

DATA REPOSITORY ITEM

Table 1 RESULTS FROM GEOCHEMICAL STUDIES, INCLUDING C, O, AND B ISOTOPE RATIOS, AND CARBONATE AND B CONTENTS

Sample	Depth (mbsf)	Lithology	$\delta^{13}\text{C}$ ‰	$\delta^{18}\text{O}$ ‰	B* in whole rock (ppm)	B* in carbonate (ppm)	1/B (1/ppm)	$\delta^{11}\text{B}$ ‰	$\delta^{11}\text{B}$ in parent solution at pH 7.78	$\delta^{11}\text{B}$ in parent solution at pH 7
matrix										
160 970A 14X 01 7-11	114.87	mud	-0.31	-1.41	179.4		0.006	1.4		
160 970A 22X 01 57-61	192.30	mud	-2.52	2.48	200.3		0.005	2.2		
160 970D 3H 02 47-54	20.98	mud	-0.28	-1.22	142.6		0.007	7.2		
160 970D 4H 05 94-98	36.82	mud	-0.35	-1.38	172.3		0.006	6.8		
160 970D 4H 05 94-98	36.82	mud				106.4	0.009	22.9	38.2	36.6
160 971B 3H 05 117-119	23.41	mud	-8.36	2.40	98.0		0.010	4.8		
160 971B 16X 03 30-32	155.00	mud	-0.5	-1.15	85.8		0.012	6.3		
160 971D 5H 01 119-121	39.24	mud	-1.21	-1.11	133.9		0.007	-1.4		
160 971E 2H 04 14-16	14.22	mud	-0.92	-0.92	194.1		0.005	-3.1		
clasts										
160 970A 7X 01 19-22	47.29	calcilutite	0.63	-0.77		52.9	0.019	10	25.3	23.7
160 970A 8X CC 2-6	56.72	calc. claystone	0.31	-1.89	120.6		0.008	2.1		
160 970A 8X CC 2-6	56.72	calc. claystone				72.7	0.014	21.3	36.6	35.0
160 970A 10X 01 68- 71	76.68	elagic limestone	-0.75	-2.82		62.4	0.016	13.5	28.8	27.2
160 970A 12X CC 20- 24	95.60	litharenite (S)	7.68	-2.26		22.6	0.044	8.4	23.7	22.1
160 970C 4X 01 25-27	19.61	litharenite (N)	-1.03	-3.63		26.7	0.037	6.9	22.2	20.6
160 970D 5H 06 75- 78	41.25	elite (Messinian)	-0.74	-3.94	10.5		0.095	-1.2		
160 970D 5H 06 75- 78	41.25	elite (Messinian)				9.4	0.106	12.3		
160 971B 3H 05 130-150	19.00	calc. claystone	-1.53	-3.37		84.0	0.012	14.9	30.2	28.6
160 971B 17X 02 20- 22	147.30	calc. claystone	-0.26	-2.12		49.9	0.020	16	31.3	29.7
160 971B 20X 03 0-30	177.91	calc. claystone	-0.8	-0.28	94.6		0.011	6		
160 971B 20X 03 0-30	177.91	calc. claystone				43.5	0.023	24.4	39.7	38.1
biogenic carbonates										
160 971A 1H 01 57-61	1.24	ianno fossil oozi	-0.93	2.48	110.1		0.009	7.8		
160 971A 1H 01 57-61	1.24	ianno fossil ooze				80.8	0.012	21.4	36.7	35.1
160 971E 1H 04 14-16	4.19	mollusc shells	-2.52	6.35		33.0	0.030	16.8	32.1	30.5
authigenic carbonates										
160 971A 3H 03 110-113	20.60	fibrous calcite	3.8	-4.19	18.6		0.054	9.6		
160 971A 3H 03 110-113						14.0	0.071	12.1	27.4	25.8
160 971D 3H 01 130-150	18.80	micritic crust	-17.11	2.76		105.5	0.009	21.6	36.9	35.3
mud volcano pore fluids										
971 A 4H 04 115-133	20.45	interstitial water	n.a.	n.a.	n.a.	22.2 *	0.045	25.5		
971 B 3H 03 130-150	16.00	interstitial water	n.a.	n.a.	n.a.	39.4 *	0.025	33.6		
971 B 17X 04 20-40	150.3	interstitial water	n.a.	n.a.	n.a.	51.8 *	0.019	28.8		

Note: Parameters not analyzed are indicated as "n.a.". "calc." stands for calcareous; "N" and "S" stand for northern and southern provenance of the litharenites.

* HF digestion.

+ HCl digestion.

ERRATUM: Note that in the manuscript text the value of the $\delta^{11}\text{B}$ shift due to variable pH have been not reported correctly. The shifts are +13.7‰ at pH 7 and +15.3‰ at pH 7.78 (see righthandside data columns). The figures are correct given the shift at pH 8 was used.