Regional coal seam gas distribution and burial history of the Hunter Coalfield, Sydney Basin

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SUPPLEMENTARY PAPERS

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Tables A1–7 listed at the end of the paper are Supplementary Papers; copies may be obtained from the Geological Society of Australia's website (www.gsa.org.au), the Australian Journal of Earth Sciences website (www.ajes.com.au) or from the National Library of Australia's Pandora archive (<http://nla.gov.au/nla.arc-25194>).

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Table A1 Main model inputs for Knight-1.

Table A2 Main model inputs for Pinegrove-1.

Table A3 Main model inputs for DH219.

Table A4 Main model inputs for DH225.

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Table A7 Main model inputs for Wybong-1.

Table 1 Main model inputs for Knight-1.

LAYER	TOP	BASE	THICKNESS	EROSION	DEPOSITION FROM	DEPOSITION TO	EROSION FROM	EROSION TO	CONGLOM ERATE	LITHOLOGY (%)							TOC
	(m)	(m)	(m)	(m)	(Ma)	(Ma)	(Ma)	(Ma)		SANDSTONE	SILTSTONE	MUDSTONE	CLAYSTONE	SHALE	TUFF	COAL	(%)
Late Triassic - Jurassic sediments	-97	-97	0	1100	205	135	130	90		50				50			
Wianamatta Group	-97	-97	0	300	215	210	90	80		50				50			
Hawkesbury Sandstone	-97	-97	0	250	225	215	80	70		100							
Narrabeen Group	-97	-97	0	800	252	225	70	4	50	50							
NCL CM Moon Island Beach Formati	-97	-97	0	48	253	252	4	3	40	30	10	17				3	2
NCL CM Boolaroo Formation	-97	-97	0	70	254	253	3	1		40	10	23			10	17	15
NCL CM Adamstown Formation	-97	-66	31	50	255	254	1	0		45	15	28			5	7	6
NCL CM Lambton Formation	-66	25	91		256	255				37	29	1		12	11	10	9
Waratah Sandstone	25	43	18		256	256				100							
WTM CM Denman Formation	43	79	36		256	256			19	53	28						
WTM CM JP SG Mt Leonard Formati	79	124	46		257	256			14	63	13	1				9	8
WTM CM JP SG Althorpe Formation	124	129	5		257	257						10	90				
WTM CM JP SG Malabar Formation	129	240	111		258	257			5	53	22	6			2	12	11
WTM CM JP SG Mt Ogilvie Formation	240	321	81		259	258				57	24	6			2	11	10
WTM CM JP SG Milbrodale Formation	321	322	1		259	259									100		
WTM CM JP SG Mt Thorley Formation	322	385	63		259	259			5	44	24	9			4	14	13
WTM CM JP SG Fairford Formation	385	388	3		259	259					25	25			50		
WTM CM JP SG Burnamwood Formati	388	521	133		260	259			3	48	23	6			2	18	17
WTM CM Archerfield Sandstone	521	530	9		260	260				100							
WTM CM VN SG Bulga Formation	530	545	14		260	260				90	10						
WTM CM VN SG Foybrook Formation	545	650	106		261	260			2	51	20	15			2	10	9

NCL CM = Newcastle Coal Measures
 WTM CM = Wittingham Coal Measures
 JP SG = Jerrys Plains Subgroup
 VN SG = Vane Subgroup

Table 2 Main model inputs for Pinegrove-1.

