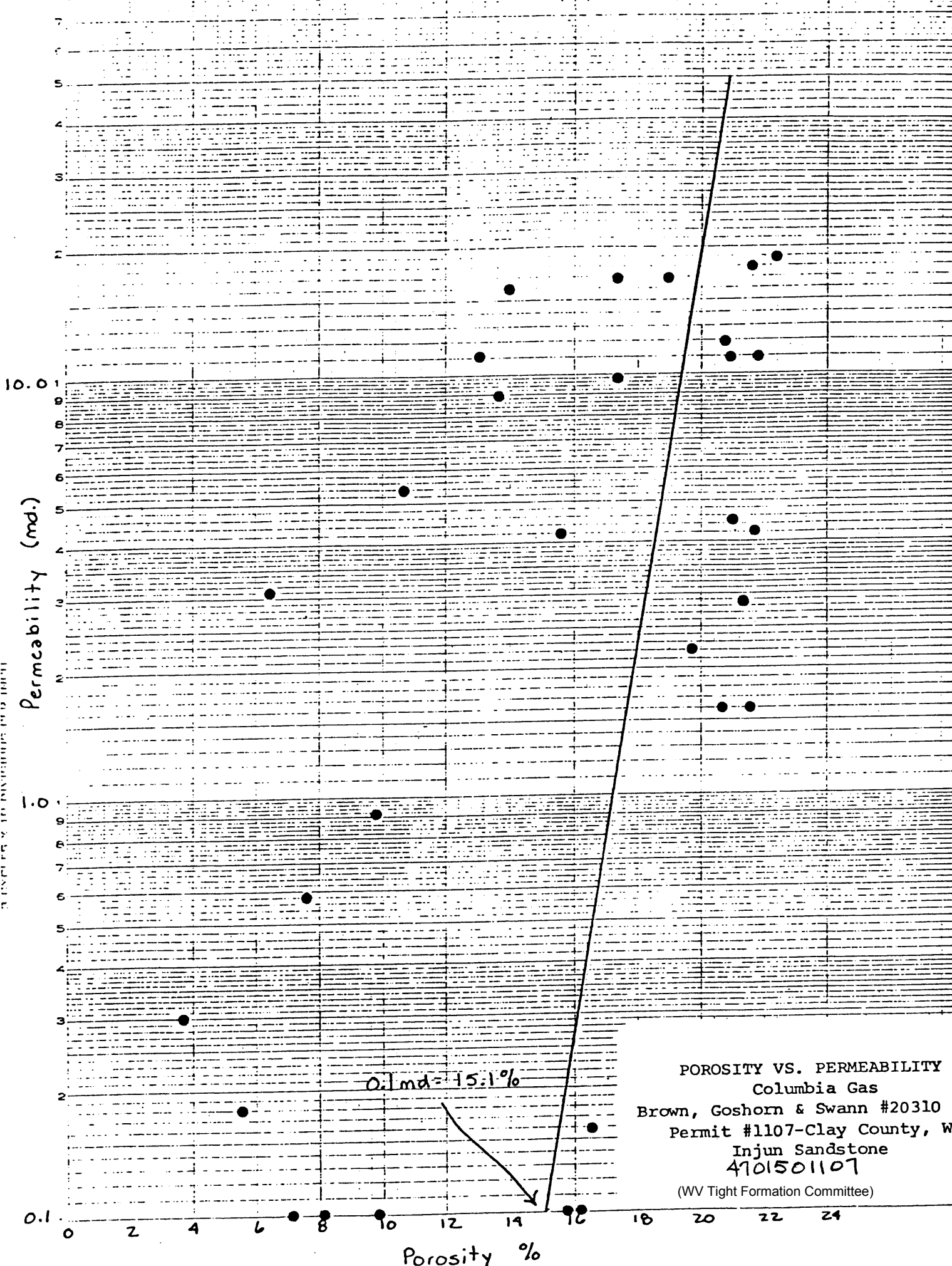


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FORM LDC-AM-1100
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0.1 md = 15.1%

PEROSITY VS. PERMEABILITY
Columbia Gas
Brown, Goshorn & Swann #20310 Well
Permit #1107-Clay County, WV
Injun Sandstone
4701501107
(WV Tight Formation Committee)

42-55

Clay-1107



OILFIELD RESEARCH, INC.

