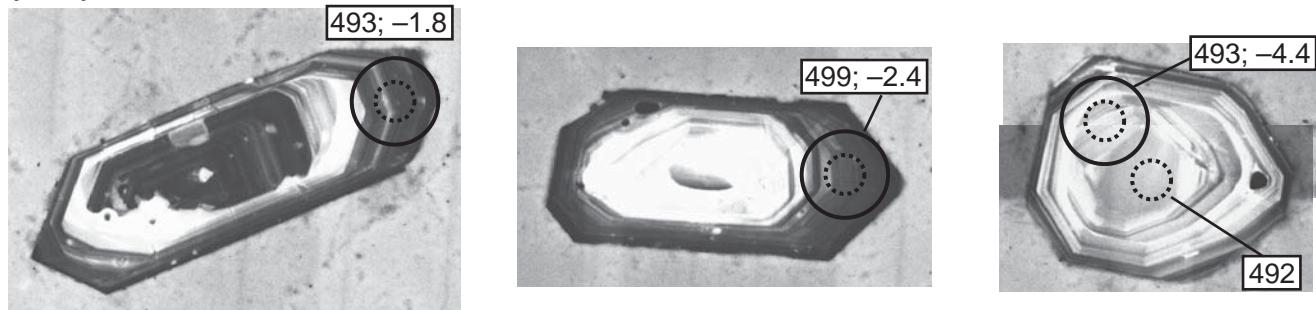
P68787
(DV1a)



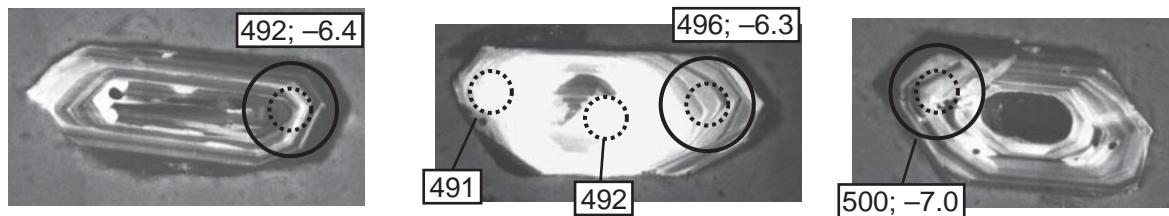
P68796
(DV2)