LAYER	TOP	BASE	THICKNESS	EROSION	DEPOSITION FROM	DEPOSITION TO	EROSION FROM	EROSION TO	CONGLOMERATE	LITHOLOGY (%)							TOC
	(m)	(m)	(m)	(m)	(Ma)	(Ma)	(Ma)	(Ma)		SANDSTONE	SILTSTONE	MUDSTONE	CLAYSTONE	SHALE	TUFF	COAL	(%)
Late Triassic - Jurassic sediments	-99	-99	0	1075	205	135	130	90		50				50			
Wianamatta Group	-99	-99	0	300	215	210	90	80		50				50			
Hawkesbury Sandstone	-99	-99	0	250	225	215	80	70		100							
Narrabeen Group	-99	-99	0	800	252	225	70	10	50	50							
NCL CM Moon Island Beach Formatio	-99	-99	0	48	253	252	10	9	40	30	10	17				3	2
NCL CM Boolaroo Formation	-99	-99	0	70	254	253	9	7		40	10	23			10	17	15
NCL CM Adamstown Formation	-99	-99	0	81	255	254	7	5		45	15	28			5	7	6
NCL CM Lambton Formation	-99	-99	0	91	256	255	5	3		37	29	1		12	11	10	9
Waratah Sandstone	-99	-99	0	18	256	256	3	2		100							
WTM CM Denman Formation	-99	-99	0	36	256	256	2	1	19	53	28						
WTM CM JP SG Mt Leonard Formatio	-99	-93	6	40	257	256	1	0	14	63	13	1				9	8
WTM CM JP SG Althorpe Formation	-93	-92	1		257	257						10	90				
WTM CM JP SG Malabar Formation	-92	96	188		259	257			5	53	22	6			2	12	11
WTM CM JP SG Mt Ogilvie Formation	96	109	13		259	259				42	30	12				16	15
WTM CM JP SG Milbrodale Formatior	109	131	22		259	259				60	35	5					
WTM CM JP SG Mt Thorley Formatior	131	186	55		259	259				51	14	19			2	14	13
WTM CM JP SG Fairford Formation	186	194	7		260	259					25	25			50		
WTM CM JP SG Burnamwood Format	194	346	152		261	260			3	48	23	6			2	18	17
WTM CM Archerfield Sandstone	346	351	5		261	261				100							
WTM CM VN SG Bulga Formation	351	359	8		261	261				70	30						
WTM CM VN SG Foybrook Formation	359	412	53		262	261				66	15	8			3	8	7

NCL CM = Newcastle Coal Measures
 WTM CM = Wittingham Coal Measures
 JP SG = Jerrys Plains Subgroup
 VN SG = Vane Subgroup

Table 3 Main model inputs for DH219.

LAYER	TOP	BASE	THICKNESS	EROSION	DEPOSITION FROM	DEPOSITION TO	EROSION FROM	EROSION TO	LITHOLOGY (%)								TOC
	(m)	(m)	(m)	(m)	(Ma)	(Ma)	(Ma)	(Ma)	CONGLOMERATE	SANDSTONE	SILTSTONE	MUDSTONE	CLAYSTONE	SHALE	TUFF	COAL	(%)
Late Triassic - Jurassic sediments	-94	-94	0	500	205	135	130	100		50				50			
Wianamatta Group	-94	-94	0	300	215	210	100	95		50				50			
Hawkesbury Sandstone	-94	-94	0	250	225	215	95	90		100							
Narrabeen Group	-94	-94	0	800	252	225	90	20	50	50							
NCL CM Moon Island Beach Formation	-94	-94	0	48	253	252	20	19	40	30	10	17				3	2
NCL CM Boolaroo Formation	-94	-94	0	70	254	253	19	17		40	10	23			10	17	15
NCL CM Adamstown Formation	-94	-94	0	81	255	254	17	15		45	15	28			5	7	6
NCL CM Lambton Formation	-94	-94	0	28	255	255	15	14		65	25			10			
Waratah Sandstone	-94	-94	0	24	255	255	14	13		100							
WTM CM Denman Formation	-94	-94	0	37	256	255	13	12		70		30					
WTM CM JP SG Mt Leonard Formation	-94	-94	0	36	256	256	12	11		50		34	3			13	12
WTM CM JP SG Althorpe Formation	-94	-94	0	11	256	256	11	11				10	90				
WTM CM JP SG Malabar Formation	-94	-94	0	100	257	256	11	8	5	43		30	4			18	16
WTM CM JP SG Mt Ogilvie Formation	-94	-94	0	139	258	257	8	4	1	56	2	29	5			7	6
WTM CM JP SG Milbrodale Formation	-94	-94	0	13	258	258	4	4		50	25	15	10				
WTM CM JP SG Mt Thorley Formation	-94	-94	0	99	259	258	4	2	2	40		44	2			12	11
WTM CM JP SG Fairford Formation	-94	-94	0	7	259	259	2	2		50		50					
WTM CM JP SG Burnamwood Formation	-94	-30	64	98	261	259	2	0		44	3	32	4			17	15
WTM CM Archerfield Sandstone	-30	-24	6		261	261				100							
WTM CM VN SG Bulga Formation	-24	-13	11		261	261				100							
WTM CM VN SG Foybrook Formation	-13	405	418		264	261			16	53	10	9	1			11	10

