



POROSITY VS. PERMEABILITY

Columbia Gas
Brown, Goshorn & Swann #20311
Permit #1108 - Clay County, WV
Injun Sandstone
4701501108
(WV Tight Formation Committee)

42-55

Clay-1108



OILFIELD RESEARCH, INC.

WHOLE CORE ANALYSIS REPORT

Company Columbia Gas Transmission Corp. Elevation 1166.42 File No. 75010004
 Lease Brown-Goshorn & Swann Well 20311 Formation See Below Date Cored 9/29/75
 Field Grannys Fork Drlg. Fluid FW Gel Date Report 10/8/75
 County Clay State W. Va. Type Of Core Diamond Permit No. _____
 Location Summers Fork, Henry Dist. Remarks Sampled by client

LITHOLOGICAL ABBREVIATIONS

SAND-SO	DOLOMITE-DOL	ANHYDRITE-ANHY	SANDY-SDY	FINE-FN-	CRYSTALLINE-XLN	BROWN-BRN	FRACTURED-FRAC	SLIGHTLY-SL/
SHALE-SH	CHERT-CH	CONGLOMERATE-CONG	SHALEY-SHY	MEDIUM-MED	GRAIN-GRN	GRAY-GY	LAMINATION-LAM	VERY-W/
LIME-LM	GYPSUM-GYP	FOSSILIFEROUS-FOSS	LIMEY-LMY	COARSE-CSE	GRANULAR-GRNL	VUGGY-VGY	STYLOLITIC-STY	WITH-W/

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCY		POROSITY PERCENT	LITHOLOGY AND REMARKS
		HORIZONTAL			
		MAX	90°		

					Percent Oil	Percent Water
1	BUS LIME 2031.8 - 32.4	<0.10	<0.10	1.0	10.7	64.3
2	KEENER 2060.2 - 61.8	<0.10	<0.10	7.5	32.7	59.6
3	2061.8 - 63.3	<0.10	<0.10	4.4	11.2	81.8
4	2063.3 - 64.5	3.7	2.0	9.0	14.8	55.3
5	2064.5 - 66.1	0.80	0.80	8.2	18.3	56.4
6	2066.1 - 67.7	3.9	<0.10	9.7	24.4	48.0
7	2067.7 - 69.2	<0.10	<0.10	11.3	27.6	42.6
8	2069.2 - 70.4	0.20	0.20	9.8	30.9	40.9
9	2070.4 - 72.0	3.3	3.2	9.7	19.1	47.0
10	2072.0 - 73.2	9.0	<0.10	12.9	23.6	51.2
11	2073.2 - 74.3	13.	12.	18.0	22.0	48.3
12	2074.3 - 75.8	12.	11.	16.1	22.8	54.6
13	2075.8 - 77.3	7.5	7.1	17.2	20.1	50.5
14	2077.3 - 78.5	18.	15.	21.2	19.0	48.0
15	2078.5 - 79.5	16.	15.	18.3	18.9	50.3
16	INTON 2079.5 - 80.7	2.8	2.7	21.4	19.1	51.5
17	2080.7 - 82.3	3.4	3.2	21.3	20.7	51.8
18	2082.3 - 83.9	11.	11.	21.7	15.8	52.6
19	2083.9 - 85.2	15.	15.	21.4	17.2	46.5
20	2085.2 - 86.5	0.53	0.40	18.9	27.9	48.1
21	2086.5 - 87.9	3.6	2.7	20.4	21.3	54.2
22	2087.9 - 89.2	2.0	1.9	20.5	19.9	54.6
23	2089.2 - 90.5	2.5	2.5	20.5	16.9	55.0
24	2090.5 - 91.5	6.1	6.1	22.3	16.7	51.1
25	2091.5 - 93.0	6.1	6.1	23.4	19.6	47.2

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WHOLE CORE ANALYSIS REPORT

Lease Brown-Gardner & Swan

Well No. 20311

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCY			POROSITY PERCENT	LITHOLOGY AND REMARKS
		HORIZONTAL		VERTICAL		
		MAX.	90°			

					Percent Oil	Percent Water
26	2093.0 - 94.4	8.1	7.5	21.4	19.1	49.3
27	2094.4 - 95.4	7.8	6.8	19.7	20.7	52.9
28	2095.4 - 96.8	<0.10	<0.10	8.6	25.0	61.4
29	2096.8 - 98.3	1.0	1.0	17.6	20.9	53.7
30	2098.3 - 00.0	0.38	0.33	13.3	13.4	76.1

SQUAW

31	2134.0 - 34.8	26.	26.	7.6	43.9	37.4
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AVERAGES

2060.2-2073.2	2.2	0.70		9.1	21.3	53.9	(13.0')
2073.2-2100.0	6.6	6.2		19.0	19.7	53.3	(26.8')

All averages are weighted averages