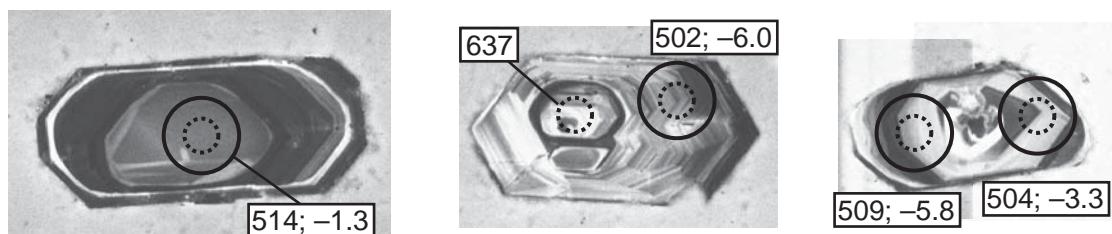
**P68802
(DV2)**



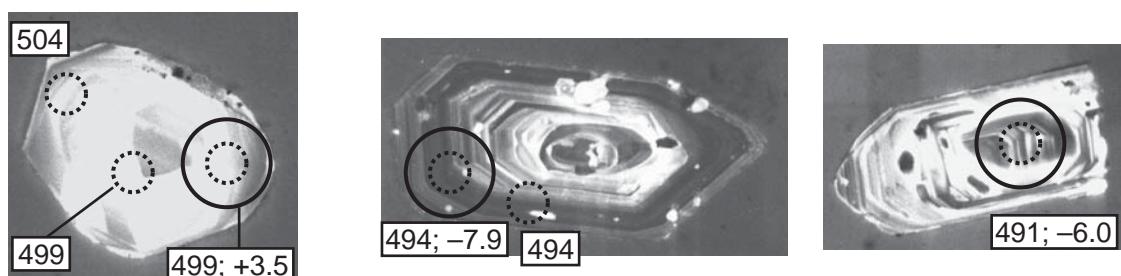
**P68826
(DV2)**



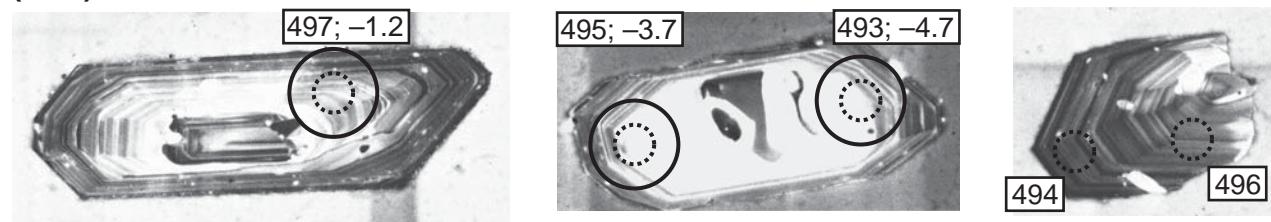
**P68843
(DV2)**



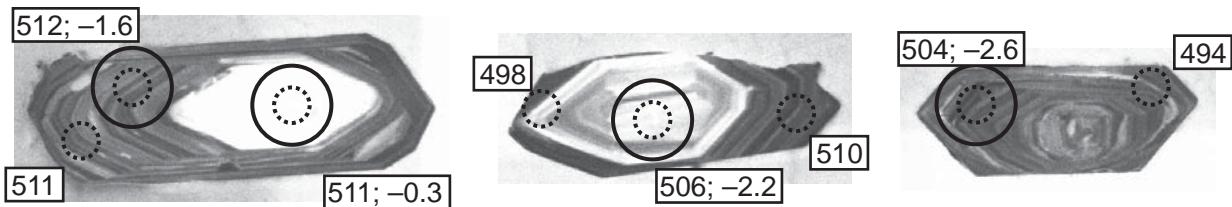
**P68844
(DV2)**



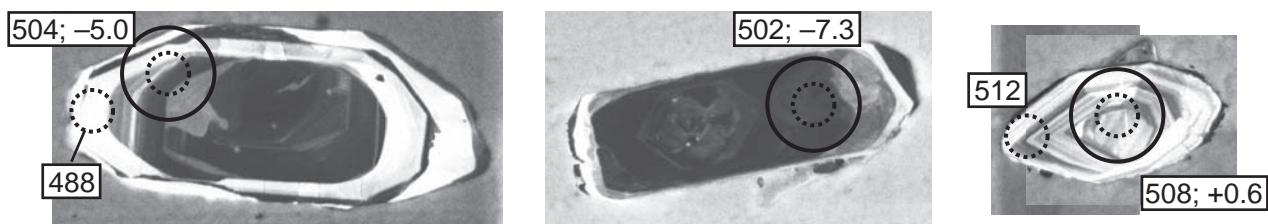
**P68845
(DV2)**



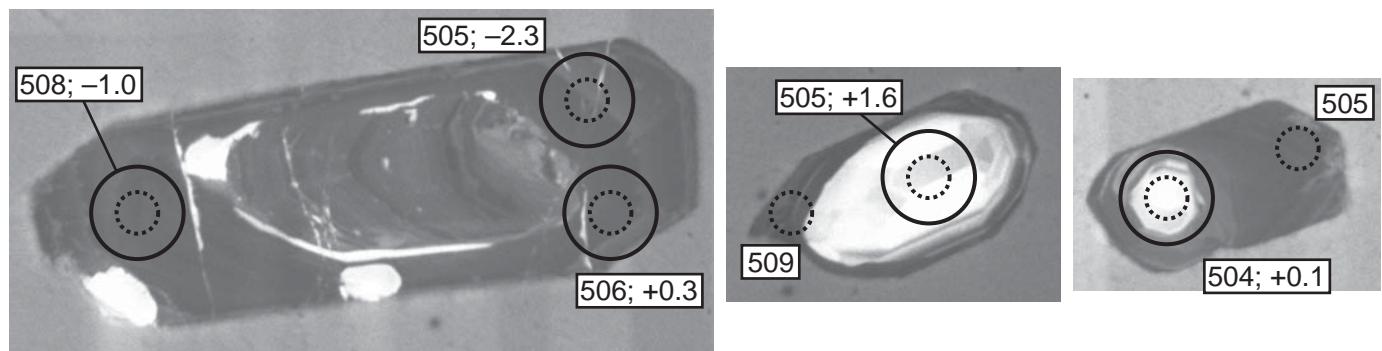
P68851
(DV1b)



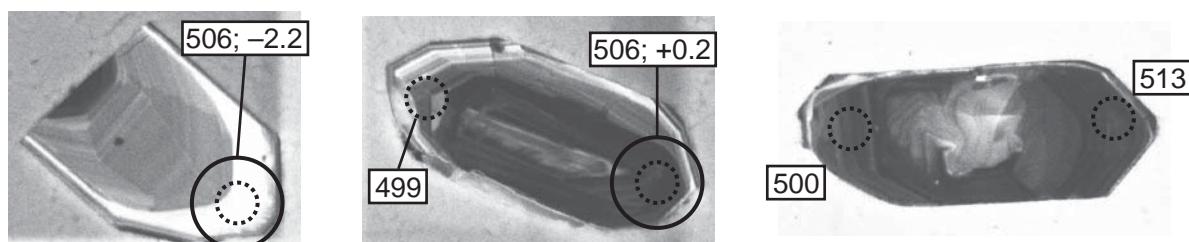
P68860
(DV1a)



