Supplement of Clim. Past, 15, 1327–1344, 2019
https://doi.org/10.5194/cp-15-1327-2019-supplement

Climate of the Past
Open Access
EGU

Supplement of

Central Tethyan platform-top hypoxia during Oceanic Anoxic Event 1a

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Table 1. Redox sensitive trace elements arsenic, vanadium, molybdenum and uranium, as well as aluminum (ppm). Every sample was measured 6 times (2 spots, 3 measurements each) by LA-ICP-MS. The mean values were calculated. (This data is shown in Fig. 4).

Sample No.	As mean (ppm)	V mean (ppm)	Mo mean (ppm)	U (ppm)	Al (ppm)
KAN 8.25	0.730	7.973	3.485	1.989	1404.946
KAN 11.0	1.502	7.812	4.353	1.742	217.815
KAN 11.9	2.200	19.491	1.789	1.456	342.524
KAN 12.8	2.300	NA	7.162	1.660	295.317
KAN 13.2	3.246	17.604	4.497	1.162	818.487
KAN 14.2	0.500	7.856	0.511	1.223	150.915
KAN 15.4	0.404	7.327	0.707	1.408	141.018
KAN 16.3	0.620	10.911	0.813	1.141	504.974
KAN 16.6	1.354	16.061	2.300	1.274	1149.653
KAN 16.85	1.114	9.237	0.940	1.336	322.943
KAN 18.7	0.846	8.694	0.890	0.934	306.271
KAN 19.0	1.908	7.325	1.401	0.947	336.278
KAN 19.3	0.739	6.537	0.922	0.795	359.915
KAN 20.0	0.772	7.412	0.943	0.929	457.109
KAN 20.3	0.487	8.640	0.554	0.834	379.191
KAN 20.8	0.494	8.381	0.568	0.769	571.012
KAN 21.2	0.347	3.269	0.739	0.663	17.159
KAN 21.85	0.537	5.980	0.709	0.907	420.649
KAN 22.4	0.500	5.651	0.527	0.893	504.185
KAN 22.7	0.661	14.543	2.656	0.907	616.569
KAN 23.3	0.799	15.898	3.663	1.183	441.366
KAN 23.6	0.492	12.632	2.429	0.936	653.257
KAN 23.9	0.886	11.636	3.761	0.982	365.236
KAN 24.2	1.580	NA	NA	1.079	450.519
KAN 24.8	NA	11.120	0.806	1.156	403.832
KAN 25.2	0.773	6.725	1.601	0.762	363.384
KAN 25.5	1.176	4.734	NA	0.547	154.734
KAN 26.4	0.841	11.357	1.085	0.825	460.276
KAN 26.6	1.352	11.378	2.474	0.850	474.495
KAN 27.0	0.146	NA	NA	0.524	89.098
KAN 27.6	0.300	2.943	0.183	0.459	76.497
KAN 27.9	0.173	3.248	0.195	0.443	143.370
KAN 29.4	0.074	NA	0.130	0.467	33.601
KAN 30.8	0.361	11.558	1.039	0.600	476.376

Table 2. Rare Earth Elements cerium, lanthanum and praseodymium (ppm) and Ce anomalies. REEs and redox sensitive trace elements were measured using LA-ICP-MS. Ce anomalies were defined following Nozaki`s calculation (2008): $Ce/Ce^* = 2Ce_N / (La_N + Pr_N)$. (This data is shown in Fig. 5).

Sample	Ce mean (ppm)	La mean (ppm)	Pr mean (ppm)	Ce/Ce*
KAN 12,8	0.015	0.031	0.016	0.642
KAN 13,2	0.013	0.040	0.019	0.423
KAN 14,2	0.004	0.014	0.005	0.408
KAN 15,4	0.005	0.017	0.007	0.400
KAN 16,3	0.010	0.033	0.016	0.422
KAN 16,6	0.012	0.032	0.016	0.522
KAN 16,85	0.011	0.029	0.019	0.445
KAN 20,8	0.012	0.023	0.016	0.588
KAN 21,2	0.011	0.017	0.012	0.776
KAN 21,85	0.008	0.016	0.010	0.626
KAN 22,4	0.013	0.020	0.014	0.786
KAN 22,7	0.016	0.020	0.017	0.876
KAN 24,65	0.013	0.015	0.013	0.946
KAN 24,8	0.020	0.023	0.020	0.929
KAN 25,2	0.017	0.018	0.017	0.953
KAN 25,5	0.014	0.018	0.015	0.868
KAN 26,4	0.016	0.029	0.019	0.678
KAN 26,6	0.014	0.025	0.014	0.724
KAN 27,0	0.012	0.030	0.013	0.584
KAN 27,6	0.015	0.048	0.015	0.471

Table 3. Uranium isotope ratios and twice the standard deviation. Uranium isotope analysis were performed using MC-ICP-MS. Results are provided in the delta-notation: $\delta^{238}U$ in ‰ = [$(^{238}U / ^{235}U)_{sample}$ / $(^{238}U / ^{235}U)_{standard}$ -1] x 1000. (This data is shown in Fig. 5).