NCL CM = Newcastle Coal Measures
 WTM CM = Wittingham Coal Measures
 JP SG = Jerrys Plains Subgroup
 VN SG = Vane Subgroup

Table 4 Main model inputs for DH225.

LAYER	TOP	BASE	THICKNESS	EROSION	DEPOSITION FROM	DEPOSITION TO	EROSION FROM	EROSION TO	CONGLOM ERATE	LITHOLOGY (%)							TOC
	(m)	(m)	(m)	(m)	(Ma)	(Ma)	(Ma)	(Ma)		SANDSTONE	SILTSTONE	MUDSTONE	CLAYSTONE	SHALE	TUFF	COAL	(%)
Late Triassic - Jurassic sediments	-102	-102	0	200	205	135	130	100		50				50			
Wianamatta Group	-102	-102	0	300	215	210	100	95		50				50			
Hawkesbury Sandstone	-102	-102	0	250	225	215	95	90		100							
Narrabeen Group	-102	-102	0	800	252	225	90	20	50	50							
NCL CM Moon Island Beach Formation	-102	-102	0	48	253	252	20	19	40	30	10	17				3	2
NCL CM Boolaroo Formation	-102	-102	0	70	254	253	19	17		40	10	23			10	17	15
NCL CM Adamstown Formation	-102	-102	0	81	255	254	17	15		45	15	28			5	7	6
NCL CM Lambton Formation	-102	-102	0	28	255	255	15	14		65	25			10			
Waratah Sandstone	-102	-102	0	24	255	255	14	13		100							
WTM CM Denman Formation	-102	-102	0	37	256	255	13	12		70		30					
WTM CM JP SG Mt Leonard Formation	-102	-102	0	36	256	256	12	11		50	34		3			13	12
WTM CM JP SG Althorpe Formation	-102	-102	0	11	256	256	11	11				10	90				
WTM CM JP SG Malabar Formation	-102	-102	0	100	257	256	11	8	5	43		30	4			18	16
WTM CM JP SG Mt Ogilvie Formation	-102	-102	0	139	258	257	8	4	1	56	2	29	5			7	6
WTM CM JP SG Milbrodale Formation	-102	-102	0	13	258	258	4	4		50	25	15	10				
WTM CM JP SG Mt Thorley Formation	-102	-102	0	99	259	258	4	2	2	40		44	2			12	11
WTM CM JP SG Fairford Formation	-102	-102	0	7	259	259	2	2		50		50					
WTM CM JP SG Burnamwood Formation	-102	-16	86	76	261	259	2	0		59	21	13				7	6
WTM CM Archerfield Sandstone	-16	-7	9		261	261				100							
WTM CM VN SG Bulga Formation	-7	6	13		261	261				92	8						
WTM CM VN SG Foybrook Formation	6	433	427		264	261			14	63	12	4				7	6

NCL CM = Newcastle Coal Measures
 WTM CM = Wittingham Coal Measures
 JP SG = Jerrys Plains Subgroup
 VN SG = Vane Subgroup

Table 5 Main model inputs for EHL-1.