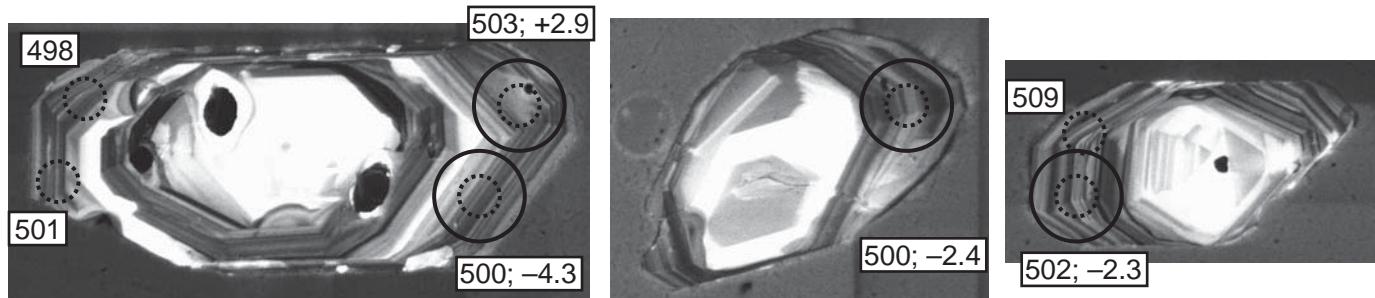
P68861
(DV1a)



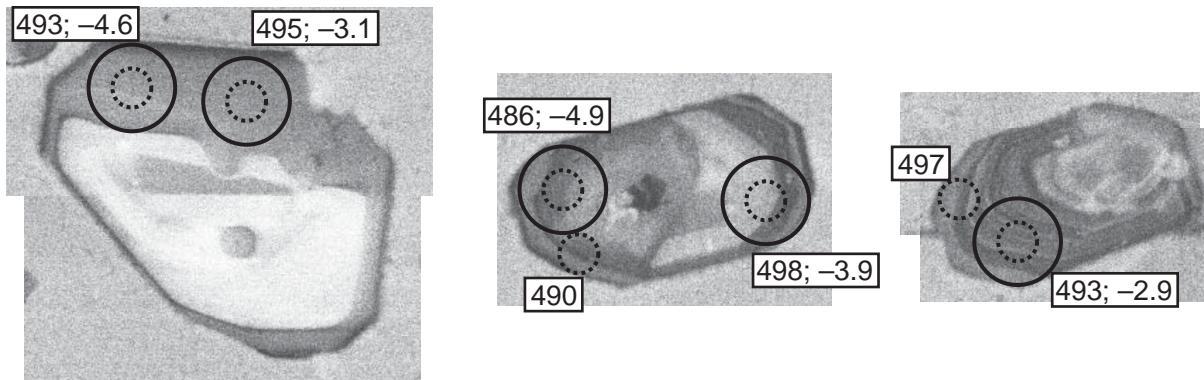
P68878
(DV2)



RG11-224
(DV2)



RG11-233
(DV2)



RG11-234
(DV2)

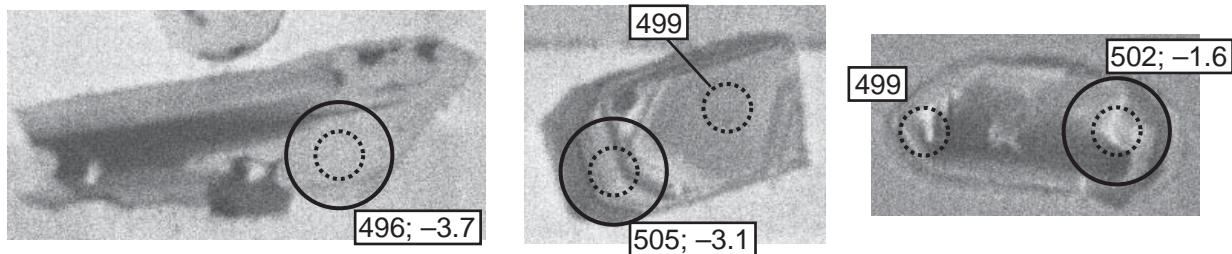


FIGURE DR2.— This supplementary figure provides inverse concordia diagrams and $^{206}\text{Pb}/^{238}\text{U}$ age distributions for all of the samples from this study. Age data are summarized in Table 1 and Figure 6 in the text. All analyses for each sample are show on the large concordia diagrams; the inset concordia diagrams and $^{206}\text{Pb}/^{238}\text{U}$ age distributions show the analyses used in the mean age calculations.

