## DR2004017

TABLE DR-1. FISSION TRACK SAMPLE LOCALITY, COUNTING, AND AGE DATA

Sample	Irradiation	Latitude	Longitude	Paleo-	Elev.	No	Sponta	neous	Induc	ed	$P(\chi^2)$	Dosim	eter	Age ± 1σ
number	number	(°N)	(°W)	depth(m)	(m)	xls	Rho-S	NS	Rho-I	NI	(%)	Rho-D	ND	(Ma)
Santa Rosa S														
JC00-SR4	SU058-15	41º 34' 50"	117º 37' 30"	952	7260	35	0.3157	901	1.1107	3170	41.6	1.4790	4065	75.2 ± 3.4
JC00-SR9	SU055-11	41° 34' 08"	117º 39' 13"	1592	7060	30	0.4029	766	1.4168	2694	0.0	1.3733	3877	70.1 ± 4.6
JC00-SR13	SU058-16	41° 34' 49"	117° 40' 48"	1837	8360	29	0.2556	668	1.2556	3281	7.9	1.4790	4065	52.8 ± 3.0
JC00-SR15	SU055-13	41° 34' 50"	117º 41' 44"	2370	8160	36	0.3568	727	1.6986	3461	44.6	1.4065	3877	52.9 ± 2.5
Sawtooth Sto														
JC00-SR17	SU055-14	41° 34' 49"	117° 43' 53"	3360	7240	24	0.1340	211	3.5249	5551	9.1	1.4065	3877	9.6 ± 0.8
JC00-SR19	SU055-15	41° 35' 01"	117° 44' 55"	4275	5120	28	0.0660	95	2.2889	3293	66.7	1.4286	3877	7.4 ± 0.8
JC00-SR22	SU055-16	41° 34' 55"	117° 45' 08"	4427	5340	31	0.1584	210	4.9602	6577	82.6	1.4286	3877	8.2 ± 0.6
JC00-SR29	SU055-17	41° 34' 01"	117° 45' 34"	4732	4880	29	0.0602	102	2.4349	4128	30.1	1.4508	3877	6.4 ± 0.8
JC01-SR50	SU058-17	41° 34' 44"	117º 44' 01"	3421	7200	32	0.1098	243	2.7024	5979	0.2	1.4930	4065	11.2 ± 0.9
JC01-SR51	SU058-18	41° 34' 44"	117° 44' 17"	3543	7160	35	0.1111	202	2.8655	5209	9.6	1.4930	4065	10.2 ± 0.9
JC01-SR52	SU058-19	41° 34' 56"	117° 44' 30"	3833	6500	27	0.0897	93	1.8827	1951	90.0	1.5080	4065	12.0 ± 1.5
Andorno Stock														
JC00-SR49	SU055-18	41° 26' 08"	117º 45' 31"	3100	5250	30	0.1007	167	1.6299	2703	10.9	1.4508	3877	15.4 ± 1.6
Northern Pine Forest Range														
JC00-PF1	SU055-19	41º 46' 11"	118º 35' 27"		4840	35	0.0326	63	1.0069	1944	44.7	1.4116	3877	8.2 ± 1.0
JC01-PF2	SU058-01	41° 45' 36"	118º 35' 41"		4760	36	0.0597	130	1.3635	2969	36.2	1.3818	4065	10.9 ± 1.0

*Note:* Abbreviations are: No xls, number of individual crystals (grains) dated; Rho-S, spontaneous track density (x  $10^6$  tracks per square centimeter); NS, number of spontaneous tracks counted; Rho-I, induced track density in external detector (muscovite) (x  $10^6$  tracks per square centimeter); NI, number of induced tracks counted; P( $\chi^2$ ),  $\chi^2$  probability (Galbraith, 1981; Green, 1981); Rho-D, induced track density in external detector adjacent to dosimetry glass (x  $10^6$  tracks per square centimeter); ND, number of tracks counted in determining Rho-D. Age is the sample central fission track age (Galbraith and Laslett, 1993), calculated using zeta calibration method (Hurford and Green, 1983). Analyst: J. P. Colgan.

