

Background Evidence concerning Narrabri Gas Project GHG claims

Table 3. Data from <https://search.geoscience.nsw.gov.au> (DIGS) used to calculate average CO₂ content in Pilliga licences for Narrabri CSG (Coal Seam Gas)

Note - well names have direct link to data (also see DropBox). These wells are *inside or near the borders of PPLA 13 / PPLA 14 / PPLA 15/ PPLA 16.*

This Table has the data for all gas samples that are publicly available (i.e. low CO₂ and high CO₂)

Well	Date drilled	MGA Zone 55		CO ₂ Value used - MCF	CO ₂ Value used - HS	Source of Composition Data	Composition of MCF				Composition of Hoskissons				Comments													
		Easting	Northing				Seam	N ₂	CO ₂	CH ₄	Seam	N ₂	CO ₂	CH ₄														
Biblewindi North-1C	11-05-07	753011.0	6613832.8	22.6	59.1	Biblewindi_North_1C_Gas_Composition (thickness weighted average of seams)	MCF		22.6					59.1														
Biblewindi West-1C	07-01-08	749880.1	6609246.3	No data	75.0	Use HS sample data ES0067 on in gas desorption report. [GS2010_0481.RE0000272.Biblewindi West 1C Gas (Composition).pdf Sample is described as wellhead gas in March 2009 but no record of sampling can be found and well is recorded as P&A in 2007, so impossible to have taken a sample in 2009? Note - BW-1C Desorption report consistently indicates significantly high [CO ₂ +N ₂], but only Hoskisson seam analyses are presented	Thin		No data		HS			75.0		<table border="1"> <tr> <td>Q1+Q2+Q3</td> <td>CO₂+N₂</td> <td>1.59</td> <td>m³/t</td> </tr> <tr> <td>Total</td> <td>CH₄</td> <td>0.52</td> <td>m³/t</td> </tr> <tr> <td></td> <td>N₂+CO₂+CH₄</td> <td>2.12</td> <td>m³/t</td> </tr> </table>	Q1+Q2+Q3	CO ₂ +N ₂	1.59	m ³ /t	Total	CH ₄	0.52	m ³ /t		N ₂ +CO ₂ +CH ₄	2.12	m ³ /t
Q1+Q2+Q3	CO ₂ +N ₂	1.59	m ³ /t																									
Total	CH ₄	0.52	m ³ /t																									
	N ₂ +CO ₂ +CH ₄	2.12	m ³ /t																									
Biblewindi-1	01-04-00	753855.4	6607734.7	7.6	No Data	Appendix_5b_gas_and_water_analysis.pdf [Sample 238/0007]	Tight	5.03	7.6	87.03	Tight, No data		No Data		Separator Gas													
Biblewindi-11C	24-11-07	754342.8	6603932.2	13.9	74.0	Biblewindi_11C_Gas_Composition.pdf [BBW11C-GG14]	MCF	0.25	13.91	85.83	HS		74.0		Black Jack Formation : 47% CO ₂ ; Hoskisson 74%													
Biblewindi-12	08-01-09	753818.6	6604437.0	5.4	No Data	Biblewindi_12_Gas_Composition.pdf (looks to be from wellhead sample 23/4/2009. Hoskissons seam cemented off)	MCF	2.69	5.42	91.82	No data		No Data															
Bohena 2	02-04-98	750432.7	6619591.0	6.3	15.6	Appendix_2_Gas_composition_analyses.pdf [BHN2391905980020A]	MCF	1.75	6.26	91.83	HS		15.63															
