## DR 2004135

**Figure DR1.** Orthogonal projection and equal-area plot of samples form the S. Lorenzo lacustrine basin. Numbers denote demagnetization steps in °C. Thermal demagnetization yields well-defined components of demagnetization, usually after a small viscous component is removed. Open and solid circles represent projections onto the vertical and horizontal planes, respectively. Total natural remanent magnetization (NRM) intensities are shown.

**Figure DR2.** Orthogonal projection and equal-area plot of samples form the S. Lorenzo lacustrine basin. Numbers denote demagnetization steps in °C. Thermal demagnetization shows two components with overlapping temperature spectra, usually after a small viscous component is removed. Open and solid circles represent projections onto the vertical and horizontal planes, respectively. Total natural remanent magnetization (NRM) intensities are shown.

## Mattei



Fig. Dr1



TABLE DR1. SITE MEAN PALEOMAGNETIC DIRECTIONS

Sites (age)	N(n,c)	<i>N(n,c)</i> Geographic coordinates					Stratigraphic coordinates		
	-	D	1	k	α95	D	Ι	S <sub>0</sub>	
SL02 (M)	9 (2,4)	193.10	-37.70	20.01	17	178.51	-46.65	250, 18	
SL03 (M)	8 (2,3)	188.20	-23.10	89.24	12.7	174.98	-24.97	268, 29	
SL05 (M)	9 (7,1)	217.10	-51.30	18.78	12.3	176.28	-49.89	289, 32	
SL06 (M)	6 (0,6)	151.00	-48.00	397.61	3.4	151.00	-48.00	270, 8	
SL08 (M)	9 (7,0)	213.00	-35.70	23.92	12.6	204.36	-36.28	312, 13	
SL11 (M)	9 (8,0)	164.30	-37.70	53.80	7.6	171.29	-52.15	142, 16	
SL12 (M)	8 (2,6)	188.70	-34.40	3.45	11.3	188.70	-34.40	0, 0	
SL16 (?)	10 (8,1)	158.00	-67.70	63.09	5.1	182.45	-60.30	48, 14	
SL13 (?)	9 (7,1)	11.80	55.70	107.61	5.4	356.89	56.47	270, 10	
SL10 (J)	8 (4,4)	335.10	50.10	32.31	10.3	335.10	50.10	70, 25	
SL22 (J)	15 (7,4)	358.60	49.70	34.79	7.2	12.50	46.00	79, 13	
SL15 (J)	8 (1,3)	356.40	50.90	190.40	9.4	341.50	55.30	236, 12	
SL17 (J)	13 (0,5)	358.60	71.60	102.99	7.6	5.60	56.90	15, 15	
SL19 (J)	11 (2,4)	315.20	56.60	47.31	11	343.30	48.60	310, 10	
SL20 (J)	9 (7,2)	335.90	41.50	19.28	12.2	354.50	51.60	105, 20	
Mean	15	357.90	49.60	16.83	9.6				
				34.43	6.6	356.5	48.50		

*Note*: M = Late Matuyama chron; J = Jaramillo subchron; ? = greigite bearing sites; N = number of demagnetised samples (n = number of set points; c = number of remagnetization circles); D = declination (in degrees); I = inclination (in degrees); k = best estimate of the precision parameter;  $\alpha_{95}$  = angular radius of the cone in which the mean direction lies within 95% confidence; S<sub>0</sub> = bedding attitude. The magnetic polarity of sites SL13 and SL16 has been considered unreliable because the main magnetic carrier is greigite

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