Sample	mean $^{238}U/^{235}U$	2 S.D.
KAN12.8	0.260	0.06
KAN13.2	0.439	0.04
KAN16.3	0.363	0.02
KAN16.6	0.415	0.04
KAN16.75	0.264	0.03
KAN19	0.180	0.01
KAN20.0	0.111	0.04
KAN20.9	0.092	0.02
KAN21.2	0.142	0.04
KAN22.4	0.074	0.05
KAN23.3	0.103	0.16
KAN23.9	0.154	0.09
KAN24.8	0.060	0.02
KAN25.5	-0.021	0.05
KAN27.6	0.202	0.05

Table 4. The Lanthanum anomaly, to test whether the Ce anomaly values are genuine or an artifact caused by elevated amounts of lanthanum. The calculation of Pr/Pr* is given by $2Pr_N / (Ce_N + Nd_N)$. Calculation of Ce/Ce* is explained in Table 2. (This data is shown in Fig. 6).

Sample	La (ppm)	Ce (ppm)	Pr (ppm)	Nd (ppm)	Pr* (ppm)	Pr/Pr*	Ce* (ppm)	Ce/Ce*
KAN 7,2	0.010	0.010	0.010	0.011	0.021	0.961	0.020	1.016
KAN 7,6	0.012	0.013	0.013	0.014	0.027	0.983	0.026	0.997
KAN 8,25	0.013	0.011	0.012	0.012	0.023	1.008	0.025	0.922
KAN 11,0	0.008	0.003	0.003	0.003	0.006	1.005	0.011	0.526
KAN 11,9	0.008	0.003	0.003	0.003	0.007	0.955	0.011	0.573
KAN 12,8	0.031	0.015	0.016	0.016	0.031	1.051	0.047	0.642
KAN 13,2	0.040	0.013	0.019	0.021	0.034	1.156	0.059	0.423
KAN 14,2	0.014	0.004	0.005	0.005	0.009	1.046	0.019	0.408
KAN 15,4	0.017	0.005	0.007	0.007	0.012	1.101	0.024	0.400
KAN 16,3	0.033	0.010	0.016	0.017	0.028	1.141	0.049	0.422
KAN 16,6	0.032	0.012	0.016	0.017	0.029	1.077	0.048	0.522
KAN 16,75	0.025	0.010	0.012	0.014	0.023	1.056	0.037	0.515
KAN 16,85	0.029	0.011	0.019	0.020	0.031	1.204	0.048	0.445
KAN 18,7	0.030	0.009	0.017	0.019	0.028	1.168	0.046	0.401
KAN 19,0	0.044	0.010	0.045	0.049	0.059	1.542	0.089	0.218
KAN 19,3	0.030	0.011	0.028	0.031	0.042	1.316	0.058	0.364
KAN 20,0	0.037	0.015	0.035	0.039	0.054	1.291	0.072	0.423
KAN 20,3	0.029	0.013	0.025	0.028	0.042	1.199	0.054	0.495
KAN 20,8	0.023	0.012	0.016	0.018	0.030	1.104	0.039	0.588
KAN 21,2	0.017	0.011	0.012	0.013	0.024	0.967	0.029	0.776
KAN 21,85	0.016	0.008	0.010	0.011	0.026	1.148	0.026	0.626
KAN 22,4	0.020	0.013	0.014	0.015	0.029	0.974	0.034	0.786
KAN 22,7	0.020	0.016	0.017	0.017	0.034	0.997	0.037	0.876
KAN 23,3	0.092	0.017	0.099	0.105	0.089	1.595	0.190	0.178
KAN 23,6	0.085	0.015	0.075	0.088	0.103	1.456	0.160	0.185
KAN 23,9	0.080	0.014	0.082	0.092	0.106	1.555	0.162	0.173
KAN 24,2	0.054	0.017	0.036	0.042	0.044	1.169	0.090	0.373
KAN 24,65	0.015	0.013	0.013	0.014	0.026	0.961	0.027	0.946
KAN 24,8	0.023	0.020	0.020	0.020	0.024	0.960	0.043	0.929
KAN 25,2	0.018	0.017	0.017	0.018	0.029	1.006	0.035	0.953
KAN 25,5	0.018	0.014	0.015	0.015	0.026	1.035	0.033	0.868
KAN 26,4	0.029	0.016	0.019	0.021	0.037	1.039	0.048	0.678
KAN 26,6	0.025	0.014	0.014	0.015	0.029	0.971	0.039	0.724
KAN 27,0	0.030	0.012	0.013	0.014	0.027	0.978	0.043	0.584
KAN 27,6	0.048	0.015	0.015	0.017	0.032	0.963	0.063	0.471

KAN 27,9	0.065	0.019	0.019	0.022	0.041	0.942	0.084	0.460
KAN 29,4	0.043	0.026	0.027	0.031	0.056	0.960	0.070	0.729
KAN 30,0	0.043	0.027	0.028	0.031	0.058	0.957	0.070	0.758
KAN 30,8	0.080	0.053	0.053	0.059	0.113	0.939	0.133	0.805
KAN 33,4	0.107	0.115	0.118	0.126	0.241	0.981	0.225	1.019
KAN 34,0	0.089	0.082	0.096	0.103	0.186	1.037	0.185	0.886