

APPENDIX 2

Vitrinite reflectance and Rock-Eval II data of all original coal and carbonaceous shale samples

Sample code	Vitrinite reflectance					TOC [wt.%]	$T_{max}$ [°C]	PI	HI		OI		Sample code	Vitrinite reflectance					TOC [wt.%]	$T_{max}$ [°C]	PI	HI		OI	
	$R_o$ [%]	N	St.d.	Min	Max				[mg HC/g TOC]	[mg CO <sub>2</sub> /g TOC]	$R_o$ [%]	N		St.d.	Min	Max	[mg HC/g TOC]	[mg CO <sub>2</sub> /g TOC]							
Upper Silesian Coal Basin																									
Br-20st	0.83	96	0.03	0.76	0.88	2.18	440	0.07	71	6		Pn-24st	not analysed					1.62	466	0.26	28	65			
Br-20c	0.86	133	0.03	0.79	0.95	66.3	446	0.03	279	7		Pn-24c	not analysed					72.37	468	0.08	105	5			
Br-20sb	0.83	53	0.04	0.77	0.92	1.33	440	0.14	45	3		Pn-24sb	not analysed					1.37	466	0.27	25	24			
Br-21st	not analysed					0.97	443	0.29	18	29		Pn-25st	not analysed					10.9	467	0.08	101	1			
Br-21c	not analysed					74.08	441	0.02	183	4		Pn-25c	1.06	145	0.04	0.99	1.17	54.5	472	0.03	226	5			
Br-21sb	not analysed					1.8	***	0.6	2	6		Pn-25sb	not analysed					1.84	465	0.14	58	8			
Br-22st	not analysed					2.18	438	0.07	88	130		Pn-26st	not analysed					3.81	461	0.13	62	4			
Br-22c	not analysed					52.48	440	0.04	137	10		Pn-26c	not analysed					75.55	460	0.06	186	3			
Br-22sb	not analysed					0.88	438	0.16	47	62		Pn-26sb	not analysed					4.27	460	0.1	234	4			
Br-23st	0.86	62	0.02	0.82	0.92	1.7	440	0.07	52	31		Pn-27st	not analysed					0.91	463	0.16	51	169			
Br-23c	0.9	105	0.04	0.84	0.99	65.8	448	0.02	169	5		Pn-27c	not analysed					68.79	457	0.08	84	6			
Br-23sb	0.92	52	0.03	0.87	0.98	2.61	439	0.12	31	4		Pn-27sb	not analysed					3.55	455	0.13	72	12			
Br-24st	not analysed					0.76	438	0.18	30	78		Zo-21st	not analysed					1.9	479	0.17	44	14			
Br-24c	0.8	135	0.03	0.72	0.87	67.2	444	0.02	253	3		Zo-21c	1.06	152	0.05	0.95	1.19	75.2	475	0.06	144	2			
Br-24sb	not analysed					2.17	437	0.05	65	23		Zo-21sb	not analysed					3.1	484	0.12	45	6			
Si-20st	not analysed					1.73	434	0.09	39	119		Zo-22st	not analysed					2.0	488	0.18	44	7			
Si-20c	not analysed					73.7	431	0.01	193	5		Zo-22c	not analysed					71.48	486	0.13	86	12			
Si-20sb	not analysed					0.83	***	0.06	81	149		Zo-22sb	not analysed					1.15	491	0.41	18	0			
Si-21st	not analysed					1.08	433	0.21	40	171		MI-20st	not analysed					3.59	437	0.05	88	8			
Si-21c	not analysed					64.04	430	0.03	174	7		MI-20c	0.7	156	0.06	0.57	0.85	57.7	442	0.02	176	0			
Si-21sb	not analysed					1.28	436	0.17	19	176		MI-20sb	not analysed					6.18	440	0.07	63	61			
Si-22st	0.66	103	0.02	0.6	0.69	1.98	435	0.05	98	119		MI-21st	0.87	58	0.05	0.77	0.95	2.0	446	0.1	71	10			
