Harvey, Zircon age and oxygen isotopic correlations bewteen Bouse Formation tephra and the Lawlor Tuff: Geosphere, v. 10, p. 221–232, doi:10.1130/GES00904.1

Supplemental File. Individual zircon analysis data from zircon age and oxygen isotopic correlations between Bouse Formation tephra and the Lawlor Tuff. Included is all new zircon analysis information for Lawlor1 and Lawlor2, Bouse tephra (Amboy and Buzzards Peak ash beds), new analysis for Kilgore Tuff and Pre-Kilgore Tuff, compilation of prior analysis of Kilgore Tuff and Pre-Kilgore Tuff, and Neroly Formation pumiceous sandstone analyses. An initial attempt was made to date the ash from the Amboy location in 2009. Mechanically crushed samples were sieved to eliminate “pixie dust” crystals and abundant glass fragments smaller than ~ 50 µm before heavy mineral separation. Zircons were screened on the UCLA SIMS (University of California, Los Angeles, secondary ion mass spectrometry facility) in a low-precision screening mode, and only the younge zircons (Amboy_2009_long) were analyzed for a full analysis and listed here. No significant juvenile age population was identified at that time. After a second attempt found juvenile zircon in the Buzzards Peak sample provided by Jon Spencer, the <50 µm previously sieved fraction from Amboy was examined after heavy liquid separation, and an additional 24 Amboy zircons were found and analyzed in 2012. All samples were hand-crushed and sieved to <250 µm. The dense fractions were separated using standard heavy liquid procedures for the Bouse Formation tephra samples, whereas proximal Lawlor Tuff glass was first digested with concentrated hydrofluoric acid (HF) before heavy liquid separation to enrich the HF-insoluble zircon-bearing fraction. Zircon crystals were hand-picked from the heavy mineral fraction, with preference given to zircon with residual adhering glass, and mounted for secondary ion mass spectrometry (SIMS, ion microprobe) U-Pb age analysis according to the techniques described in Schmitt et al. (2003). Initial 230Th disequilibrium was corrected using a typical DTh/U (ratio of the mineral/melt partitioning coefficients for Th over U) of 0.2 after Bindeman et al. (2006).

SIMS U-Pb ages and $\delta^{18}O$ values for the Bouse tephra (Amboy and Buzzards Peak locations), proximal Lawlor Tuff, Neroly Formation, and Heise Pre-Kilgore and Kilgore Tuffs.

	$^{238}U/^{206}Pb$	1 s.e.	$^{207}Pb^*/^{206}Pb^*$	1 s.e.	$^{206}Pb/^{238}U$ age [Ma]	±1σ [Ma]	U ppm	Th ppm	Th/U	% $^{206}Pb^*$	$\delta^{18}O$ ‰	±1σ
Bouse Tephra												
Buzzard_R5-6	117.00	8.17	7.74E-001	2.16E-002	3.91	5.30	152.00	42.20	0.28	6.96	7.38	0.26
Buzzard_R3-4	1230.00	37.10	1.91E-001	1.92E-002	4.36	0.20	309.00	88.80	0.29	81.50	7.02	0.26
Buzzard_R5-4	1270.00	33.50	9.80E-002	1.09E-002	4.84	0.15	296.00	97.90	0.33	93.40	7.39	0.26
Amboy_r1-9	730.00	31.50	4.05E-001	1.57E-002	4.87	0.49	1520.00	939.00	0.62	54.20	-	-
Amboy_r2-4	1270.00	37.10	8.98E-002	3.98E-003	4.90	0.15	4270.00	2850.00	0.67	94.40	5.92	0.15
Buzzard_R3-15	1270.00	31.50	7.67E-002	6.28E-003	4.95	0.13	518.00	153.00	0.30	96.10	6.14	0.26
Buzzard_R5-12	1060.00	33.10	1.91E-001	1.25E-002	5.03	0.21	273.00	67.50	0.25	81.50	7.14	0.26
Buzzard_R1-13	1150.00	26.40	1.36E-001	1.14E-002	5.05	0.15	564.00	208.00	0.37	88.50	7.32	0.26
Buzzard_R5-13	950.00	50.80	2.51E-001	2.06E-002	5.10	0.45	1110.00	555.00	0.50	73.80	-	-
Amboy_2009_long-94B	1040.00	42.10	1.91E-001	1.09E-002	5.12	0.27	335.00	163.00	0.49	81.50	-	-
Buzzard_R2-3	1260.00	19.00	5.95E-002	1.94E-003	5.12	0.08	8780.00	9060.00	1.03	98.30	-	-
Buzzard_R5-1	424.00	8.36	5.66E-001	9.46E-003	5.18	0.39	629.00	247.00	0.39	33.60	6.85	0.26
Buzzard_R5-15	1160.00	18.10	1.11E-001	3.80E-003	5.20	0.09	3750.00	1980.00	0.53	91.70	-	-
Buzzard_R3-13	1050.00	26.10	1.71E-001	1.14E-002	5.23	0.18	547.00	187.00	0.34	84.00	7.19	0.26
Buzzard_R3-1	1020.00	27.00	1.88E-001	1.57E-002	5.24	0.20	810.00	379.00	0.47	81.90	7.47	0.26
Buzzard_R5-10	1230.00	13.50	6.01E-002	1.84E-003	5.24	0.06	5840.00	3270.00	0.56	98.20	6.74	0.26
Buzzard_R3-5	1180.00	14.30	5.85E-002	1.80E-003	5.47	0.07	9550.00	7300.00	0.77	98.40	-	-
Buzzard_R1-2	1160.00	13.40	6.84E-002	1.88E-003	5.49	0.07	8330.00	6590.00	0.79	97.20	-	-
Amboy_2009_long-94	611.00	21.40	4.21E-001	1.85E-002	5.58	0.42	334.00	161.00	0.48	52.10	-	-
Buzzard_R3-11	1150.00	26.70	5.80E-002	1.49E-003	5.59	0.13	5850.00	4440.00	0.76	98.50	-	-
Amboy_r1-15	1110.00	38.10	8.15E-002	3.66E-003	5.64	0.20	4960.00	3650.00	0.74	95.50	-	-
Amboy_r2-18	705.00	30.10	3.50E-001	3.10E-002	5.67	0.51	299.00	95.70	0.32	61.10	6.52	0.15
Amboy_2009_long-5	695.00	31.10	1.86E-001	1.67E-002	7.70	0.46	202.00	120.00	0.59	82.10	-	-
Amboy_r2-20	357.00	7.64	4.19E-001	1.31E-002	9.54	0.49	1470.00	836.00	0.57	52.30	-	-
Amboy_2009_long-33	455.00	19.20	2.58E-001	9.41E-003	10.40	0.64	451.00	191.00	0.42	72.90	-	-

