An Advanced Rock Properties Study Of Selected Samples From Well : POSEIDON-2

Australia

Prepared for
ConocoPhillips (Browse Basin) Pty Ltd

September 2010

File: PRP-09079A

Rock Properties
Core Laboratories Australia Pty. Ltd.
Perth
Australia

10th September 2010

ConocoPhillips (Browse Basin) Pty Ltd
Level 3, 53 Ord Street
West Perth
Western Australia, 6005

Attention : Rob Rutherford

Subject: An Advanced Rock Properties Study
Well : Poseidon-2
File : PRP-09079A

Dear Rob,

Presented herein is the final report of an Advanced Rock Properties (ARP) study conducted on selected sidewall core samples from the subject well.

Thank you for the opportunity to have been of service to ConocoPhillips (Browse Basin) Pty Ltd. If you have any questions regarding these results or if we can be of any further assistance please do not hesitate to contact us.

Yours sincerely,
Core Laboratories Australia Pty Ltd

Moussa Karolia
Supervisor Advanced Rock Properties Perth

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SUMMARY OF RESULTS

Base Properties

Sixteen plug samples taken from the Poseidon-2 well were selected to undergo advanced rock properties (ARP) measurements. All samples were subjected to routine rock properties measurements at ambient condition.

The selected samples porosity values ranged from 4.3 to 13.2% and permeability (Kair) values of between 0.016 to 0.363 md.

Electrical Properties

Measurements of formation resistivity factor (FRF) and resistivity index (RI), at net overburden pressure (5600 psi), were made on the eight selected samples.

Summary of results from the electrical properties measurements are presented on page 3-1. Cementation exponent (“m”) and (“m*”) values range from 1.88 to 2.07 and 2.17 to 2.33 respectively. Assuming an intercept, “a”, of 1.00, the composite plot exhibits an average value for the cementation exponent, “m” and “m*” of 1.96 and 2.26 respectively.

Resistivity measurements taken of the partially saturated samples yielded values of resistivity index. The composite resistivity index plot (page 3-2) yields an average saturation exponent “n” of 1.26 and “n*” of 1.80.

The cation exchange capacity (CEC) values ranged from 2.352 to 5.980 meq/100g of sample.

Qv from CEC test is used to derive the idealized “m*”, and “n*”values quoted above.

Air-Brine Capillary Pressure by Centrifuge

Eight samples were selected to undergo air-brine capillary pressure tests by centrifuge at ambient condition.

At the 500 psi capillary pressure, the selected samples yielded immobile water saturation (Swi) values between 18.0 and 78.1% pore volume (PV).

Water-Oil (Decane) Capillary Pressure by Centrifuge

Three samples (S2-17, S2-18 and S2-19) were selected for water-oil (decane) capillary pressure tests by centrifuge at ambient condition after completing the air-brine capillary pressure cycle.

The selected samples yielded residual oil (decane) saturation (Sorw) values between 51.9 and 58.1% pore volume (PV).

High Pressure Mercury Injection Capillary Pressure

Twenty-six off-cuts from the RCA samples were selected for high pressure mercury injection test. The general increasing threshold injection pressure with decreasing sample permeability was noted.

INTRODUCTION

An advanced rock properties (ARP) study was conducted on selected samples taken from the Poseidon-2 well by Core Laboratories Australia Pty Ltd (Corelab). This study was conducted on behalf of ConocoPhillips (Browse Basin) Pty Ltd.

The following ARP analyses were requested on the selected samples:

- Measurement / re-measurement of porosity, permeability, and grain density values
- Formation resistivity factor (FRF) analysis
- Formation resistivity index (RI) analysis
- Air-brine capillary pressure by centrifuge
- Water-oil capillary pressure by centrifuge
- High pressure mercury injection capillary pressure
- Regain permeability

The full list of selected samples and test schedule is provided on page 1-5 of this report.

Information on the net overburden pressure (5600 psi) and brine salinity (25,000 ppm) was provided by ConocoPhillips (Browse Basin) Pty Ltd.

The regain permeability test was performed at Core Laboratories facility in Houston.

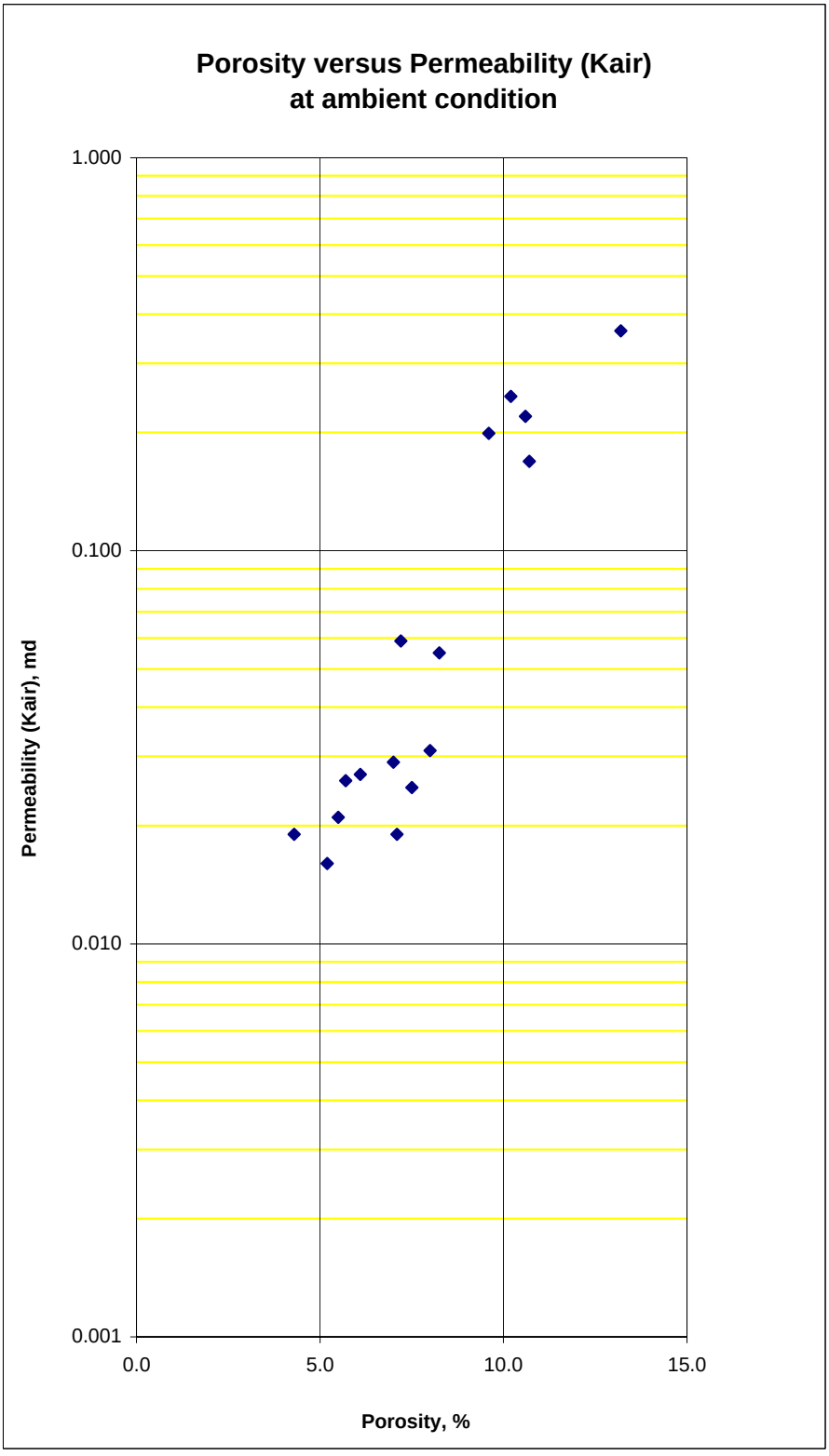
TEST SCHEDULE SUMMARY

PLUG	Depth (m)	Pre-Test K-Phi at ambient	Post-Test K-Phi at ambient	FRF NOBP	RI NOBP	AW Cent-Pc	WO Cent-Pc	HPMI	Remarks
3	5061.90							√	Off-cut
6	5062.79							√	Off-cut
2DS	5063.03	√	√	√	√				
S2-3	5064.25	√	√			√			
10	5064.30							√	Off-cut
17	5066.70							√	Off-cut
20	5067.61							√	Off-cut
25	5069.13							√	Off-cut
33	5071.50							√	Off-cut
35	5072.11							√	Off-cut
41	5074.20							√	Off-cut
48	5076.60							√	Off-cut
52	5077.81							√	Off-cut
S2-12	5078.68	√	√			√			
55	5078.73							√	Off-cut
58	5079.61							√	Off-cut
59	5080.20							√	Off-cut
S2-14	5080.24	√	√			√			
63	5081.42							√	Off-cut
S2-15	5081.48	√	√			√			
11DS	5081.78	√	√	√	√				
S1-6	5082.15	√	√	√	√				
S2-16	5082.15	√	√			√			
65	5082.41							√	Off-cut
13DS	5084.35	√	√	√	√				
S2-17	5085.76	√	√			√	√		
76	5086.01							√	Off-cut
14DS	5086.29	√	√	√	√				
S2-18	5086.56	√	√			√	√		
77	5086.61							√	Off-cut
15DS	5087.35	√	√	√	√				
S2-19	5088.35	√	√			√	√		
83	5088.40							√	Off-cut
19DS	5090.18	√	√	√	√				
19DS	5090.18							√	Off-cut
104	5096.08							√	Off-cut
23DS	5104.09	√	√	√	√				
127	5106.25							√	Off-cut
149	5114.47							√	Off-cut
150	5114.73							√	Off-cut
154	5116.34							√	Off-cut
168	5121.21							√	Off-cut

SECTION 2
BASIC PROPERTIES
(PRE AND POST-TEST)

Pre-Test Basedata

SAMPLE NUMBER	SAMPLE DEPTH (m)	CONFINING STRESS 400psi Steady - State PERMEABILITY Kair (md)	Hg Bulk Volume POROSITY (%)	GRAIN DENSITY (g/cc)
2DS	5063.03	0.026	5.7	2.666
S2-3	5064.25	0.016	5.2	2.697
S2-12	5078.68	0.027	6.1	2.700
S2-14	5080.24	0.021	5.5	2.690
S2-15	5081.48	0.029	7.0	2.708
11DS	5081.78	0.019	7.1	2.694
S1-6	5082.15	0.025	7.5	2.718
S2-16	5082.15	0.031	8.0	2.725
13DS	5084.35	0.059	7.2	2.715
S2-17	5085.76	0.169	10.7	2.672
14DS	5086.29	0.220	10.6	2.678
S2-18	5086.56	0.363	13.2	2.771
15DS	5087.35	0.247	10.2	2.670
S2-19	5088.35	0.199	9.6	2.674
19DS	5090.18	0.055	8.3	2.760
23DS	5104.09	0.019	4.3	3.124


Porosity versus Permeability (Kair)
at ambient condition
1.000
0.100
0.010
0.001
Permeability (Kair), md
0.0
5.0
10.0
15.0
Porosity, %

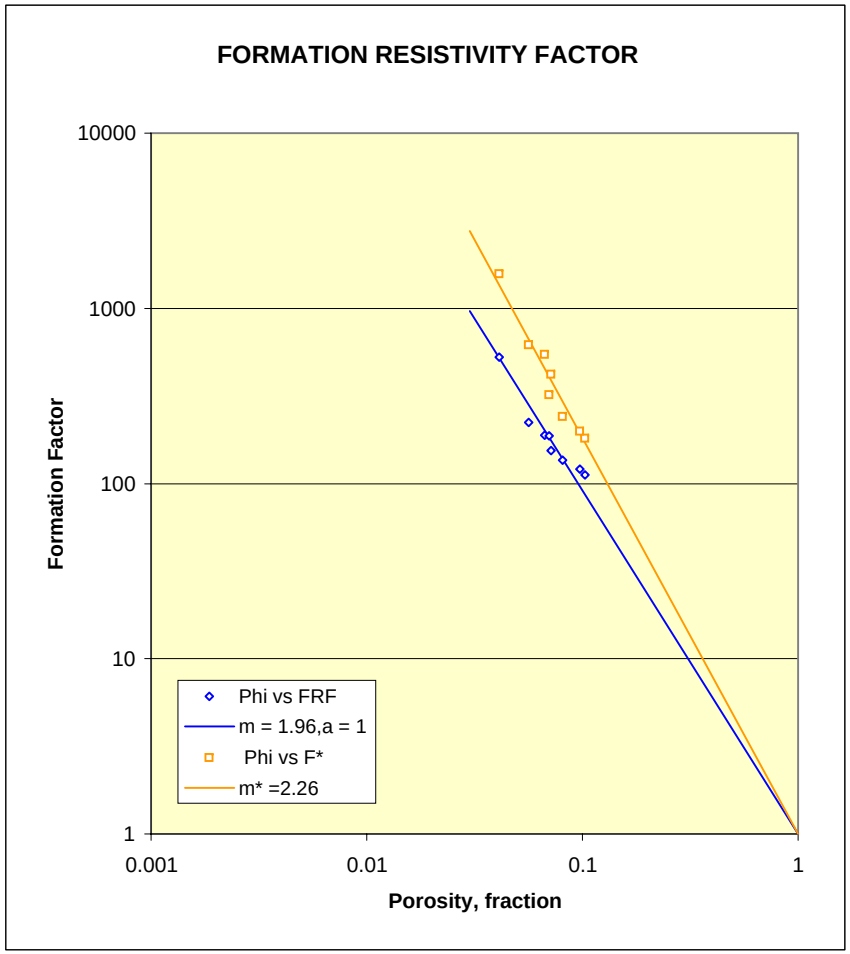
Post-Test Basedata

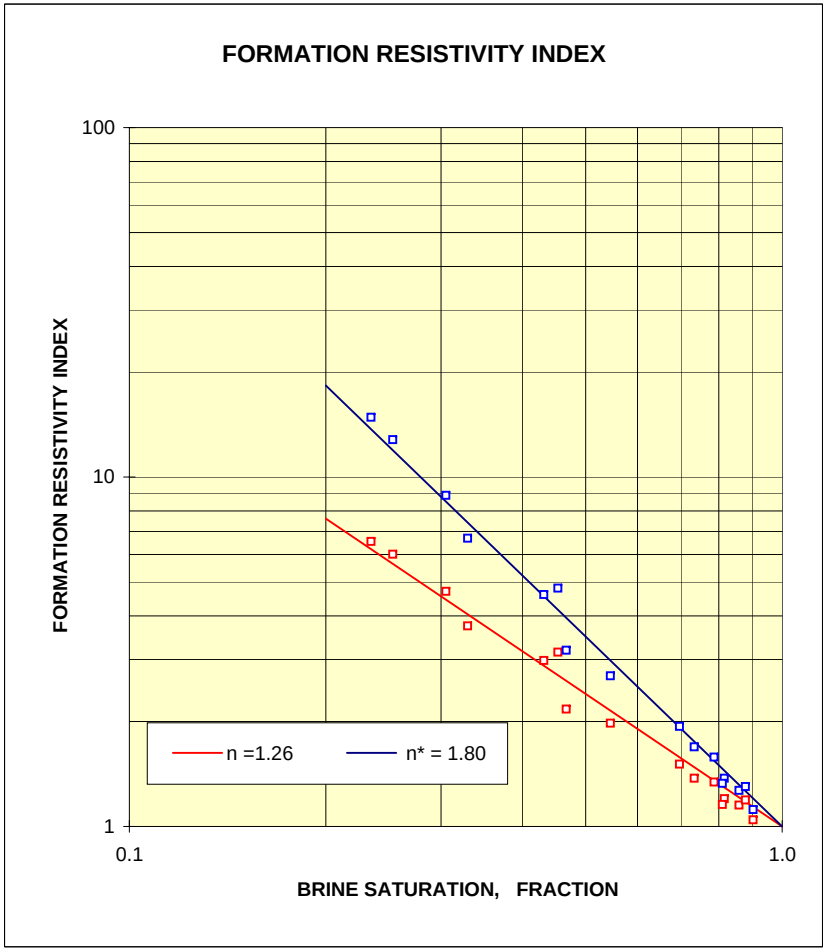
SAMPLE NUMBER	SAMPLE DEPTH (m)	CONFINING STRESS 400psi Steady - State PERMEABILITY Kair (md)	Hg Bulk Volume POROSITY (%)	GRAIN DENSITY (g/cc)
2DS	5063.03	0.025	6.5	2.669
S2-3	5064.25	0.044	5.2	2.694
S2-12	5078.68	0.029	6.3	2.698
S2-14	5080.24	0.021	5.6	2.691
S2-15	5081.48	0.026	7.0	2.708
11DS	5081.78	0.027	7.7	2.719
S1-6	5082.15	0.031	7.5	2.717
S2-16	5082.15	0.030	8.1	2.725
13DS	5084.35	0.038	7.2	2.717
S2-17	5085.76	0.165	10.7	2.672
14DS	5086.29	0.293	10.6	2.679
S2-18	5086.56	0.394	13.4	2.771
15DS	5087.35	0.304	10.2	2.672
S2-19	5088.35	0.212	9.7	2.673
19DS	5090.18	0.054	8.5	2.762
23DS	5104.09	0.022	4.7	3.130

SECTION 3
ELECTRICAL PROPERTIES

Summary of results from the electrical properties measurements at NOBP

Sample no.	Depth (m)	CEC meq/100g	K air (md) At ambient	Porosity (frac) At NOBP	FRF	Cementation exponent m	F*	m*	Saturation (frac pv)	RI	Saturation exponent n	RI*	n*
2DS	5063.03	4.75	0.026	0.056	223	1.88	616	2.23	0.859	1.15	0.92	1.27	1.57
									0.817	1.20	0.89	1.37	1.55
11DS	5081.78	5.98	0.019	0.067	189	1.94	544	2.33	0.788	1.34	1.23	1.58	1.91
									0.697	1.50	1.13	1.93	1.82
S1-6	5082.15	5.86	0.025	0.071	154	1.91	418	2.29	0.810	1.15	0.68	1.32	1.33
									0.734	1.37	1.03	1.69	1.70
13DS	5084.35	2.35	0.059	0.070	187	1.97	320	2.17	0.467	2.16	1.01	3.19	1.52
									0.432	2.98	1.30	4.60	1.82
14DS	5086.29	3.19	0.22	0.103	112	2.07	181	2.29	0.330	3.75	1.19	6.66	1.71
									0.254	6.00	1.31	12.76	1.86
15DS	5087.35	3.07	0.2470	0.097	121	2.06	198	2.27	0.306	4.71	1.31	8.87	1.84
									0.235	6.53	1.30	14.80	1.86
19DS	5090.18	2.98	0.0550	0.081	136	1.95	241	2.18	0.546	1.97	1.12	2.69	1.64
									0.453	3.15	1.45	4.81	1.99
23DS	5104.09	5.86	0.0190	0.041	528	1.96	1573	2.30	0.904	1.04	0.42	1.12	1.09
									0.879	1.19	1.34	1.30	2.02
					Average	**1.96**		**2.26**			**1.26**		**1.80**


FORMATION RESISTIVITY FACTOR
10000
1000
100
10
1
Formation Factor
0.001
0.01
0.1
1
Porosity, fraction
Phi vs FRF
m = 1.96,a = 1
Phi vs F*
m* =2.26


FORMATION RESISTIVITY INDEX
100
10
1
FORMATION RESISTIVITY INDEX
0.1
1.0
BRINE SATURATION, FRACTION
n =1.26
n* = 1.80

Summary of CEC results

Sample no.	Depth (m)	CEC meq/100g	Grain Density g/cc	Porosity (frac) At NOBP
2DS	5063.03	4.75	2.666	0.056
11DS	5081.78	5.98	2.694	0.067
S1-6	5082.15	5.86	2.718	0.071
13DS	5084.35	2.35	2.715	0.070
14DS	5086.29	3.19	2.678	0.103
15DS	5087.35	3.07	2.67	0.097
19DS	5090.18	2.98	2.76	0.081
23DS	5104.09	5.86	3.124	0.041

SECTION 4
CAPILLARY PRESSURE

COMPANY : CONOCOPHILLIPS (BROWSE BASIN) PTY LTD
WELL : POSEIDON-2

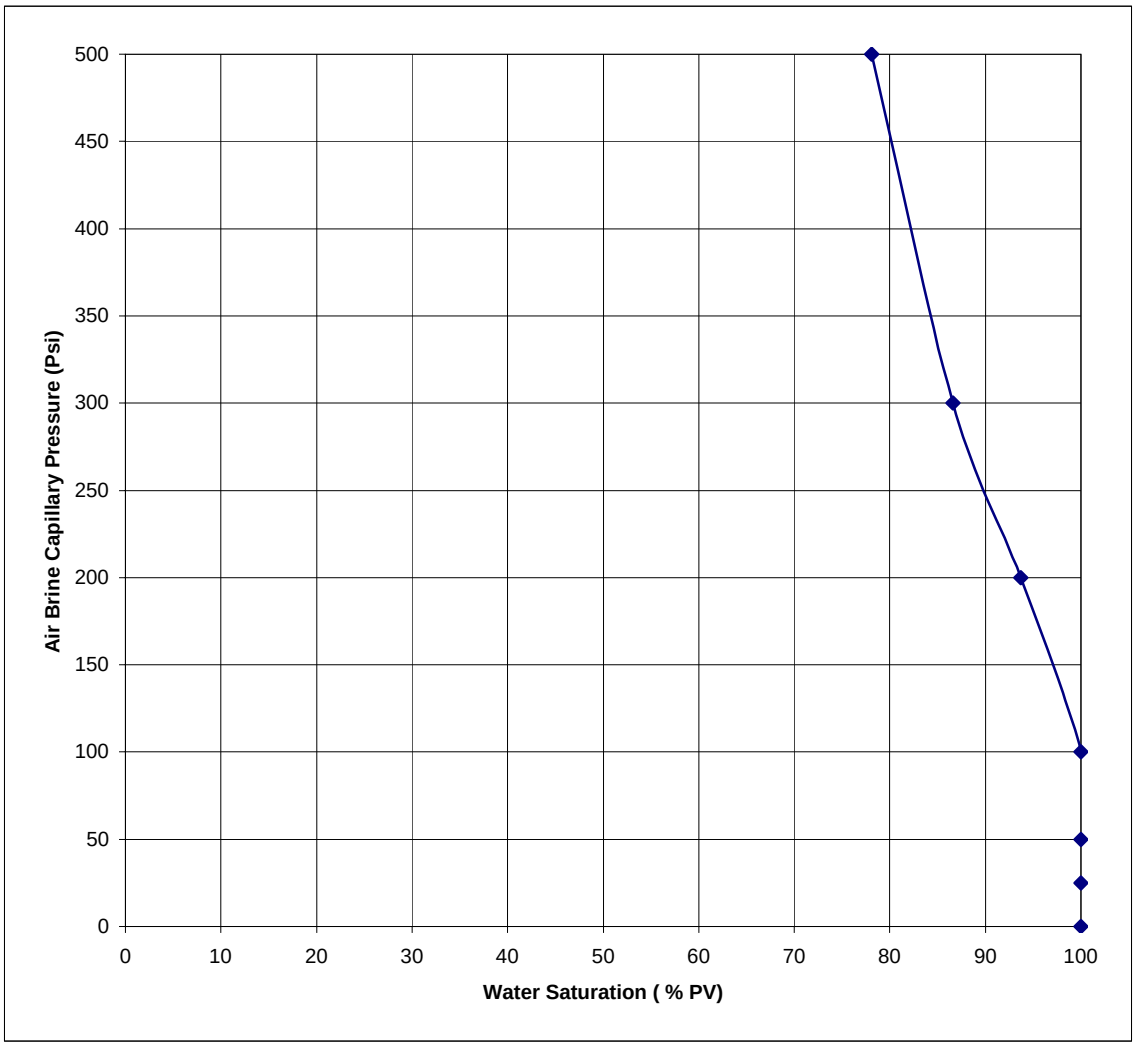
Summary of air-brine capillary pressure by centrifuge at ambient condition

Sample number	Depth (m)	at Ambient		AIR - BRINE CAPILLARY PRESSURE (PSI)						
		Kair	Porosity	0 psi	25 psi	50 psi	100 psi	200 psi	300 psi	500 psi
		(md)	(%)	INLET-FACE WATER SATURATION Sw (%PV)						
S2-3	5064.25	0.016	5.2	100	100	100	100	93.7	86.6	78.1
S2-12	5078.68	0.027	6.1	100	100	100	100	88.9	73.3	60.8
S2-14	5080.24	0.021	5.5	100	100	100	92.0	76.7	61.9	52.9
S2-15	5081.48	0.029	7.0	100	100	100	100	70.6	60.7	53.4
S2-16	5082.15	0.031	8.0	100	100	100	100	64.6	53.8	46.8
S2-17	5085.76	0.169	10.7	100	100	78.4	52.9	36.3	29.3	22.2
S2-18	5086.56	0.363	13.2	100	100	54.6	38.6	25.5	20.5	18.0
S2-19	5088.35	0.199	9.6	100	100	67.4	41.1	27.5	22.8	19.0