Bohena 3	29-06-98	750352.8	6617645.6	6.7	No Data	WCR280.R00031547.Bohena 2 Gas Composition.jpg	MCF	3.63	6.71	89.40	No data		No Data															
Bohena 3C	03-02-99	750352.8	6617645.6	14.6	18.3	Appendix_II_gas_comp_sample_timing_tabulations_plots_gas_comp_analyses	MCF	22.45	14.55	62.00	HS		18.30															
Bohena 4	11-06-98	750377.9	6618623.1	9.1	No Data	WCR280.R00031547.Bohena 2 Gas Composition.jpg	MCF	0.57	9.10	90.22	No data		No Data															
Bohena 5	12-07-98	749349.0	6618693.6	24.7	No Data	WCR280.R00031547.Bohena 2 Gas Composition.jpg	MCF	4.60	24.66	66.84	No data		No Data															
Bohena 6	04-08-98	751373.9	6618618.3	2.6	13.7	WCR280.R00031547.Bohena 2 Gas Composition.jpg	MCF	6.78	2.62	77.40	HS		13.65		Use HS data from 6H, B-6 N ₂ is too high to be real data													
Bohena 12C	23-07-07	752301.8	6621619.8	15.3	52.6	Bohena_12C_Gas_Composition.pdf [Hoskissons 45% / Maules Creek Formation 15%]	MCF	6.50	15.32	76.00			52.61															
Bohena 14	14-04-10	747170.1	6626227.0			Bohena_14_Gas_Composition.pdf [Hoskissons formation 64% CO ₂ , MCF 93% CO ₂]	MCF		93.19				64.39															
Bohena South-1	02-07-04	751483.1	6614583.6	25.0	No Data	Well_completion_report_on_Bohena_South_1.pdf (Producing gas sample data) Desorption reports referred to in WCR are missing from DIGS	MCF	5.00	25.00	65.00	No data		No Data		https://search.geoscience.nsw.gov.au/report/R00079264													
Brigalow Park-2	15-11-10	750105.7	6633893.1	1.4	0.7	Brigalow_Park_2_Gas_Composition.pdf [BPK002_0010211102330A1_1] HS : BPK002_009; MCF : BPK002_014	MCF	0.00	1.36	99.06	HS		0.69															
Burrawarna-1	05-05-00	757961.1	6614737.7			Appendix_8_desorbtion_report (Composition).pdf MCF : BWA1ED170206001609B ; HS : BWA1ED081505001101A	MCF	3.58	85.13	11.00	HS		61.73															
Coonarah-2	21-08-95	646830.7	6637863.6	No data	0.0	Appendix_3_gas_analysis_(240kb_pdf).pdf	Not drilled		No data		HS	7.00	0.01	92.67	https://search.geoscience.nsw.gov.au/report/R00031946													
Coonarah-3	14-12-01			0.1	No data	Text_Coonarah-3_well_completion_report.pdf DST #1 tested the Maules Creek Formation	MCF	12.45	0.08	86.70	No data		No data															
Coonarah-5	10-11-01			0.1	No data	Appendix_3_gas_analysis_report_pdf_79KB.pdf , DST#2 [MCF]	MCF	12.77	0.14	86.55	No data		No data															
Coonarah-9	13-07-09	747066.0	6637315.0	3.6	No data	Coonarah_9_Gas_Composition.pdf [CNH009ED071905091537A1]		2.31	3.57	94.08	No data		No data															