Amboy_r1-14	390.00	34.30	8.92E-002	7.65E-003	15.70	1.47	860.00	157.00	0.18	94.50	-	-
Amboy_r1-21	314.00	16.40	1.28E-001	1.36E-002	18.40	1.13	91.30	105.00	1.15	89.60	-	-
Amboy_r1-18	341.00	9.72	5.08E-002	1.61E-003	18.90	0.54	2150.00	3010.00	1.40	99.40	-	-
Bouse_long-26	266.00	5.80	1.01E-001	4.16E-003	22.60	0.54	1690.00	589.00	0.35	93.00	-	-
Buzzard_R3-12	253.00	2.08	5.66E-002	8.59E-004	24.90	0.22	8000.00	1490.00	0.19	98.70	-	-
Buzzard_R5-14	254.00	3.06	4.93E-002	1.36E-003	25.30	0.31	1830.00	766.00	0.42	99.60	-	-
Buzzard_R3-9	251.00	6.77	5.39E-002	3.36E-003	25.60	0.69	286.00	68.80	0.24	99.10	-	-
Amboy_2009_long-24	233.00	7.67	6.62E-002	3.60E-003	26.90	0.89	793.00	180.00	0.23	97.50	-	-
Amboy_r3-1	89.80	4.16	1.21E-001	6.58E-003	64.20	3.23	249.00	53.20	0.21	90.60	-	-
Amboy_r2-22	84.00	2.48	7.88E-002	3.09E-003	73.10	2.16	1180.00	483.00	0.41	96.00	-	-
Amboy_r2-7	83.50	3.38	4.99E-002	1.78E-003	75.30	3.06	299.00	86.60	0.29	99.70	-	-
Amboy_r2-19	76.80	2.66	8.24E-002	1.64E-003	80.20	2.78	1450.00	312.00	0.22	95.50	-	-
Amboy_r1-22	77.70	3.53	5.46E-002	1.71E-003	80.60	3.68	1040.00	1040.00	1.01	99.10	-	-
Amboy_r2-21	42.80	1.64	8.95E-002	3.35E-003	138.00	5.50	267.00	203.00	0.76	94.80	-	-
Amboy_r3-3	42.00	1.35	4.90E-002	1.71E-003	148.00	4.91	218.00	204.00	0.94	100.00	-	-
Amboy_r2-10	43.20	1.31	5.08E-002	9.69E-004	148.00	4.49	1570.00	1380.00	0.88	99.80	-	-
Amboy_r1-16	40.10	1.17	5.09E-002	1.38E-003	158.00	4.56	376.00	98.90	0.26	99.80	-	-
Buzzard_R3-16	38.10	0.41	5.12E-002	6.50E-004	167.00	1.77	1100.00	521.00	0.47	99.80	-	-
Amboy_r1-17	36.20	1.19	5.35E-002	1.98E-003	174.00	5.85	324.00	159.00	0.49	99.50	-	-
Amboy_r1-1	6.50	0.22	7.83E-002	1.25E-003	912.00	70.60	168.00	54.80	0.33	98.80	-	-
Amboy_r2-9	10.30	0.32	9.05E-002	1.54E-003	1280.00	53.80	824.00	383.00	0.46	95.90	-	-
Amboy_r1-20	4.19	0.13	8.96E-002	5.90E-004	1340.00	41.60	352.00	224.00	0.64	99.80	-	-
Amboy_r2-13	4.72	0.16	8.95E-002	7.23E-004	1400.00	32.30	359.00	135.00	0.38	98.90	-	-
Buzzard_R1-14	4.21	0.05	9.44E-002	5.44E-004	1430.00	9.95	582.00	31.70	0.05	99.00	-	-
Amboy_r2-6	8.35	0.30	1.04E-001	2.14E-003	1430.00	69.70	3170.00	132.00	0.04	94.60	-	-
Amboy_r2-12	5.39	0.16	8.86E-002	4.83E-004	1530.00	145.00	484.00	215.00	0.44	98.20	-	-