Air-brine Capillary Pressure by Centrifuge

Sample no.	Depth (m)	Air Perm (mD)	Porosity (%)
S2-3	5064.25	0.016	5.2

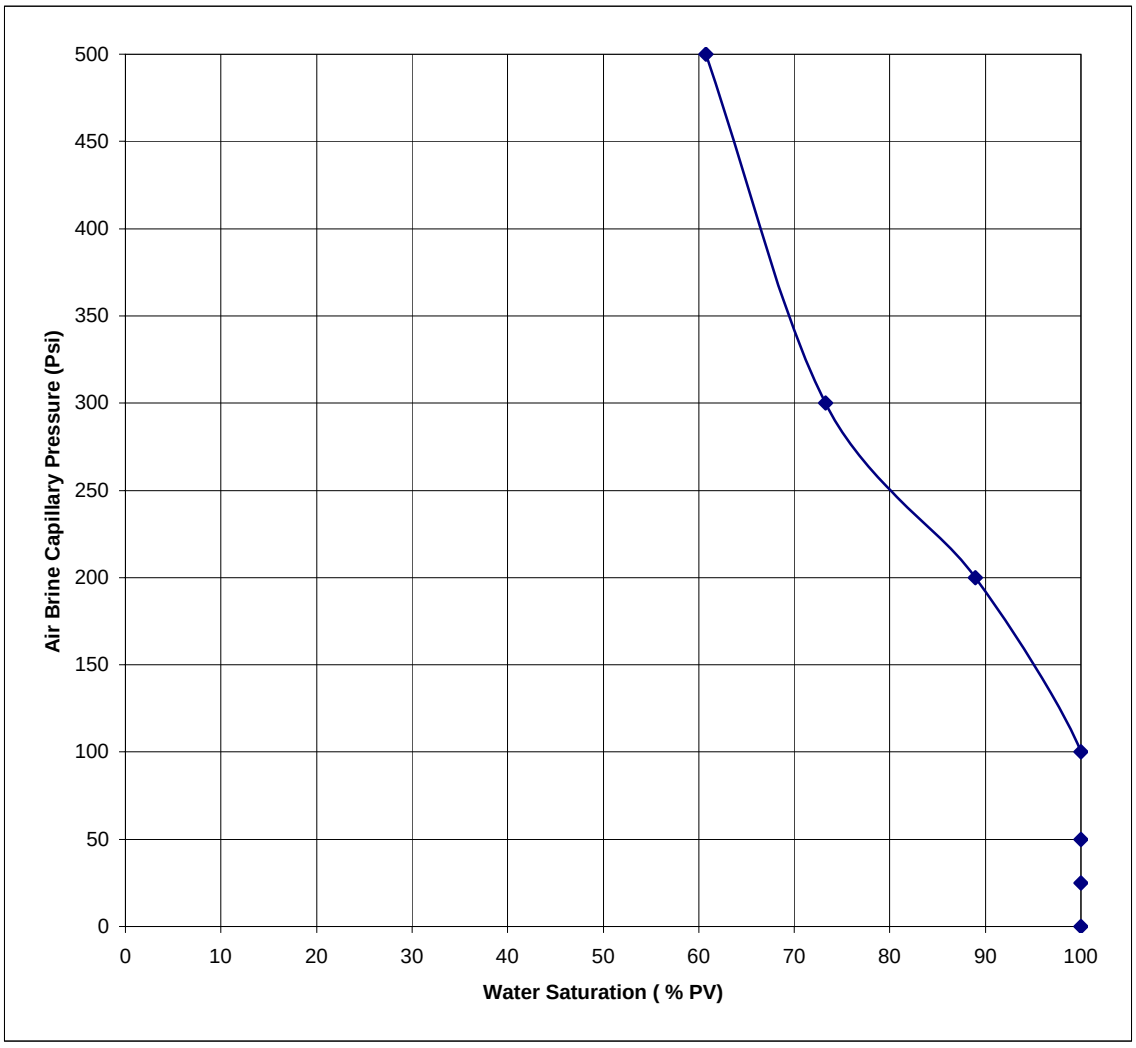
Capillary pressure (psi)	Water saturation (%pv)
0	100
25	100
50	100
100	100
200	93.7
300	86.6
500	78.1



Air-brine Capillary Pressure by Centrifuge

Sample no.	Depth (m)	Air Perm (mD)	Porosity (%)
S2-12	5078.68	0.027	6.1

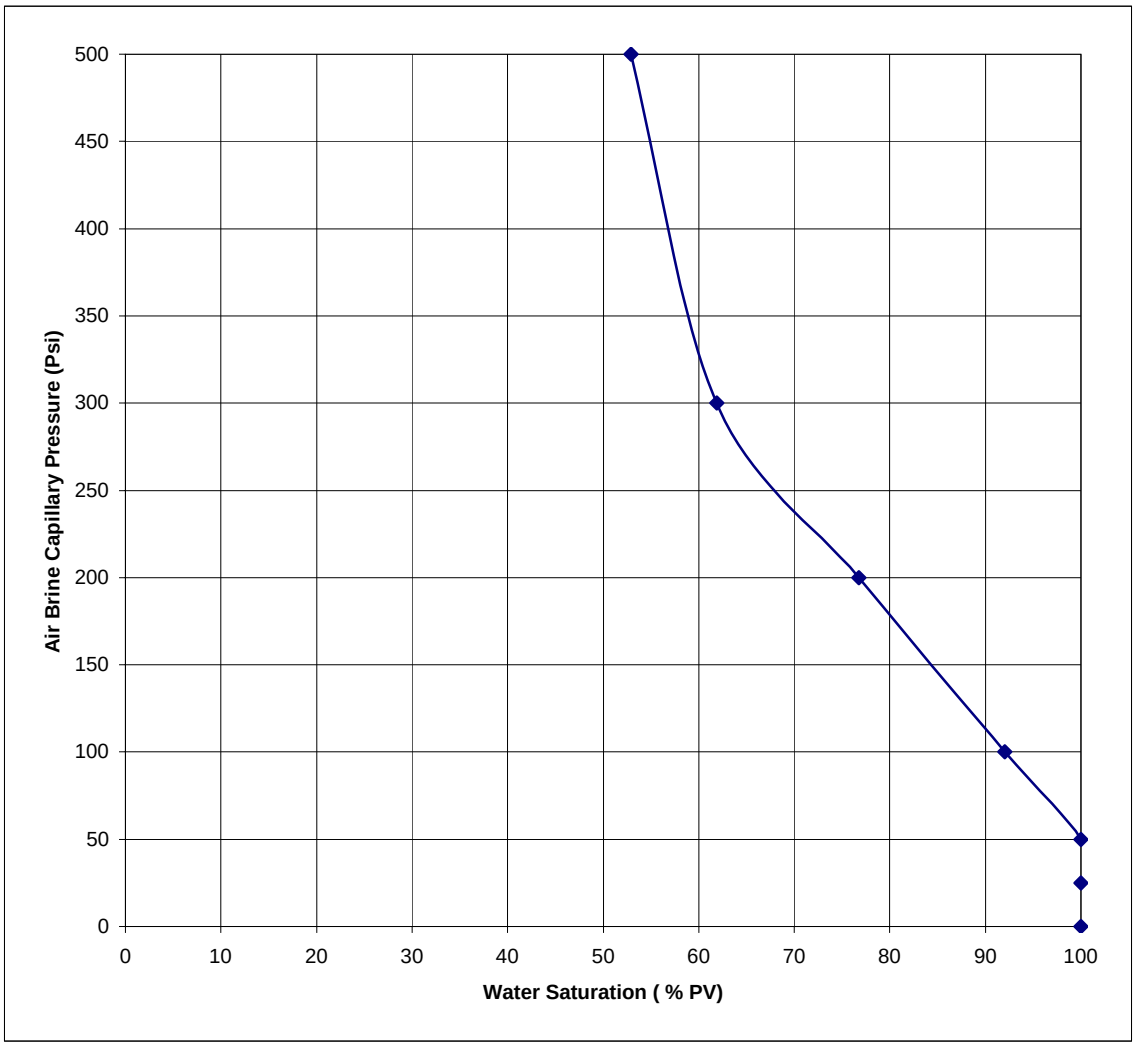
Capillary pressure (psi)	Water saturation (%pv)
0	100
25	100
50	100
100	100
200	88.9
300	73.3
500	60.8



Air-brine Capillary Pressure by Centrifuge

Sample no.	Depth (m)	Air Perm (mD)	Porosity (%)
S2-14	5080.24	0.021	5.5

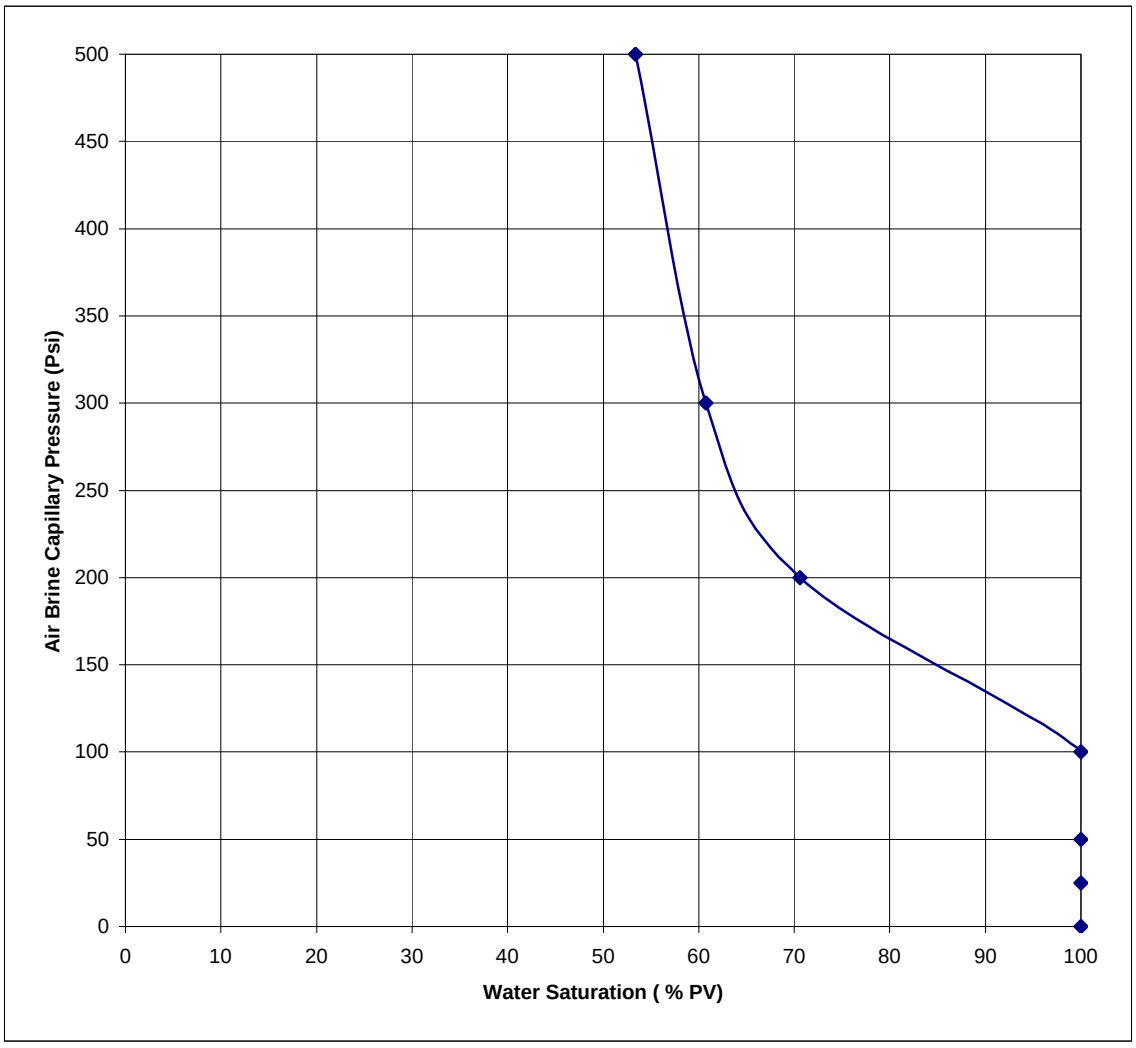
Capillary pressure (psi)	Water saturation (%pv)
0	100
25	100
50	100
100	92.0
200	76.7
300	61.9
500	52.9



Air-brine Capillary Pressure by Centrifuge

Sample no.	Depth (m)	Air Perm (mD)	Porosity (%)
S2-15	5081.48	0.029	7.0

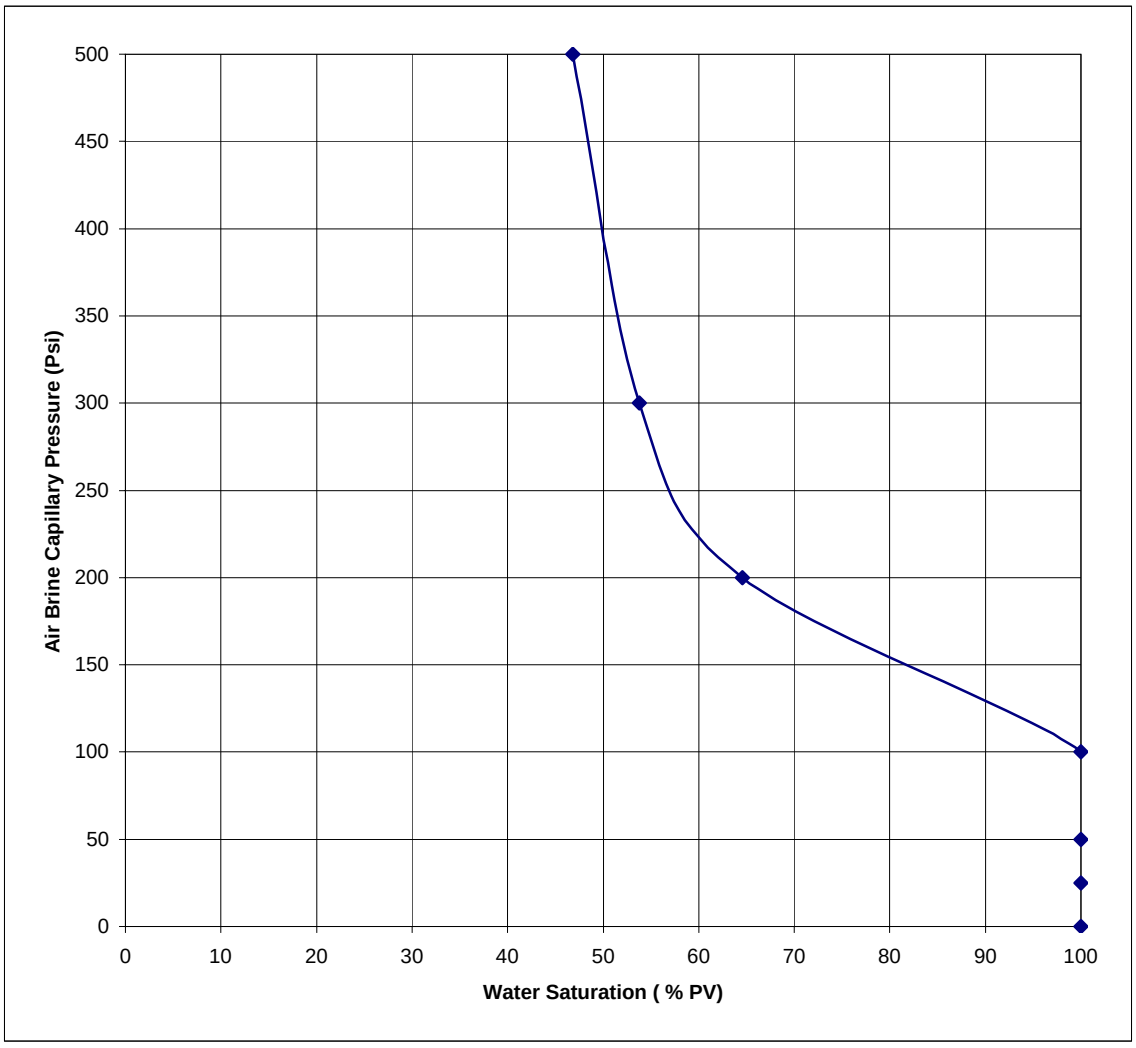
Capillary pressure (psi)	Water saturation (%pv)
0	100
25	100
50	100
100	100
200	70.6
300	60.7
500	53.4



Air-brine Capillary Pressure by Centrifuge

Sample no.	Depth (m)	Air Perm (mD)	Porosity (%)
S2-16	5082.15	0.031	8.0

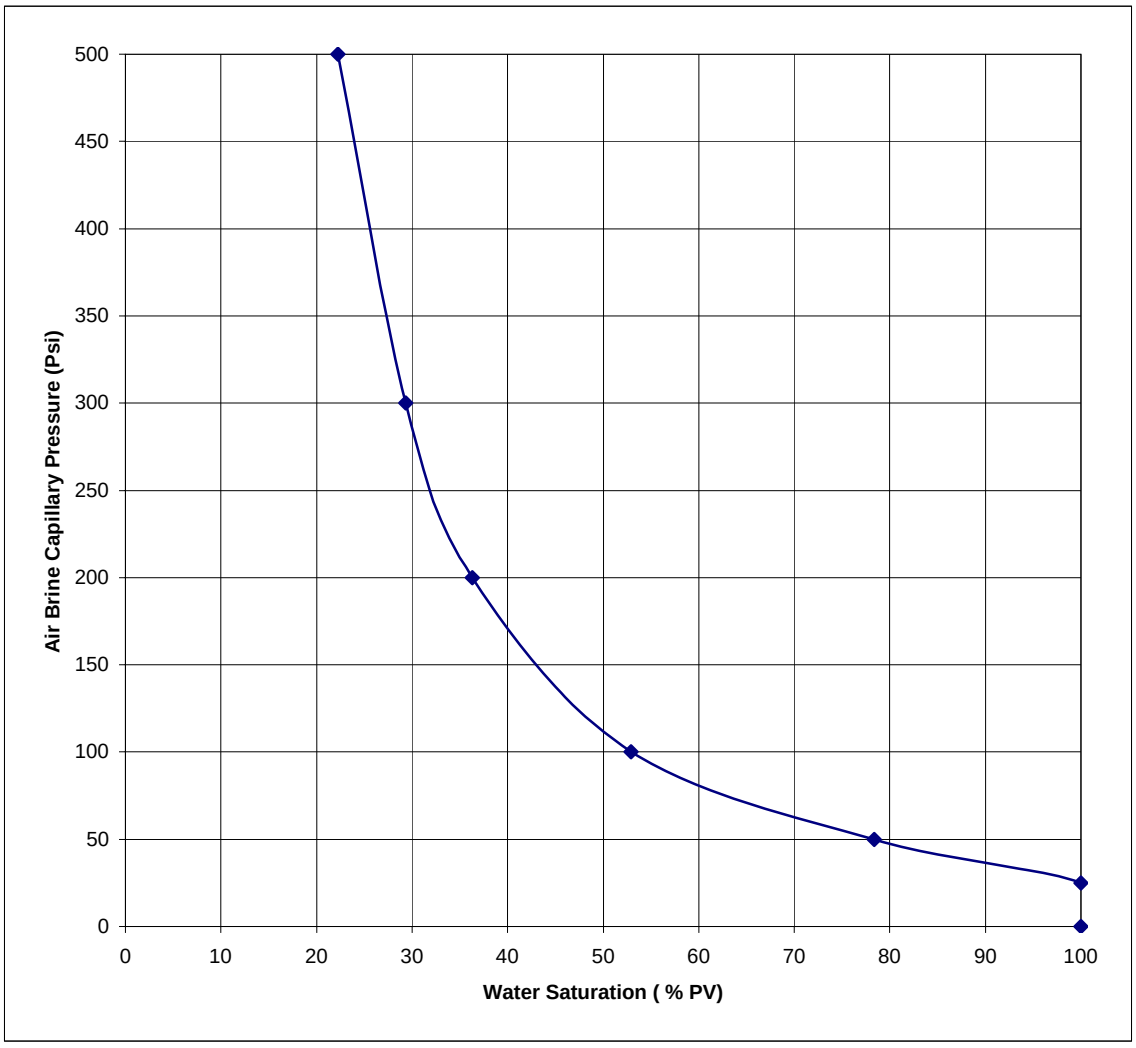
Capillary pressure (psi)	Water saturation (%pv)
0	100
25	100
50	100
100	100
200	64.6
300	53.8
500	46.8



Air-brine Capillary Pressure by Centrifuge

Sample no.	Depth (m)	Air Perm (mD)	Porosity (%)
S2-17	5085.76	0.169	10.7

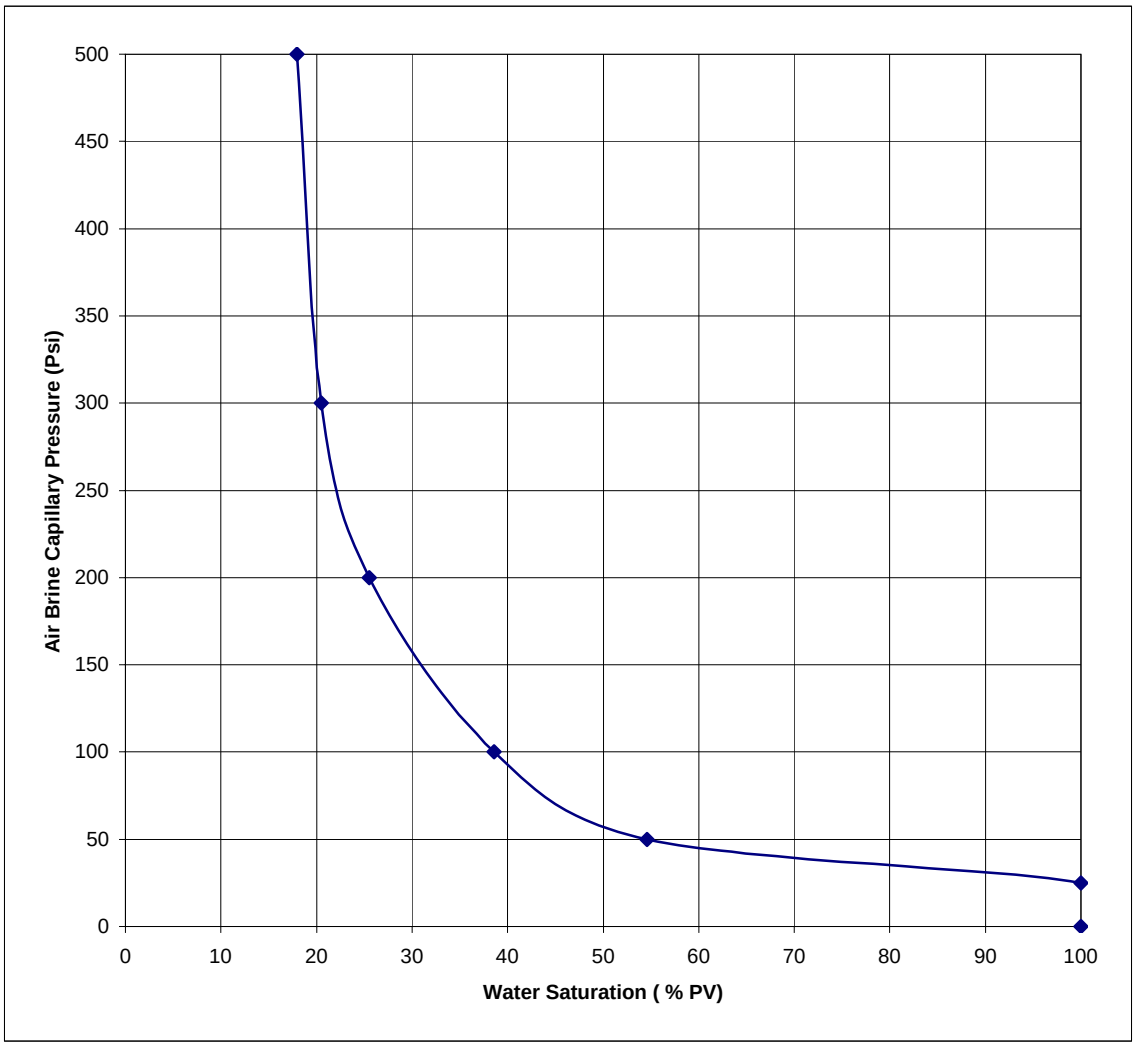
Capillary pressure (psi)	Water saturation (%pv)
0	100
25	100
50	78.4
100	52.9
200	36.3
300	29.3
500	22.2



Air-brine Capillary Pressure by Centrifuge

Sample no.	Depth (m)	Air Perm (mD)	Porosity (%)
S2-18	5086.56	0.363	13.2

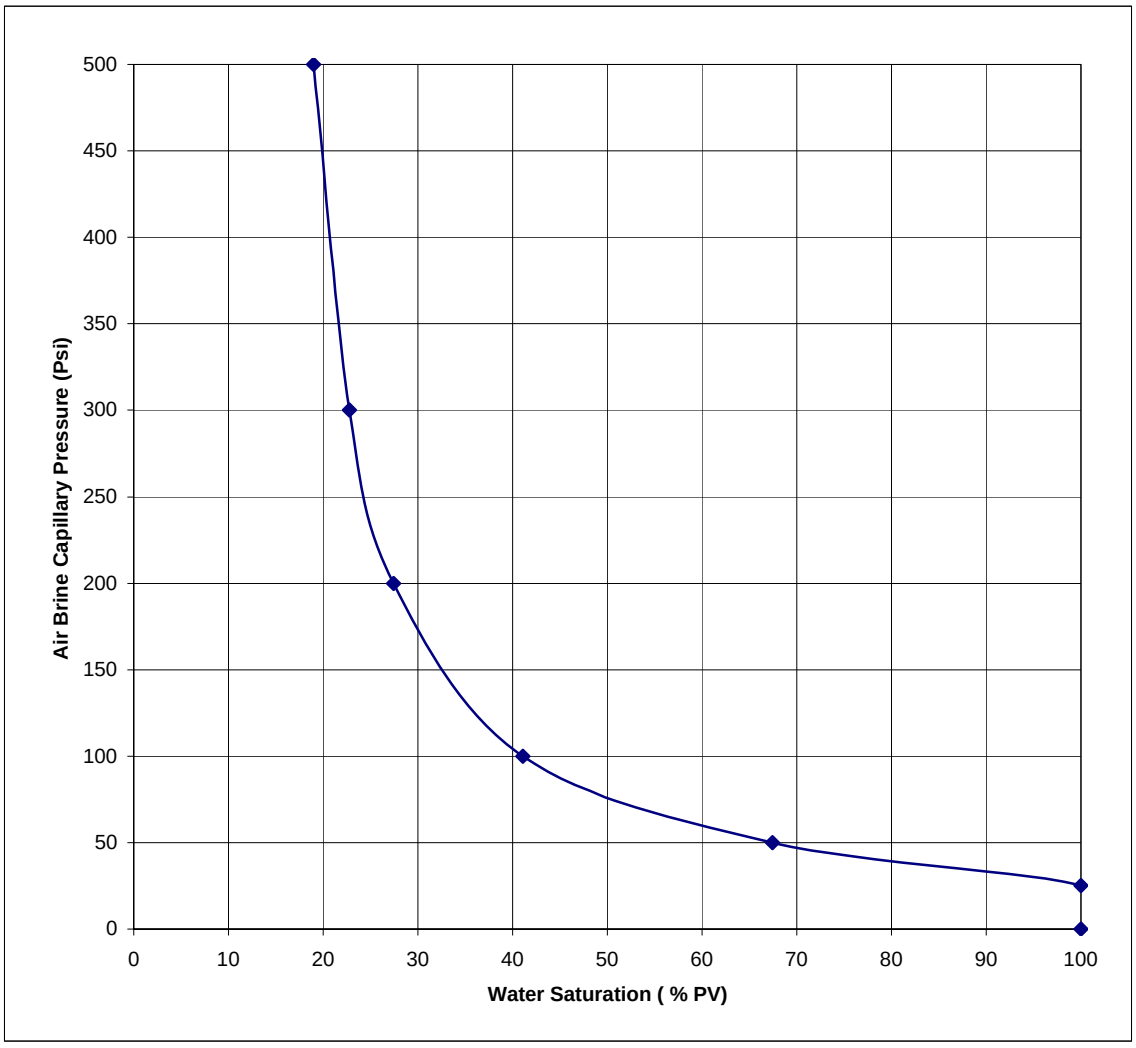
Capillary pressure (psi)	Water saturation (%pv)
0	100
25	100
50	54.6
100	38.6
200	25.5
300	20.5
500	18.0

