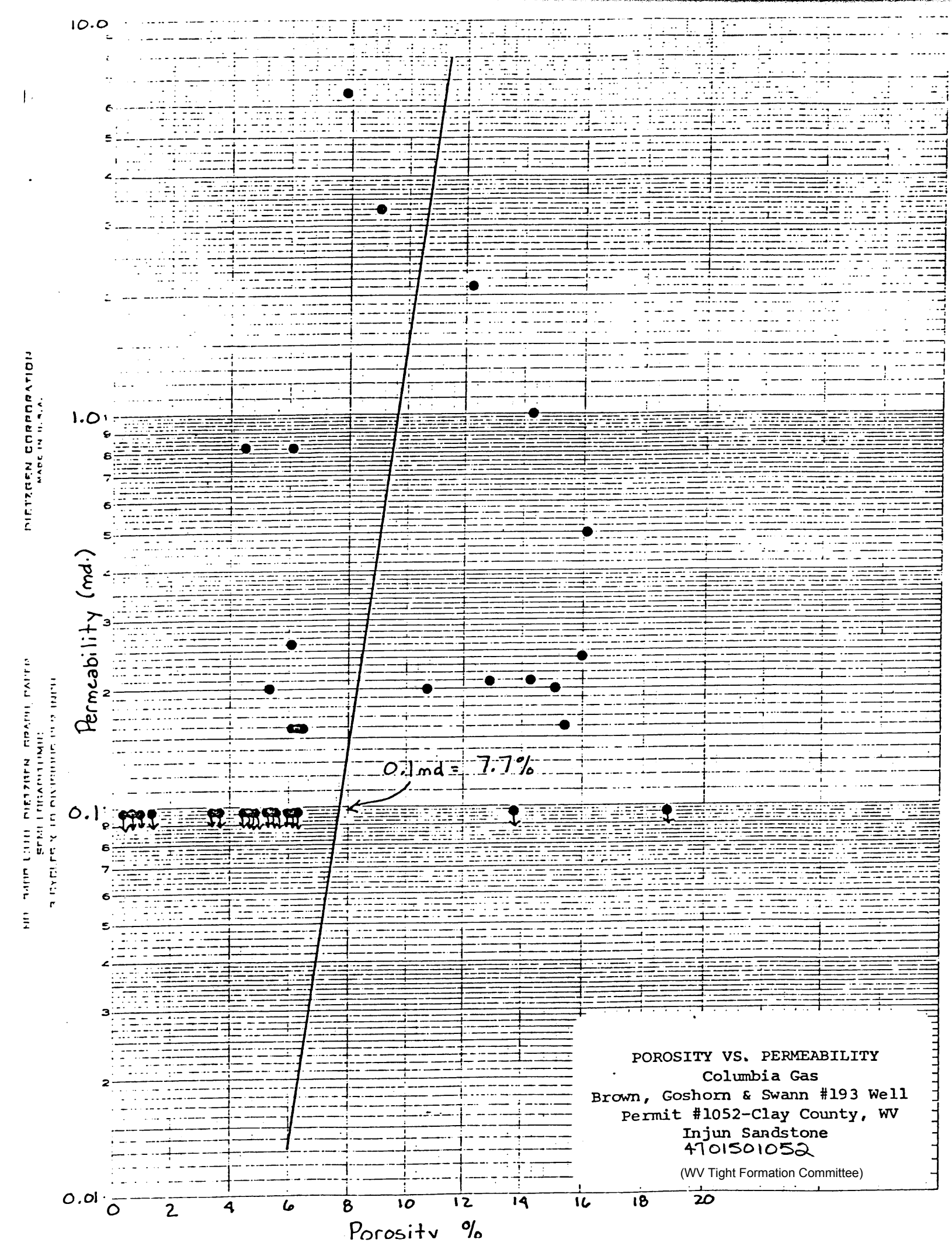
10.0
1.0
0.1
0.01
Permeability (md.)
0.1 md = 7.7%
0 2 4 6 8 10 12 14 16 18 20
Porosity %
POROSITY VS. PERMEABILITY
Columbia Gas
Brown, Goshorn & Swann #193 Well
Permit #1052-Clay County, WV
Injun Sandstone
4701501052
(WV Tight Formation Committee)

40-53

Clay - 1052

OILFIELD RESEARCH, INC.