99 additional Amboy zircons analyzed in survey mode yielded detritral ages >7.00 Ma

Proximal Lawlor

Lawlor 1

LAWL1-103	1360.00	25.20	8.32E-002	6.11E-003	4.60	0.09	661.00	190.00	0.29	95.30	7.59	0.26
LAWL1-106	1330.00	30.10	7.58E-002	6.65E-003	4.75	0.12	421.00	153.00	0.36	96.20	-	-
LAWL1-121	472.00	19.30	5.58E-001	1.12E-002	4.80	0.72	287.00	78.50	0.27	34.50	-	-
LAWL1-112	1270.00	32.20	9.62E-002	9.24E-003	4.84	0.14	318.00	102.00	0.32	93.60	-	-
LAWL1-113	1280.00	26.60	9.00E-002	7.78E-003	4.85	0.12	357.00	93.80	0.26	94.40	-	-
LAWL1-101	1280.00	22.0	8.85E-002	4.63E-003	4.85	0.09	696.00	127.00	0.18	94.60	7.29	0.26
LAWL1-100	1250.00	39.30	1.08E-001	1.43E-002	4.85	0.19	239.00	48.00	0.20	92.00	7.04	0.26
LAWL1-102	1290.00	23.30	7.84E-002	6.05E-003	4.86	0.10	608.00	174.00	0.29	95.90	-	-
LAWL1-116	1330.00	16.40	5.58E-002	3.48E-003	4.87	0.06	2230.00	905.00	0.41	98.80	6.61	0.33
LAWL1-117	1250.00	20.90	9.78E-002	8.48E-003	4.88	0.10	362.00	115.00	0.32	93.40	7.06	0.33
LAWL1-111	1210.00	34.30	1.20E-001	1.61E-002	4.90	0.19	563.00	241.00	0.43	90.60	5.97	0.33
LAWL1-114	1290.00	26.70	7.23E-002	5.06E-003	4.90	0.11	411.00	119.00	0.29	96.70	6.60	0.33
LAWL1-107	1310.00	27.10	6.28E-002	3.57E-003	4.92	0.11	829.00	299.00	0.36	97.90	-	-
LAWL1-104	1290.00	20.40	6.88E-002	4.22E-003	4.95	0.08	1190.00	389.00	0.33	97.10	-	-
LAWL1-110	1280.00	23.20	6.11E-002	3.12E-003	5.03	0.09	1260.00	525.00	0.42	98.10	7.54	0.26
LAWL1-120	1230.00	25.30	8.32E-002	8.08E-003	5.09	0.12	392.00	124.00	0.32	95.30	-	-
LAWL1-115	1250.00	25.20	7.17E-002	7.39E-003	5.09	0.11	475.00	101.00	0.21	96.70	-	-