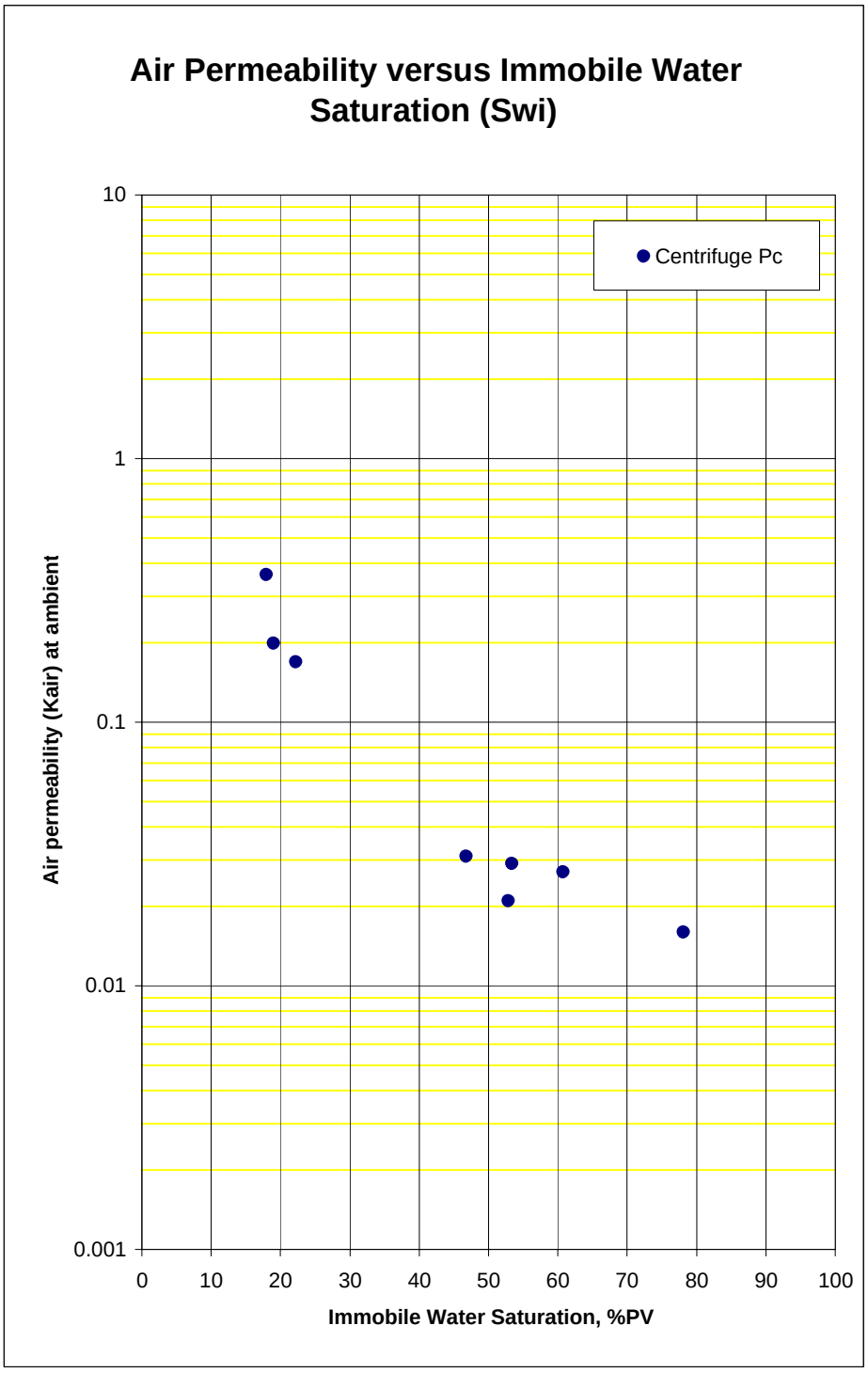


Air-brine Capillary Pressure by Centrifuge

Sample no.	Depth (m)	Air Perm (mD)	Porosity (%)
S2-19	5088.35	0.199	9.6

Capillary pressure (psi)	Water saturation (%pv)
0	100
25	100
50	67.4
100	41.1
200	27.5
300	22.8
500	19.0




Air Permeability versus Immobile Water Saturation (Swi)
Centrifuge Pc
Air permeability (Kair) at ambient
10
1
0.1
0.01
0.001
0
10
20
30
40
50
60
70
80
90
100
Immobile Water Saturation, %PV

Summary of water-decane capillary pressure by centrifuge at ambient condition

(Imbibition after Air-brine Pc to Swi)

Sample No.	Depth (m)	400psi NOBP		INITIAL CONDITIONS				WATER DISPLACING DECANE			
		Kair (md)	Porosity (%)	Water Saturation (% pv)	Decane Saturation (% pv)	Kgas* at Swi (md)	Kdecane* at Swi (md)	Residual Oil Saturation (% pv)	Decane Recovered (% pv)	Decane Recovered (%Sdi)**	Kw* at Sor (md)
S2-17	5085.76	0.169	10.7	30.3	69.7	0.054	0.031	52.3	17.4	25.0	<0.001
S2-18	5086.56	0.363	13.2	24.4	75.6	0.142	0.109	51.9	23.7	31.3	<0.001
S2-19	5088.35	0.199	9.6	27.4	72.6	0.042	0.035	58.1	14.5	20.0	<0.001

* denotes permeability measured at 5600psi NOBP

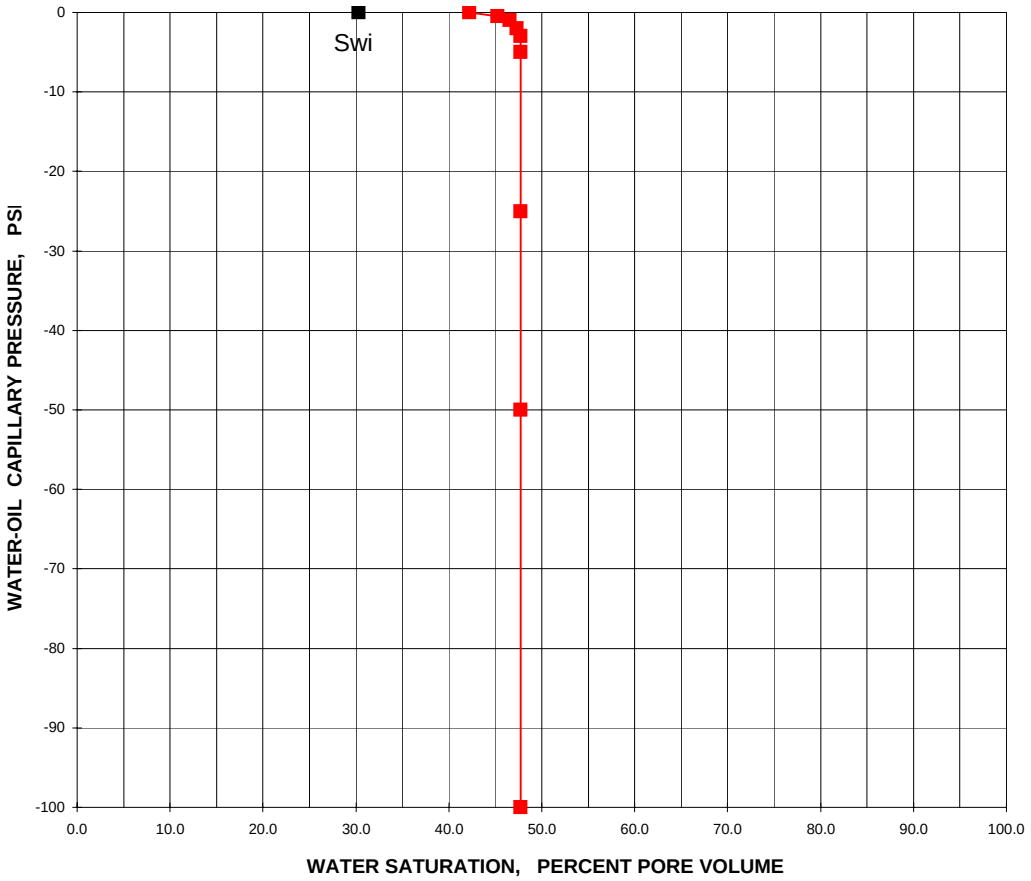
**initial decane saturation

Water-Decane capillary pressure determined by centrifuge

(Imbibition after Air-brine Pc to Swi)

Sample no.	Depth (m)	Perm. to air (md)	Porosity (%)	Swi (% pv)	Imbibition	
					Capillary pressure (psi)	Water saturation (% pv)
S2-17	5085.76	0.169	10.7	30.3	0	42.2
					-0.5	45.2
					-1	46.6
					-2	47.3
					-3	47.7
					-5	47.7
					-25	47.7
					-50	47.7
					-100	47.7
					Sor(w)	**52.3**

0 psi point is Static Imbibition

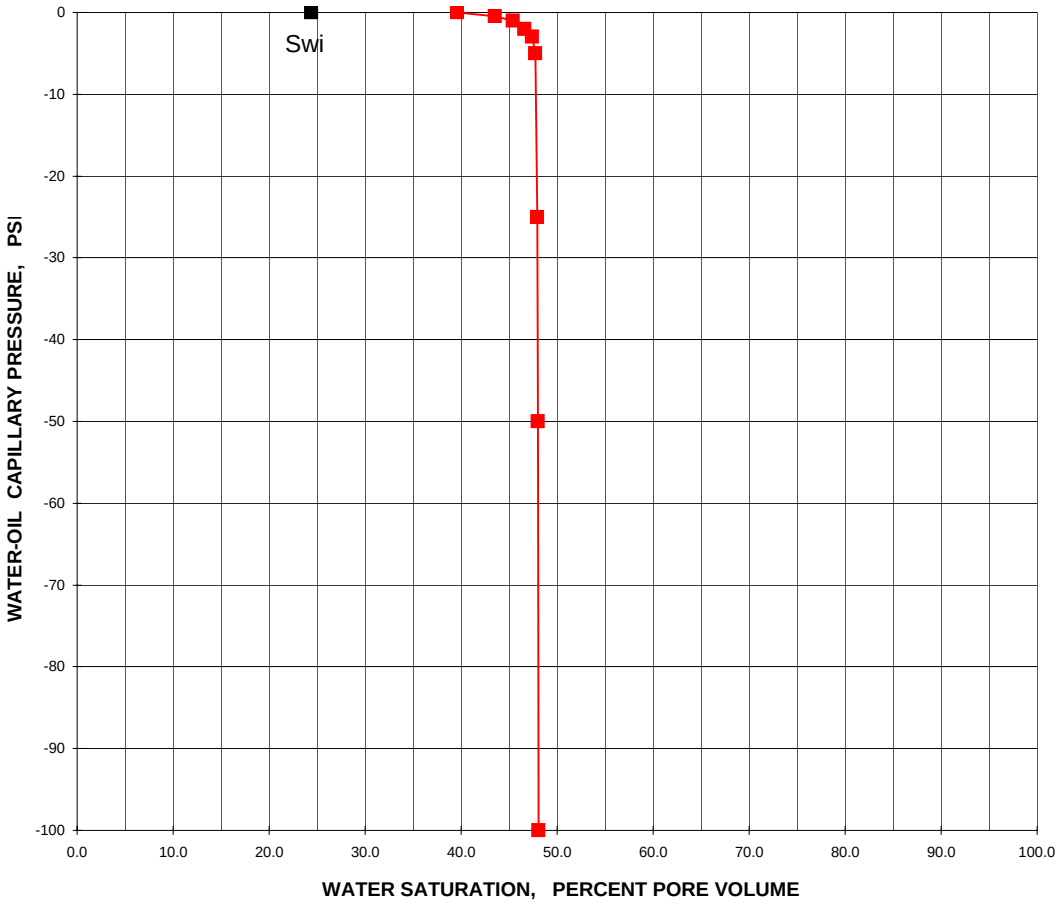


Water-Decane capillary pressure determined by centrifuge

(Imbibition after Air-brine Pc to Swi)

Sample no.	Depth (m)	Perm. to air (md)	Porosity (%)	Swi (% pv)	Imbibition	
					Capillary pressure (psi)	Water saturation (% pv)
S2-18	5086.56	0.363	13.2	24.4	0	39.6
					-0.5	43.5
					-1	45.4
					-2	46.6
					-3	47.4
					-5	47.7
					-25	47.9
					-50	48.0
					-100	48.1
					Sor(w)	**51.9**

0 psi point is Static Imbibition

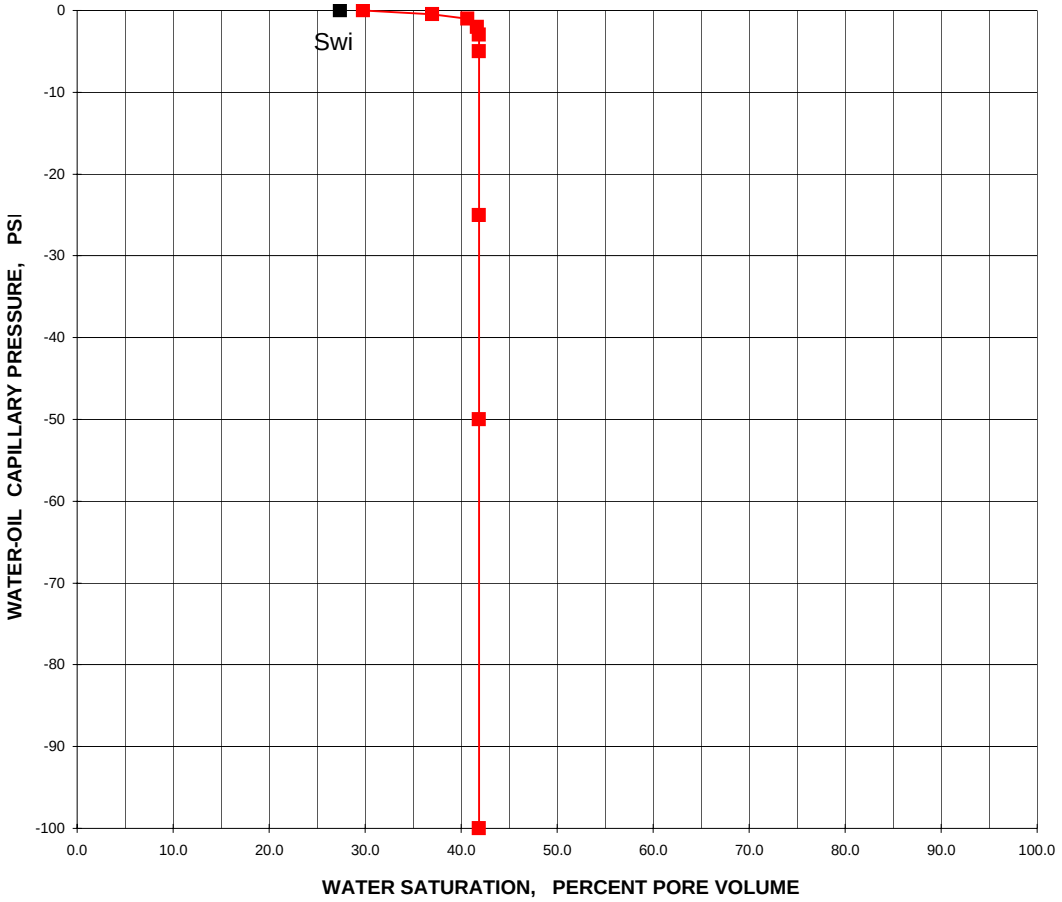


Water-Decane capillary pressure determined by centrifuge

(Imbibition after Air-brine Pc to Swi)

Sample no.	Depth (m)	Perm. to air (md)	Porosity (%)	Swi (% pv)	Imbibition	
					Capillary pressure (psi)	Water saturation (% pv)
S2-19	5088.35	0.199	9.6	27.4	0	29.8
					-0.5	37.0
					-1	40.7
					-2	41.6
					-3	41.9
					-5	41.9
					-25	41.9
					-50	41.9
					-100	41.9
					Sor(w)	**58.1**

0 psi point is Static Imbibition



Summary of the (drainage) mercury injection analysis (0 - 55,000 psia)

Sample Number	Depth	Core Plug Data		Injection Sample Data		
		Kair	Porosity	Porosity	Mean Hydraulic Radius	Threshold Injection Pressure
	(m)	(md)	(%)	(%)	(microns)	(psia)
3	5061.90	0.015	2.8	1.7	0.0490	697.8
6	5062.79	0.026	4.4	3.8	0.0475	612.8
10	5064.30	0.036	5.7	3.9	0.0351	901.0
17	5066.70	0.043	3.7	2.8	0.0505	539.1
20	5067.61	0.029	4.3	2.4	0.0296	1026.2
25	5069.13	0.026	3.9	2.7	0.0429	697.8
33	5071.50	0.021	3.1	2.1	0.0469	697.9
35	5072.11	0.025	3.1	2.0	0.0438	697.4
41	5074.20	0.037	3.5	2.4	0.0389	793.3
48	5076.60	0.030	3.7	2.8	0.0523	538.9
52	5077.81	0.011	1.6	0.3	0.0112	3260.8
55	5078.73	0.037	6.2	5.1	0.0520	539.2
58	5079.61	0.022	2.9	2.2	0.0465	697.1
59	5080.20	0.039	6.9	5.0	0.0568	539.6
63	5081.42	0.034	7.3	6.2	0.0569	473.7
65	5082.41	0.033	7.2	6.7	0.0625	474.1
76	5086.01	0.132	10.2	9.6	0.1208	192.5
77	5086.61	0.257	12.7	11.6	0.1639	218.8
83	5088.40	0.314	11.2	10.2	0.2127	191.8
19DS	5090.18	0.051	8.5	7.4	0.0860	417.2
104	5096.08	0.008	1.5	1.3	0.0092	2868.7
127	5106.25	0.034	1.7	1.1	0.0797	366.2
149	5114.47	0.003	1.4	0.3	0.0035	10355.2
150	5114.73	0.005	1.6	0.6	0.0164	2217.0
154	5116.34	0.009	1.9	1.0	0.0219	1714.5
168	5121.21	0.008	1.3	0.5	0.0169	2217.2

MERCURY INJECTION

High-Pressure Method

IFT * Cosine Contact Angle				
	Air-Brine	Air-Oil	Oil-Brine	Air-Hg
Lab --->	72	24	42	372
Res --->	50		26	

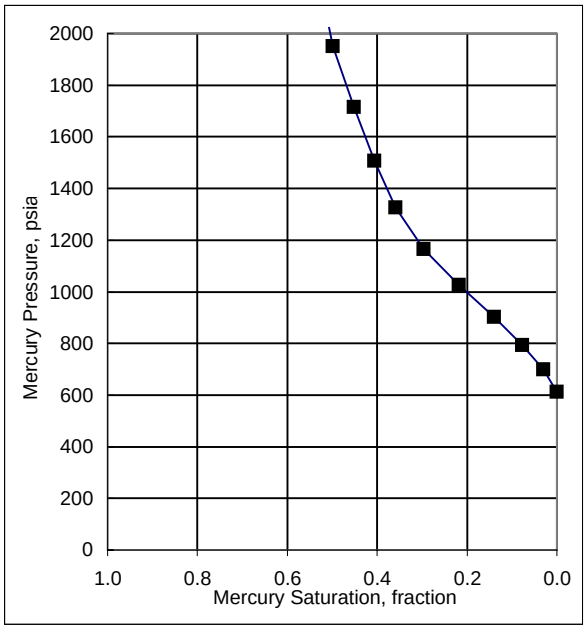
Sample Identification:	3
Sample Depth, m:	5061.90
Kair, mD:	0.015
Plug Porosity, fraction:	0.028
Injection Sample Porosity, fraction:	0.017
Injection Sample Pore Volume, cm3:	0.070
Injection Sample Bulk Volume, cm3:	4.102
Brine Density Gradient, psig/foot:	
Oil Density Gradient, psig/foot:	
Mean Hydraulic Radius, microns:	0.049
Swanson's Parameter:	4.64E-04
FZI:	0.80

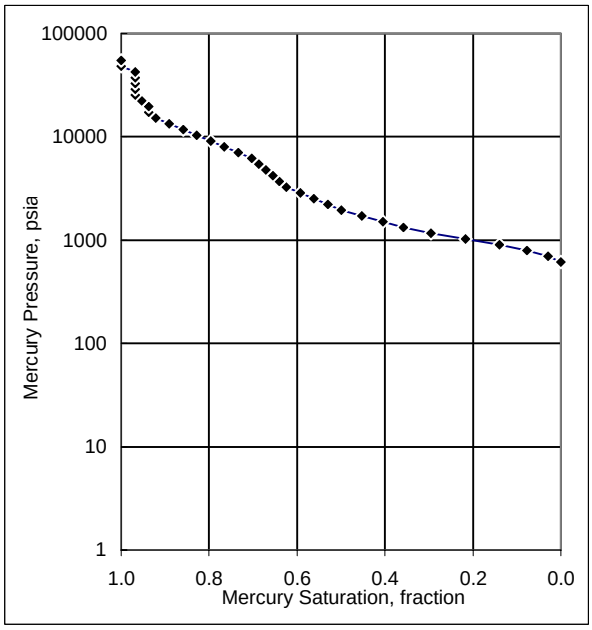
Injection Pressure, psia	Mercury Satn, fraction Vp	Equiv. Water Satn, fraction Vp	Pore Throat Radius, microns	Normalized Pore Size Distribution Function	Equivalent Injection Pressure, psia			Height Above Free Water, feet	Normalized Permeability Distribution Function	J Function
					A/B (Lab)	O/B (Lab)	O/B (Res)			
612.7	0.000	1.000	0.176	0.000	119	69	43	-	1.000	0.334
697.8	0.030	0.970	0.154	0.443	135	79	49	-	0.865	0.380
792.6	0.077	0.923	0.136	0.736	154	90	55	-	0.701	0.432
901.4	0.139	0.861	0.120	0.922	175	102	63	-	0.531	0.491
1025.1	0.218	0.782	0.105	1.000	199	116	72	-	0.367	0.559
1165.4	0.296	0.704	0.092	0.921	226	132	82	-	0.240	0.635
1326.3	0.358	0.642	0.081	0.764	257	150	93	-	0.161	0.723
1507.8	0.405	0.595	0.072	0.660	292	170	106	-	0.116	0.822
1714.0	0.452	0.548	0.063	0.606	332	194	120	-	0.080	0.934
1949.6	0.499	0.501	0.055	0.526	378	220	136	-	0.053	1.062
2216.6	0.531	0.469	0.049	0.447	430	251	155	-	0.039	1.208
2521.0	0.562	0.438	0.043	0.422	489	285	176	-	0.028	1.374
2865.6	0.593	0.407	0.038	0.395	555	324	201	-	0.020	1.561
3258.7	0.624	0.376	0.033	0.317	632	368	228	-	0.013	1.776
3706.1	0.640	0.360	0.029	0.238	718	419	259	-	0.011	2.019
4212.4	0.656	0.344	0.026	0.211	816	476	295	-	0.009	2.295
4789.0	0.671	0.329	0.023	0.211	928	541	335	-	0.007	2.609
5447.3	0.687	0.313	0.020	0.237	1056	616	381	-	0.006	2.968
6193.8	0.703	0.297	0.017	0.315	1200	700	433	-	0.005	3.375
7043.0	0.734	0.266	0.015	0.395	1365	796	493	-	0.004	3.837
8009.0	0.765	0.235	0.013	0.422	1552	905	561	-	0.003	4.364
9106.7	0.797	0.203	0.012	0.421	1765	1030	637	-	0.002	4.962
10354.7	0.828	0.172	0.010	0.421	2007	1171	725	-	0.001	5.642
11774.7	0.859	0.141	0.009	0.423	2282	1331	824	-	0.001	6.415
13389.0	0.890	0.110	0.008	0.400	2595	1514	937	-	0.001	7.295
15223.1	0.922	0.078	0.007	0.294	2950	1721	1065	-	0.000	8.294
17309.5	0.937	0.063	0.006	0.159	3355	1957	1211	-	0.000	9.431
19682.3	0.937	0.063	0.006	0.130	3815	2225	1377	-	0.000	10.724
22381.1	0.953	0.047	0.005	0.157	4338	2530	1566	-	0.000	12.194
25449.1	0.969	0.031	0.004	0.105	4932	2877	1781	-	0.000	13.866
28937.6	0.969	0.031	0.004	0.026	5608	3272	2025	-	0.000	15.767
32902.9	0.969	0.031	0.003	0.000	6377	3720	2303	-	0.000	17.927
37408.2	0.969	0.031	0.003	0.053	7250	4229	2618	-	0.000	20.382
42525.8	0.969	0.031	0.003	0.157	8242	4808	2976	-	0.000	23.170
48349.3	1.000	0.000	0.002	0.154	9371	5466	3384	-	0.000	26.343
54977.6	1.000	0.000	0.002	0.050	10655	6216	3848	-	0.000	29.955

