DATA REPOSITORY ITEM

APPENDIX A - PALEOMAGNETIC METHODS AND RESULTS

Samples were cored in the field or collected as oriented blocks and cored in the laboratory. Pilot samples were subjected to progressive thermal and alternating field (AF) demagnetization. Thermal demagnetization proved more reliable and the remaining samples were thermally demagnetized to a peak temperature of 575 _C. Pilot AF experiments were made on several sandstone samples using procedures similar to those of Panuska (1985) to assess the reliability of the paleomagnetic results from that earlier study.

Remanence measurements were made at the University of Michigan on a three-axis cryogenic magnetometer housed in a magnetically shielded room with a peak ambient field of < 600 nT. Remanence components isolated during demagnetization were determined from visual inspection of linear segments on vector end-point diagrams (Zijderveld, 1967). Component directions were determined from a least squares fit of the observed linear trajectories (e.g., Kirschvink, 1980). Sample directions were combined to site means using simple vector addition, giving unit weight to each sample direction. Statistical parameters were calculated using the method of Fisher (1953). The fold test (Graham, 1949; McElhinny,1964; McFadden and Jones,1981) was used to establish the relative age of the magnetization.

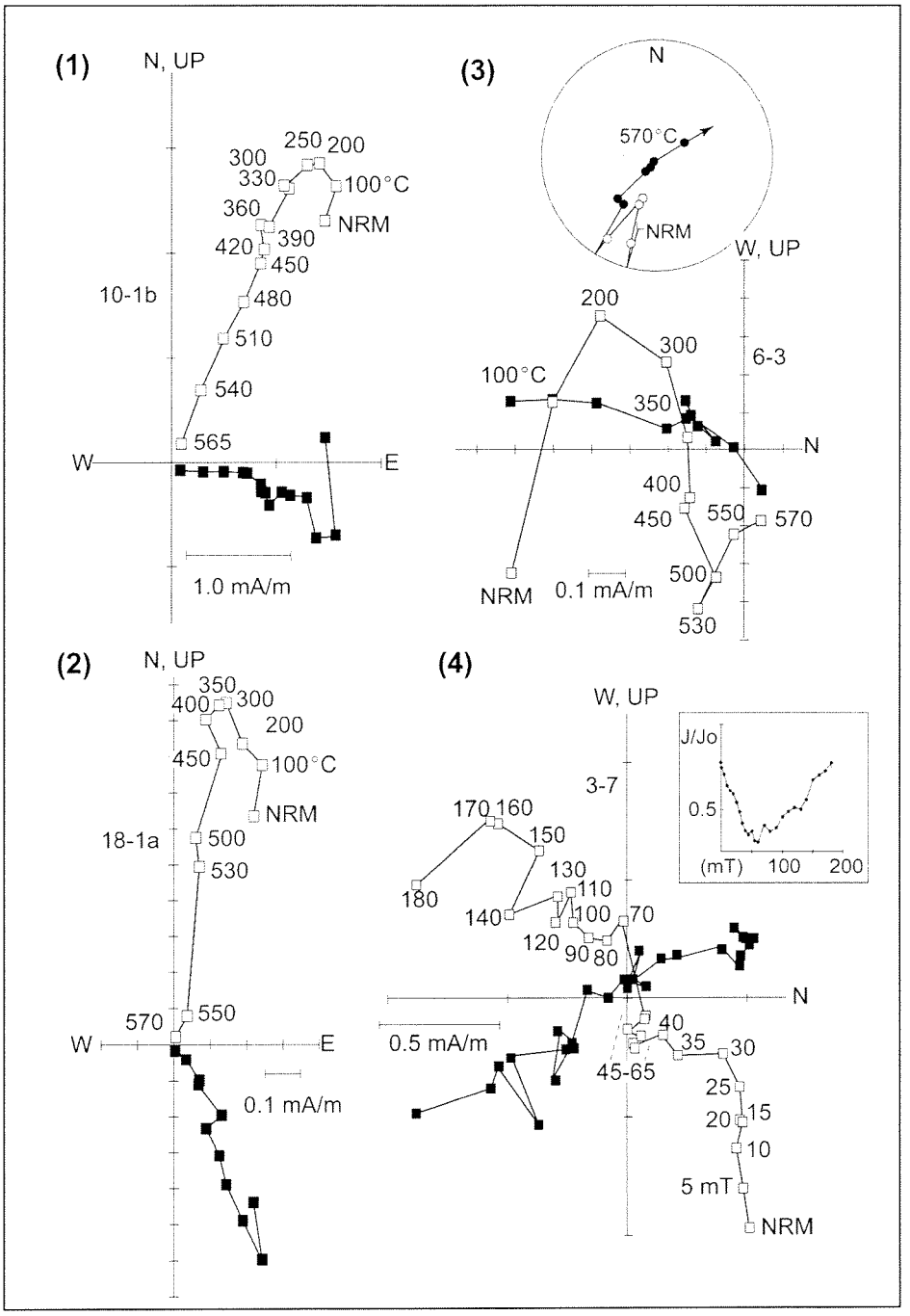

Figure A. Sample vector end-point diagrams showing thermal and alternating field demagnetization in in situ coordinates. Open and closed symbols are projections onto vertical and horizontal planes, respectively. NRM is natural remanent magnetization. Diagrams (1) and (2) show demagnetization of typical tuff samples. Diagrams (3) and (4) show demagnetization of typical lithic arkosic sandstone samples. Inset in (3) is equal-angle projection of demagnetization showing remagnetization-circle trend. Inset in (4) shows relative change in magnetization intensity as function of alternating field intensity.

TABLE A. PALEOMAGNETIC DATA FROM THE MACCOLL RIDGE FORMATION, ALASKA

Site	Lith.	n/N	S/D	D_g	I_g	D_s	I_s	k	α_{95}	ϕ	θ
1	VC	4/8	124/40	189	-43	137	-72	11.7	28	136	68
2	Tuff	4/9	124/40	(017)	(-80)	(28)	(-39)	(5.1)	(46)	-	-
3	SS	0/7	120/40	-	-	-	-	-	-	-	-
4	Tuff	8/8	95/16	144	-58	118	-68	19.6	13	139	56
5	SS	3/8	95/16	155	-68	112	-79	34.0	22	172	62