LAWL1-108	857.00	37.90	3.06E-001	2.08E-002	5.11	0.44	502.00	128.00	0.25	66.80	6.70	0.26
LAWL1-118	1200.00	17.50	9.66E-002	4.74E-003	5.12	0.09	3780.00	2040.00	0.54	93.50	-	-
Lawlor1_z1-1	1180.00	47.60	8.87E-002	8.48E-003	5.23	0.23	415.00	174.00	0.42	94.60	-	-
LAWL1-119	1230.00	17.10	5.46E-002	2.18E-003	5.25	0.07	1970.00	1280.00	0.65	98.90	-	-
LAWL1-109	590.00	118.00	4.24E-001	6.03E-002	5.73	2.89	491.00	112.00	0.23	51.70	6.73	0.26
Lawlor 2												
LAWL2-110	1320.00	40.60	1.03E-001	1.17E-002	4.61	0.16	228.00	39.20	0.17	92.80	7.09	0.22
LAWL2-109	1340.00	37.80	8.72E-002	6.75E-003	4.65	0.14	303.00	177.00	0.59	94.80	6.66	0.22
LAWL2-112	1230.00	55.80	1.44E-001	1.53E-002	4.68	0.26	152.00	51.80	0.34	87.50	-	-
LAWL2-113	1280.00	48.90	9.72E-002	1.92E-002	4.79	0.23	245.00	48.70	0.20	93.50	6.89	0.22
LAWL2-101	1220.00	32.30	1.29E-001	1.16E-002	4.82	0.16	246.00	64.30	0.26	89.50	6.66	0.33
LAWL2-108	1310.00	19.80	7.07E-002	4.83E-003	4.85	0.08	604.00	237.00	0.39	96.90	6.05	0.22
LAWL2-126	1260.00	31.70	1.03E-001	1.36E-002	4.85	0.15	211.00	80.30	0.38	92.80	-	-
LAWL2-117	1290.00	39.60	8.13E-002	1.17E-002	4.88	0.17	299.00	123.00	0.41	95.50	-	-
LAWL2-125	1230.00	22.30	1.11E-001	6.01E-003	4.88	0.10	600.00	148.00	0.25	91.70	-	-
LAWL2-123	1320.00	18.50	5.43E-002	2.71E-003	4.91	0.07	1280.00	608.00	0.47	99.00	-	-
LAWL2-127	1320.00	20.70	5.41E-002	3.75E-003	4.93	0.08	1290.00	811.00	0.63	99.00	-	-
LAWL2-124	1050.00	43.30	2.07E-001	2.33E-002	4.94	0.31	61.70	15.70	0.26	79.40	-	-
LAWL2-116	1300.00	17.70	5.99E-002	3.73E-003	4.97	0.07	1090.00	590.00	0.54	98.20	5.93	0.22
LAWL2-122	1200.00	48.70	1.18E-001	1.48E-002	4.98	0.25	163.00	52.90	0.33	90.90	-	-
LAWL2-114	1260.00	32.30	7.93E-002	6.29E-003	4.99	0.14	341.00	91.60	0.27	95.80	-	-
LAWL2-111	1290.00	18.00	6.25E-002	3.88E-003	4.99	0.07	1630.00	834.00	0.51	97.90	-	-
LAWL2-129	1210.00	35.60	1.06E-001	1.10E-002	5.00	0.17	208.00	45.00	0.22	92.30	-	-
LAWL2-118	1290.00	20.20	5.66E-002	3.52E-003	5.00	0.08	800.00	602.00	0.75	98.70	-	-
LAWL2-100	1220.00	27.10	1.00E-001	1.01E-002	5.02	0.14	318.00	126.00	0.40	93.10	6.40	0.33
LAWL2-102	1250.00	32.80	7.70E-002	8.08E-003	5.03	0.15	278.00	106.00	0.38	96.10	5.80	0.33
LAWL2-128	1250.00	21.00	6.80E-002	4.80E-003	5.09	0.09	485.00	215.00	0.44	97.20	-	-
LAWL2-121	1160.00	34.90	1.21E-001	1.37E-002	5.11	0.20	223.00	77.70	0.35	90.50	-	-
Lawlor2_z2-1	289.00	11.60	6.52E-001	1.46E-002	5.11	1.26	470.00	154.00	0.33	22.50	-	-
Lawlor2_z1-1	1230.00	46.40	7.02E-002	3.18E-003	5.18	0.20	1710.00	785.00	0.46	96.90	-	-
LAWL2-115	1280.00	14.60	4.99E-002	1.42E-003	5.12	0.06	4570.00	3460.00	0.76	99.50	6.18	0.22
LAWL2-119	1240.00	22.10	6.62E-002	4.50E-003	5.13	0.10	1640.00	1290.00	0.79	97.40	-	-
LAWL2-106	1250.00	15.80	5.79E-002	2.77E-003	5.16	0.07	1940.00	1590.00	0.82	98.50	-	-
LAWL2-107	1240.00	15.60	4.95E-002	1.79E-003	5.27	0.07	2720.00	1570.00	0.58	99.60	5.77	0.22
LAWL2-120	1230.00	14.50	4.95E-002	1.75E-003	5.32	0.06	2880.00	2850.00	0.99	99.60	-	-
LAWL2-130	1010.00	27.00	1.53E-001	1.38E-002	5.59	0.21	943.00	407.00	0.43	86.30	-	-
Kilgore												
HS11_21	116.00	4.66	8.10E-001	1.26E-002	1.41	3.63	134.00	53.20	0.40	2.37	-	-
TNP-96-43_g2_s1 **	207.00	22.90	7.95E-001	1.78E-002	1.41	4.65	301.00	174.00	0.58	4.30	-	-
HS11_1	310.00	35.20	6.98E-001	2.35E-002	3.56	3.44	342.00	146.00	0.43	16.70	-	-
2000-17b_g7_s1 **	301.00	18.60	6.94E-001	2.32E-002	3.77	1.87	235.00	105.00	0.45	17.20	-	-
2000-17b_g9_s1 **	284.00	19.80	6.97E-001	1.33E-002	3.90	2.02	463.00	279.00	0.60	16.80	-	-
TNP-9643_g17_s2 **	870.00	47.60	4.06E-001	1.95E-002	4.07	0.48	393.00	245.00	0.62	53.90	-	-
HS10_8 **	1490.00	95.00	1.03E-001	2.21E-002	4.09	0.30	209.00	125.00	0.60	92.70	-	-
TNP-9643_g9_s1 **	1350.00	77.60	1.66E-001	2.21E-002	4.11	0.31	284.00	151.00	0.53	84.60	-	-