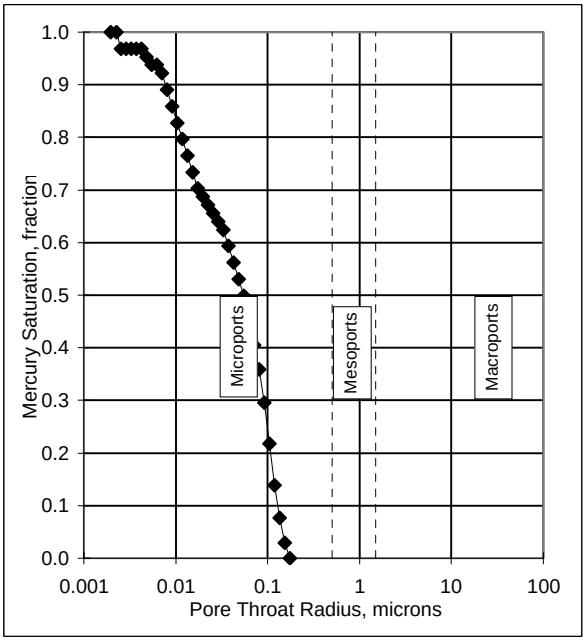
MERCURY INJECTION

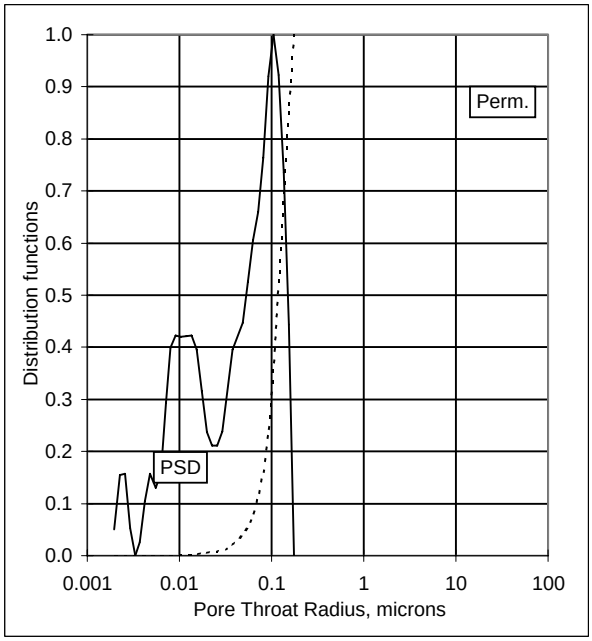
High-Pressure Method

Sample Identification:	3
Sample Depth, m:	5061.90
Kair, mD:	0.015
Plug Porosity, fraction:	0.028
Injection Sample Porosity, fraction:	0.017









MERCURY INJECTION

High-Pressure Method

IFT * Cosine Contact Angle				
	Air-Brine	Air-Oil	Oil-Brine	Air-Hg
Lab --->	72	24	42	372
Res --->	50		26	

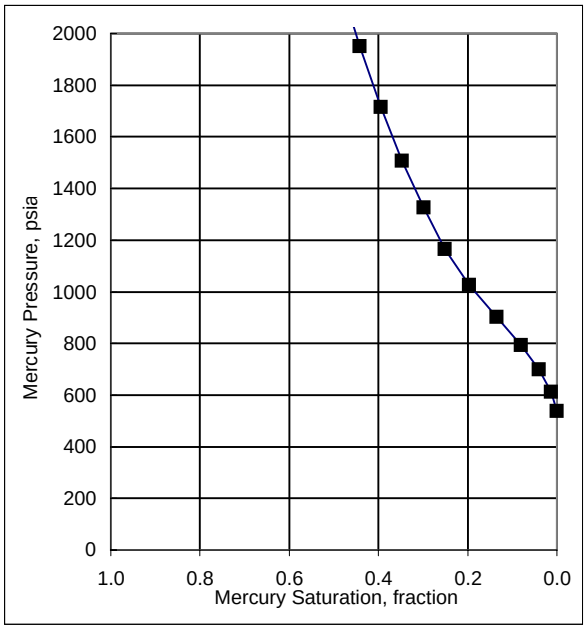
Sample Identification:	6
Sample Depth, m:	5062.79
Kair, mD:	0.026
Plug Porosity, fraction:	0.044
Injection Sample Porosity, fraction:	0.038
Injection Sample Pore Volume, cm3:	0.122
Injection Sample Bulk Volume, cm3:	3.184
Brine Density Gradient, psig/foot:	
Oil Density Gradient, psig/foot:	
Mean Hydraulic Radius, microns:	0.047
Swanson's Parameter:	8.83E-04
FZI:	0.52

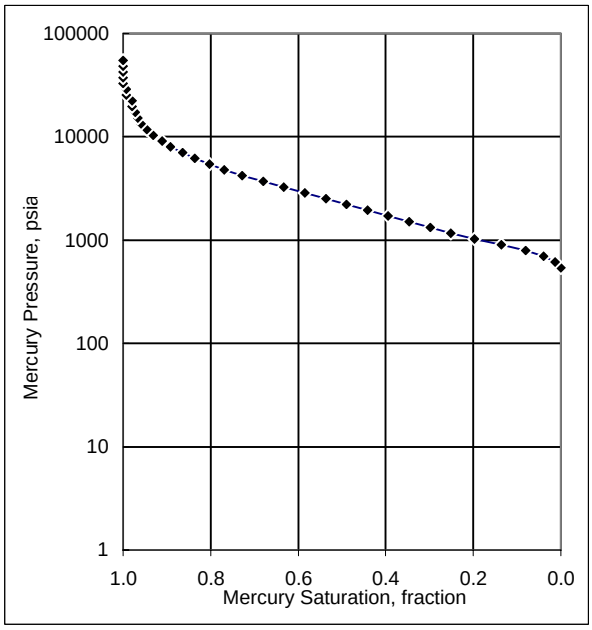
Injection Pressure, psia	Mercury Satn, fraction Vp	Equiv. Water Satn, fraction Vp	Pore Throat Radius, microns	Normalized Pore Size Distribution Function	Equivalent Injection Pressure, psia			Height Above Free Water, feet	Normalized Permeability Distribution Function	J Function
					A/B (Lab)	O/B (Lab)	O/B (Res)			
538.9	0.000	1.000	0.200	0.000	104	61	38	-	1.000	0.259
612.8	0.013	0.987	0.176	0.329	119	69	43	-	0.921	0.294
697.8	0.040	0.960	0.154	0.604	135	79	49	-	0.793	0.335
792.6	0.081	0.919	0.136	0.834	154	90	55	-	0.644	0.380
901.4	0.135	0.865	0.120	0.986	175	102	63	-	0.491	0.432
1025.1	0.197	0.803	0.105	1.000	199	116	72	-	0.357	0.492
1165.4	0.251	0.749	0.093	0.923	226	132	82	-	0.266	0.559
1326.2	0.299	0.701	0.081	0.863	257	150	93	-	0.203	0.636
1507.7	0.346	0.654	0.072	0.850	292	170	106	-	0.156	0.723
1713.9	0.394	0.606	0.063	0.850	332	194	120	-	0.118	0.822
1949.5	0.442	0.558	0.055	0.848	378	220	136	-	0.090	0.935
2216.4	0.489	0.511	0.049	0.847	430	251	155	-	0.067	1.063
2520.8	0.537	0.463	0.043	0.848	489	285	176	-	0.050	1.209
2865.3	0.585	0.415	0.038	0.851	555	324	201	-	0.037	1.375
3258.4	0.632	0.368	0.033	0.851	632	368	228	-	0.027	1.563
3705.7	0.680	0.320	0.029	0.834	718	419	259	-	0.019	1.778
4211.9	0.728	0.272	0.026	0.773	816	476	295	-	0.013	2.021
4788.5	0.769	0.231	0.023	0.682	928	541	335	-	0.009	2.297
5446.8	0.803	0.197	0.020	0.606	1056	616	381	-	0.006	2.613
6193.3	0.837	0.163	0.017	0.544	1200	700	433	-	0.004	2.971
7042.5	0.864	0.136	0.015	0.485	1365	796	493	-	0.003	3.379
8008.4	0.891	0.109	0.013	0.425	1552	905	560	-	0.002	3.842
9106.1	0.912	0.088	0.012	0.364	1765	1029	637	-	0.001	4.369
10354.2	0.932	0.068	0.010	0.302	2007	1171	725	-	0.001	4.968
11774.2	0.946	0.054	0.009	0.243	2282	1331	824	-	0.000	5.649
13388.4	0.959	0.041	0.008	0.184	2595	1514	937	-	0.000	6.424
15222.6	0.966	0.034	0.007	0.138	2950	1721	1065	-	0.000	7.304
17309.0	0.973	0.027	0.006	0.107	3355	1957	1211	-	0.000	8.305
19681.8	0.980	0.020	0.006	0.090	3815	2225	1377	-	0.000	9.443
22380.6	0.980	0.020	0.005	0.105	4338	2530	1566	-	0.000	10.738
25448.6	0.993	0.007	0.004	0.105	4932	2877	1781	-	0.000	12.210
28937.1	0.993	0.007	0.004	0.077	5608	3271	2025	-	0.000	13.884
32902.4	1.000	0.000	0.003	0.047	6377	3720	2303	-	0.000	15.786
37407.7	1.000	0.000	0.003	0.016	7250	4229	2618	-	0.000	17.948
42525.3	1.000	0.000	0.003	0.000	8242	4808	2976	-	0.000	20.403
48348.8	1.000	0.000	0.002	0.000	9370	5466	3384	-	0.000	23.197
54977.1	1.000	0.000	0.002	0.000	10655	6215	3848	-	0.000	26.378

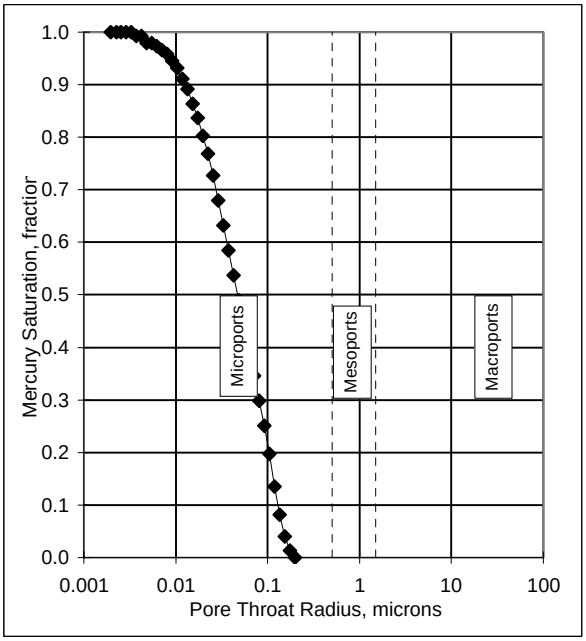
MERCURY INJECTION

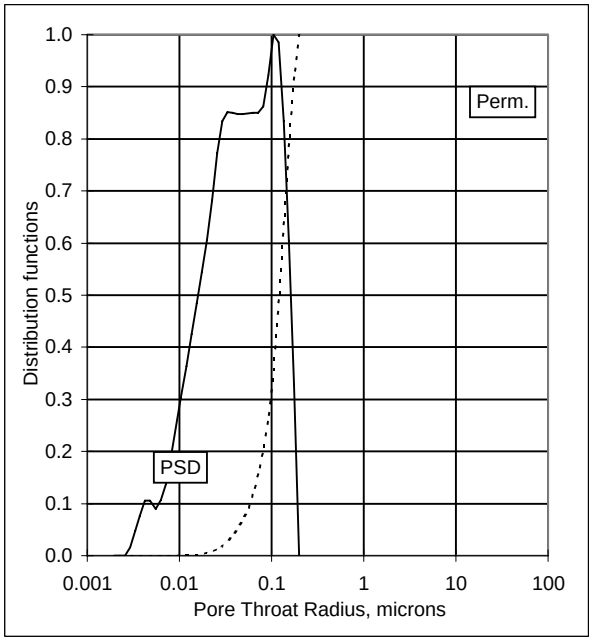
High-Pressure Method

Sample Identification:	6
Sample Depth, m:	5062.79
Kair, mD:	0.026
Plug Porosity, fraction:	0.044
Injection Sample Porosity, fraction:	0.038









MERCURY INJECTION

High-Pressure Method

IFT * Cosine Contact Angle				
	Air-Brine	Air-Oil	Oil-Brine	Air-Hg
Lab --->	72	24	42	372
Res --->	50		26	

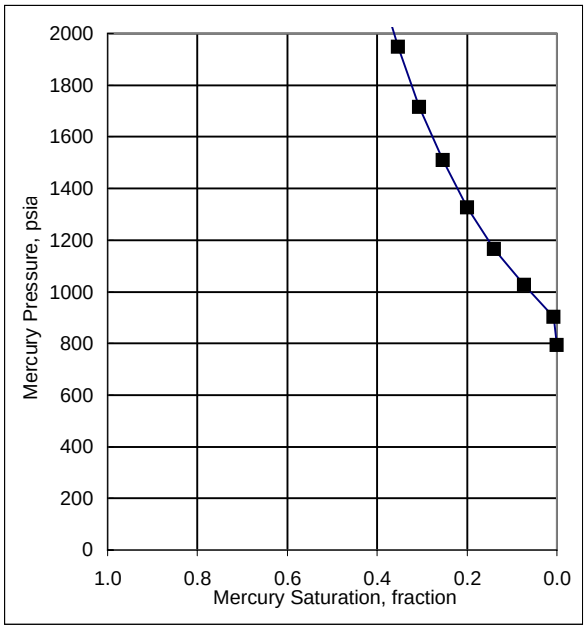
Sample Identification:	10
Sample Depth, m:	5064.30
Kair, mD:	0.036
Plug Porosity, fraction:	0.057
Injection Sample Porosity, fraction:	0.039
Injection Sample Pore Volume, cm3:	0.126
Injection Sample Bulk Volume, cm3:	3.246
Brine Density Gradient, psig/foot:	
Oil Density Gradient, psig/foot:	
Mean Hydraulic Radius, microns:	0.035
Swanson's Parameter:	7.04E-04
FZI:	0.41

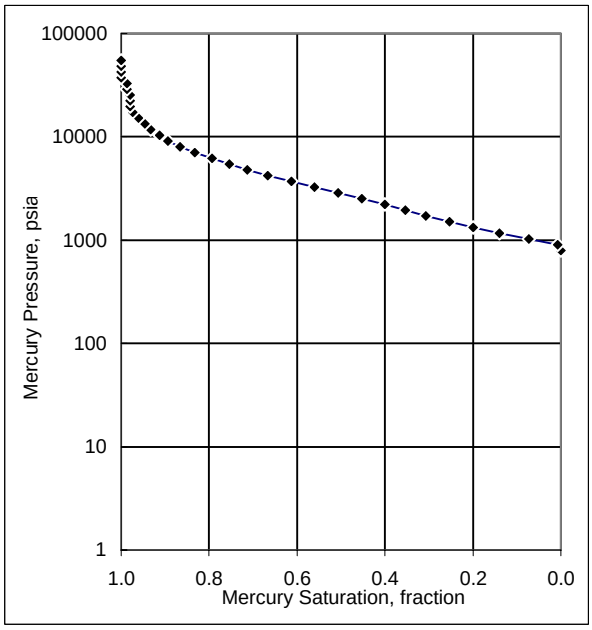
Injection Pressure, psia	Mercury Satn, fraction Vp	Equiv. Water Satn, fraction Vp	Pore Throat Radius, microns	Normalized Pore Size Distribution Function	Equivalent Injection Pressure, psia			Height Above Free Water, feet	Normalized Permeability Distribution Function	J Function
					A/B (Lab)	O/B (Lab)	O/B (Res)			
792.6	0.000	1.000	0.136	0.000	154	90	55	-	1.000	0.445
901.0	0.007	0.993	0.120	0.559	175	102	63	-	0.967	0.506
1025.0	0.073	0.927	0.105	0.933	199	116	72	-	0.715	0.575
1165.9	0.140	0.860	0.092	1.000	226	132	82	-	0.520	0.654
1324.8	0.200	0.800	0.081	0.919	257	150	93	-	0.384	0.744
1508.6	0.253	0.747	0.071	0.852	292	171	106	-	0.291	0.847
1714.3	0.307	0.693	0.063	0.801	332	194	120	-	0.219	0.962
1948.3	0.353	0.647	0.055	0.774	378	220	136	-	0.170	1.094
2217.0	0.400	0.600	0.049	0.800	430	251	155	-	0.133	1.244
2520.9	0.453	0.547	0.043	0.840	489	285	176	-	0.099	1.415
2866.2	0.507	0.493	0.038	0.853	555	324	201	-	0.074	1.609
3259.4	0.560	0.440	0.033	0.851	632	368	228	-	0.054	1.830
3706.9	0.613	0.387	0.029	0.840	718	419	259	-	0.038	2.081
4214.8	0.667	0.333	0.026	0.790	817	477	295	-	0.026	2.366
4789.5	0.713	0.287	0.023	0.711	928	541	335	-	0.018	2.688
5447.2	0.753	0.247	0.020	0.654	1056	616	381	-	0.013	3.058
6194.3	0.793	0.207	0.017	0.626	1201	700	434	-	0.009	3.477
7042.1	0.833	0.167	0.015	0.573	1365	796	493	-	0.005	3.953
8008.3	0.867	0.133	0.013	0.481	1552	905	560	-	0.003	4.495
9106.3	0.893	0.107	0.012	0.387	1765	1030	637	-	0.002	5.111
10354.8	0.913	0.087	0.010	0.319	2007	1171	725	-	0.001	5.812
11775.0	0.933	0.067	0.009	0.267	2282	1331	824	-	0.001	6.610
13387.6	0.947	0.053	0.008	0.229	2595	1514	937	-	0.001	7.515
15223.0	0.960	0.040	0.007	0.203	2950	1721	1065	-	0.000	8.545
17309.8	0.973	0.027	0.006	0.148	3355	1957	1211	-	0.000	9.716
19683.0	0.980	0.020	0.006	0.066	3815	2225	1378	-	0.000	11.048
22380.8	0.980	0.020	0.005	0.026	4338	2530	1566	-	0.000	12.563
25449.6	0.980	0.020	0.004	0.040	4932	2877	1781	-	0.000	14.285
28937.5	0.987	0.013	0.004	0.068	5608	3272	2025	-	0.000	16.243
32903.8	0.987	0.013	0.003	0.096	6377	3720	2303	-	0.000	18.469
37407.8	1.000	0.000	0.003	0.081	7250	4229	2618	-	0.000	20.998
42524.2	1.000	0.000	0.003	0.027	8242	4808	2976	-	0.000	23.870
48350.8	1.000	0.000	0.002	0.000	9371	5466	3384	-	0.000	27.140
54976.3	1.000	0.000	0.002	0.000	10655	6215	3848	-	0.000	30.859

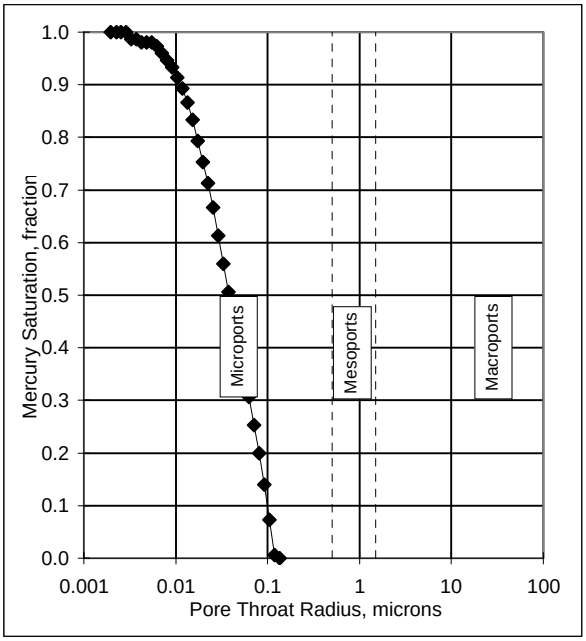
MERCURY INJECTION

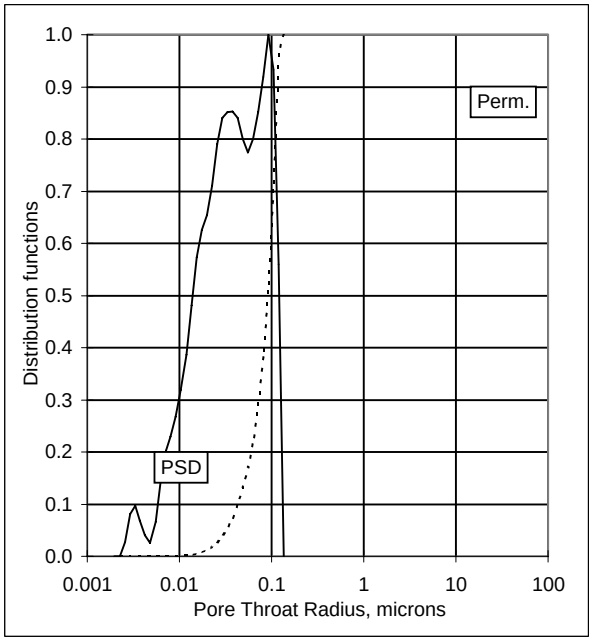
High-Pressure Method

Sample Identification:	10
Sample Depth, m:	5064.30
Kair, mD:	0.036
Plug Porosity, fraction:	0.057
Injection Sample Porosity, fraction:	0.039









MERCURY INJECTION

High-Pressure Method

IFT * Cosine Contact Angle				
	Air-Brine	Air-Oil	Oil-Brine	Air-Hg
Lab --->	72	24	42	372
Res --->	50		26	

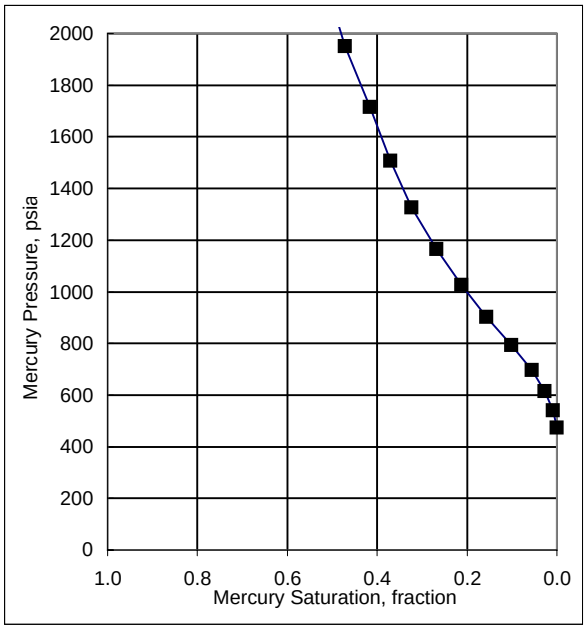
Sample Identification:	17
Sample Depth, m:	5066.70
Kair, mD:	0.043
Plug Porosity, fraction:	0.037
Injection Sample Porosity, fraction:	0.028
Injection Sample Pore Volume, cm3:	0.081
Injection Sample Bulk Volume, cm3:	2.862
Brine Density Gradient, psig/foot:	
Oil Density Gradient, psig/foot:	
Mean Hydraulic Radius, microns:	0.050
Swanson's Parameter:	6.93E-04
FZI:	0.88

