CAPTION FOR TABLE IN DATA REPOSITORY ITEM 2002024, G18007

RE, OS AND ORGANIC-CARBON ABUNDANCES AND $^{187}OS/^{188}OS$ RATIOS OF MUDROCKS FROM Tr–J BOUNDARY SECTIONS, UK

Note: Analytical procedures for Re and Os are described in full by Cohen and Waters (1996) and by Cohen et al. (1999). Only pristine samples (2–5 kg) were collected, generally from foreshore exposures. Fragments totaling ~0.5–1 g were taken from the interior of the large samples for Re, Os analysis. They were digested in aqua regia in sealed Carius tubes, Re and Os were separated and purified by solvent extraction, ion exchange, and microdistillation. Re and Os abundance measurements and Os isotope determinations were made on a Finnegan MAT 261 thermal ionization mass spectrometer using a low-background secondary electron multiplier and peak-switching routines. Re and Os blanks during this study were <10 pg and <2 pg, respectively, and provided an insignificant contribution to the quantity of these elements analyzed. TOC measurements were performed on a LECO elemental analyzer by Robertson Research Ltd. Not analyzed—n.a.

*Sample locations: L, Lavernock Point; S, St. Audrie's Bay; W, Watchet Harbour.

†Stratigraphic distance from the Tr–J boundary. The boundary is currently defined in the UK by the first appearance of the ammonite genus *Psiloceras* at the base of bed 8 at St. Audrie's Bay (Hodges, 1994; Warrington and Ivimey-Cook, 1995). The positions of samples from Watchet Harbour and Lavernock Point have been located with respect to the St. Audrie's Bay succession using stratigraphic data from Hodges (1994), Richardson (1911), Waters and Lawrence (1987) and Whittaker and Green (1983).

§Sample positions shown as bed numbers from the following sources: (H) Hodges, 1994; (WL) Waters and Lawrence, 1987; (WG) Whittaker and Green, 1983; (R) Richardson, 1911, and as meters above the base of each bed, e.g. [0.10].

#The initial Os isotope compositions (i.e., those at the time of sample deposition) ($^{187}Os/^{188}Os_{(i)}$) are calculated by using the nominal ages in the table and with the assumption that the samples have behaved as closed systems. These nominal ages are based on an age of 205.7 Ma for the Tr–J boundary, taken from the time scale of Gradstein et al. (1994).

Data Repository Table

Sample no.	Location*	Distance from Tr–J boundary† (m)	Position§	Re (ppb)	Os (ppb)	^{192}Os (ppb)	TOC (%)	^{187}Os/^{188}Os	^{187}Os/^{188}Os$_{(i)}$#	Assumed age (Ma)
HSM 98-41	L	7.25	60 (WL) [0.10]	72.08	0.7419	0.2399	3.95	2.121	0.1017	205
HSM 98-52	L	6.94	58 (WL) [0.22]	87.322	0.8299	0.2782	4.5	1.785	-0.3256	205
HSM 98-40	L	3.87	47 (WL) [0.11]	86.013	1.0209	0.3428	5.08	1.768	0.0809	205
HSM 98-39	L	1.13	40 (WL) [0.07]	101.163	1.4481	0.5113	8.1	1.318	-0.0135	205
HPLC 98-14	S	1.07	14 (WG) [0.22]	87.4	2.0037	0.7478	8.62	0.848	0.0606	205
HSM 98-37	L	0.06	38 (H) [0.18]	18.438	0.8499	0.3062	1.28	1.143	0.7377	205
RSM 98-35	L	-0.96	32 (H) [0.06]	18.438	1.769	0.7035	2.83	0.339	0.1614	206
RSM 98-34	L	-1.32	22 (H) [0.05]	18.588	1.049	0.4127	2.36	0.423	0.118	206
RSM 98-47	L	-1.51	14 (H) [0.10]	15.636	0.9694	0.3846	2.4	0.356	0.0794	207
RSM 98-33	L	-1.66	12 (H) [0.07]	33.466	n.a.	n.a.	9.51	n.a.	–	207
RLC 98-13	S	-2.6	5 (WG) [0.18]	18.438	1.1096	0.4328	5.96	0.491	0.2023	206
RSM 98-32	L	-3.32	3(H) [0.12]	12.184	0.3563	0.1329	8.22	0.851	0.2278	207
RLF 98-21	S	-4.58	1(WG) [0.44]	16.729	0.18	0.0594	1.95	1.926	0.0057	208
RSM 98-27	L	-4.81	1(H) [0.04]	5.278	0.2103	0.0794	3.24	0.755	0.3023	207
RWF 98-19	S	-10.82	8 (R) [0.60]	1.066	0.0854	0.032	1.57	0.808	0.5806	208
RWF 98-8	W	-12.65	12 (R) [1.03]	1.616	0.228	0.0882	3.66	0.561	0.4353	208
RWF 98-18	S	-12.92	12 (R) [0.76]	0.736	0.1356	0.0506	6.3	0.842	0.742	209
RWF 98-6	W	-12.95	12 (R) [0.73]	3.238	0.1473	0.0547	7.66	0.882	0.4762	209
RWF 98-4	W	-13.07	12 (R) [0.61]	1.204	0.1438	0.0537	7.9	0.852	0.6976	209
RWF 98-10	W	-15.52	18 (R) [0.45]	6.127	0.28	0.1051	0.98	0.801	0.4007	209