HS11_12	657.00	107.00	5.02E-001	5.06E-002	4.18	2.18	263.00	97.70	0.37	41.70	-	-
TNP-96-43_g7 **	463.00	32.80	5.95E-001	2.29E-002	4.24	1.24	196.00	91.00	0.46	29.80	-	-
HS10_1 **	1470.00	113.00	8.32E-002	1.51E-002	4.25	0.35	317.00	217.00	0.69	95.20	-	-
HS10_4 **	1420.00	74.40	1.02E-001	1.56E-002	4.30	0.26	299.00	170.00	0.57	92.80	-	-
HS11_10 **	1410.00	78.70	1.01E-001	1.31E-002	4.33	0.27	426.00	301.00	0.71	93.00	-	-
HS11_17 **	1410.00	36.50	1.03E-001	1.11E-002	4.33	0.13	408.00	202.00	0.50	92.80	-	-
HS11_5 **	1400.00	78.40	1.07E-001	2.10E-002	4.35	0.28	280.00	147.00	0.53	92.10	-	-
2000-17b_g13_s1 **	1310.00	76.60	1.49E-001	1.81E-002	4.36	0.32	207.00	105.00	0.51	86.90	-	-
TNP-9643_g22_s1 **	1300.00	80.30	1.49E-001	1.32E-002	4.37	0.32	515.00	354.00	0.69	86.90	-	-
HS11_3 **	840.00	53.00	3.90E-001	3.46E-002	4.37	0.61	213.00	93.90	0.44	55.80	-	-
HS11_11	1400.00	31.30	9.13E-002	9.64E-003	4.42	0.12	376.00	185.00	0.49	94.20	-	-
HS11_6 **	1420.00	82.60	7.70E-002	9.90E-003	4.44	0.27	621.00	476.00	0.77	96.00	-	-
2000-17b_g17_s1 **	724.00	44.30	4.42E-001	1.38E-002	4.48	0.61	471.00	293.00	0.62	49.40	-	-
TNP-9643_g17_s1 **	1330.00	87.00	1.20E-001	1.75E-002	4.48	0.34	489.00	325.00	0.67	90.60	-	-
HS10_6 **	1400.00	94.40	8.14E-002	1.97E-002	4.50	0.33	286.00	197.00	0.69	95.50	-	-
HS10_2 **	1410.00	83.70	7.55E-002	1.31E-002	4.50	0.28	434.00	282.00	0.65	96.20	-	-
HS11_8	1120.00	28.90	2.27E-001	1.70E-002	4.50	0.19	271.00	128.00	0.47	76.90	-	-
HS11_23	1380.00	37.80	8.77E-002	1.16E-002	4.50	0.14	367.00	173.00	0.47	94.70	-	-
2000-17b_g12_s1 **	1330.00	82.20	1.11E-001	1.33E-002	4.52	0.31	266.00	128.00	0.48	91.70	-	-
HS11_22	1360.00	31.70	9.14E-002	7.31E-003	4.54	0.12	435.00	229.00	0.53	94.20	-	-
TNP-96-43_g8 **	1210.00	179.00	1.73E-001	1.47E-002	4.55	0.83	297.00	204.00	0.69	83.70	-	-
TNP-9643_g14_s1 **	1150.00	75.50	2.01E-001	2.02E-002	4.57	0.41	303.00	252.00	0.83	80.20	-	-
HS11_8 **	1390.00	85.10	7.04E-002	1.00E-002	4.57	0.29	541.00	411.00	0.76	96.90	-	-
HS11_13	1220.00	49.10	1.63E-001	2.02E-002	4.58	0.27	239.00	118.00	0.50	85.10	-	-
HS10_10 **	1300.00	85.90	1.19E-001	1.59E-002	4.59	0.34	315.00	165.00	0.52	90.60	-	-
HS11_14	1340.00	35.70	9.47E-002	1.17E-002	4.59	0.15	467.00	228.00	0.49	93.80	-	-
HS11_18	1230.00	29.70	1.55E-001	7.65E-003	4.60	0.14	428.00	238.00	0.56	86.10	-	-
2000-17b_g4_s1 **	1240.00	75.70	1.51E-001	1.24E-002	4.60	0.33	251.00	130.00	0.52	86.60	-	-
HS11_2	1360.00	33.60	7.86E-002	9.58E-003	4.62	0.13	388.00	207.00	0.53	95.80	-	-
HS11_9 **	1340.00	80.00	8.80E-002	1.69E-002	4.63	0.30	256.00	277.00	1.09	94.60	-	-
HS11_15	1320.00	40.30	1.01E-001	9.09E-003	4.64	0.17	376.00	203.00	0.54	93.00	-	-
2000-17b_g11_s1 **	1220.00	89.80	1.45E-001	1.01E-002	4.68	0.40	432.00	262.00	0.61	87.30	-	-
HS11_20	1350.00	30.50	7.45E-002	6.12E-003	4.69	0.11	485.00	281.00	0.58	96.40	-	-
HS11_7 **	1330.00	83.90	8.37E-002	1.68E-002	4.70	0.32	462.00	235.00	0.51	95.20	-	-
2000-17b_g5_s2r **	1270.00	93.90	1.15E-001	6.90E-003	4.70	0.38	423.00	238.00	0.56	91.20	-	-
TNP-9643_g11_s1 **	1300.00	66.80	9.67E-002	8.20E-003	4.71	0.26	508.00	361.00	0.71	93.50	-	-
HS11_1 **	1360.00	65.10	6.58E-002	9.84E-003	4.72	0.24	577.00	406.00	0.70	97.50	-	-
HS11_2 **	1370.00	84.60	5.69E-002	9.14E-003	4.73	0.30	516.00	372.00	0.72	98.60	-	-
HS11_19	1340.00	29.20	6.87E-002	8.04E-003	4.76	0.12	643.00	358.00	0.56	97.10	-	-
HS11_16	1290.00	36.00	9.18E-002	9.00E-003	4.79	0.15	380.00	173.00	0.46	94.20	-	-
2000-17b_g5_s1 **	1230.00	95.30	1.23E-001	1.14E-002	4.81	0.41	393.00	226.00	0.58	90.20	-	-
2000-17b_g6_s1 **	1240.00	100.00	1.19E-001	1.87E-002	4.81	0.44	247.00	109.00	0.44	90.70	-	-
HS10_7 **	1340.00	94.30	5.74E-002	8.86E-003	4.84	0.34	688.00	282.00	0.41	98.50	-	-
HS11_4 **	1280.00	86.80	8.08E-002	1.71E-002	4.92	0.36	199.00	106.00	0.53	95.50	-	-
HS10_5 **	1300.00	62.90	6.30E-002	1.37E-002	4.95	0.26	407.00	289.00	0.71	97.80	-	-
HS10_9 **	1280.00	65.40	5.88E-002	1.34E-002	5.06	0.27	566.00	310.00	0.55	98.40	-	-
TNP-96-43_g1_s1 **	1170.00	137.00	1.23E-001	8.90E-003	5.06	0.66	574.00	387.00	0.67	90.20	-	-