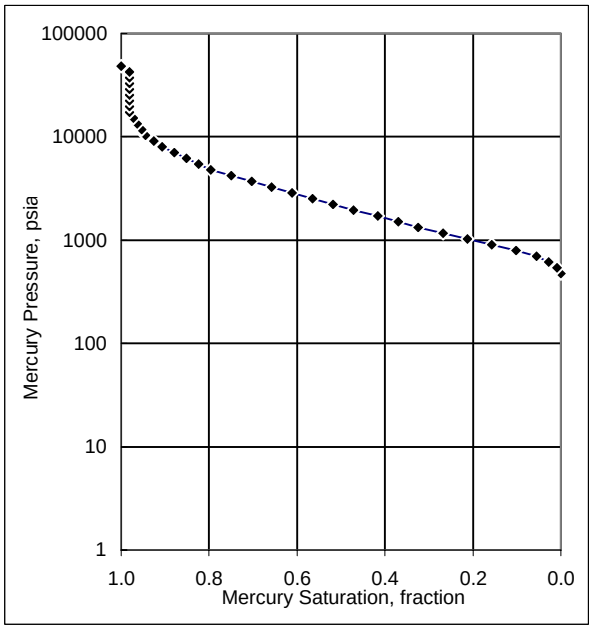
Injection Pressure, psia	Mercury Satn, fraction Vp	Equiv. Water Satn, fraction Vp	Pore Throat Radius, microns	Normalized Pore Size Distribution Function	Equivalent Injection Pressure, psia			Height Above Free Water, feet	Normalized Permeability Distribution Function	J Function
					A/B (Lab)	O/B (Lab)	O/B (Res)			
474.3	0.000	1.000	0.227	0.000	92	54	33	-	1.000	0.342
539.1	0.009	0.991	0.200	0.229	104	61	38	-	0.936	0.388
613.6	0.028	0.972	0.176	0.437	119	69	43	-	0.836	0.442
697.6	0.056	0.944	0.155	0.668	135	79	49	-	0.720	0.502
793.1	0.102	0.898	0.136	0.877	154	90	56	-	0.571	0.571
901.3	0.157	0.843	0.120	0.979	175	102	63	-	0.433	0.649
1025.9	0.213	0.787	0.105	1.000	199	116	72	-	0.326	0.739
1165.2	0.269	0.731	0.093	0.979	226	132	82	-	0.243	0.839
1326.2	0.324	0.676	0.081	0.916	257	150	93	-	0.179	0.955
1507.1	0.370	0.630	0.072	0.875	292	170	105	-	0.138	1.085
1714.2	0.417	0.583	0.063	0.896	332	194	120	-	0.106	1.235
1949.3	0.472	0.528	0.055	0.896	378	220	136	-	0.077	1.404
2217.1	0.519	0.481	0.049	0.854	430	251	155	-	0.058	1.597
2520.6	0.565	0.435	0.043	0.834	489	285	176	-	0.043	1.815
2866.1	0.611	0.389	0.038	0.834	555	324	201	-	0.032	2.064
3259.4	0.657	0.343	0.033	0.834	632	368	228	-	0.023	2.347
3706.1	0.704	0.296	0.029	0.833	718	419	259	-	0.016	2.669
4215.3	0.750	0.250	0.026	0.793	817	477	295	-	0.011	3.036
4790.4	0.796	0.204	0.023	0.669	928	542	335	-	0.007	3.450
5446.3	0.824	0.176	0.020	0.543	1056	616	381	-	0.005	3.922
6194.3	0.852	0.148	0.017	0.499	1201	700	434	-	0.003	4.461
7043.2	0.880	0.120	0.015	0.479	1365	796	493	-	0.002	5.073
8008.4	0.907	0.093	0.013	0.418	1552	905	560	-	0.001	5.768
9105.6	0.926	0.074	0.012	0.334	1765	1029	637	-	0.001	6.558
10355.0	0.944	0.056	0.010	0.249	2007	1171	725	-	0.000	7.458
11774.9	0.954	0.046	0.009	0.188	2282	1331	824	-	0.000	8.480
13388.9	0.963	0.037	0.008	0.169	2595	1514	937	-	0.000	9.643
15223.3	0.972	0.028	0.007	0.148	2950	1721	1065	-	0.000	10.964
17310.3	0.981	0.019	0.006	0.084	3355	1957	1211	-	0.000	12.467
19682.6	0.981	0.019	0.006	0.021	3815	2225	1378	-	0.000	14.176
22380.6	0.981	0.019	0.005	0.000	4338	2530	1566	-	0.000	16.119
25449.4	0.981	0.019	0.004	0.000	4932	2877	1781	-	0.000	18.329
28937.6	0.981	0.019	0.004	0.000	5608	3272	2025	-	0.000	20.841
32903.7	0.981	0.019	0.003	0.000	6377	3720	2303	-	0.000	23.697
37406.4	0.981	0.019	0.003	0.042	7250	4229	2618	-	0.000	26.940
42526.5	0.981	0.019	0.003	0.124	8242	4808	2976	-	0.000	30.628
48350.8	1.000	0.000	0.002	0.122	9371	5466	3384	-	0.000	34.823

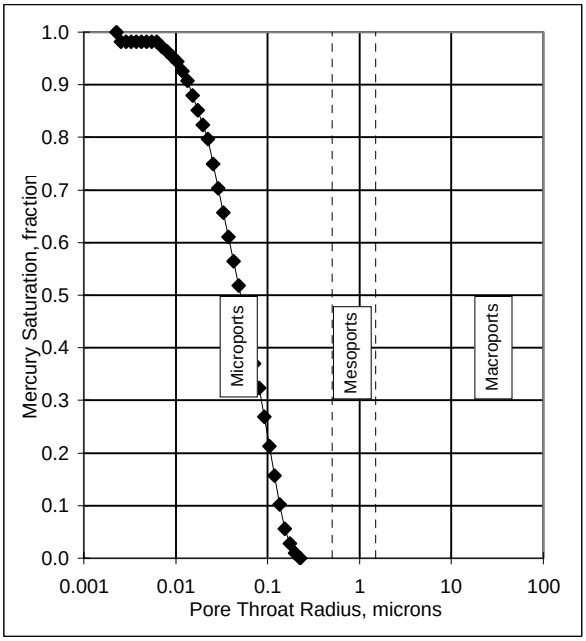
MERCURY INJECTION

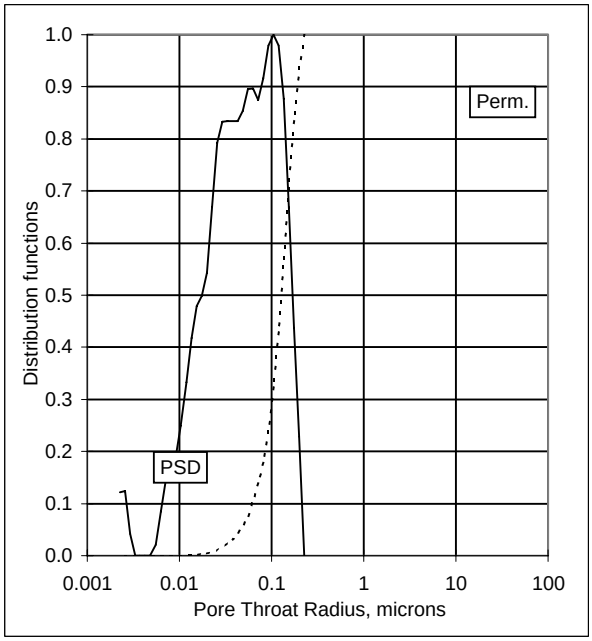
High-Pressure Method

Sample Identification:	17
Sample Depth, m:	5066.70
Kair, mD:	0.043
Plug Porosity, fraction:	0.037
Injection Sample Porosity, fraction:	0.028









MERCURY INJECTION

High-Pressure Method

IFT * Cosine Contact Angle				
	Air-Brine	Air-Oil	Oil-Brine	Air-Hg
Lab --->	72	24	42	372
Res --->	50		26	

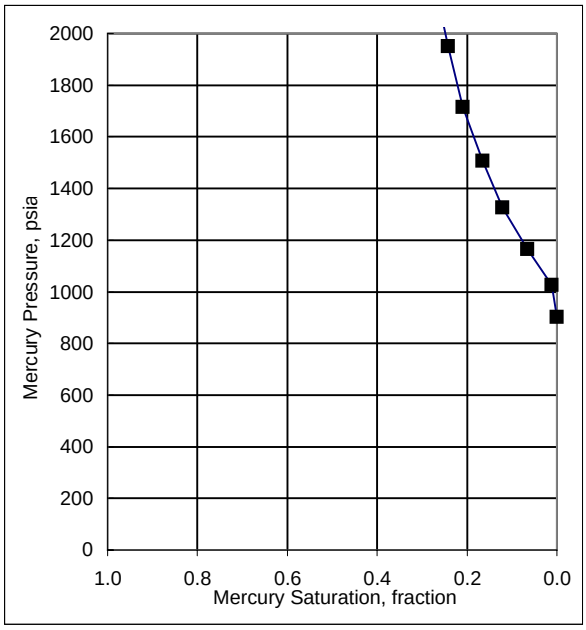
Sample Identification:	20
Sample Depth, m:	5067.61
Kair, mD:	0.029
Plug Porosity, fraction:	0.043
Injection Sample Porosity, fraction:	0.024
Injection Sample Pore Volume, cm3:	0.057
Injection Sample Bulk Volume, cm3:	2.340
Brine Density Gradient, psig/foot:	
Oil Density Gradient, psig/foot:	
Mean Hydraulic Radius, microns:	0.030
Swanson's Parameter:	3.01E-04
FZI:	0.57

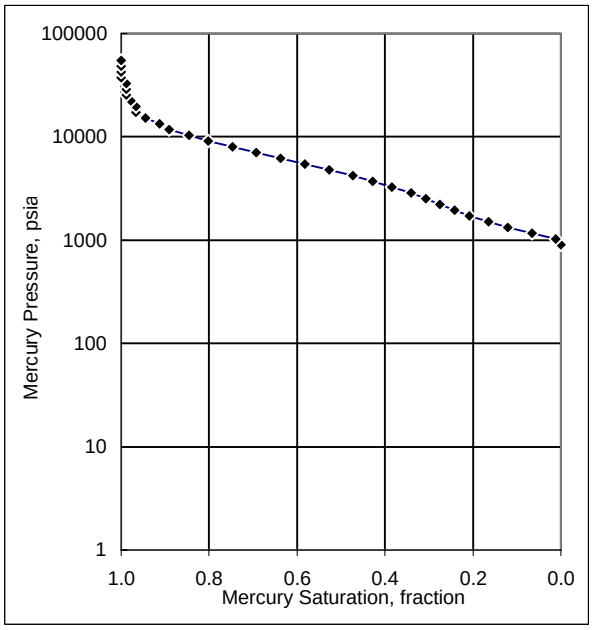
Injection Pressure, psia	Mercury Satn, fraction Vp	Equiv. Water Satn, fraction Vp	Pore Throat Radius, microns	Normalized Pore Size Distribution Function	Equivalent Injection Pressure, psia			Height Above Free Water, feet	Normalized Permeability Distribution Function	J Function
					A/B (Lab)	O/B (Lab)	O/B (Res)			
901.6	0.000	1.000	0.120	0.000	175	102	63	-	1.000	0.575
1026.2	0.011	0.989	0.105	0.550	199	116	72	-	0.935	0.654
1165.6	0.066	0.934	0.092	0.875	226	132	82	-	0.683	0.743
1326.6	0.121	0.879	0.081	0.900	257	150	93	-	0.488	0.846
1507.5	0.165	0.835	0.072	0.800	292	170	106	-	0.367	0.961
1714.6	0.209	0.791	0.063	0.699	332	194	120	-	0.274	1.093
1949.8	0.242	0.758	0.055	0.624	378	220	136	-	0.219	1.243
2217.5	0.275	0.725	0.049	0.599	430	251	155	-	0.177	1.414
2521.0	0.308	0.692	0.043	0.624	489	285	176	-	0.145	1.607
2866.6	0.341	0.659	0.038	0.700	556	324	201	-	0.120	1.828
3259.9	0.385	0.615	0.033	0.775	632	369	228	-	0.094	2.079
3706.7	0.429	0.571	0.029	0.824	718	419	259	-	0.074	2.363
4215.9	0.473	0.527	0.026	0.900	817	477	295	-	0.059	2.688
4790.9	0.527	0.473	0.023	0.978	929	542	335	-	0.044	3.055
5446.9	0.582	0.418	0.020	1.000	1056	616	381	-	0.032	3.473
6194.8	0.637	0.363	0.017	0.997	1201	700	434	-	0.023	3.950
7043.7	0.692	0.308	0.015	0.999	1365	796	493	-	0.016	4.491
8008.9	0.747	0.253	0.013	0.976	1552	905	561	-	0.011	5.106
9106.0	0.802	0.198	0.012	0.899	1765	1029	637	-	0.007	5.806
10355.5	0.846	0.154	0.010	0.772	2007	1171	725	-	0.004	6.603
11775.4	0.890	0.110	0.009	0.626	2282	1331	824	-	0.002	7.508
13389.3	0.912	0.088	0.008	0.530	2595	1514	937	-	0.002	8.537
15223.8	0.945	0.055	0.007	0.430	2950	1721	1065	-	0.001	9.707
17310.7	0.967	0.033	0.006	0.252	3355	1957	1212	-	0.000	11.037
19683.0	0.967	0.033	0.006	0.149	3815	2225	1378	-	0.000	12.550
22381.0	0.978	0.022	0.005	0.149	4338	2530	1566	-	0.000	14.270
25449.8	0.989	0.011	0.004	0.099	4932	2877	1781	-	0.000	16.227
28938.0	0.989	0.011	0.004	0.051	5608	3272	2025	-	0.000	18.451
32904.1	0.989	0.011	0.003	0.078	6377	3720	2303	-	0.000	20.980
37406.8	1.000	0.000	0.003	0.076	7250	4229	2618	-	0.000	23.851
42527.0	1.000	0.000	0.003	0.025	8242	4808	2976	-	0.000	27.115
48351.3	1.000	0.000	0.002	0.000	9371	5466	3384	-	0.000	30.829
54976.2	1.000	0.000	0.002	0.000	10655	6215	3848	-	0.000	35.053

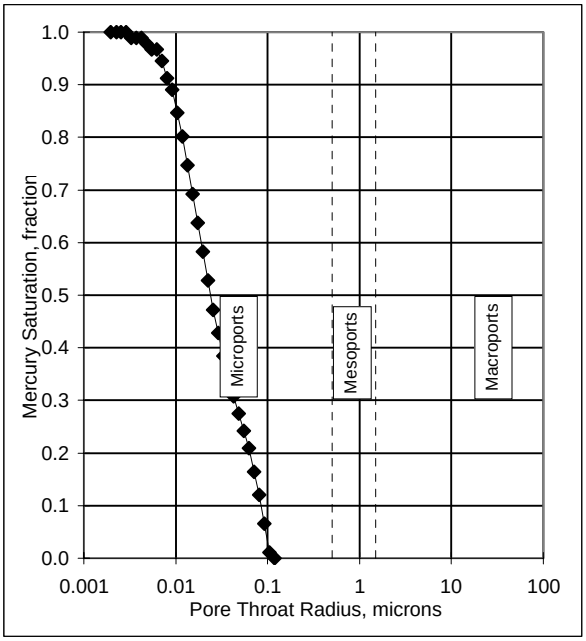
MERCURY INJECTION

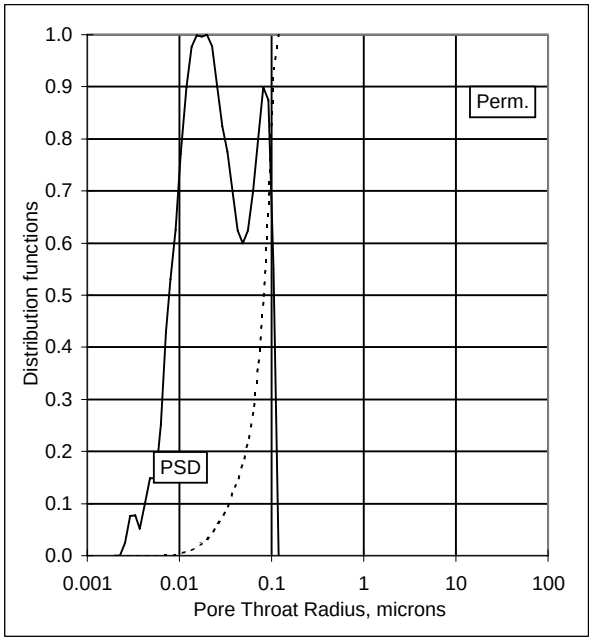
High-Pressure Method

Sample Identification:	20
Sample Depth, m:	5067.61
Kair, mD:	0.029
Plug Porosity, fraction:	0.043
Injection Sample Porosity, fraction:	0.024









MERCURY INJECTION

High-Pressure Method

IFT * Cosine Contact Angle				
	Air-Brine	Air-Oil	Oil-Brine	Air-Hg
Lab --->	72	24	42	372
Res --->	50		26	

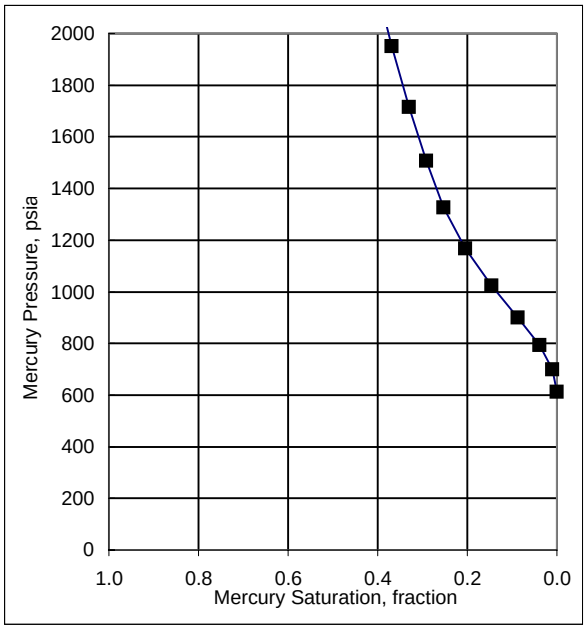
Sample Identification:	25
Sample Depth, m:	5069.13
Kair, mD:	0.026
Plug Porosity, fraction:	0.039
Injection Sample Porosity, fraction:	0.027
Injection Sample Pore Volume, cm3:	0.065
Injection Sample Bulk Volume, cm3:	2.412
Brine Density Gradient, psig/foot:	
Oil Density Gradient, psig/foot:	
Mean Hydraulic Radius, microns:	0.043
Swanson's Parameter:	5.24E-04
FZI:	0.63

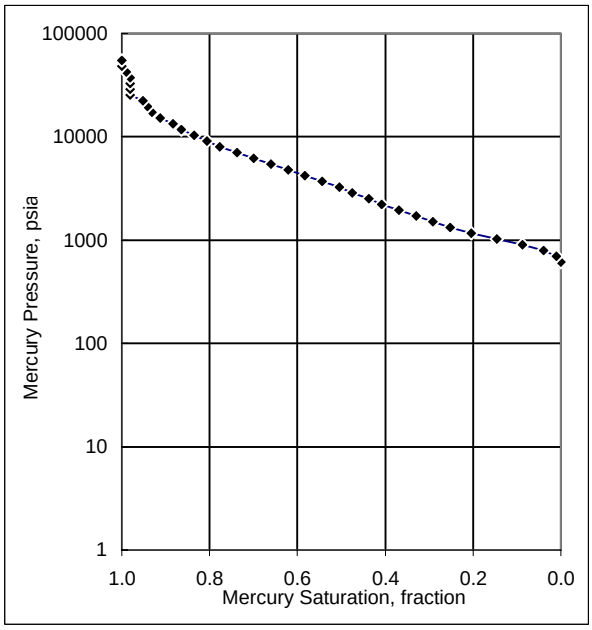
Injection Pressure, psia	Mercury Satn, fraction Vp	Equiv. Water Satn, fraction Vp	Pore Throat Radius, microns	Normalized Pore Size Distribution Function	Equivalent Injection Pressure, psia			Height Above Free Water, feet	Normalized Permeability Distribution Function	J Function
					A/B (Lab)	O/B (Lab)	O/B (Res)			
612.3	0.000	1.000	0.176	0.000	119	69	43	-	1.000	0.350
697.8	0.010	0.990	0.154	0.349	135	79	49	-	0.938	0.398
793.6	0.039	0.961	0.136	0.680	154	90	56	-	0.796	0.453
900.6	0.087	0.913	0.120	0.919	175	102	63	-	0.611	0.514
1023.8	0.146	0.854	0.105	1.000	198	116	72	-	0.440	0.584
1167.3	0.204	0.796	0.092	0.934	226	132	82	-	0.308	0.666
1325.7	0.252	0.748	0.081	0.808	257	150	93	-	0.223	0.757
1507.1	0.291	0.709	0.072	0.721	292	170	105	-	0.170	0.860
1714.1	0.330	0.670	0.063	0.698	332	194	120	-	0.129	0.978
1949.3	0.369	0.631	0.055	0.675	378	220	136	-	0.098	1.113
2216.7	0.408	0.592	0.049	0.632	430	251	155	-	0.073	1.265
2521.0	0.437	0.563	0.043	0.611	489	285	176	-	0.059	1.439
2864.5	0.476	0.524	0.038	0.611	555	324	200	-	0.044	1.635
3259.7	0.505	0.495	0.033	0.634	632	369	228	-	0.036	1.861
3706.0	0.544	0.456	0.029	0.678	718	419	259	-	0.027	2.115
4213.9	0.583	0.417	0.026	0.699	817	476	295	-	0.020	2.405
4790.7	0.621	0.379	0.023	0.698	928	542	335	-	0.015	2.735
5447.9	0.660	0.340	0.020	0.697	1056	616	381	-	0.011	3.110
6192.6	0.699	0.301	0.017	0.696	1200	700	433	-	0.008	3.535
7043.5	0.738	0.262	0.015	0.676	1365	796	493	-	0.006	4.021
8008.1	0.777	0.223	0.013	0.612	1552	905	560	-	0.004	4.571
9106.5	0.806	0.194	0.012	0.545	1765	1030	637	-	0.003	5.198
10355.0	0.835	0.165	0.010	0.500	2007	1171	725	-	0.002	5.911
11774.6	0.864	0.136	0.009	0.459	2282	1331	824	-	0.001	6.721
13389.1	0.883	0.117	0.008	0.441	2595	1514	937	-	0.001	7.643
15223.5	0.913	0.087	0.007	0.398	2950	1721	1065	-	0.001	8.690
17310.2	0.932	0.068	0.006	0.285	3355	1957	1211	-	0.000	9.881
19681.0	0.942	0.058	0.006	0.238	3814	2225	1377	-	0.000	11.234
22380.7	0.951	0.049	0.005	0.281	4338	2530	1566	-	0.000	12.775
25448.7	0.981	0.019	0.004	0.216	4932	2877	1781	-	0.000	14.526
28937.6	0.981	0.019	0.004	0.065	5608	3272	2025	-	0.000	16.518
32903.4	0.981	0.019	0.003	0.022	6377	3720	2303	-	0.000	18.782
37407.1	0.981	0.019	0.003	0.088	7250	4229	2618	-	0.000	21.353
42524.4	0.990	0.010	0.003	0.131	8242	4808	2976	-	0.000	24.274
48349.6	1.000	0.000	0.002	0.086	9371	5466	3384	-	0.000	27.599
54975.9	1.000	0.000	0.002	0.021	10655	6215	3848	-	0.000	31.381

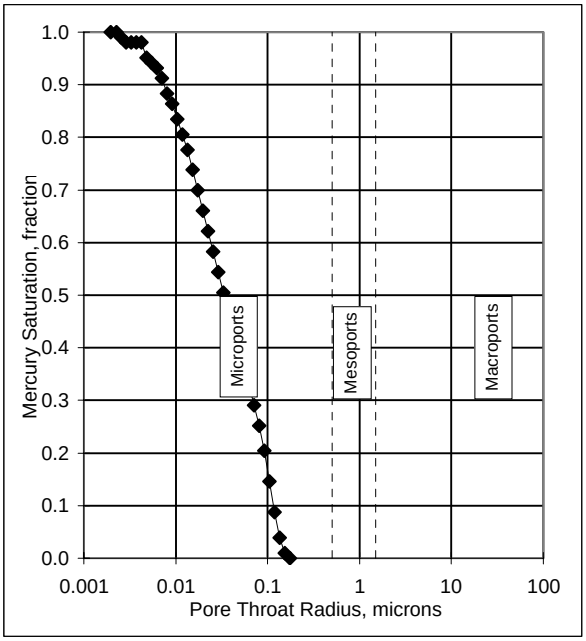
MERCURY INJECTION

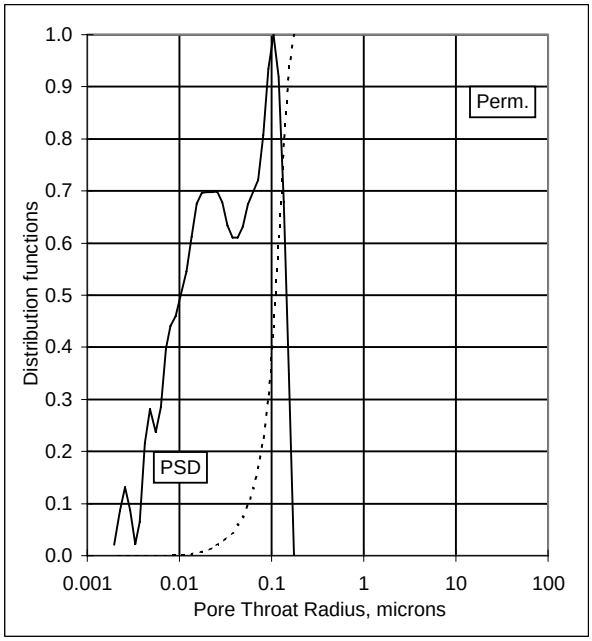
High-Pressure Method

Sample Identification:	25
Sample Depth, m:	5069.13
Kair, mD:	0.026
Plug Porosity, fraction:	0.039
Injection Sample Porosity, fraction:	0.027









MERCURY INJECTION

High-Pressure Method

IFT * Cosine Contact Angle				
	Air-Brine	Air-Oil	Oil-Brine	Air-Hg
Lab --->	72	24	42	372
Res --->	50		26	

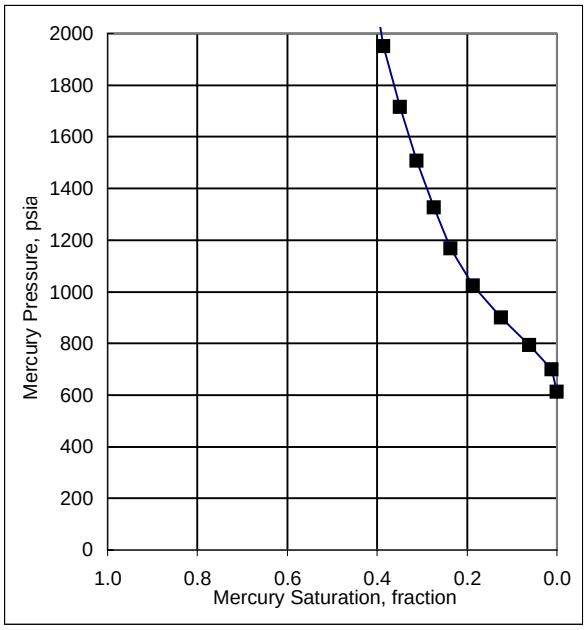
Sample Identification:	33
Sample Depth, m:	5071.50
Kair, mD:	0.021
Plug Porosity, fraction:	0.031
Injection Sample Porosity, fraction:	0.021
Injection Sample Pore Volume, cm3:	0.044
Injection Sample Bulk Volume, cm3:	2.066
Brine Density Gradient, psig/foot:	
Oil Density Gradient, psig/foot:	
Mean Hydraulic Radius, microns:	0.047
Swanson's Parameter:	4.42E-04
FZI:	0.81