6	SS	0/8	95/16	-	-	-	-	-	-	-	-
7	Tuff	8/8	150/20	187	-73	117	-73	17.4	14	151	60
8	Tuff	5/5	150/20	159	-73	106	-66	41.0	12	145	48
9	SS	0/6	271/05	-	-	-	-	-	-	-	-
10	Tuff	8/9	271/05	119	-56	125	-53	30.6	10	115	46
11	Tuff	10/10	271/05	103	-73	118	-72	20.2	11	148	59
12	VC	6/9	Horz.	178	-61	179	-61	21.5	15	40	71
13	VC	9/15	Horz.	152	-60	153	-60	19.1	12	89	64
14	Tuff	6/7	Horz.	123	-59	125	-59	18.1	16	120	51
15	Tuff	7/7	Horz.	165	-65	166	-64	21.5	13	72	73
16	SS	3/6	Horz.	(008)	(-76)	(009)	(-77)	(13.5)	(35)	-	-
17	Tuff	13/14	Horz.	159	-65	159	-65	29.8	8	87	71
18	Tuff	13/13	Horz.	162	-76	162	-76	72.8	5	151	81
19	Tuff	12/12	27016	057	-76	125	-76	12.4	13	160	65
20	Tuff	17/17	270/16	168	-79	175	-64	22.3	8	50	74
21	SS	0/8	270/16	-	-	-	-	-	-	-	-
$Mean_g$		14/21		153	-69			26.7	8		
Mean (80%)		14/21				143	-69	50.8	5		
$Mean_s$		14/21				140	-69	47.2	6		
Paleopole								19.7	9*	126	68

Notes: Lith. is the lithology of the site (SS = sandstone, VC = volcaniclastic sandstones). n is the number of samples that produced characteristic remanent magnetization (ChRM) directions, and N is the number of samples demagnetized. S and D are the strike and dip of bedding (dip direction 90°clockwise from strike). Horz. is horizontal bedding. D_g and I_g (D_s and I_s) are the declination and inclination of the site mean in in situ (tilt-corrected) coordinates, in degrees. k is the best estimate of Fisher (1953) precision parameter, and α_{95} is the 95% confidence region about the mean in degrees. ϕ and θ are the longitude and latitude of the corresponding virtual geomagnetic pole, in degrees. Values in parentheses were not used to calculate the formation means. The - symbol indicates that no reliable ChRM directions were obtained from those sites.

* For mean paleopole, the confidence interval is reported as A_{95}, in degrees.

TABLE B. PALEOMAGNETIC SITE LOCATIONS

Site	Latitude	Longitude
1	61.19028	142.4577
2	61.19028	142.4577
3	61.19210	142.4579
4	61.18916	142.4621
5	61.18916	142.4621
6	61.18916	142.4621
7	61.18866	142.4734
8	61.18866	142.4734
9	61.17960	142.4755
10	61.17960	142.4755
11	61.17960	142.4755
12	61.17147	142.4515
13	61.17147	142.4515
14	61.17167	142.4415
15	61.17167	142.4415
16	61.17167	142.4415
17	61.17421	142.4384
18	61.17421	142.4384
19	61.16910	142.4199
20	61.16910	142.4199
21	61.16910	142.4199

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