HS10_3 **	657.00	52.30	4.28E-001	4.42E-002	5.08	1.16	356.00	233.00	0.65	50.90	-	-
TNP-96-43_g5 **	1200.00	212.00	9.91E-002	1.02E-002	5.10	0.96	384.00	233.00	0.61	93.20	-	-
TNP-96-43_g6 **	1120.00	162.00	8.93E-002	8.90E-003	5.54	0.84	444.00	195.00	0.44	94.50	-	-

** Watts et al., 2011, and references therein

Pre-Kilgore

HS14-4 **	1090.00	74.50	2.82E-001	3.96E-002	4.23	0.50	174.00	62.90	0.36	69.70	1.96	0.22
HS14-3 **	1370.00	91.60	1.11E-001	1.78E-002	4.40	0.34	307.00	190.00	0.62	91.70	1.06	0.22
HS14-21	1180.00	50.40	1.93E-001	2.73E-002	4.52	0.32	113.00	40.20	0.36	81.20	2.73	0.18
HS14-14	1270.00	36.60	1.36E-001	1.78E-002	4.57	0.18	172.00	71.00	0.41	88.50	2.99	0.21
HS14-10 **	1380.00	68.00	5.92E-002	5.41E-003	4.68	0.23	1800.00	942.00	0.52	98.30	5.03	0.22
HS14-6 **	966.00	75.00	2.77E-001	3.33E-002	4.78	0.59	179.00	95.00	0.53	70.30	2.45	0.22
HS14-5 **	1260.00	85.20	9.02E-002	2.00E-002	4.90	0.37	398.00	238.00	0.60	94.30	0.92	0.22
HS14-2	1230.00	30.10	1.00E-001	5.45E-003	4.95	0.13	413.00	322.00	0.78	93.10	1.29	0.18
HS14-8 **	1250.00	72.00	8.95E-002	1.26E-002	4.96	0.31	377.00	211.00	0.56	94.40	5.45	0.22
HS14-19	1200.00	39.70	1.15E-001	1.30E-002	4.98	0.20	185.00	169.00	0.92	91.10	5.52	0.18
HS14-1	1210.00	46.40	1.05E-001	1.53E-002	5.01	0.23	183.00	95.10	0.52	92.40	-	-
HS14-11	1180.00	38.70	1.20E-001	1.43E-002	5.01	0.21	132.00	67.80	0.51	90.50	2.52	0.21
HS14-2 **	1270.00	67.30	6.52E-002	1.14E-002	5.03	0.28	440.00	350.00	0.80	97.50	-	-
HS14-9 **	1280.00	72.80	5.72E-002	1.31E-002	5.07	0.30	374.00	168.00	0.45	98.60	4.96	0.22
HS14-22	1210.00	38.30	9.49E-002	1.30E-002	5.10	0.19	254.00	108.00	0.43	93.80	0.58	0.18
HS14-13	1210.00	34.00	9.03E-002	1.23E-002	5.11	0.17	257.00	117.00	0.46	94.40	0.44	0.21
HS14-17	1190.00	30.40	9.65E-002	1.25E-002	5.13	0.16	229.00	93.60	0.41	93.60	1.61	0.18
HS14-15	983.00	58.20	2.26E-001	3.68E-002	5.14	0.52	54.50	13.90	0.26	77.00	4.25	0.21
HS14-16	1130.00	43.30	1.31E-001	1.17E-002	5.16	0.24	182.00	89.80	0.49	89.20	2.06	0.21
HS14-7 **	1250.00	57.90	5.43E-002	3.51E-003	5.19	0.24	4570.00	2940.00	0.64	99.00	0.89	0.22
HS14-24	1150.00	36.70	1.11E-001	1.34E-002	5.21	0.21	208.00	90.30	0.44	91.80		
HS14-20	1190.00	41.20	8.69E-002	6.20E-003	5.22	0.19	339.00	157.00	0.46	94.80	1.29	0.18
HS14-23	1150.00	33.80	1.06E-001	9.75E-003	5.24	0.18	196.00	84.90	0.43	92.30	1.88	0.18
HS14-12	1210.00	64.60	6.95E-002	7.24E-003	5.26	0.29	630.00	202.00	0.32	97.00	0.70	0.08