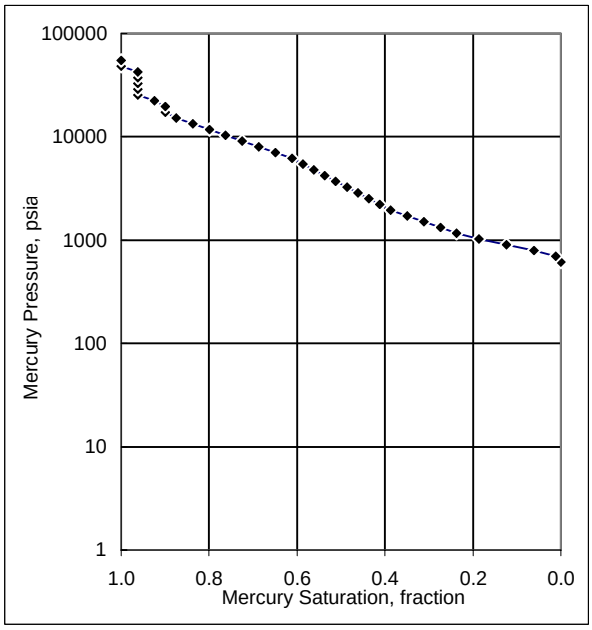
Injection Pressure, psia	Mercury Satn, fraction Vp	Equiv. Water Satn, fraction Vp	Pore Throat Radius, microns	Normalized Pore Size Distribution Function	Equivalent Injection Pressure, psia			Height Above Free Water, feet	Normalized Permeability Distribution Function	J Function
					A/B (Lab)	O/B (Lab)	O/B (Res)			
612.4	0.000	1.000	0.176	0.000	119	69	43	-	1.000	0.354
697.9	0.011	0.989	0.154	0.492	135	79	49	-	0.936	0.403
793.7	0.061	0.939	0.136	0.867	154	90	56	-	0.715	0.459
900.7	0.124	0.876	0.120	1.000	175	102	63	-	0.501	0.521
1024.0	0.186	0.814	0.105	0.914	198	116	72	-	0.335	0.592
1167.4	0.237	0.763	0.092	0.757	226	132	82	-	0.233	0.675
1325.9	0.274	0.726	0.081	0.656	257	150	93	-	0.173	0.766
1507.3	0.312	0.688	0.072	0.630	292	170	105	-	0.128	0.871
1714.3	0.349	0.651	0.063	0.603	332	194	120	-	0.092	0.991
1949.5	0.387	0.613	0.055	0.524	378	220	136	-	0.065	1.127
2216.9	0.412	0.588	0.049	0.445	430	251	155	-	0.050	1.281
2521.3	0.437	0.563	0.043	0.419	489	285	176	-	0.039	1.457
2864.8	0.462	0.538	0.038	0.420	555	324	200	-	0.031	1.655
3260.0	0.487	0.513	0.033	0.420	632	369	228	-	0.024	1.884
3706.3	0.512	0.488	0.029	0.419	718	419	259	-	0.019	2.142
4214.2	0.537	0.463	0.026	0.420	817	476	295	-	0.016	2.435
4791.0	0.562	0.438	0.023	0.421	929	542	335	-	0.012	2.769
5448.3	0.587	0.413	0.020	0.446	1056	616	381	-	0.010	3.148
6192.9	0.612	0.388	0.017	0.523	1200	700	433	-	0.008	3.579
7043.9	0.650	0.350	0.015	0.603	1365	796	493	-	0.006	4.070
8008.4	0.687	0.313	0.013	0.631	1552	905	560	-	0.005	4.628
9106.8	0.725	0.275	0.012	0.629	1765	1030	637	-	0.003	5.263
10355.4	0.762	0.238	0.010	0.628	2007	1171	725	-	0.002	5.984
11775.0	0.800	0.200	0.009	0.631	2282	1331	824	-	0.002	6.804
13389.4	0.837	0.163	0.008	0.610	2595	1514	937	-	0.001	7.737
15223.8	0.875	0.125	0.007	0.478	2951	1721	1065	-	0.001	8.797
17310.6	0.900	0.100	0.006	0.290	3355	1957	1212	-	0.000	10.003
19681.4	0.900	0.100	0.006	0.286	3814	2225	1377	-	0.000	11.373
22381.1	0.925	0.075	0.005	0.390	4338	2530	1566	-	0.000	12.933
25449.0	0.962	0.038	0.004	0.286	4932	2877	1781	-	0.000	14.706
28938.0	0.962	0.038	0.004	0.078	5608	3272	2025	-	0.000	16.722
32903.8	0.962	0.038	0.003	0.000	6377	3720	2303	-	0.000	19.014
37407.5	0.962	0.038	0.003	0.080	7250	4229	2618	-	0.000	21.617
42524.8	0.962	0.038	0.003	0.235	8242	4808	2976	-	0.000	24.574
48350.0	1.000	0.000	0.002	0.230	9371	5466	3384	-	0.000	27.940
54976.2	1.000	0.000	0.002	0.075	10655	6215	3848	-	0.000	31.769

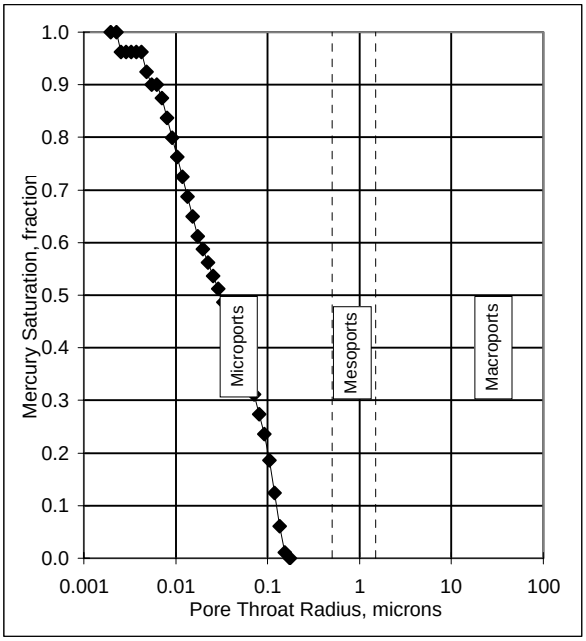
MERCURY INJECTION

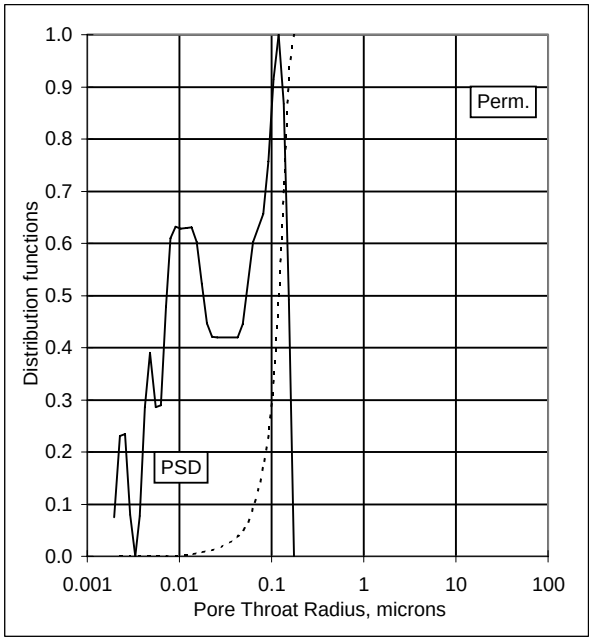
High-Pressure Method

Sample Identification:	33
Sample Depth, m:	5071.50
Kair, mD:	0.021
Plug Porosity, fraction:	0.031
Injection Sample Porosity, fraction:	0.021









MERCURY INJECTION

High-Pressure Method

IFT * Cosine Contact Angle				
	Air-Brine	Air-Oil	Oil-Brine	Air-Hg
Lab --->	72	24	42	372
Res --->	50		26	

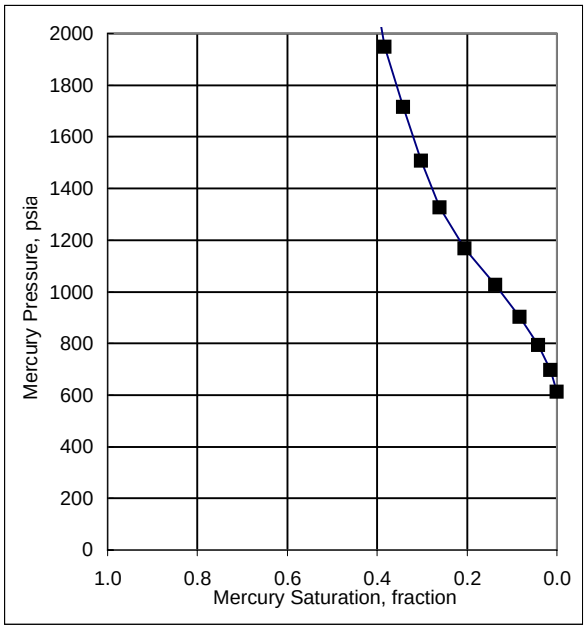
Sample Identification:	35
Sample Depth, m:	5072.11
Kair, mD:	0.025
Plug Porosity, fraction:	0.031
Injection Sample Porosity, fraction:	0.020
Injection Sample Pore Volume, cm3:	0.049
Injection Sample Bulk Volume, cm3:	2.466
Brine Density Gradient, psig/foot:	
Oil Density Gradient, psig/foot:	
Mean Hydraulic Radius, microns:	0.044
Swanson's Parameter:	3.96E-04
FZI:	0.88

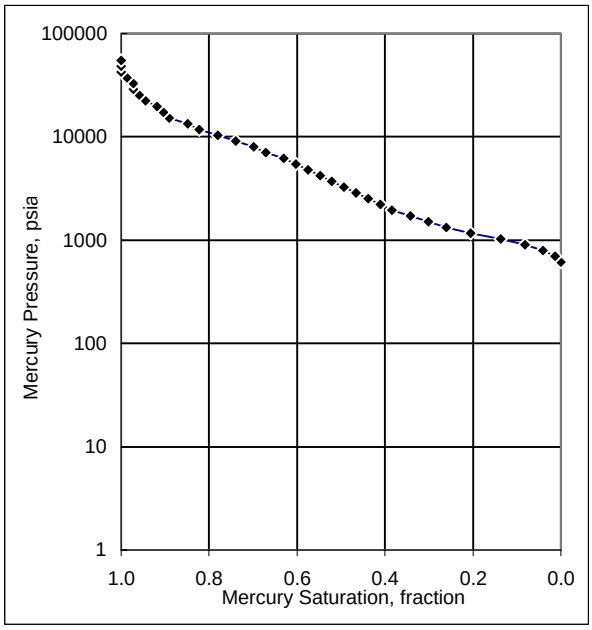
Injection Pressure, psia	Mercury Satn, fraction Vp	Equiv. Water Satn, fraction Vp	Pore Throat Radius, microns	Normalized Pore Size Distribution Function	Equivalent Injection Pressure, psia			Height Above Free Water, feet	Normalized Permeability Distribution Function	J Function
					A/B (Lab)	O/B (Lab)	O/B (Res)			
613.1	0.000	1.000	0.176	0.000	119	69	43	-	1.000	0.401
697.4	0.014	0.986	0.155	0.323	135	79	49	-	0.913	0.457
793.2	0.041	0.959	0.136	0.588	154	90	56	-	0.778	0.519
901.9	0.082	0.918	0.120	0.823	175	102	63	-	0.622	0.590
1025.2	0.137	0.863	0.105	1.000	199	116	72	-	0.462	0.671
1166.4	0.205	0.795	0.092	1.000	226	132	82	-	0.306	0.764
1325.6	0.260	0.740	0.081	0.853	257	150	93	-	0.210	0.868
1508.0	0.301	0.699	0.071	0.735	292	170	106	-	0.154	0.987
1714.6	0.342	0.658	0.063	0.677	332	194	120	-	0.111	1.123
1949.2	0.384	0.616	0.055	0.588	378	220	136	-	0.078	1.276
2217.0	0.411	0.589	0.049	0.500	430	251	155	-	0.060	1.451
2521.0	0.438	0.562	0.043	0.471	489	285	176	-	0.047	1.650
2866.7	0.466	0.534	0.038	0.472	556	324	201	-	0.037	1.877
3257.8	0.493	0.507	0.033	0.471	631	368	228	-	0.029	2.133
3706.1	0.521	0.479	0.029	0.469	718	419	259	-	0.023	2.426
4214.4	0.548	0.452	0.026	0.470	817	476	295	-	0.018	2.759
4789.2	0.575	0.425	0.023	0.472	928	541	335	-	0.014	3.135
5447.1	0.603	0.397	0.020	0.500	1056	616	381	-	0.011	3.566
6192.9	0.630	0.370	0.017	0.557	1200	700	433	-	0.009	4.054
7043.7	0.671	0.329	0.015	0.588	1365	796	493	-	0.007	4.611
8009.7	0.699	0.301	0.013	0.619	1552	906	561	-	0.005	5.244
9107.0	0.740	0.260	0.012	0.676	1765	1030	637	-	0.004	5.962
10355.0	0.781	0.219	0.010	0.675	2007	1171	725	-	0.003	6.779
11774.3	0.822	0.178	0.009	0.619	2282	1331	824	-	0.002	7.709
13388.4	0.849	0.151	0.008	0.565	2595	1514	937	-	0.001	8.765
15224.8	0.890	0.110	0.007	0.447	2951	1721	1066	-	0.001	9.968
17310.4	0.904	0.096	0.006	0.324	3355	1957	1211	-	0.000	11.333
19681.7	0.918	0.082	0.006	0.319	3814	2225	1377	-	0.000	12.885
22380.8	0.945	0.055	0.005	0.320	4338	2530	1566	-	0.000	14.653
25449.1	0.959	0.041	0.004	0.234	4932	2877	1781	-	0.000	16.661
28938.3	0.973	0.027	0.004	0.149	5609	3272	2025	-	0.000	18.946
32903.0	0.973	0.027	0.003	0.151	6377	3720	2303	-	0.000	21.541
37408.8	0.986	0.014	0.003	0.178	7250	4229	2618	-	0.000	24.491
42523.7	1.000	0.000	0.003	0.118	8241	4808	2976	-	0.000	27.840
48347.8	1.000	0.000	0.002	0.030	9370	5466	3384	-	0.000	31.653
54971.7	1.000	0.000	0.002	0.000	10654	6215	3847	-	0.000	35.990

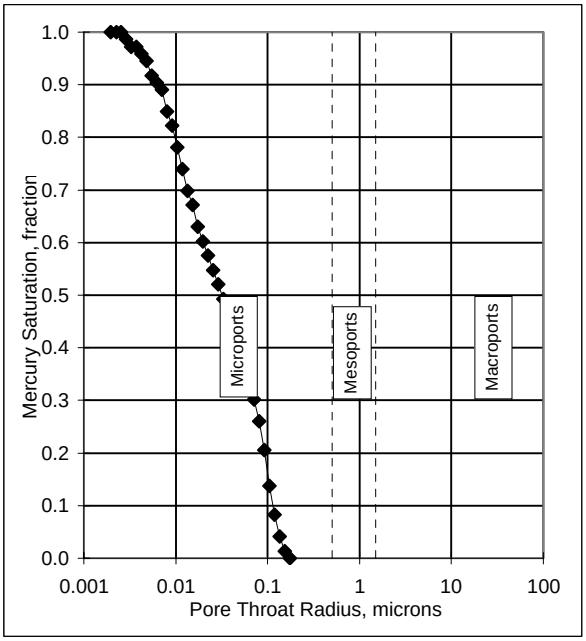
MERCURY INJECTION

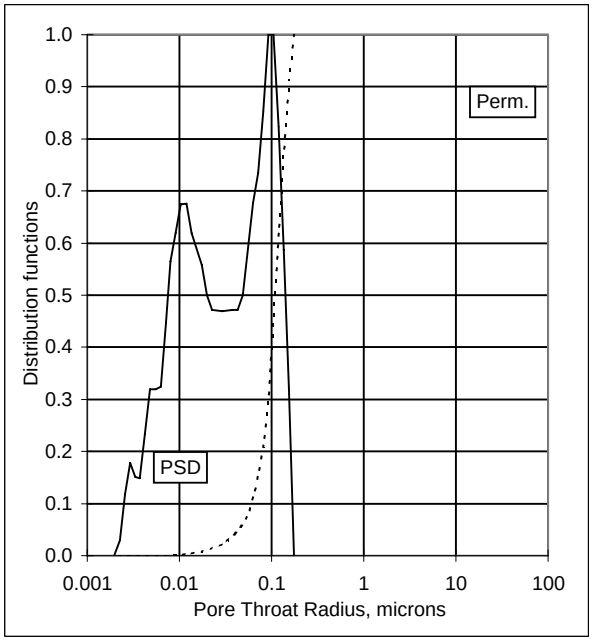
High-Pressure Method

Sample Identification:	35
Sample Depth, m:	5072.11
Kair, mD:	0.025
Plug Porosity, fraction:	0.031
Injection Sample Porosity, fraction:	0.020









MERCURY INJECTION

High-Pressure Method

IFT * Cosine Contact Angle				
	Air-Brine	Air-Oil	Oil-Brine	Air-Hg
Lab --->	72	24	42	372
Res --->	50		26	

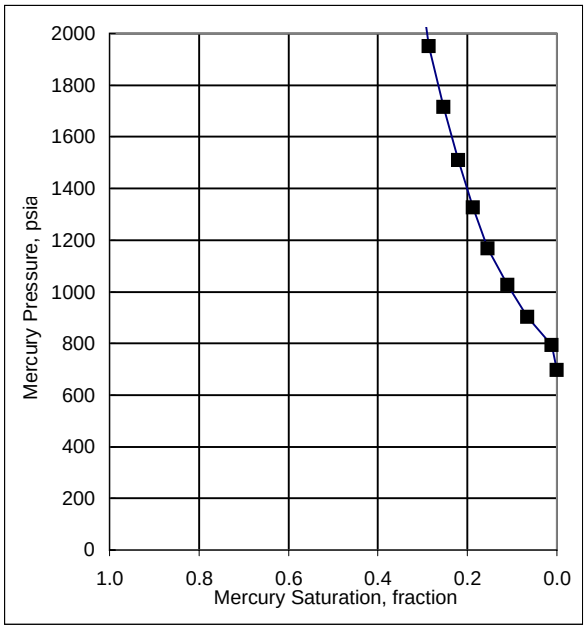
Sample Identification:	41
Sample Depth, m:	5074.20
Kair, mD:	0.037
Plug Porosity, fraction:	0.035
Injection Sample Porosity, fraction:	0.024
Injection Sample Pore Volume, cm3:	0.072
Injection Sample Bulk Volume, cm3:	2.988
Brine Density Gradient, psig/foot:	
Oil Density Gradient, psig/foot:	
Mean Hydraulic Radius, microns:	0.039
Swanson's Parameter:	3.56E-04
FZI:	0.89

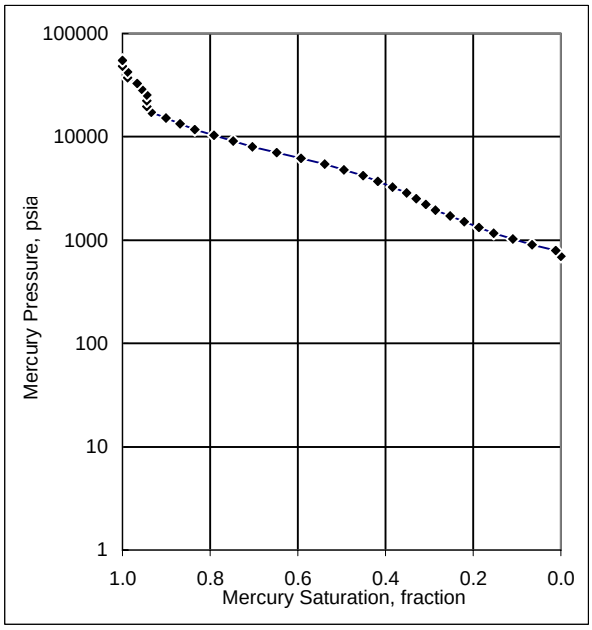
Injection Pressure, psia	Mercury Satn, fraction Vp	Equiv. Water Satn, fraction Vp	Pore Throat Radius, microns	Normalized Pore Size Distribution Function	Equivalent Injection Pressure, psia			Height Above Free Water, feet	Normalized Permeability Distribution Function	J Function
					A/B (Lab)	O/B (Lab)	O/B (Res)			
697.5	0.000	1.000	0.155	0.000	135	79	49	-	1.000	0.503
793.3	0.011	0.989	0.136	0.539	154	90	56	-	0.927	0.573
901.9	0.066	0.934	0.120	0.821	175	102	63	-	0.644	0.651
1025.3	0.110	0.890	0.105	0.821	199	116	72	-	0.469	0.740
1166.5	0.154	0.846	0.092	0.718	226	132	82	-	0.334	0.842
1325.7	0.187	0.813	0.081	0.641	257	150	93	-	0.255	0.957
1508.1	0.220	0.780	0.071	0.616	292	170	106	-	0.194	1.088
1714.7	0.253	0.747	0.063	0.591	332	194	120	-	0.147	1.238
1949.2	0.286	0.714	0.055	0.513	378	220	136	-	0.111	1.407
2217.0	0.308	0.692	0.049	0.436	430	251	155	-	0.092	1.600
2521.1	0.330	0.670	0.043	0.437	489	285	176	-	0.078	1.820
2866.7	0.352	0.648	0.038	0.515	556	324	201	-	0.067	2.069
3257.8	0.385	0.615	0.033	0.590	631	368	228	-	0.054	2.351
3706.1	0.418	0.582	0.029	0.639	718	419	259	-	0.044	2.675
4214.4	0.451	0.549	0.026	0.718	817	476	295	-	0.036	3.042
4789.2	0.495	0.505	0.023	0.824	928	541	335	-	0.028	3.457
5447.1	0.538	0.462	0.020	0.924	1056	616	381	-	0.022	3.931
6192.9	0.593	0.407	0.017	0.998	1200	700	433	-	0.016	4.470
7043.6	0.648	0.352	0.015	1.000	1365	796	493	-	0.011	5.084
8009.6	0.703	0.297	0.013	0.926	1552	906	561	-	0.007	5.781
9106.9	0.747	0.253	0.012	0.846	1765	1030	637	-	0.005	6.573
10354.9	0.791	0.209	0.010	0.793	2007	1171	725	-	0.003	7.474
11774.1	0.835	0.165	0.009	0.720	2282	1331	824	-	0.002	8.498
13388.3	0.868	0.132	0.008	0.648	2595	1514	937	-	0.001	9.663
15224.6	0.901	0.099	0.007	0.572	2951	1721	1066	-	0.001	10.988
17310.3	0.934	0.066	0.006	0.388	3355	1957	1211	-	0.000	12.494
19681.5	0.945	0.055	0.006	0.153	3814	2225	1377	-	0.000	14.205
22380.7	0.945	0.055	0.005	0.050	4338	2530	1566	-	0.000	16.153
25449.0	0.945	0.055	0.004	0.103	4932	2877	1781	-	0.000	18.368
28938.2	0.956	0.044	0.004	0.211	5608	3272	2025	-	0.000	20.886
32902.8	0.967	0.033	0.003	0.266	6377	3720	2303	-	0.000	23.747
37408.5	0.989	0.011	0.003	0.209	7250	4229	2618	-	0.000	26.999
42523.5	0.989	0.011	0.003	0.128	8241	4808	2976	-	0.000	30.691
48347.7	1.000	0.000	0.002	0.075	9370	5466	3384	-	0.000	34.895
54971.5	1.000	0.000	0.002	0.025	10654	6215	3847	-	0.000	39.675

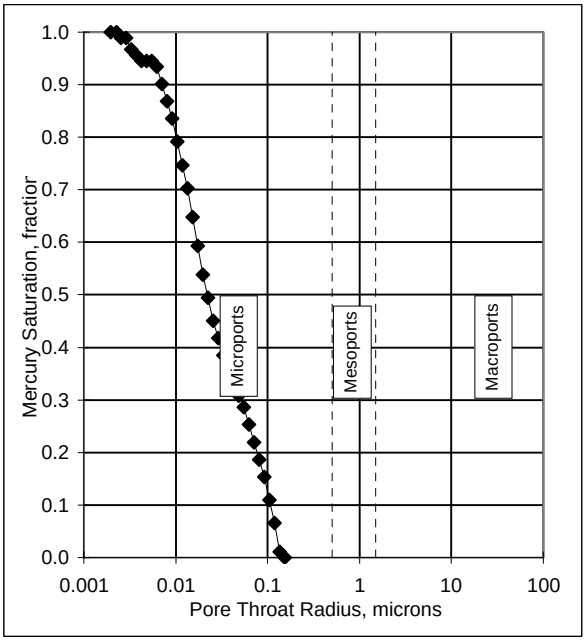
MERCURY INJECTION

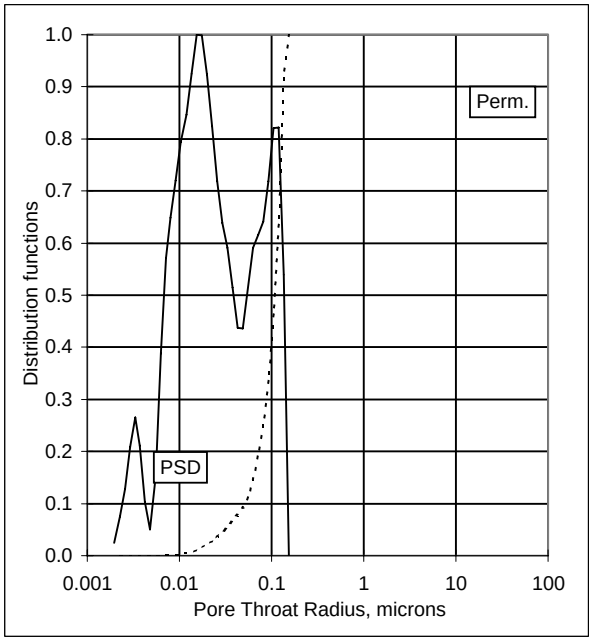
High-Pressure Method

Sample Identification:	41
Sample Depth, m:	5074.20
Kair, mD:	0.037
Plug Porosity, fraction:	0.035
Injection Sample Porosity, fraction:	0.024