WHOLE CORE ANALYSIS REPORT

Company Columbia Gas Transmission Corp. Elevation 1233.40 File No. 75010028
 Lease J.F. Brown-Goshorn & Swann Well 20310 Formation See Below Date Cored 10/11/75
 Field Grannys Fork Orig. Fluid FW Gel Date Report 10/20/75
 County Clay State W. Va. Type Of Core Diamond Permit No. _____
 Location Summers Fork (Waters) Remarks Sampled by OR-JCM

LITHOLOGICAL ABBREVIATIONS

SAND-SD 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-V/
 LIME-LM GYPSUM-GYP FOSSILIFEROUS-FOSS LIMEY-LMY COARSE-CSE GRANULAR-GRNL VUGGY-VGY STYLOLITIC-STY WITH-W/

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

INJUN	DEPTH	PERMEABILITY		POROSITY	Oil	Water
		MAX	90°		Saturation	Saturation
1	2118.0-19.6	<0.10	<0.10	8.1	37.3	49.9
2	2119.6-21.2	11.	11.	13.1	24.4	49.4
3	2121.2-22.5	16.	14.	14.0	25.0	48.2
4	2122.5-23.8	8.9	6.8	13.7	19.8	47.8
5	2123.8-25.2	9.7	9.7	17.5	21.9	47.6
6	2125.2-26.5	0.91	0.91	9.8	37.2	58.5
7	2126.5-28.0	0.18	0.18	5.6	31.2	38.4
8	2128.0-29.5	0.58	0.58	7.6	27.3	34.4
9	2129.5-30.8	0.30	0.30	3.7	31.3	50.8
10	2130.8-31.9	3.1	2.7	6.4	16.2	60.7
11	2131.9-33.2	5.4	5.4	10.7	28.6	57.0
12	2133.2-34.3	17.	17.	17.4	24.0	54.0
13	2134.3-35.5	19.	19.	22.4	20.1	52.3
14	2135.5-36.6	17.	17.	19.0	21.8	62.2
15	2136.6-37.6	4.2	4.2	15.6	26.3	60.7
16	2137.6-38.5	18.	16.	21.6	21.5	50.0
17	2138.5-40.0	<0.10	<0.10	15.8	28.2	67.0
18	2140.0-41.1	<0.10	<0.10	16.2	31.5	59.7
19	2141.1-42.7	<0.10	<0.10	7.1	13.3	84.6
20	2142.7-44.2	<0.10	<0.10	9.9	20.0	78.4
21	2144.2-45.4	1.6	1.6	20.7	26.6	56.8
22	2145.4-47.0	2.9	2.9	21.3	18.8	57.2
23	2147.0-48.3	1.6	1.6	21.5	17.9	56.8
24	2148.3-49.5	11.	11.	21.8	18.1	56.6
25	2149.5-50.9	12.	9.7	20.7	19.1	57.1
26	2150.9-52.2	4.5	4.5	21.0	15.9	55.2
27	2152.2-53.4	11.	9.0	20.9	19.1	59.2
28	2153.4-54.4	4.2	4.2	21.7	17.7	58.0

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WHOLE CORE ANALYSIS REPORT

Lease J.F. Brown-Goshorn & Swann

Well No. 20310

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

					Oil Saturation	Water Saturation
29	2154.4-55.8	2.2	2.2	19.8	16.8	59.0
30	2155.8-57.1	0.97	0.42	19.2	18.2	58.0
31	2157.1-58.5	0.35	0.23	23.9	27.0	44.4
32	2158.5-59.6	0.16	0.16	16.5	22.6	66.9
SQUAW						
33	2191.0-91.8	<0.10	<0.10	10.0	34.4	26.0
34	2191.8-93.0	7.1	7.1	22.8	32.1	35.4
35	2193.0-94.4	3.7	3.7	22.0	32.8	32.0
36	2194.4-95.6	2.0	2.0	21.1	37.9	28.0
37	2195.6-96.9	1.5	1.5	21.0	33.6	29.3
38	2196.9-98.0	1.7	1.7	21.6	33.7	29.4
39	2198.0-99.0	4.8	4.2	19.7	29.0	30.6

AVERAGES

(37.3')	2118.0-59.6	5.9	5.5	16.5	23.1	56.9	INJUN
(7.2')	2191.8-99.0	3.4	3.4	21.4	33.3	30.8	SQUAW

Averages for samples with porosity greater than 10%.
Averages are weighed.