Si-22c	0.7	150	0.02	0.66	0.74	57.2	436	0.04	159	10		MI-21c	0.88	149	0.04	0.77	0.96	63.3	444	0.03	334	2			
Si-22sb	0.68	68	0.04	0.61	0.73	1.4	436	0.17	27	5		MI-21sb	0.84	92	0.03	0.79	0.94	2.1	443	0.05	103	5			
Si-23st	0.57	80	0.02	0.54	0.62	4.28	436	0.04	64	81		MI-22st	not analysed					1.11	451	0.19	24	25			
Si-23c	0.6	103	0.03	0.54	0.67	60.7	438	0.02	231	4		MI-22c	0.72	153	0.05	0.57	0.79	53.4	448	0.05	120	0			
Si-23sb	0.59	48	0.03	0.54	0.63	1.38	434	0.15	34	4		MI-22sb	not analysed					3.92	446	0.04	92	2			
Ja-20st	not analysed					4.0	479	0.2	26	11		MI-23st	not analysed					3.63	448	0.07	71	7			
Ja-20c	not analysed					60.7	478	0.07	99	5		MI-23c	not analysed					68.52	445	0.06	90	5			
Ja-20sb	not analysed					10.13	478	0.07	202	3		MI-23sb	not analysed					0.03	***	***	***	***			
Ja-21st	not analysed					4.86	481	0.11	29	19		MI-24st	not analysed					18.6	435	0.03	168	4			
Ja-21c	not analysed					70.1	480	0.06	91	3		MI-24c	not analysed					74.6	440	0.02	211	5			
Ja-21sb	not analysed					10.23	484	0.04	187	7		MI-25st	not analysed					3.02	436	0.09	70	165			
Ja-22st	not analysed					1.35	480	0.19	32	55		MI-25c	not analysed					75.35	438	0.04	220	3			
Ja-22c	1.12	142	0.06	0.99	1.27	70.6	481	0.12	75	9		MI-25sb	not analysed					3.16	437	0.08	98	46			
Ja-22sb	not analysed					6.04	480	0.1	122	16		Lublin Coal Basin													
Pn-21st	not analysed					9.76	463	0.05	246	3		Bo-20st	not analysed					1.05	433	0.24	51	40			
Pn-21c	not analysed					70.8	464	0.05	116	3		Bo-20c	0.72	134	0.03	0.65	0.8	56.6	434	0.04	209	8			
Pn-21sb	not analysed					1.93	466	0.15	29	62		Bo-20sb	0.73	40	0.05	0.62	0.82	2.84	435	0.11	75	0			
Pn-22st	not analysed					1.17	468	0.25	34	47		Bo-21st	not analysed					0.88	*	0.36	31	63			
Pn-22c	not analysed					75.1	468	0.05	145	2		Bo-21c	0.62	143	0.04	0.54	0.71	40.41	430	0.04	189	0			
Pn-22sb	not analysed					1.2	471	0.22	26	85		Bo-21sb	not analysed					2.18	431	0.1	64	0			
Pn-23st	not analysed					3.46	469	0.18	55	54															
Pn-23c	1.57	134	0.05	1.49	1.71	59.0	472	0.05	189	3															
Pn-23sb	not analysed					1.69	470	0.19	56	21															

$R_o$  – mean vitrinite reflectance value; N – number of measured particles; St.d. – standard deviation for vitrinite measurements; Min – minimum vitrinite reflectance value (%); Max – maximum vitrinite reflectance value (%); TOC – total organic carbon;  $T_{max}$  – temperature of maximum of  $S_2$  peak; PI (production index) =  $S_1/(S_1+S_2)$ ; HI – hydrogen index; OI – oxygen index; HC – hydrocarbons; \*\*\* – incredible value; c – channel coal sample; st – block shale sample collected above coal seam; sb – block shale sample collected below coal seam