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Well	Date drilled	MGA Zone 55		CO2 Value used - MCF	CO2 Value used - HS	Source of Composition Data	Composition of MCF				Composition of Hoskissons				Comments
		Easting	Northing				Seam	N2	CO2	CH4	Seam	N2	CO2	CH4	
	20-01-11	746284.2	6641556.5	No data	25.0	Culgoora_2_Gas_Composition.pdf (Mostly Black Jack Group, only 2 m of MCF in well)	Very thin		No data		HS		25.00	50.00	https://search.geoscience.nsw.gov.au/report/RE0001453
Dewhurst-2	21-04-08	758390.9	6606255.8	No data	No data	Cannot find any composition data in WCR or Appendices	No data		No data		No data		No data		
Dewhurst-4	03-07-08	755289.1	6600283.6	17.5	41.1	Dewhurst_4_Gas_Composition.pdf	MCF		17.48	60.00	HS		41.13		https://search.geoscience.nsw.gov.au/report/RE0000254
Dewhurst-5	08-10-08	766562.7	6605802.4	59.2	No data	Dewhurst_5_Gas_Composition.pdf (Average of MCF; GC06 sample - 68% CO2)	MCF		59.22	35.00	No data		No data		https://search.geoscience.nsw.gov.au/report/RE0000255
Dewhurst 7	10-09-08	759818.4	6612077.3	30.6	59.2	Dewhurst_7_Gas_Composition.pdf	MCF	6.00	30.61	62.00	HS		59.18		
Dewhurst-8A	20-11-13	765546.0	6616987.0	49.9	29.5	Appendix_13-Gas_Desorption_Report [DWH8A_021D MCF] note - all formations > 40%	MCF	5.00	49.85	55.00	HS		29.51		https://search.geoscience.nsw.gov.au/report/RE0005996
Dewhurst-11	10-11-09	761419.8	6617066.8			Dewhurst_11_Gas_Desorption_Analysis [DWH11ED230911091302B, MCF - 80%; DWH11ED081710091900A Hoskissons, 38%]	MCF	5.00	80.00	60.00	HS		38.00		https://search.geoscience.nsw.gov.au/report/RE0000617
Dewhurst-19	15-May-11	747878.1	6600510.2	95.0	25.0	Dewhurst_19_Gas_Composition.pdf [DWH019_0030805111017A1 Black Jack 70%; DWH019_0080805111036A1 Hoskisson 75%; DWH019_0101105110714A1 Maules Creek Formation 94%]	MCF	5.00	95.02	25.00	HS		62.17		https://search.geoscience.nsw.gov.au/report/RE0001664
Dewhurst-22	10-12-13	763704.0	6610149.0	64.3	57.2	Appendix_12_-_Gas_Desorption_Report (Composition).pdf [DEW022_001DGASB]	MCF	0.28	64.27	35.00	HS		57.16		All seams high CO2. 594 - Hoskisson 923 Bohena (MCF), 60% average in both
Dewhurst-26	03-03-14	754984.3	6600730.2	20.8	No data	Appendix_9_-_Gas_Desorption_Report (Compositions).pdf [DEW026_006D (E)]	MCF	0.00	20.80	78.50	No data		No data		Bohena Coal Seam (base of MCF)
Jacks Creek-1	29-07-00	764715.4	6630498.4			Appendix_6_core_description_test_results_(Composition).pdf [JAC1ED401408001550B]	MCF	12.93	86.03	1.04	HS		54.00		WCR "the well appeared to be highly CO2-prone"
Mullaley North-1	14-02-02	777405.0	6560650.0			Text_main_report (Composition).pdf [E109 considered representative]	MCF	0.00	75.60	24.50	HS		85.20		Desorbed has composition, no test flow
Narrabri Coal Mine	13-04-15	771000.0	6620000.0			NAR- Stage 2 EA Specialist-Part 8 - Greenhouse Gas Assessment.pdf (P8-15)	No data				HS		90.00	10.00	Underground mining of up to 8 Mtpa of ROM coal from the Hoskissons Seam.
Rosevale-1A	17-Feb-10	743852.3	6633826.7	1.2	43.6	Rosevale_1A_Gas_Composition.pdf HS : RVL001AED123101100700A ; MCF : RVL001AED161002101800A1	MCF	0.00	1.20	30.27	HS		43.64		BJG - 60%, Hoskisson - 35%, MCF 1% - big variability between seams
Tintfield-1	09-Oct-09	751732.3	6635979.9	9.1	1.8	Tintfield_1_Gas_Composition.pdf HS : TFD1ED121711091157C1 ; MCF : TFD1ED251711091413C1	MCF	0.00	9.10	90.00	HS		1.82		
Wilga Park 1	13-03-98	756830.7	6637863.6	4.1	2.0	WCR280.R00031547.Bohena 2 Gas Composition.jpg	MCF		4.08		HS		1.95		
Wilga Park 3	09-12-98	755995.6	6637719.9	30.7	No data	WCR280.R00031547.Bohena 2 Gas Composition.jpg	MCF		30.65		No data		No data		
Willala-1	07-Feb-11	772194.2	6594958.5			Willala_1_Gas_Composition.pdf HS : WIL001_0023001110822B1_2 ; MCF : WIL001_0080202112156A1_2	MCF	0.00	78.69	8.76	HS		87.13		
Yallabee-1	26-Aug-09	760783.0	6627968.0			Yallabee_1_Gas_Desorption_Analysis.pdf (Outside permit) HS : YLB1ED06 ; MCF : YLB1ED19	MCF	0.00	96.26	0.00	HS		87.39		
Yallabee-2	21-Apr-11	754579.8	6630169.1	83.4	28.5	Yallabee_2_Gas_Composition.pdf HS : YLB002_001; MCF : YLB002_007	HS?	0.00	83.37	28.45			58.82		Can't match sample numbers to seams unambiguously; min CO2 58%, some >84%
Average				22.3	32.7	< - average CO2 with wells outside PPLAs (13,14,15,16) excluded		4.3	34.8	59.8		7.0	46.6	50.9	
				70%	30%										
				Average CO2	25.4%										