WHOLE CORE ANALYSIS REPORT

Company: Columbia Gas Transmission Corporation | Elevation: 1009.09 | File No.: 7506023
Lease: Brown, Goshorn & Swann#193 | Well: 20277 | Formation: Injun & Squaw | Date Cored: 5/29/75
Field: | Drlg. Fluid: FW Gel | Date Report: 6/12/75
County: Clay | State: W. Virginia | Type Of Core: Diamond | Permit No.:
Location: Dismal Br. of Laurel Cr. - Henry Dist. | Remarks: Sampled by client

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 HORIZONTAL MAX.	HORIZONTAL 90°	VERTICAL	POROSITY PERCENT	LITHOLOGY AND REMARKS	Oil Saturation	Water Saturation
	INJUN							
1	1841.0-42.9	<0.10	<0.10		0.8		0.0	76.3
2	1842.9-43.9	<0.10	<0.10		0.8		0.0	47.1
3	1843.9-45.1	<0.10	<0.10		1.0		0.0	41.4
4	1845.1-46.5	<0.10	<0.10		1.0		0.0	58.4
5	1846.5-47.5	<0.10	<0.10		1.3		0.0	76.1
6	1847.5-48.9	<0.10	<0.10		0.7		0.0	54.6
7	1848.9-50.3	6.4	6.0		7.9		5.3	61.8
8	1850.3-51.9	0.50	0.50		6.9		6.6	55.9
9	1851.9-53.1	<0.10	<0.10		5.3		4.8	59.8
10	1853.1-54.6	0.16	0.16		6.5		4.6	53.2
11	1854.6-56.3	0.20	0.16		5.4		5.3	47.4
12	1856.3-57.6	0.16	0.16		6.3		5.1	43.8
13	1857.6-59.1	<0.10	<0.10		6.2		3.4	60.5
14	1859.1-60.6	0.16	0.16		6.1		5.0	55.2
15	1860.6-62.3	0.26	0.22		6.1		8.9	49.2
16	1862.3-63.3	<0.10	<0.10		5.0		3.0	64.6
17	1863.3-64.9	<0.10	<0.10		5.9		4.0	61.8
18	1864.9-66.3	<0.10	<0.10		5.6		6.6	61.3
19	1866.3-68.0	<0.10	<0.10		6.1		5.6	62.7
20	1869.0-70.2	<0.10	<0.10		4.4		6.3	61.2
21	1870.2-71.3	0.83	0.26		4.6		2.9	55.7
22	1871.3-72.2	<0.10	<0.10		4.6		2.5	60.9
23	1872.2-73.1	<0.10	<0.10		5.3		6.3	47.6
24	1874.2-75.4	<0.10	<0.10		3.5		8.6	70.0
25	1875.4-76.3	0.16	0.16		6.1		6.9	46.1
26	1876.3-77.5	<0.10	<0.10		4.9		5.8	51.9

WHOLE CORE ANALYSIS REPORT

Lease Brown, Goshorn & Swann Well No. 20277

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYS HORIZONTAL MAX.	HORIZONTAL 90°	VERTICAL	POROSITY PERCENT	LITHOLOGY AND REMARKS	Oil Saturation	Water Saturation
27	1877.5-78.8	<0.10	<0.10		3.7		2.8	71.8
28	1878.8-79.9	<0.10	<0.10		5.0		8.9	54.6
29	1879.9-81.2	<0.10	<0.10		4.7		4.6	67.0
30	1881.2-82.4	0.83	0.70		6.2		7.4	54.4
31	1882.4-84.0	3.3	3.3		9.0		9.3	57.8
32	1884.0-85.5	1.0	0.70		14.3		11.7	50.5
33	1885.5-87.0	0.20	0.20		10.8		10.0	61.9
34	1887.0-88.4	0.22	0.16		14.3		7.9	61.5
35	1888.4-89.4	0.22	0.22		12.9		14.3	55.5
36	1889.4-90.6	2.1	1.3		12.3		6.2	75.0
37	1890.6-91.9	0.20	0.16		15.2		7.2	68.0
38	1891.9-93.5	0.16	0.16		15.5		9.4	58.6
39	1893.5-94.9	0.24	0.16		16.0		10.7	55.8
40	1894.9-96.0	0.50	0.16		16.2		10.5	54.3
41	1896.0-97.5	*<0.10			18.8		7.2	70.0
42	1897.5-99.8	*<0.10			13.8		3.0	71.7
	SQUAW							
43	1935.3-36.9	<0.10	<0.10		3.6		12.9	51.8
44	1936.9-38.1	85.	72.	**	15.8		24.7	26.7
45	1938.1-39.4	5.2	1.7		15.1		28.1	25.0
46	1940.7-43.0	85.	18.	V.F.	15.2		28.2	24.6
47	1944.0-45.5	166.	1.1	V.F.	12.0		37.7	18.4

* Conventional (plug) analysis.
** Weak bedding plane.

AVERAGES

1848.9-84.0	0.57	0.52		5.8	5.7	57.5	(32.9')
1884.0-99.8	0.39	0.27		14.6	8.5	62.7	(15.8')
1936.9-45.5	88.	21.		14.5	29.8	23.6	(6.3')

All averages are weighted averages.