

**Mercury Injection Capillary Pressure Analysis**  
**Core I.D. 48, C-94-I/94-P-10, 1139.03m**

*In situ* Klinkenberg Permeability = 0.016 md  
*In situ* Porosity = 3.6 %

| 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                              | 100.0  | 0.0                              | 0.000                          | 18   | 25   | 0.0  | 100.0                           | 0.0                                  | 100.0                           | -5.0                        |
| 75  | 2.9                              | 100.0  | 0.0                              | 0.000                          | 22   | 31   | 0.0  | 100.0                           | 0.0                                  | 100.0                           | -5.0                        |
| 95  | 2.3                              | 98.2   | 1.8                              | 0.000                          | 30   | 42   | 0.0  | 100.0                           | 0.0                                  | 100.0                           | -5.0                        |
| 120   | 1.8                              | 93.1   | 5.1                              | 0.002                          | 38   | 53   | 0.0  | 27.1                            | 0.0                                  | 92.5                            | -6.8                        |
| 150   | 1.4                              | 88.2   | 4.8                              | 0.002                          | 48   | 67   | 0.6  | 24.1                            | 0.0                                  | 73.5                            | -4.4                        |
| 200   | 1.1                              | 83.4   | 4.8                              | 0.004                          | 60   | 84   | 1.8  | 21.5                            | 0.0                                  | 58.4                            | -3.4                        |
| 260   | 0.82                             | 78.0   | 5.4                              | 0.007                          | 80   | 112  | 3.5  | 19.0                            | 0.1                                  | 45.8                            | -2.7                        |
| 350   | 0.61                             | 70.0   | 8.0                              | 0.014                          | 103  | 145  | 6.1  | 16.4                            | 0.3                                  | 34.2                            | -2.0                        |
| 430   | 0.50                             | 62.0   | 8.0                              | 0.022                          | 139  | 196  | 11.4   | 13.0                            | 1.1                                  | 21.3                            | -1.3                        |
| 550   | 0.39                             | 51.6   | 10.4                             | 0.035                          | 171  | 240  | 18.2   | 9.9                             | 2.7                                  | 12.5                            | -0.7                        |
| 725   | 0.30                             | 43.9   | 7.7                              | 0.047                          | 219  | 308  | 29.5   | 6.6                             | 7.1                                  | 5.5                             | 0.1                         |
| 925   | 0.23                             | 38.4   | 5.6                              | 0.059                          | 288  | 405  | 39.7   | 4.5                             | 12.8                                 | 2.6                             | 0.7                         |
| 1200  | 0.18                             | 34.7   | 3.7                              | 0.069                          | 368  | 517  | 48.0   | 3.3                             | 18.7                                 | 1.4                             | 1.1                         |
| 1550  | 0.14                             | 29.9   | 4.8                              | 0.086                          | 477  | 671  | 53.9   | 2.6                             | 23.6                                 | 0.8                             | 1.4                         |
| 2000  | 0.11                             | 26.8   | 3.1                              | 0.100                          | 617  | 867  | 62.0   | 1.8                             | 31.3                                 | 0.4                             | 1.9                         |
| 2600  | 0.08                             | 22.3   | 4.5                              | 0.127                          | 796  | 1119   | 67.7   | 1.3                             | 37.3                                 | 0.2                             | 2.2                         |
| 3350  | 0.06                             | 17.8   | 4.5                              | 0.161                          | 1034   | 1454   | 76.2   | 0.8                             | 47.3                                 | 0.1                             | 2.7                         |
| 4300  | 0.05                             | 13.7   | 4.2                              | 0.202                          | 1333   | 1874   | 85.2   | 0.4                             | 59.1                                 | 0.0                             | 3.4                         |
| 5550  | 0.04                             | 10.8   | 2.9                              | 0.238                          | 1711   | 2405   | 94.1   | 0.2                             | 72.1                                 | 0.0                             | 4.3                         |
| 7200  | 0.03                             | 8.4  | 2.4                              | 0.277                          | 2208   | 3104   | 100.0  | 0.1                             | 82.1                                 | 0.0                             | 5.2                         |
| 9300  | 0.02                             | 6.3  | 2.1                              | 0.323                          | 2864   | 4027   | 100.0  | 0.0                             | 91.2                                 | 0.0                             | 6.5                         |
|   |                                  |  |                                  |                                | 3700   | 5201   | 100.0  | 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 = 6.3 %  
Sorw assumed for relative permeability = 0 %  
*In situ* Gas/Oil & Brine Density (g/cc)= 0.043/0.80 1.045 g/cc

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