



Supplement of

Carbon isotopic signature of coal-derived methane emissions to the atmosphere: from coalification to alteration

Giulia Zazzeri et al.

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The isotopic ratios and mole fraction measurements used for the Keeling plots are included in the following table.

	CH₄ Mole Fractions (ppm)	St Dev (ppm)	δ¹³CH₄ (‰)	St Dev (‰)
Kellingley				
	2.1060	0.0009	-47.723	0.043
	9.5415	0.0015	-46.637	0.008
	3.7021	0.0009	-47.339	0.013
	1.9345	0.0012	-47.598	0.032
	1.9424	0.0006	-47.629	0.058
Maltby July				
	3.1038	0.0007	-46.825	0.028
	1.8939	0.0007	-47.393	0.039
	2.3795	0.0006	-46.970	0.001
Maltby Sept				
	2.3959	0.0006	-47.214	0.037
	3.2583	0.0003	-46.767	0.031
	2.4510	0.0009	-47.233	0.025
	2.5386	0.0003	-47.251	0.037
Hatfield July				
	1.9719	0.0005	-47.330	0.051
	3.6095	0.0003	-47.665	0.006
	3.9186	0.0004	-47.743	0.049
	6.5410	0.0004	-48.084	0.024
Hatfield Sept				
	3.8422	0.0004	-48.172	0.031
	5.1393	0.0004	-48.525	0.033
	3.8543	0.0006	-48.325	0.046
	5.3918	0.0005	-48.338	0.047
	2.8399	0.0007	-48.159	0.031
Thoresby				
	1.9765	0.0005	-47.274	0.047
	4.4385	0.0009	-49.460	0.027
	3.8060	0.0004	-49.191	0.015
	2.6516	0.0004	-48.293	0.050
	3.2274	0.0004	-48.841	0.049
	2.8007	0.0005	-48.442	0.045
	3.0913	0.0003	-48.682	0.078
	4.6184	0.0004	-49.736	0.021
	1.9548	0.0004	-47.535	0.047
Daw Mill				
	2.0191	0.0004	-47.787	0.061
	5.0916	0.0006	-50.015	0.027
	3.1361	0.0006	-48.902	0.033

	CH₄ Mole Fractions (ppm)	St Dev (ppm)	δ¹³CH₄ (‰)	St Dev (‰)
	1.9676	0.0004	-47.592	0.047
Cumllynfell				
	1.8928	0.0003	-47.260	0.025
	2.1100	0.0006	-46.658	0.031
	1.9777	0.0004	-47.123	0.019
Abercrave				
	2.1040	0.0006	-46.611	0.030
	1.9650	0.0005	-47.016	0.052
	2.0121	0.0005	-46.889	0.035
	1.9406	0.0004	-47.043	0.053
	1.8957	0.0006	-47.216	0.078
Aberpergwm				
	2.2765	0.0006	-44.887	0.044
	5.8203	0.0006	-37.709	0.014
	6.1058	0.0004	-37.676	0.011
	2.9237	0.0009	-42.223	0.043
	1.8958	0.0009	-47.174	0.045
Unity				
	6.1553	0.0004	-35.884	0.050
	4.0307	0.0006	-38.544	0.058
	1.8958	0.0009	-47.174	0.045
Upper Silesian basin				
	3.5842	0.0023	-48.570	0.045
	3.5211	0.0024	-48.440	0.056
	3.1348	0.0031	-47.860	0.063
	5.0761	0.0012	-48.450	0.047
	4.6512	0.0014	-48.580	0.028
	5.9172	0.0009	-48.970	0.034
	13.5135	0.0002	-50.020	0.055
	13.3333	0.0002	-50.580	0.029
Hunter Coalfield				
	2.0647	0.0003	-49.438	0.057
	1.9919	0.0006	-47.999	0.069
	1.9021	0.0003	-48.095	0.049
	1.8678	0.0002	-47.866	0.058
	1.8587	0.0002	-47.792	0.029
	1.8513	0.0003	-47.824	0.025
	1.8517	0.0004	-47.769	0.033
	1.8166	0.0004	-47.413	0.060
	1.8034	0.0002	-47.269	0.072
	1.8043	0.0002	-47.315	0.011
	1.8018	0.0003	-47.247	0.052

	CH₄ Mole Fractions (ppm)	St Dev (ppm)	δ¹³CH₄ (‰)	St Dev (‰)
	6.8141	0.0006	-57.061	0.007
Bulga Colliery				
	2.0647	0.0003	-49.438	0.057
	1.9244	0.0006	-47.999	0.069
	1.8869	0.0003	-48.095	0.049
	1.8018	0.0003	-47.247	0.052
	6.8141	0.0006	-57.061	0.007
	4.5569	0.0007	-55.522	0.039
	3.8083	0.0004	-54.842	0.072
	3.9508	0.0005	-54.603	0.011
	4.0534	0.0003	-55.000	0.008
	4.1452	0.0004	-54.975	0.051
	4.1943	0.0004	-55.002	0.045
Ravensworth mine				
	2.2809	0.0006	-50.404	0.033
	2.2130	0.0004	-49.741	0.025