** Watts et al., 2011

Neroly

Neroly_r6-14	324.00	18.10	4.17E-001	2.44E-002	10.50	1.41	303.00	115.00	0.38	52.50	-	-
Neroly_r5-16	564.00	19.30	1.10E-001	9.01E-003	10.60	0.41	401.00	115.00	0.29	91.90	-	-
Neroly_r4-13	522.00	20.80	1.58E-001	1.50E-002	10.70	0.56	385.00	86.10	0.22	85.70	-	-
Neroly_r5-4	502.00	19.30	1.71E-001	9.03E-003	10.90	0.52	518.00	119.00	0.23	84.10	-	-
Neroly_r4-8	528.00	17.30	1.29E-001	7.34E-003	11.00	0.42	701.00	153.00	0.22	89.40	-	-
Neroly_r7-2	531.00	20.80	1.19E-001	8.26E-003	11.10	0.49	406.00	107.00	0.27	90.70	-	-
Neroly_R8-7	551.00	10.60	8.66E-002	7.34E-003	11.20	0.25	352.00	153.00	0.44	94.80	-	-
Neroly_r6-7	560.00	17.70	7.31E-002	5.37E-003	11.20	0.37	432.00	90.80	0.21	96.60	-	-
Neroly_R9-9	521.00	9.27	1.25E-001	8.27E-003	11.20	0.25	643.00	120.00	0.19	90.00	-	-
Neroly_R9-2	531.00	8.03	8.67E-002	3.95E-003	11.60	0.19	869.00	303.00	0.35	94.80	-	-
Neroly_r7-1	491.00	17.90	1.40E-001	8.94E-003	11.60	0.51	491.00	107.00	0.22	88.00	-	-
Neroly_r4-11	451.00	15.20	1.94E-001	7.22E-003	11.70	0.51	376.00	77.30	0.21	81.10	-	-
Neroly_r6-13	398.00	13.50	2.61E-001	1.12E-002	11.80	0.60	499.00	116.00	0.23	72.60	-	-
Neroly_r6-3	429.00	17.50	1.97E-001	1.77E-002	12.20	0.69	231.00	93.50	0.41	80.70	-	-

