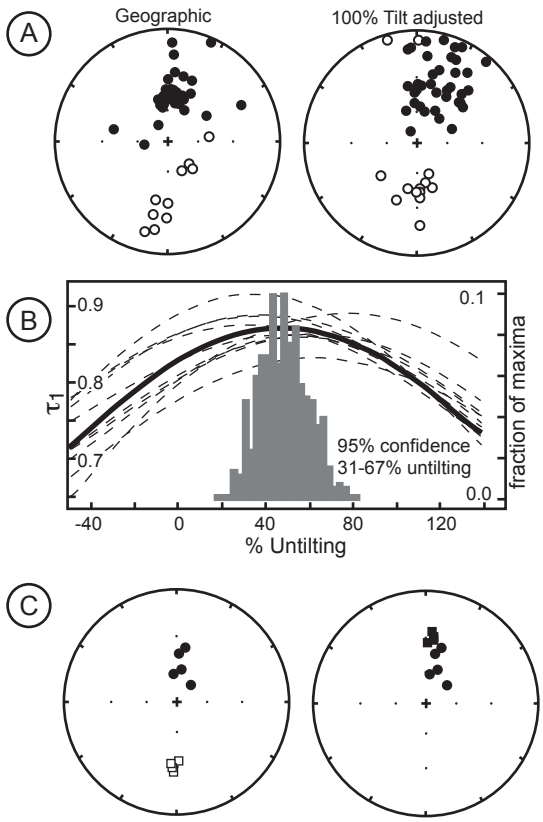
DATA REPOSITORY TABLE DR1: PALEOMAGNETIC SITE MEANS

Site	Latitude (˚N)	Longitude (˚W)	Dec (in situ)	Inc (in situ)	k	n	α_{95}	Bedding strike	Bedding dip	Rotation (˚)
1	36.268	121.435	4.1	22.9	176.0	7	4.6	107	31	9.7
2	36.268	121.435	10.8	54.2	30.2	5	14.1	114	29	6.0
6	36.267	121.435	13.7	47.8	44.0	6	10.2	102	40	34.8
7	36.206	121.277	6.3	38.6	103.0	4	9.1	314	44	22.0
8	36.211	121.279	359.5	60.2	62.1	6	8.6	328	42	35.8
10	36.158	120.864	352.6	56.8	36.6	4	15.4	305	5	7.8
14	36.231	121.281	358.4	51.2	107.3	5	7.4	294	31	13.6
16	35.776	120.889	154.1	-23.7	43.9	6	10.2	317	2	11.5
17	35.776	120.889	191.9	-44.2	333.4	6	3.7	146	17	-9.8
20	35.856	121.056	24.4	51.4	142.9	6	5.6	146	17	4.8
21	35.855	121.056	16.0	54.2	206.0	6	4.7	278	9	21.2
22	35.855	121.056	7.7	51.9	222.3	6	4.5	308	22	23.1
23	35.855	121.056	15.4	61.4	117.6	6	6.2	335	17	38.2
25	35.987	121.012	359.4	59.4	203.1	7	4.2	158	2	-8.6
26	35.987	121.012	13.2	60.7	64.4	6	8.4	166	5	11.2
29	35.801	120.883	348.6	63.1	20.2	5	17.5	021	25	-37.2
31	35.801	120.884	63.3	27.1	19.0	7	14.2	248	73	35.9
42	35.900	120.958	327.2	76.5	26.3	6	13.3	275	65	3.1
44	35.986	121.019	0.7	42.8	30.0	6	12.4	044	6	0.4
46	35.996	121.070	345.9	58.8	24.2	5	15.9	025	16	-9.2
47	36.012	121.042	333.1	68.9	18.1	5	18.5	265	10	-26.6
50	35.956	121.002	351.2	63.7	54.8	4	12.5	148	27	-68.4
52	36.013	121.074	10.3	59.0	114.7	3	11.6	012	34	49.4
58	36.212	121.224	0.5	56.5	193.4	6	4.8	131	13	-11.8
60	36.272	121.323	16.9	60.5	49.8	6	9.6	325	42	42.4
61	36.215	121.281	353.2	64.2	122.3	6	6.1	029	36	2.1
62	36.202	121.276	25.0	64.2	68.2	5	9.3	295	45	31.6
63	36.228	121.280	263.3	72.1	171.7	7	4.6	287	47	-1.1
65	36.095	121.164	356.3	58.1	96.7	7	6.2	277	60	8.0
66	36.076	121.180	20.9	57.6	88.7	6	7.2	004	24	54.1
68	36.106	121.138	22.8	-6.2	118.0	3	11.4	120	25	17.6
72	36.038	121.288	11.0	61.5	70.8	3	14.8	235	71	-19.7
74	35.893	121.090	4.5	-6.5	42.4	3	19.2	026	44	1.0
77	35.963	121.210	24.1	2.8	63.1	3	15.6	026	21	20.4
80	35.671	120.964	180.1	-46.3	42.8	3	17.1	260	17	-6.6
82	35.676	120.935	1.1	48.3	80.2	3	13.9	140	21	18.6
88	35.911	121.175	22.3	40.5	154.6	3	9.9	028	11	36.5