LAYER	TOP	BASE	THICKNESS	EROSION	DEPOSITION FROM	DEPOSITION TO	EROSION FROM	EROSION TO	CONGLOM ERATE	LITHOLOGY (%)							TOC
	(m)	(m)	(m)	(m)	(Ma)	(Ma)	(Ma)	(Ma)		SANDSTONE	SILTSTONE	MUDSTONE	CLAYSTONE	SHALE	TUFF	COAL	(%)
Late Triassic - Jurassic sediments	-170	-170	0	1100	205	135	130	100		50				50			
Wianamatta Group	-170	-170	0	300	215	210	100	95		50				50			
Hawkesbury Sandstone	-170	-170	0	250	225	215	95	90		100							
Narrabeen Group	-170	-170	0	800	252	225	90	5	50	50							
NCL CM Moon Island Beach Formation	-170	-170	0	48	253	252	5	5	40	30	10	17				3	2
NCL CM Boolaroo Formation	-170	-170	0	70	254	253	5	4		40	10	23			10	17	15
NCL CM Adamstown Formation	-170	-170	0	81	255	254	4	2		45	15	28			5	7	6
NCL CM Lambton Formation	-170	-170	0	28	255	255	2	1		65	25			10			
Waratah Sandstone	-170	-170	0	24	255	255	1	1		100							
WTM CM Denman Formation	-170	-145	25	12	256	255	1	0		70	30						
WTM CM JP SG Mt Leonard Formation	-145	-109	36		256	256				50		34	3			13	12
WTM CM JP SG Althorpe Formation	-109	-98	11		256	256						10	90				
WTM CM JP SG Malabar Formation	-98	1	100		257	256			5	43		30	4			18	16
WTM CM JP SG Mt Ogilvie Formation	1	141	139		258	257			1	56	2	29	5			7	6
WTM CM JP SG Milbrodale Formation	141	153	13		258	258				50	25	15	10				
WTM CM JP SG Mt Thorley Formation	153	253	99		259	258			2	40		44	2			12	11
WTM CM JP SG Fairford Formation	253	259	7		259	259				50		50					
WTM CM JP SG Burnamwood Formation	259	422	162		261	259			4	40	3	32	4			17	15
WTM CM Archerfield Sandstone	422	429	7		261	261				100							
WTM CM VN SG Bulga Formation	429	429	0		261	261				50	25	15	10				
WTM CM VN SG Foybrook Formation	429	557	128		262	261				52	6	22	3			17	15
WTM CM Saltwater Creek Formation	557	583	26		262	262				60		40					
Maitland Group	583	596	13		263	262						23		77			

NCL CM = Newcastle Coal Measures
 WTM CM = Wittingham Coal Measures
 JP SG = Jerrys Plains Subgroup
 VN SG = Vane Subgroup

Table 6 Main model inputs for EHRP-1.

LAYER	TOP	BASE	THICKNESS	EROSION	DEPOSITION FROM	DEPOSITION TO	EROSION FROM	EROSION TO	LITHOLOGY (%)								TOC
	(m)	(m)	(m)	(m)	(Ma)	(Ma)	(Ma)	(Ma)	CONGLOM ERATE	SANDSTONE	SILTSTONE	MUDSTONE	CLAYSTONE	SHALE	TUFF	COAL	(%)
Late Triassic - Jurassic sediments	-154	-154	0	1100	205	135	130	100		50				50			
Wianamatta Group	-154	-154	0	300	215	210	100	95		50				50			
Hawkesbury Sandstone	-154	-154	0	250	225	215	95	90		100							
Narrabeen Group	-154	-154	0	800	252	225	90	20	50	50							
NCL CM Moon Island Beach Formation	-154	-154	0	48	253	252	20	18	40	30	10	17				3	2
NCL CM Boolaroo Formation	-154	-154	0	70	254	253	18	14		40	10	23			10	17	15
NCL CM Adamstown Formation	-154	-154	0	81	255	254	14	10		45	15	28			5	7	6
NCL CM Lambton Formation	-154	-154	0	28	255	255	10	8		65	25			10			
Waratah Sandstone	-154	-154	0	24	255	255	8	6		100							
WTM CM Denman Formation	-154	-154	0	37	256	255	6	3		70	30						
WTM CM JP SG Mt Leonard Formation	-154	-154	0	4	256	256	3	2				50				50	45
WTM CM JP SG Althorpe Formation	-154	-154	0	1	256	256	2	1				100					
WTM CM JP SG Malabar Formation	-154	-61	93	20	257	256	1	0		44	10	26	15			5	5
WTM CM JP SG Mt Ogilvie Formation	-61	48	109		258	257				40	10	37	5			8	7
WTM CM JP SG Milbrodale Formation	48	62	14		258	258				50	25	15	10				
WTM CM JP SG Mt Thorley Formation	62	158	95		259	258				40	10	30	5			15	14
WTM CM JP SG Fairford Formation	158	176	19		259	259				50	25	15	10				
WTM CM JP SG Burnamwood Formation	176	299	122		260	259				44	10	18	5			23	21
WTM CM Archerfield Sandstone	299	302	4		260	260				100							
WTM CM VN SG Bulga Formation	302	302	0		260	260				50	25	15	10				
WTM CM VN SG Foybrook Formation	302	400	98		261	260				40	10	30	5			15	14
WTM CM Saltwater Creek Formation	400	424	24		261	261				50	25	15	10				
Maitland Group	424	546	122		263	261				50	25	15	10				