MERCURY INJECTION

High-Pressure Method

ConocoPhillips
Well: Poseidon 2

IFT * Cosine Contact Angle				
	Air-Brine	Air-Oil	Oil-Brine	Air-Hg
Lab --->	72	24	42	372
Res --->	50		26	

Sample Identification:	48
Sample Depth, m:	5076.60
Kair, mD:	0.030
Plug Porosity, fraction:	0.037
Injection Sample Porosity, fraction:	0.028
Injection Sample Pore Volume, cm3:	0.064
Injection Sample Bulk Volume, cm3:	2.280
Brine Density Gradient, psig/foot:	
Oil Density Gradient, psig/foot:	
Mean Hydraulic Radius, microns:	0.052
Swanson's Parameter:	5.76E-04
FZI:	0.74

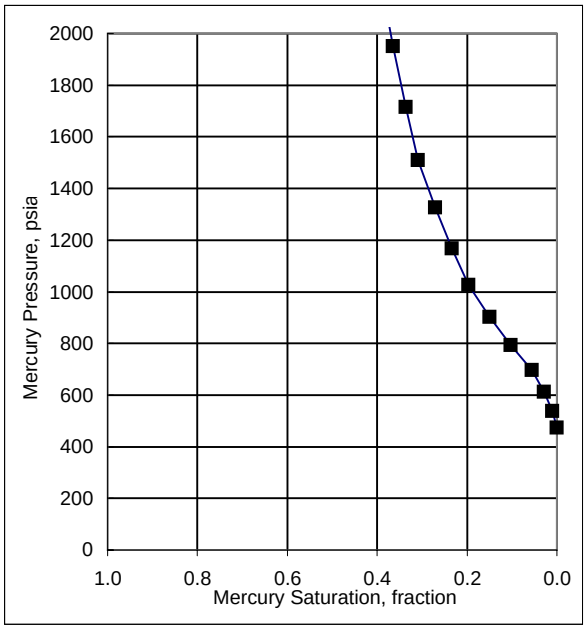
Injection Pressure, psia	Mercury Satn, fraction Vp	Equiv. Water Satn, fraction Vp	Pore Throat Radius, microns	Normalized Pore Size Distribution Function	Equivalent Injection Pressure, psia			Height Above Free Water, feet	Normalized Permeability Distribution Function	J Function
					A/B (Lab)	O/B (Lab)	O/B (Res)			
474.2	0.000	1.000	0.227	0.000	92	54	33	-	1.000	0.285
538.9	0.009	0.991	0.200	0.282	104	61	38	-	0.924	0.324
613.2	0.028	0.972	0.176	0.539	119	69	43	-	0.807	0.369
697.2	0.056	0.944	0.155	0.796	135	79	49	-	0.671	0.420
792.6	0.103	0.897	0.136	0.976	154	90	55	-	0.496	0.477
901.9	0.150	0.850	0.120	1.000	175	102	63	-	0.361	0.543
1025.0	0.196	0.804	0.105	0.922	199	116	72	-	0.256	0.617
1167.0	0.234	0.766	0.092	0.846	226	132	82	-	0.192	0.702
1326.6	0.271	0.729	0.081	0.796	257	150	93	-	0.142	0.798
1508.1	0.308	0.692	0.071	0.720	292	170	106	-	0.103	0.907
1714.8	0.336	0.664	0.063	0.642	332	194	120	-	0.080	1.032
1950.2	0.364	0.636	0.055	0.616	378	220	136	-	0.063	1.173
2216.5	0.393	0.607	0.049	0.617	430	251	155	-	0.050	1.334
2521.6	0.421	0.579	0.043	0.617	489	285	176	-	0.039	1.517
2865.9	0.449	0.551	0.038	0.616	555	324	201	-	0.031	1.724
3260.0	0.477	0.523	0.033	0.644	632	369	228	-	0.025	1.962
3705.9	0.505	0.495	0.029	0.696	718	419	259	-	0.020	2.230
4212.7	0.542	0.458	0.026	0.720	816	476	295	-	0.015	2.535
4789.0	0.570	0.430	0.023	0.745	928	541	335	-	0.012	2.881
5448.6	0.607	0.393	0.020	0.795	1056	616	381	-	0.009	3.278
6195.1	0.645	0.355	0.017	0.846	1201	700	434	-	0.007	3.727
7042.9	0.682	0.318	0.015	0.898	1365	796	493	-	0.005	4.238
8007.9	0.729	0.271	0.013	0.926	1552	905	560	-	0.004	4.818
9107.8	0.766	0.234	0.012	0.898	1765	1030	637	-	0.003	5.480
10355.0	0.813	0.187	0.010	0.794	2007	1171	725	-	0.002	6.230
11774.1	0.841	0.159	0.009	0.669	2282	1331	824	-	0.001	7.084
13387.6	0.869	0.131	0.008	0.597	2595	1514	937	-	0.001	8.055
15224.5	0.897	0.103	0.007	0.494	2951	1721	1066	-	0.000	9.160
17310.4	0.916	0.084	0.006	0.335	3355	1957	1211	-	0.000	10.415
19682.0	0.925	0.075	0.006	0.280	3815	2225	1377	-	0.000	11.842
22380.6	0.935	0.065	0.005	0.331	4338	2530	1566	-	0.000	13.466
25449.0	0.963	0.037	0.004	0.281	4932	2877	1781	-	0.000	15.312
28937.6	0.963	0.037	0.004	0.182	5608	3272	2025	-	0.000	17.411
32903.0	0.972	0.028	0.003	0.186	6377	3720	2303	-	0.000	19.797
37411.2	0.981	0.019	0.003	0.209	7251	4230	2618	-	0.000	22.510
42524.7	0.991	0.009	0.003	0.180	8242	4808	2976	-	0.000	25.586
48346.8	1.000	0.000	0.002	0.101	9370	5466	3384	-	0.000	29.089

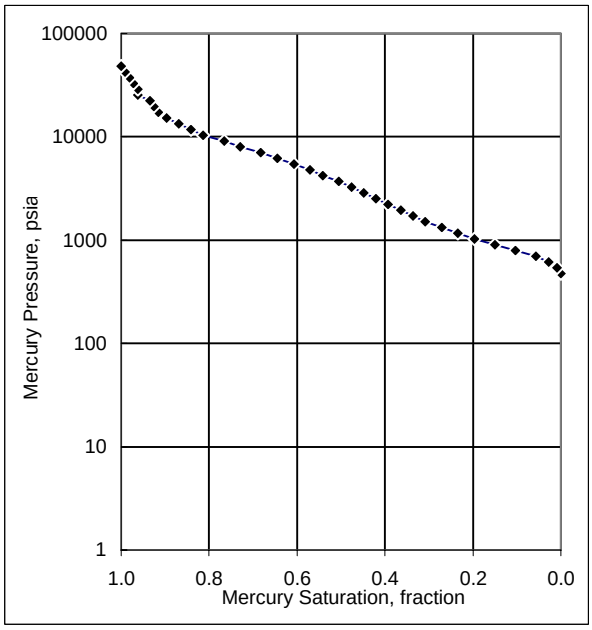
MERCURY INJECTION

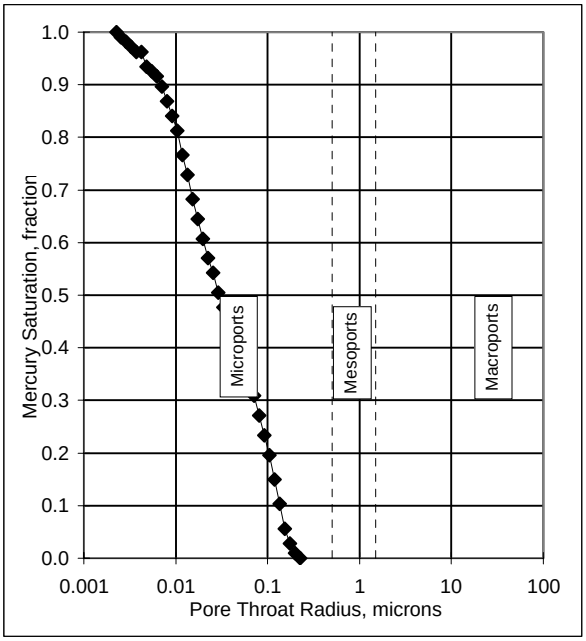
High-Pressure Method

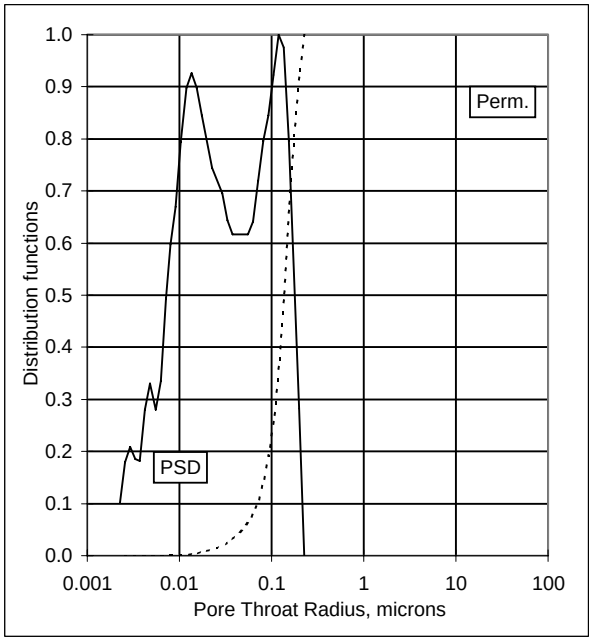
ConocoPhillips
Well: Poseidon 2

Sample Identification:	48
Sample Depth, m:	5076.60
Kair, mD:	0.030
Plug Porosity, fraction:	0.037
Injection Sample Porosity, fraction:	0.028









MERCURY INJECTION

High-Pressure Method

IFT * Cosine Contact Angle				
	Air-Brine	Air-Oil	Oil-Brine	Air-Hg
Lab --->	72	24	42	372
Res --->	50		26	

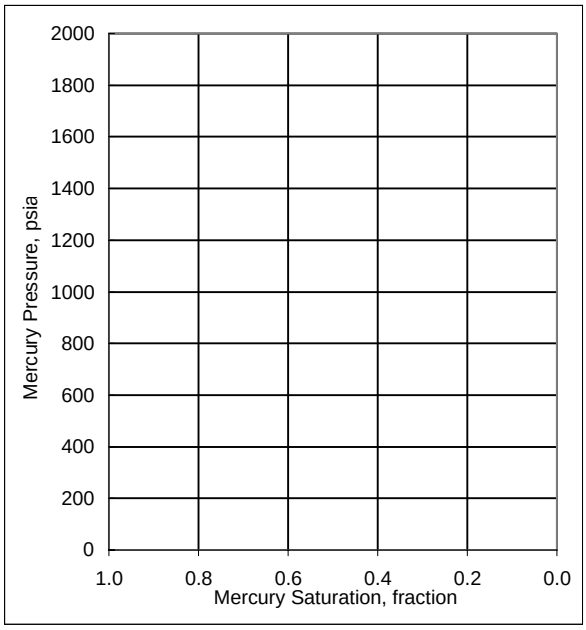
Sample Identification:	52
Sample Depth, m:	5077.81
Kair, mD:	0.011
Plug Porosity, fraction:	0.016
Injection Sample Porosity, fraction:	0.003
Injection Sample Pore Volume, cm3:	0.006
Injection Sample Bulk Volume, cm3:	1.810
Brine Density Gradient, psig/foot:	
Oil Density Gradient, psig/foot:	
Mean Hydraulic Radius, microns:	0.011
Swanson's Parameter:	2.40E-05
FZI:	1.60

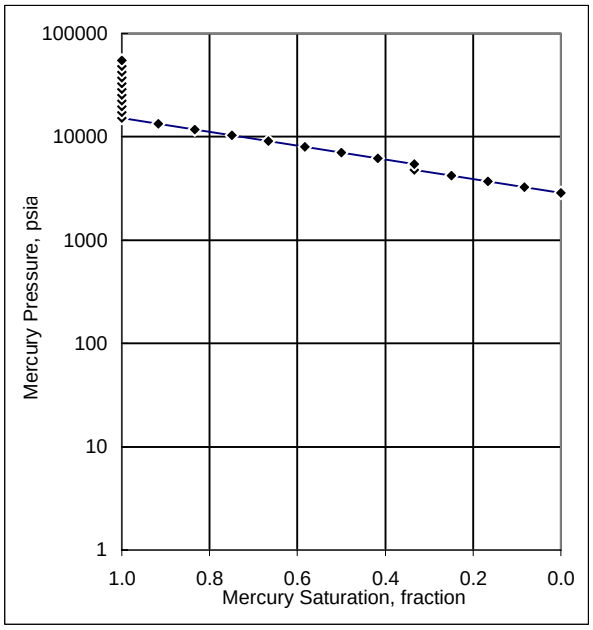
Injection Pressure, psia	Mercury Satn, fraction Vp	Equiv. Water Satn, fraction Vp	Pore Throat Radius, microns	Normalized Pore Size Distribution Function	Equivalent Injection Pressure, psia			Height Above Free Water, feet	Normalized Permeability Distribution Function	J Function
					A/B (Lab)	O/B (Lab)	O/B (Res)			
2866.7	0.000	1.000	0.038	0.000	556	324	201	-	1.000	3.064
3260.8	0.083	0.917	0.033	0.750	632	369	228	-	0.744	3.485
3706.7	0.167	0.833	0.029	1.000	718	419	259	-	0.546	3.962
4213.5	0.250	0.750	0.026	0.873	817	476	295	-	0.392	4.503
4789.9	0.333	0.667	0.023	0.623	928	542	335	-	0.273	5.119
5449.4	0.333	0.667	0.020	0.622	1056	616	381	-	0.273	5.824
6195.9	0.417	0.583	0.017	0.870	1201	700	434	-	0.202	6.622
7043.8	0.500	0.500	0.015	0.996	1365	796	493	-	0.147	7.528
8008.8	0.583	0.417	0.013	0.999	1552	905	561	-	0.105	8.559
9108.8	0.667	0.333	0.012	0.996	1765	1030	637	-	0.072	9.735
10355.9	0.750	0.250	0.010	0.994	2007	1171	725	-	0.047	11.068
11775.1	0.833	0.167	0.009	1.000	2282	1331	824	-	0.027	12.585
13388.6	0.917	0.083	0.008	0.881	2595	1514	937	-	0.012	14.309
15225.5	1.000	0.000	0.007	0.505	2951	1721	1066	-	0.000	16.272
17311.5	1.000	0.000	0.006	0.126	3355	1957	1212	-	0.000	18.502
19683.1	1.000	0.000	0.006	0.000	3815	2225	1378	-	0.000	21.036
22381.6	1.000	0.000	0.005	0.000	4338	2530	1566	-	0.000	23.921
25450.0	1.000	0.000	0.004	0.000	4932	2877	1781	-	0.000	27.200
28938.7	1.000	0.000	0.004	0.000	5609	3272	2025	-	0.000	30.928
32904.0	1.000	0.000	0.003	0.000	6377	3720	2303	-	0.000	35.167
37412.3	1.000	0.000	0.003	0.000	7251	4230	2618	-	0.000	39.985
42525.8	1.000	0.000	0.003	0.000	8242	4808	2976	-	0.000	45.450
48347.8	1.000	0.000	0.002	0.000	9370	5466	3384	-	0.000	51.672
54974.2	1.000	0.000	0.002	0.000	10654	6215	3847	-	0.000	58.754

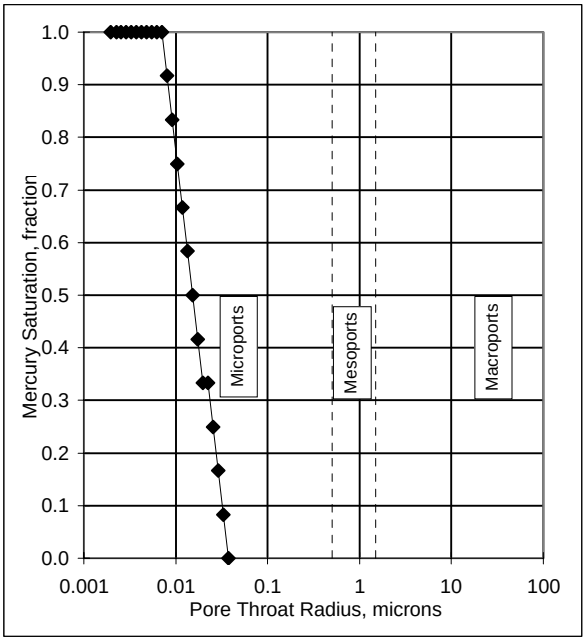
MERCURY INJECTION

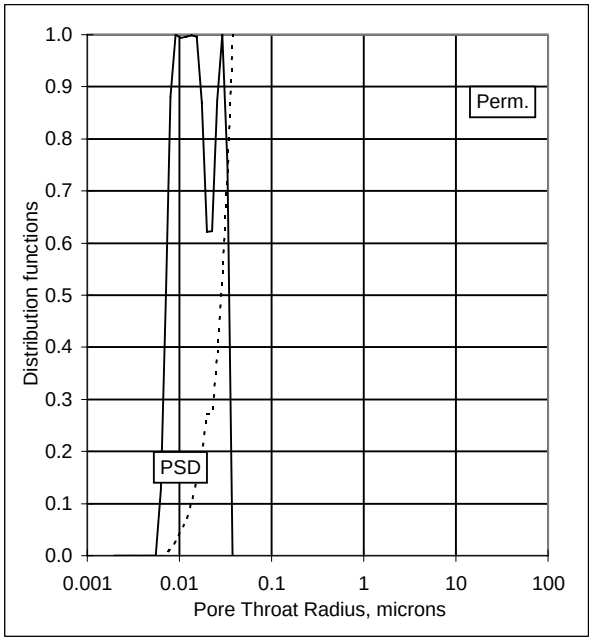
High-Pressure Method

Sample Identification:	52
Sample Depth, m:	5077.81
Kair, mD:	0.011
Plug Porosity, fraction:	0.016
Injection Sample Porosity, fraction:	0.003









MERCURY INJECTION

High-Pressure Method

IFT * Cosine Contact Angle				
	Air-Brine	Air-Oil	Oil-Brine	Air-Hg
Lab --->	72	24	42	372
Res --->	50		26	

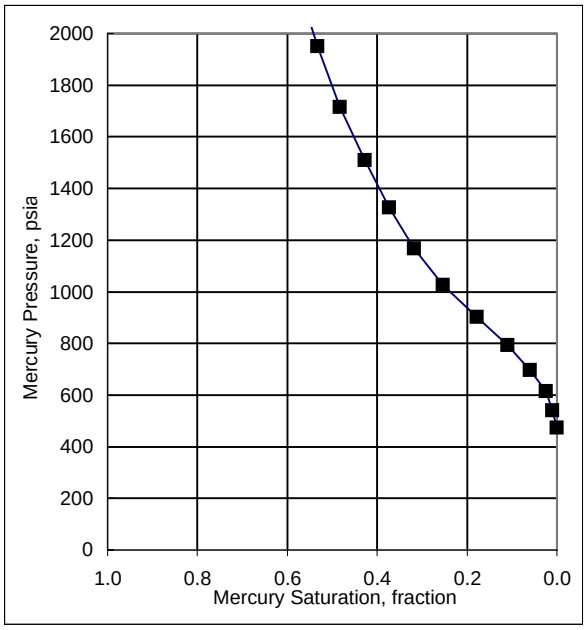
Sample Identification:	55
Sample Depth, m:	5078.73
Kair, mD:	0.037
Plug Porosity, fraction:	0.062
Injection Sample Porosity, fraction:	0.051
Injection Sample Pore Volume, cm3:	0.164
Injection Sample Bulk Volume, cm3:	3.197
Brine Density Gradient, psig/foot:	
Oil Density Gradient, psig/foot:	
Mean Hydraulic Radius, microns:	0.052
Swanson's Parameter:	1.45E-03
FZI:	0.37

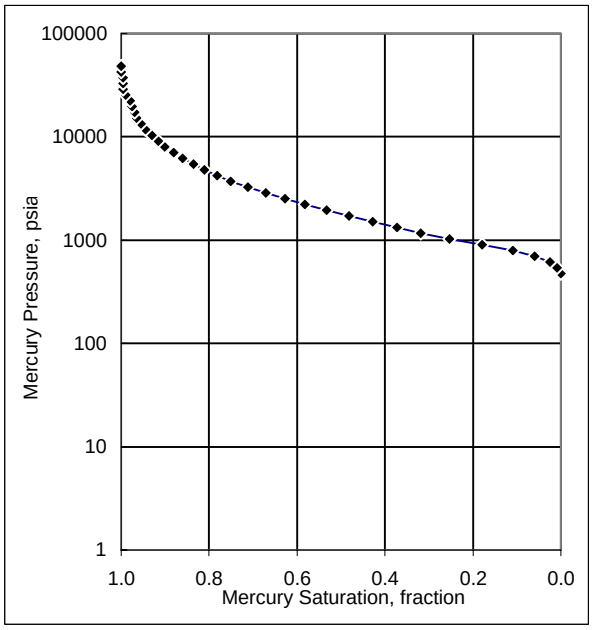
Injection Pressure, psia	Mercury Satn, fraction Vp	Equiv. Water Satn, fraction Vp	Pore Throat Radius, microns	Normalized Pore Size Distribution Function	Equivalent Injection Pressure, psia			Height Above Free Water, feet	Normalized Permeability Distribution Function	J Function
					A/B (Lab)	O/B (Lab)	O/B (Res)			
473.7	0.000	1.000	0.228	0.000	92	54	33	-	1.000	0.234
539.2	0.009	0.991	0.200	0.180	105	61	38	-	0.941	0.267
613.5	0.024	0.976	0.176	0.381	119	69	43	-	0.868	0.304
697.5	0.059	0.941	0.155	0.620	135	79	49	-	0.738	0.345
792.4	0.109	0.891	0.136	0.856	154	90	55	-	0.594	0.392
901.9	0.179	0.821	0.120	1.000	175	102	63	-	0.438	0.446
1025.1	0.253	0.747	0.105	0.990	199	116	72	-	0.309	0.507
1166.7	0.318	0.682	0.092	0.890	226	132	82	-	0.222	0.578
1326.1	0.373	0.627	0.081	0.819	257	150	93	-	0.165	0.656
1508.3	0.428	0.572	0.071	0.792	292	171	106	-	0.122	0.747
1715.3	0.482	0.518	0.063	0.764	332	194	120	-	0.088	0.849
1949.9	0.532	0.468	0.055	0.728	378	220	136	-	0.064	0.965
2217.2	0.582	0.418	0.049	0.693	430	251	155	-	0.045	1.098
2521.4	0.627	0.373	0.043	0.656	489	285	176	-	0.033	1.248
2866.6	0.671	0.329	0.038	0.619	556	324	201	-	0.023	1.419
3259.6	0.711	0.289	0.033	0.575	632	369	228	-	0.016	1.614
3705.1	0.751	0.249	0.029	0.512	718	419	259	-	0.011	1.834
4213.5	0.781	0.219	0.026	0.447	817	476	295	-	0.007	2.086
4789.2	0.811	0.189	0.023	0.400	928	541	335	-	0.005	2.371
5448.5	0.836	0.164	0.020	0.364	1056	616	381	-	0.004	2.697
6192.5	0.861	0.139	0.017	0.327	1200	700	433	-	0.002	3.066
7044.1	0.881	0.119	0.015	0.291	1365	796	493	-	0.002	3.487
8008.1	0.900	0.100	0.013	0.255	1552	905	560	-	0.001	3.964
9105.6	0.915	0.085	0.012	0.227	1765	1029	637	-	0.001	4.508
10355.3	0.930	0.070	0.010	0.209	2007	1171	725	-	0.000	5.126
11773.3	0.945	0.055	0.009	0.182	2282	1331	824	-	0.000	5.828
13388.4	0.955	0.045	0.008	0.147	2595	1514	937	-	0.000	6.628
15224.3	0.965	0.035	0.007	0.111	2951	1721	1065	-	0.000	7.537
17309.6	0.970	0.030	0.006	0.082	3355	1957	1211	-	0.000	8.569
19682.9	0.975	0.025	0.006	0.081	3815	2225	1378	-	0.000	9.744
22381.4	0.980	0.020	0.005	0.099	4338	2530	1566	-	0.000	11.080
25449.2	0.990	0.010	0.004	0.090	4932	2877	1781	-	0.000	12.598
28937.6	0.995	0.005	0.004	0.045	5608	3272	2025	-	0.000	14.325
32904.0	0.995	0.005	0.003	0.018	6377	3720	2303	-	0.000	16.289
37410.8	0.995	0.005	0.003	0.027	7251	4229	2618	-	0.000	18.520
42524.5	1.000	0.000	0.003	0.028	8242	4808	2976	-	0.000	21.051
48347.2	1.000	0.000	0.002	0.009	9370	5466	3384	-	0.000	23.933