118	36.251	121.430	282.4	49.0	319.3	3	6.9	322	56	-5.0
120	36.262	121.396	181.4	-57.8	408.8	3	6.1	102	22	-8.0
121	36.262	121.396	191.5	-56.5	749.8	3	4.5	102	22	6.5
122	35.988	121.246	84.0	-21.4	325.6	3	6.8	304	55	-7.5
124	35.994	121.283	216.9	-66.0	126.3	3	11.0	288	70	36.2
125	35.994	121.283	358.4	-33.8	889.0	6	2.2	294	65	43.2
130	35.611	120.740	6.7	54.3	550.9	5	3.3	048	16	24.7
132	35.617	120.768	56.2	56.1	98.7	6	6.8	294	12	44.3
133	35.583	120.771	356.3	60.5	169.8	3	9.5	313	61	17.0
135	35.621	120.747	2.2	11.5	58.7	3	16.2	054	35	8.8
138	35.956	121.202	194.4	-72.4	57.3	4	12.2	090	28	14.6
140	35.957	121.206	188.6	-68.6	239.2	5	2.2	112	33	-3.8
141	35.823	120.948	13.8	39.8	186.6	4	6.7	068	13	17.3
154	35.656	120.895	216.8	-65.9	41.2	3	19.4	115	11	33.3
158	35.962	120.653	6.1	58.0	49.4	7	8.7	345	24	26.5
160	36.013	120.649	12.9	55.1	33.3	6	11.8	232	7	-1.8
162	35.972	120.647	4.3	51.6	157.6	3	9.9	252	6	-3.1
169	36.232	121.460	138.9	-27.6	90.4	3	13.0	301	15	-24.7
170	36.232	121.460	136.9	-22.2	117.1	4	8.5	308	17	-15.6
177	36.266	121.359	3.4	53.8	43.9	4	14.0	000	44	40.0

DATA REPOSITORY TABLE DR2: TILT CORRECTED SITE MEANS

Sites in group	Dec (tilt corrected)	Inc (tilt corrected)	k	N	α_{95}	Rotation angle	Rotation error
1, 2, 6	358.6	74.4	18.8	3	19.3	-6.2	41.0
60, 120, 121, 177	30.2	41.4	15.2	4	20.3	25.4	22.3
7, 8, 14, 61-63, 65, 66	15.2	24.7	12.3	8	16.4	10.4	14.8
77, 122, 125, 138, 140	18.6	42.6	10.4	5	24.9	13.8	28.1
20-23, 88	17.5	52.0	89.7	5	8.1	12.7	11.1
16, 17, 29	347.3	52.6	32.2	3	22.8	-17.5	30.8
158, 162	9.3	52.7	21.4	2	27.3	4.4	39.5
80, 82, 154	18.8	41.2	12.6	3	36.3	14.0	41.6
130, 132, 133, 135	27.2	19.1	10.0	4	30.6	22.4	32.9
25, 26, 42, 44, 47, 50	349.8	53.3	20.2	6	12.0	-15.0	28.4



Titus et al. - Data Repository Figure DR1. Additional paleomagnetic results. (A) Stereographic projections showing the results of the tilt test for all 57 “A” quality sites adjacent to the Rinconada fault as in situ (left) and tilt-corrected (right). (B) Graph demonstrating that these 57 sites peak at ~40% untilting during the Tauxe and Watson (1994) tilt test. Both (A) and (B) demonstrate that taken together, the 57 sites fail the tilt test. See main text for subset of reversed sites that clearly pass the tilt test at 100% untilting. (C) Example of the reversal test for two nearby sites showing that reverse sites on the left (in white) match normal sites when their direction is reversed.