NCL CM = Newcastle Coal Measures
 WTM CM = Wittingham Coal Measures
 JP SG = Jerrys Plains Subgroup
 VN SG = Vane Subgroup

Table 7 Main model inputs for Wybong-1.

LAYER	TOP	BASE	THICKNESS	EROSION	DEPOSITION FROM	DEPOSITION TO	EROSION FROM	EROSION TO	CONGLOM ERATE	LITHOLOGY (%)							TOC
	(m)	(m)	(m)	(m)	(Ma)	(Ma)	(Ma)	(Ma)		SANDSTONE	SILTSTONE	MUDSTONE	CLAYSTONE	SHALE	TUFF	COAL	(%)
Late Triassic - Jurassic sediments	-150	-150	0	850	205	135	130	90		50				50			
Wianamatta Group	-150	-150	0	300	215	210	90	80		50				50			
Hawkesbury Sandstone	-150	-150	0	250	225	215	80	70		100							
Narrabeen Group	-150	-94	56	744	252	225	70	0	50	50							
NCL CM Moon Island Beach Formation	-94	-46	48		253	252			40	30	10	17				3	2
NCL CM Boolaroo Formation	-46	24	70		254	253				40	10	23			10	17	15
NCL CM Adamstown Formation	24	105	81		255	254				45	15	28			5	7	6
NCL CM Lambton Formation	105	133	28		255	255				65	25			10			
Waratah Sandstone	133	157	24		255	255				100							
WTM CM Denman Formation	157	194	37		256	255				70	30						
WTM CM JP SG Mt Leonard Formation	194	197	4		256	256						50				50	45
WTM CM JP SG Althorpe Formation	197	199	1		256	256						100					
WTM CM JP SG Malabar Formation	199	269	71		257	256				44	10	26	10			10	9
WTM CM JP SG Mt Ogilvie Formation	269	340	71		258	257				45	10	34	5			6	6
WTM CM JP SG Milbrodale Formation	340	340	0		258	258				70	30						
WTM CM JP SG Mt Thorley Formation	340	445	104		259	258				45	10	33	5			7	7
WTM CM JP SG Fairford Formation	445	446	2		259	259				70	30						
WTM CM JP SG Burnamwood Formation	446	572	125		260	259				44	10	18	5			23	21
WTM CM Archerfield Sandstone	572	573	1		260	260				100							
WTM CM VN SG Bulga Formation	573	575	2		260	260				70	30						
WTM CM VN SG Foybrook Formation	575	613	38		260	260				45	15	30	10				

NCL CM = Newcastle Coal Measures
 WTM CM = Wittingham Coal Measures
 JP SG = Jerrys Plains Subgroup
 VN SG = Vane Subgroup