The following is a summary of key laboratory procedures. Apatites were etched for 20 s in 5N nitric acid at room temperature. Grains were dated by external detector method with muscovite detectors. Samples were irradiated in well thermalized positions of Oregon State University reactor. CN5 dosimetry glasses with muscovite external detectors were used as neutron flux monitors. External detectors were etched in 48% HF. Tracks counted with Zeiss Axioskop microscope with 100x air objective, 1.25x tube factor, 10x eyepieces, transmitted light with supplementary reflected light as needed; external detector prints were located with Kinetek automated scanning stage (Dumitru, 1993). Only grains with c axes subparallel to slide plane were dated. Ages calculated using zeta calibration factor of 359.8. Confined tracks lengths were measured only in apatite grains with c axes subparallel to slide plane; only horizontal tracks measured (within  $\pm \infty$ -510°), following protocols of Laslett and others (1982). Lengths were measured along with carks to the grains' c-axes and the Dpar track entrace diameter, following protocols of Ketcham and others (1999, 2000); confined tracks by surface tracks and by cleavage surfaces were both measured. Age calculations were done with program by J. P. Colgan.

## DATA TABLE REFERENCES

Dumitru, T.A., 1993, A new computer-automated microscope stage system for fission-track analysis: Nuclear Tracks and Radiation Measurements, v. 21, p. 575-580.

Galbraith, R.F., 1981, On statistical models for mixed fission-track ages: Nuclear Tracks and Radiation Measurements, v. 5, p. 471-478.

Galbraith, R.F., and Laslett, G.M., 1993, Statistical models for mixed fission-track ages: Nuclear Tracks and Radiation Measurements, v. 21, p. 459-470

Green, P.F., 1981, A new look at statistics in fission-track dating: Nuclear Tracks and Radiation Measurements, v. 5, p. 77-86.

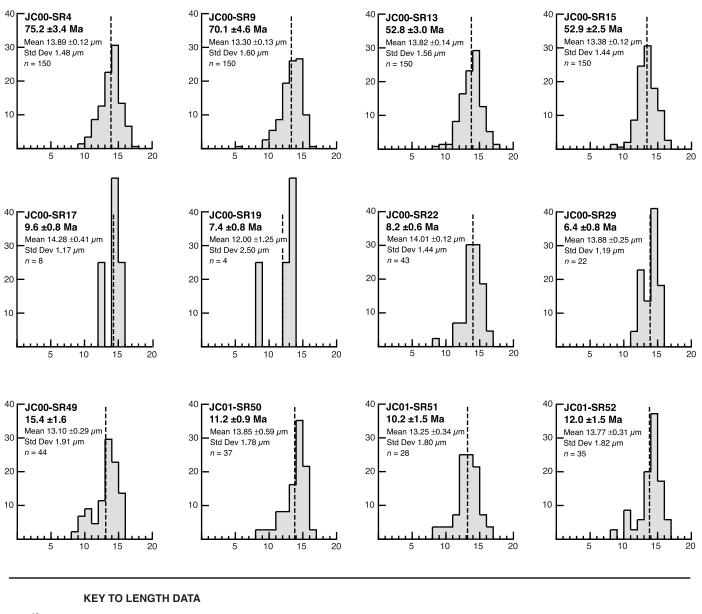
Hurford, A.J., and Green, P.F., 1983, The zeta age calibration in fission-track dating: Chemical Geology, v. 41, p. 285-317.

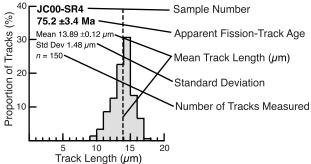
Ketcham, R.A., Donelick, R.A., and Carlson, W.D., 1999, Variability of apatite fission-track annealing kinetics. 3. Extrapolation to geological time scales: American Mineralogist, v. 84, p. 1235-1255.

Ketcham, R.A., Donelick, R.A., and Donelick, M.B., 2000, AFTSolve: A program for multi-kinetic modeling of apatite fission-track data: Geological Materials Research, v. 2, p. 1-32 (an entirely electronic journal at http://gmr.minsocam.org/papers/v2/2n1/v2n1abs.html)

Laslett, G.M., Kendall, W.S., Gleadow, A.J.W., and Duddy, I.R., 1982, Bias in the measurements of fission-track length distributions: Nuclear Tracks and Radiation Measurements, v. 6, p. 79-85.

## Colgan and others, Northwestern Nevada, Table DR-1 for data repository





Colgan and others, Northwestern Nevada, Figure DR-1 for data repository