

**Mercury Injection Capillary Pressure Analysis**  
**Core I.D. 199, 13-14-118-12W6, 1051.5m**

*In situ* Klinkenberg Permeability = 0.469 md  
*In situ* Porosity = 13.6 %

Mercury Injection Capillary Pressure (psia)	Approx. Pore Entry Diameter (um)	Cumulative Wetting Phase Saturation (% pore vol)	Pore Size Distribution Frequency	Cumulative Surface Area (m2/g)	Approx. Gas-Water Height Above Free Water Level (ft)	Approx. Oil-Water Height Above Free Water Level (ft)	Honarpour <i>et al.</i> Imbibition Carbonate		Corey Calculated		
							Oil Relative Permeability (%)	Water Relative Permeability (%)	Oil or Gas Relative Permeability (%)	Water Relative Permeability (%)	Log Oil/Brine Kro/Krw Ratio
2.0	107	100.0	0.0	0.000	0.1	0.1	0.0	100.0	0.0	100.0	-5.0
2.5	86	100.0	0.0	0.000	0.8	1.1	0.0	100.0	0.0	100.0	-5.0
3.3	65	100.0	0.0	0.000	1.0	1.4	0.0	100.0	0.0	100.0	-5.0
4.3	50	100.0	0.0	0.000	1.3	1.8	0.0	100.0	0.0	100.0	-5.0
5.5	39	100.0	0.0	0.000	1.7	2.4	0.0	100.0	0.0	100.0	-5.0
7.2	30	100.0	0.0	0.000	2.2	3.1	0.0	100.0	0.0	100.0	-5.0
9.3	23	100.0	0.0	0.000	2.9	4.0	0.0	100.0	0.0	100.0	-5.0
12.0	18	100.0	0.0	0.000	3.7	5.2	0.0	100.0	0.0	100.0	-5.0
15.5	14	100.0	0.0	0.000	4.8	6.7	0.0	100.0	0.0	100.0	-5.0
20	11	100.0	0.0	0.000	6.2	8.7	0.0	100.0	0.0	100.0	-5.0
25	8.6	100.0	0.0	0.000	8.0	11.2	0.0	100.0	0.0	100.0	-5.0
35	6.1	100.0	0.0	0.000	9.9	14.0	0.0	100.0	0.0	100.0	-5.0
45	4.8	100.0	0.0	0.000	14	20	0.0	100.0	0.0	100.0	-5.0
55	3.9	99.7	0.3	0.000	18	25	0.0	100.0	0.0	100.0	-5.0
75	2.9	93.5	6.1	0.005	22	31	0.0	29.5	0.0	98.7	-5.0
95	2.3	69.0	24.5	0.028	30	42	0.5	25.9	0.0	76.3	-4.6
120	1.8	46.3	22.6	0.055	38	53	12.1	13.9	1.0	22.1	-1.4
150	1.4	37.6	8.8	0.041	48	67	36.3	6.2	8.7	4.3	0.3
200	1.1	28.6	9.0	0.059	60	84	49.2	4.0	16.0	1.8	0.9
260	0.82	22.5	6.1	0.075	80	112	64.4	2.3	27.4	0.6	1.7
350	0.61	17.5	5.0	0.093	103	145	75.9	1.4	38.0	0.2	2.3
430	0.50	14.8	2.7	0.105	139	196	86.0	0.8	48.9	0.1	2.8
550	0.39	12.3	2.5	0.118	171	240	91.7	0.6	55.5	0.0	3.2
725	0.30	9.1	3.2	0.141	219	308	97.1	0.4	62.3	0.0	3.6
925	0.23	7.0	2.1	0.161	288	405	104.2	0.2	71.7	0.0	4.2
1200	0.18	5.9	1.1	0.174	368	517	109.1	0.1	78.7	0.0	4.8
1550	0.14	4.8	1.2	0.192	477	671	111.7	0.1	82.4	0.0	5.2
2000	0.11	4.1	0.7	0.206	617	867	114.4	0.0	86.5	0.0	5.7
2600	0.08	3.4	0.7	0.223	796	1119	116.1	0.0	89.0	0.0	6.1
3350	0.06	2.8	0.7	0.246	1034	1454	117.7	0.0	91.6	0.0	6.6
4300	0.05	2.3	0.4	0.264	1333	1874	119.4	0.0	94.1	0.0	7.3
5550	0.04	1.9	0.5	0.291	1711	2405	120.4	0.0	95.7	0.0	7.8
7200	0.03	1.5	0.3	0.315	2208	3104	121.6	0.0	97.7	0.0	8.9
9300	0.02	1.3	0.2	0.338	2864	4027	122.4	0.0	99.0	0.0	10.4
					3700	5201	123.0	0.0	100.0	0.0	15.0

All Hg calculations assume air-mercury T=484 dyne/cm, contact angle=140deg.  
Oil/Gas-Brine Pc assumes insitu o/g-brine Tcos0= 64.0000 22.0000 dynes/cm  
Oil/gas-Brine height assumes o/g density gradient = 0.0186 0.3464 psi/ft  
Oil/gas-Brine height assumes brine density gradient = 0.4525 0.4525 psi/ft  
Swi assumed for relative permeability = 1.3 1.3 %  
Sorw assumed for relative permeability = 0 0 %  
*In situ* Gas/Oil & Brine Density (g/cc)= 0.043/0.80 1.045 g/cc

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