Neroly_r6-17	347.00	20.00	3.11E-001	2.47E-002	12.40	1.37	286.00	70.40	0.25	66.10	-	-
Neroly_r5-19	421.00	17.80	1.88E-001	1.16E-002	12.60	0.70	366.00	92.50	0.25	81.80	-	-
Neroly_r4-7	399.00	14.30	2.04E-001	7.24E-003	13.00	0.61	767.00	206.00	0.27	79.80	-	-
Neroly_r5-2	297.00	21.20	2.78E-001	5.54E-002	15.40	2.44	337.00	80.70	0.24	70.40	-	-
Neroly_R8-6	267.00	3.97	5.58E-002	2.67E-003	23.90	0.37	621.00	394.00	0.63	98.80	-	-
Neroly_R7-5	257.00	7.14	5.42E-002	3.36E-003	24.90	0.70	298.00	92.20	0.31	99.00	-	-
Neroly_r6-9	248.00	7.50	5.15E-002	1.24E-003	25.70	0.78	2680.00	594.00	0.22	99.40	-	-
Neroly_R8-8	248.00	3.55	5.41E-002	2.26E-003	25.80	0.39	1090.00	379.00	0.35	99.00	-	-
Neroly_r6-6	237.00	7.17	5.88E-002	2.30E-003	26.90	0.83	649.00	466.00	0.72	98.40	-	-
Neroly_r6-10	207.00	5.32	6.01E-002	2.07E-003	30.40	0.78	1120.00	232.00	0.21	98.30	-	-
Neroly_r6-11	157.00	4.99	5.07E-002	3.41E-003	40.70	1.30	285.00	78.10	0.27	99.50	-	-
Neroly_R9-6	127.00	2.31	6.97E-002	3.41E-003	47.00	1.52	203.00	112.00	0.55	97.10	-	-
Neroly_r5-17	135.00	4.27	6.01E-002	3.23E-003	47.10	1.50	1580.00	187.00	0.12	98.30	-	-
Neroly_R8-2	128.00	2.79	7.84E-002	5.06E-003	47.90	1.72	118.00	48.80	0.41	96.00	-	-
Neroly_r6-15	116.00	3.65	1.26E-001	2.57E-003	50.20	1.62	519.00	119.00	0.23	89.90	-	-
Neroly_r6-12	106.00	5.40	7.42E-002	1.90E-003	58.10	2.95	1040.00	499.00	0.48	96.50	-	-
Neroly_r4-3	81.20	2.47	1.20E-001	1.59E-002	72.00	2.63	479.00	13.40	0.03	90.70	-	-
Neroly_R8-1	87.60	1.15	4.95E-002	9.57E-004	73.20	0.96	1610.00	752.00	0.47	99.70	-	-
Neroly_r7-9	78.30	2.84	5.98E-002	1.60E-003	80.50	2.91	2170.00	646.00	0.30	98.40	-	-
Neroly_r4-5	74.30	2.40	5.11E-002	9.56E-004	86.20	2.77	916.00	304.00	0.33	99.60	-	-
Neroly_r7-13	72.80	2.22	5.11E-002	1.37E-003	87.00	2.66	1290.00	527.00	0.41	99.60	-	-
Neroly_r7-10	70.90	2.20	4.84E-002	1.47E-003	90.00	2.78	2010.00	332.00	0.17	99.90	-	-
Neroly_r5-5	69.20	2.30	6.42E-002	1.64E-003	90.60	2.99	548.00	82.70	0.15	97.90	-	-
Neroly_R9-10	70.20	1.00	4.79E-002	1.12E-003	90.80	1.29	825.00	248.00	0.30	100.00	-	-
Neroly_r4-10	66.60	2.04	4.84E-002	8.28E-004	95.80	2.92	1030.00	538.00	0.52	99.90	-	-
Neroly_r5-3	65.60	2.10	5.07E-002	1.48E-003	96.80	3.09	690.00	238.00	0.35	99.70	-	-
Neroly_r6-1	62.10	2.09	6.15E-002	1.31E-003	97.30	3.45	2020.00	854.00	0.42	98.30	-	-
Neroly_r5-20	64.40	3.04	6.34E-002	1.47E-003	97.40	4.58	1820.00	179.00	0.10	98.00	-	-
Neroly_r5-8	65.10	1.89	5.16E-002	9.24E-004	98.20	2.84	1430.00	357.00	0.25	99.50	-	-
Neroly_r7-17	64.30	1.89	4.99E-002	1.57E-003	99.00	2.89	760.00	135.00	0.18	99.80	-	-
Neroly_r7-14	63.60	1.81	5.26E-002	1.02E-003	99.70	2.84	1580.00	904.00	0.57	99.40	-	-
Neroly_r6-8	63.30	2.25	5.67E-002	1.05E-003	100.00	3.54	1110.00	213.00	0.19	98.90	-	-
Neroly_R9-3	60.80	0.69	5.07E-002	1.64E-003	105.00	1.20	865.00	374.00	0.43	99.70	-	-
Neroly_r5-6	59.00	2.38	7.46E-002	1.50E-003	105.00	4.21	669.00	149.00	0.22	96.60	-	-
Neroly_r7-5	59.40	1.90	5.18E-002	1.54E-003	106.00	3.40	626.00	164.00	0.26	99.50	-	-
Neroly_r5-18	59.50	1.77	4.91E-002	7.47E-004	107.00	3.17	2210.00	729.00	0.33	99.90	-	-
Neroly_r4-2	58.40	2.06	5.64E-002	1.65E-003	109.00	3.82	290.00	79.30	0.27	98.90	-	-
Neroly_r6-5	58.70	1.75	4.85E-002	1.17E-003	109.00	3.22	863.00	51.50	0.06	100.00	-	-
Neroly_r6-4	57.40	1.71	5.72E-002	1.11E-003	110.00	3.24	808.00	304.00	0.38	98.90	-	-
Neroly_R7-2	55.70	0.83	5.29E-002	1.56E-003	114.00	1.76	368.00	75.90	0.21	99.40	-	-
Neroly_R9-1	54.90	0.65	5.35E-002	7.06E-004	115.00	1.38	1160.00	833.00	0.72	99.30	-	-
Neroly_r5-7	53.20	1.80	5.48E-002	1.40E-003	119.00	4.00	595.00	183.00	0.31	99.20	-	-
Neroly_r4-4	53.30	1.57	5.31E-002	2.05E-003	119.00	3.49	466.00	94.00	0.20	99.40	-	-
Neroly_r7-16	44.90	1.45	5.35E-002	2.24E-003	141.00	4.57	234.00	78.50	0.34	99.40	-	-
Neroly_r7-6	43.60	1.36	5.72E-002	1.87E-003	145.00	4.48	528.00	179.00	0.34	98.90	-	-
Neroly_R9-5	41.80	0.75	6.48E-002	1.86E-003	149.00	2.81	478.00	153.00	0.32	98.00	-	-
Neroly_r7-4	40.40	1.21	4.99E-002	9.94E-004	157.00	4.67	767.00	142.00	0.19	99.90	-	-

Neroly_r6-16	39.00	1.22	5.55E-002	9.41E-004	162.00	5.02	836.00	103.00	0.12	99.20	-	-
Neroly_R8-5	39.00	0.57	5.09E-002	1.27E-003	163.00	2.37	348.00	255.00	0.73	99.80	-	-
Neroly_r7-8	35.50	1.29	5.15E-002	1.32E-003	178.00	6.36	1080.00	142.00	0.13	99.80	-	-
Neroly_r5-11	10.10	0.41	6.66E-002	6.86E-004	1400.00	27.30	820.00	164.00	0.20	99.10	-	-
Neroly_r5-1	3.38	0.12	9.63E-002	2.38E-004	1460.00	33.20	893.00	343.00	0.38	101.00	-	-
Neroly_r5-14	3.50	0.13	1.03E-001	8.38E-004	1630.00	46.00	283.00	212.00	0.75	99.50	-	-
	$^{238}U/^{206}Pb$	**1 s.e.**	**$^{207}Pb^*/^{206}Pb^*$**	**1 s.e.**	**$^{206}Pb/^{238}U$ age [Ma]**	**±1σ [Ma]**	**U ppm**	**Th ppm**	**Th/U**	**% $^{206}Pb^*$**	**$d^{18}O$ ‰**	**±1σ**