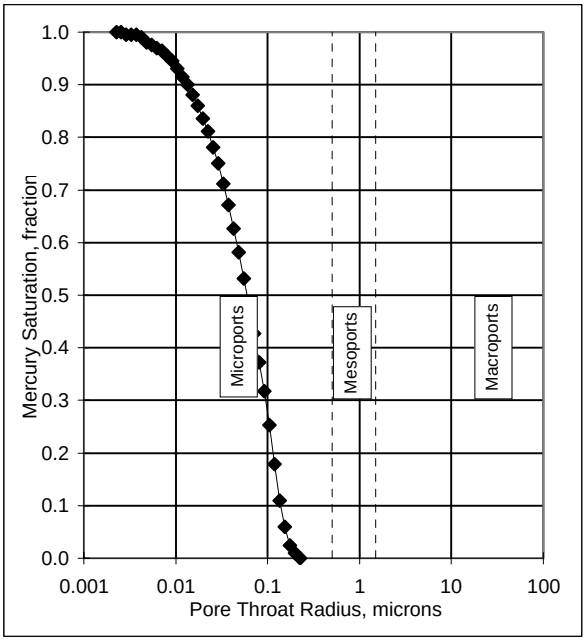
MERCURY INJECTION

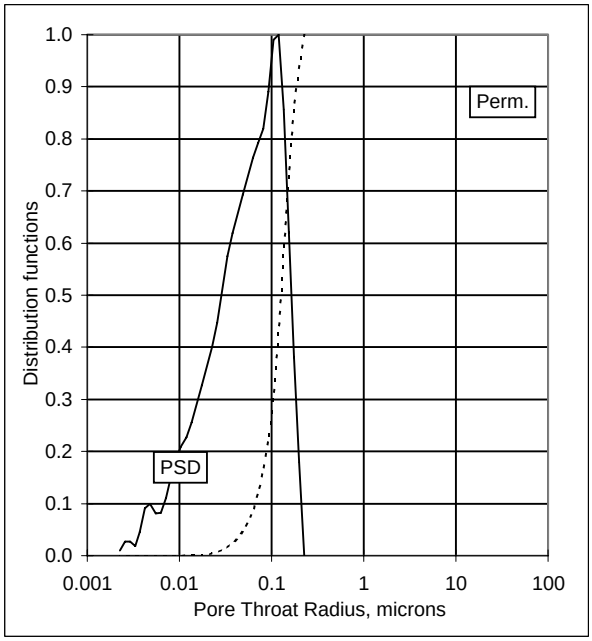
High-Pressure Method

Sample Identification:	55
Sample Depth, m:	5078.73
Kair, mD:	0.037
Plug Porosity, fraction:	0.062
Injection Sample Porosity, fraction:	0.051









MERCURY INJECTION

High-Pressure Method

IFT * Cosine Contact Angle				
	Air-Brine	Air-Oil	Oil-Brine	Air-Hg
Lab --->	72	24	42	372
Res --->	50		26	

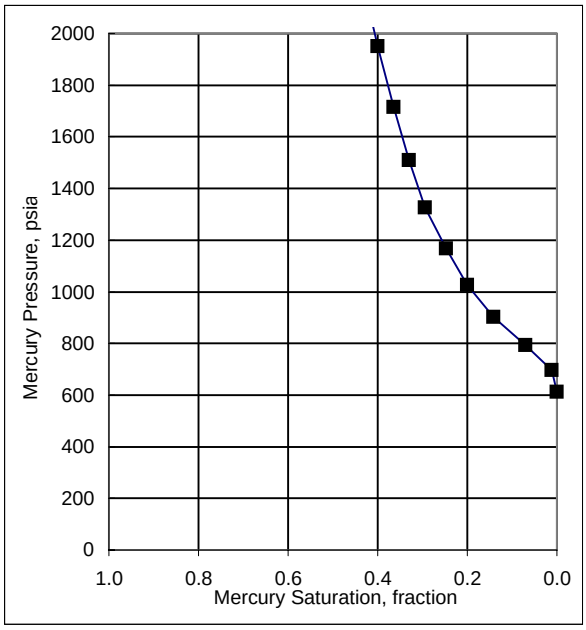
Sample Identification:	58
Sample Depth, m:	5079.61
Kair, mD:	0.022
Plug Porosity, fraction:	0.029
Injection Sample Porosity, fraction:	0.022
Injection Sample Pore Volume, cm3:	0.051
Injection Sample Bulk Volume, cm3:	2.293
Brine Density Gradient, psig/foot:	
Oil Density Gradient, psig/foot:	
Mean Hydraulic Radius, microns:	0.047
Swanson's Parameter:	4.96E-04
FZI:	0.92

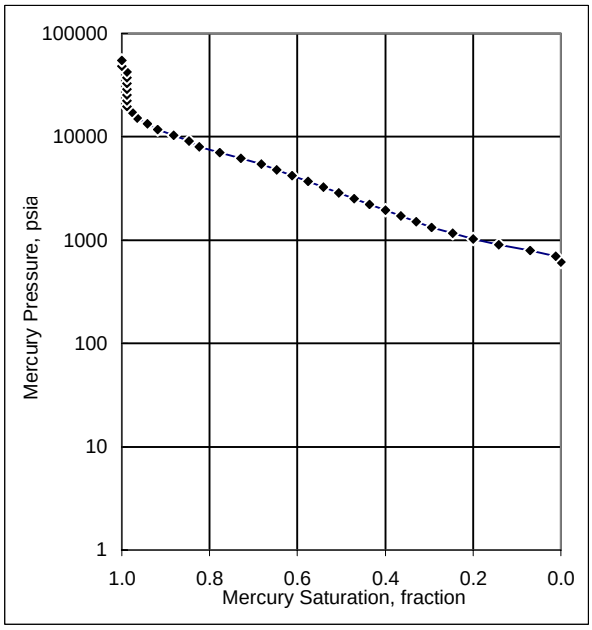
Injection Pressure, psia	Mercury Satn, fraction Vp	Equiv. Water Satn, fraction Vp	Pore Throat Radius, microns	Normalized Pore Size Distribution Function	Equivalent Injection Pressure, psia			Height Above Free Water, feet	Normalized Permeability Distribution Function	J Function
					A/B (Lab)	O/B (Lab)	O/B (Res)			
613.1	0.000	1.000	0.176	0.000	119	69	43	-	1.000	0.355
697.1	0.012	0.988	0.155	0.549	135	79	49	-	0.938	0.403
792.2	0.071	0.929	0.136	0.929	154	90	55	-	0.698	0.458
901.8	0.141	0.859	0.120	1.000	175	102	63	-	0.476	0.522
1025.0	0.200	0.800	0.105	0.881	199	116	72	-	0.332	0.593
1166.7	0.247	0.753	0.092	0.762	226	132	82	-	0.244	0.675
1326.2	0.294	0.706	0.081	0.668	257	150	93	-	0.175	0.767
1508.5	0.329	0.671	0.071	0.596	292	171	106	-	0.136	0.873
1715.6	0.365	0.635	0.063	0.573	332	194	120	-	0.105	0.992
1950.3	0.400	0.600	0.055	0.574	378	220	136	-	0.081	1.128
2217.6	0.435	0.565	0.049	0.574	430	251	155	-	0.063	1.283
2521.9	0.471	0.529	0.043	0.573	489	285	176	-	0.049	1.459
2867.1	0.506	0.494	0.038	0.573	556	324	201	-	0.038	1.658
3260.3	0.541	0.459	0.033	0.573	632	369	228	-	0.029	1.886
3705.7	0.576	0.424	0.029	0.573	718	419	259	-	0.023	2.143
4214.2	0.612	0.388	0.026	0.574	817	476	295	-	0.017	2.438
4789.9	0.647	0.353	0.023	0.599	928	542	335	-	0.014	2.771
5449.3	0.682	0.318	0.020	0.669	1056	616	381	-	0.010	3.152
6193.3	0.729	0.271	0.017	0.738	1200	700	433	-	0.007	3.582
7044.9	0.776	0.224	0.015	0.716	1365	796	493	-	0.005	4.075
8008.9	0.824	0.176	0.013	0.598	1552	905	561	-	0.003	4.632
9106.5	0.847	0.153	0.012	0.525	1765	1030	637	-	0.002	5.267
10356.2	0.882	0.118	0.010	0.524	2007	1171	725	-	0.001	5.990
11774.2	0.918	0.082	0.009	0.479	2282	1331	824	-	0.001	6.810
13389.2	0.941	0.059	0.008	0.386	2595	1514	937	-	0.000	7.744
15225.1	0.965	0.035	0.007	0.290	2951	1721	1066	-	0.000	8.806
17310.5	0.976	0.024	0.006	0.192	3355	1957	1212	-	0.000	10.013
19683.8	0.988	0.012	0.006	0.095	3815	2225	1378	-	0.000	11.385
22382.2	0.988	0.012	0.005	0.023	4338	2530	1566	-	0.000	12.946
25450.1	0.988	0.012	0.004	0.000	4932	2877	1781	-	0.000	14.721
28938.5	0.988	0.012	0.004	0.000	5609	3272	2025	-	0.000	16.738
32904.9	0.988	0.012	0.003	0.000	6377	3720	2303	-	0.000	19.032
37411.7	0.988	0.012	0.003	0.024	7251	4230	2618	-	0.000	21.639
42525.4	0.988	0.012	0.003	0.071	8242	4808	2976	-	0.000	24.597
48348.1	1.000	0.000	0.002	0.070	9370	5466	3384	-	0.000	27.965
54970.7	1.000	0.000	0.002	0.023	10654	6215	3847	-	0.000	31.795

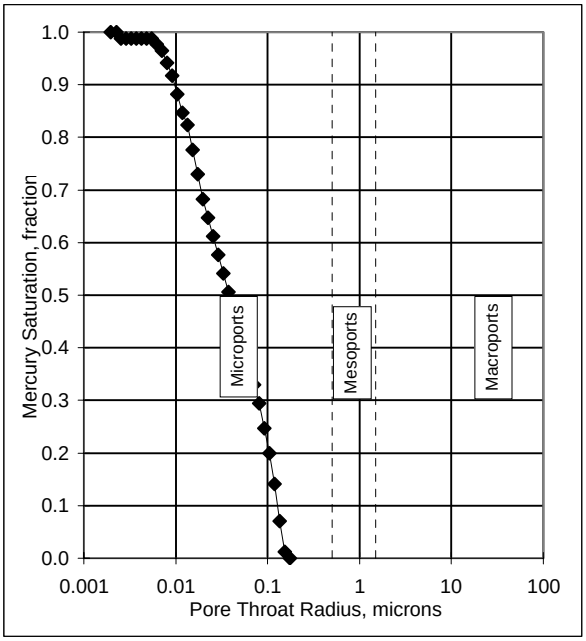
MERCURY INJECTION

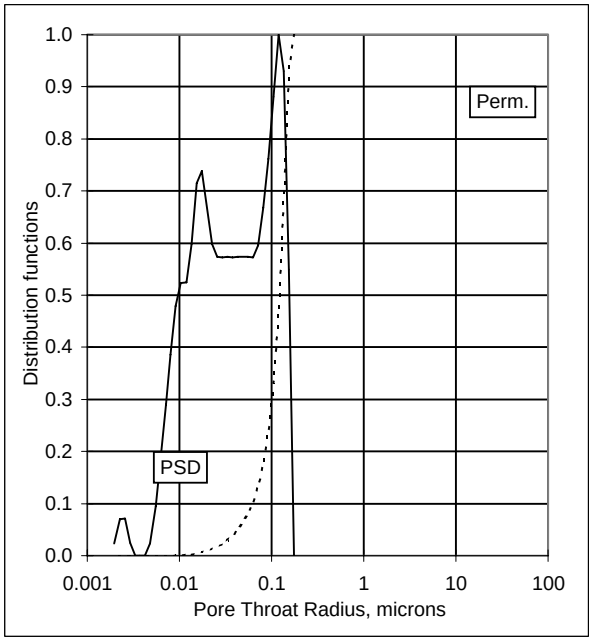
High-Pressure Method

Sample Identification:	58
Sample Depth, m:	5079.61
Kair, mD:	0.022
Plug Porosity, fraction:	0.029
Injection Sample Porosity, fraction:	0.022









MERCURY INJECTION

High-Pressure Method

IFT * Cosine Contact Angle				
	Air-Brine	Air-Oil	Oil-Brine	Air-Hg
Lab --->	72	24	42	372
Res --->	50		26	

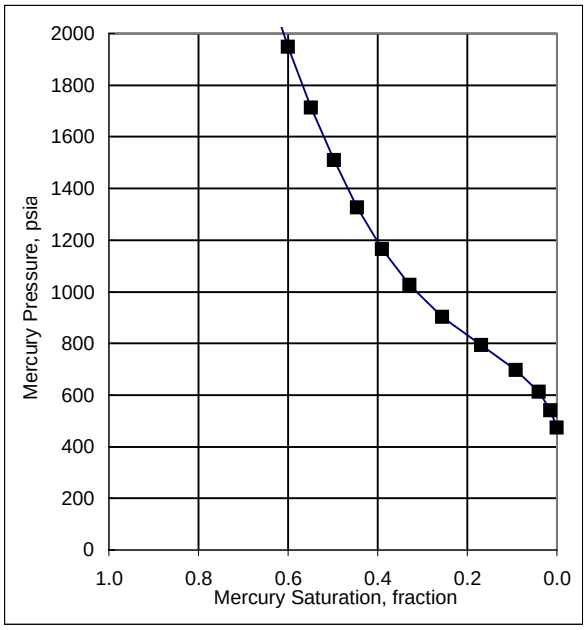
Sample Identification:	59
Sample Depth, m:	5080.20
Kair, mD:	0.039
Plug Porosity, fraction:	0.069
Injection Sample Porosity, fraction:	0.050
Injection Sample Pore Volume, cm3:	0.163
Injection Sample Bulk Volume, cm3:	3.258
Brine Density Gradient, psig/foot:	
Oil Density Gradient, psig/foot:	
Mean Hydraulic Radius, microns:	0.057
Swanson's Parameter:	1.68E-03
FZI:	0.32

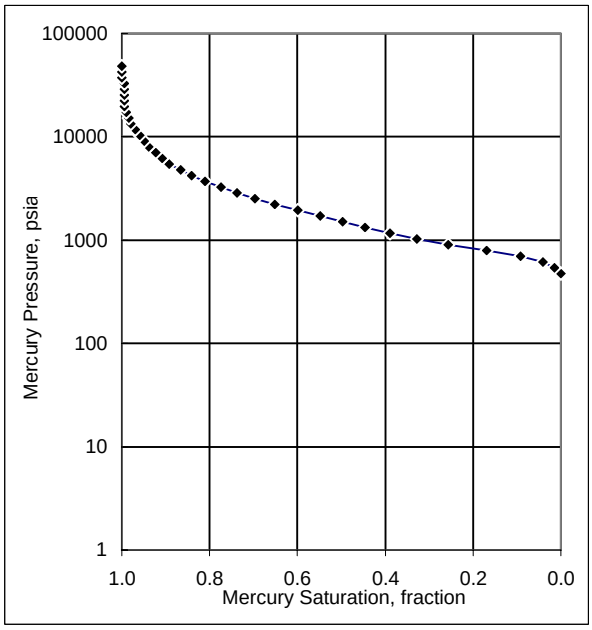
Injection Pressure, psia	Mercury Satn, fraction Vp	Equiv. Water Satn, fraction Vp	Pore Throat Radius, microns	Normalized Pore Size Distribution Function	Equivalent Injection Pressure, psia			Height Above Free Water, feet	Normalized Permeability Distribution Function	J Function
					A/B (Lab)	O/B (Lab)	O/B (Res)			
474.0	0.000	1.000	0.227	0.000	92	54	33	-	1.000	0.244
539.6	0.015	0.985	0.200	0.257	105	61	38	-	0.926	0.278
612.9	0.041	0.959	0.176	0.525	119	69	43	-	0.826	0.316
697.2	0.092	0.908	0.155	0.809	135	79	49	-	0.673	0.359
792.7	0.169	0.831	0.136	1.000	154	90	55	-	0.495	0.409
900.9	0.256	0.744	0.120	0.998	175	102	63	-	0.339	0.464
1025.7	0.328	0.672	0.105	0.881	199	116	72	-	0.239	0.529
1165.9	0.389	0.611	0.092	0.775	226	132	82	-	0.174	0.601
1325.9	0.446	0.554	0.081	0.708	257	150	93	-	0.127	0.684
1508.8	0.497	0.503	0.071	0.675	292	171	106	-	0.094	0.778
1713.6	0.548	0.452	0.063	0.667	332	194	120	-	0.069	0.883
1949.1	0.600	0.400	0.055	0.657	378	220	136	-	0.049	1.005
2217.3	0.651	0.349	0.049	0.624	430	251	155	-	0.034	1.143
2521.3	0.697	0.303	0.043	0.566	489	285	176	-	0.023	1.300
2866.9	0.738	0.262	0.038	0.508	556	324	201	-	0.016	1.478
3259.1	0.774	0.226	0.033	0.466	632	368	228	-	0.011	1.680
3707.1	0.810	0.190	0.029	0.426	718	419	259	-	0.007	1.911
4211.7	0.841	0.159	0.026	0.377	816	476	295	-	0.005	2.171
4788.4	0.867	0.133	0.023	0.325	928	541	335	-	0.003	2.468
5446.6	0.892	0.108	0.020	0.266	1056	616	381	-	0.002	2.808
6193.1	0.908	0.092	0.017	0.216	1200	700	433	-	0.001	3.193
7042.0	0.923	0.077	0.015	0.191	1365	796	493	-	0.001	3.630
8009.8	0.938	0.062	0.013	0.167	1552	906	561	-	0.001	4.129
9106.3	0.949	0.051	0.012	0.142	1765	1030	637	-	0.000	4.694
10356.5	0.959	0.041	0.010	0.133	2007	1171	725	-	0.000	5.339
11774.3	0.969	0.031	0.009	0.125	2282	1331	824	-	0.000	6.070
13388.5	0.979	0.021	0.008	0.101	2595	1514	937	-	0.000	6.902
15222.7	0.985	0.015	0.007	0.076	2950	1721	1065	-	0.000	7.847
17310.9	0.990	0.010	0.006	0.059	3355	1957	1212	-	0.000	8.924
19682.4	0.995	0.005	0.006	0.033	3815	2225	1377	-	0.000	10.147
22380.1	0.995	0.005	0.005	0.008	4337	2530	1566	-	0.000	11.537
25449.2	0.995	0.005	0.004	0.000	4932	2877	1781	-	0.000	13.119
28937.8	0.995	0.005	0.004	0.009	5608	3272	2025	-	0.000	14.918
32903.1	0.995	0.005	0.003	0.026	6377	3720	2303	-	0.000	16.962
37405.2	1.000	0.000	0.003	0.025	7249	4229	2618	-	0.000	19.283
42520.1	1.000	0.000	0.003	0.008	8241	4807	2976	-	0.000	21.920
48346.7	1.000	0.000	0.002	0.000	9370	5466	3384	-	0.000	24.923

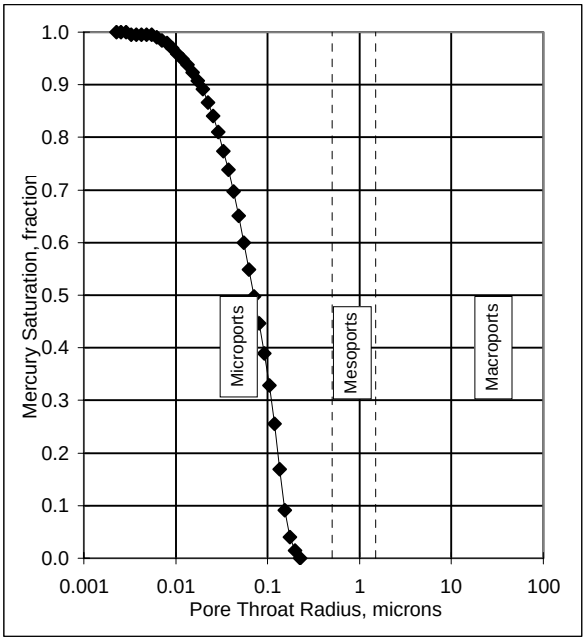
MERCURY INJECTION

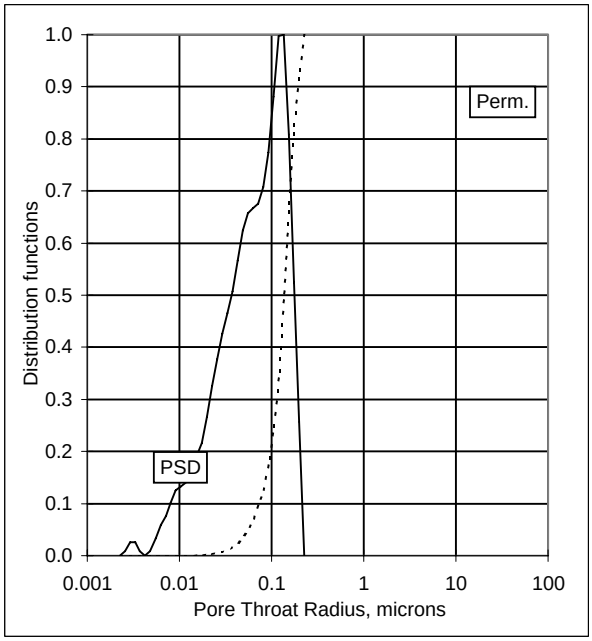
High-Pressure Method

Sample Identification:	59
Sample Depth, m:	5080.20
Kair, mD:	0.039
Plug Porosity, fraction:	0.069
Injection Sample Porosity, fraction:	0.050









MERCURY INJECTION

High-Pressure Method

IFT * Cosine Contact Angle				
	Air-Brine	Air-Oil	Oil-Brine	Air-Hg
Lab --->	72	24	42	372
Res --->	50		26	

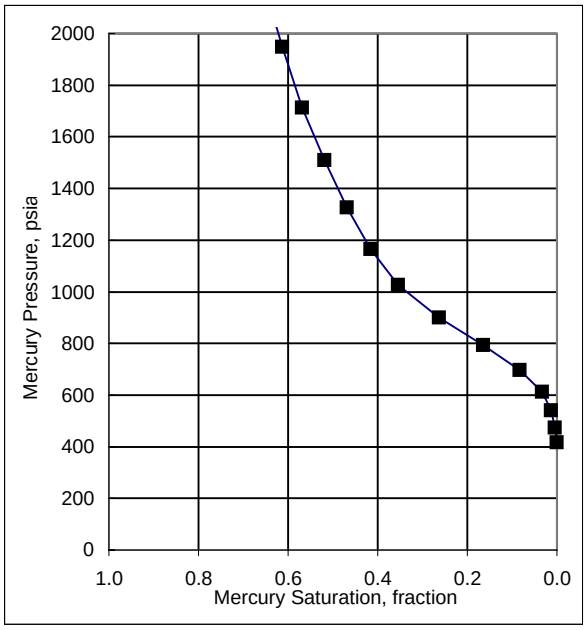
Sample Identification:	63
Sample Depth, m:	5081.42
Kair, mD:	0.034
Plug Porosity, fraction:	0.073
Injection Sample Porosity, fraction:	0.062
Injection Sample Pore Volume, cm3:	0.171
Injection Sample Bulk Volume, cm3:	2.775
Brine Density Gradient, psig/foot:	
Oil Density Gradient, psig/foot:	
Mean Hydraulic Radius, microns:	0.057
Swanson's Parameter:	2.19E-03
FZI:	0.27

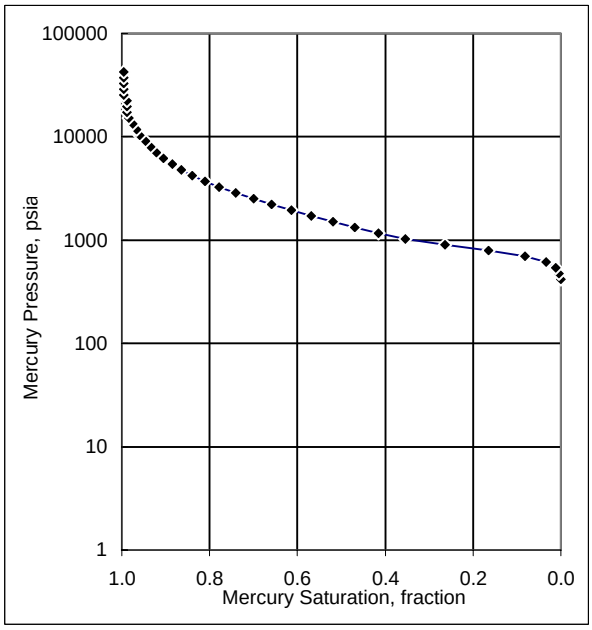
Injection Pressure, psia	Mercury Satn, fraction Vp	Equiv. Water Satn, fraction Vp	Pore Throat Radius, microns	Normalized Pore Size Distribution Function	Equivalent Injection Pressure, psia			Height Above Free Water, feet	Normalized Permeability Distribution Function	J Function
					A/B (Lab)	O/B (Lab)	O/B (Res)			
417.2	0.000	1.000	0.258	0.000	81	47	29	-	1.000	0.181
473.7	0.004	0.996	0.228	0.075	92	54	33	-	0.974	0.205
539.3	0.012	0.988	0.200	0.197	105	61	38	-	0.933	0.234
612.6	0.033	0.967	0.176	0.423	119	69	43	-	0.855	0.266
696.9	0.082	0.918	0.155	0.725	135	79	49	-	0.710	0.302
792.4	0.165	0.835	0.136	0.962	154	90	55	-	0.523	0.343
900.5	0.263	0.737	0.120	1.000	175	102	63	-	0.349	0.390
1025.4	0.354	0.646	0.105	0.854	199	116	72	-	0.225	0.444
1165.5	0.416	0.584	0.092	0.682	226	132	82	-	0.161	0.505
1325.5	0.469	0.531	0.081	0.590	257	150	93	-	0.117	0.575
1508.4	0.519	0.481	0.071	0.556	292	171	106	-	0.086	0.654
1713.3	0.568	0.432	0.063	0.533	332	194	120	-	0.062	0.743
1948.7	0.613	0.387	0.055	0.509	378	220	136	-	0.045	0.845
2217.0	0.658	0.342	0.049	0.486	430	251	155	-	0.032	0.961
2520.9	0.700	0.300	0.043	0.463	489	285	176	-	0.023	1.093
2866.5	0.741	0.259	0.038	0.434	556	324	201	-	0.015	1.243
3258.7	0.778	0.222	0.033	0.395	632	368	228	-	0.010	1.413
3706.7	0.811	0.189	0.029	0.349	718	419	259	-	0.007	1.607
4211.3	0.840	0.160	0.026	0.302	816	476	295	-	0.005	1.826
4788.0	0.864	0.136	0.023	0.261	928	541	335	-	0.003	2.076
5446.2	0.885	0.115	0.020	0.231	1056	616	381	-	0.002	2.361
6192.7	0.905	0.095	0.017	0.202	1200	700	433	-	0.001	2.684
7041.7	0.922	0.078	0.015	0.168	1365	796	493	-	0.001	3.052
8009.5	0.934	0.066	0.013	0.145	1552	906	561	-	0.001	3.472
9105.9	0.947	0.053	0.012	0.133	1765	1029	637	-	0.000	3.947
10356.2	0.959	0.041	0.010	0.116	2007	1171	725	-	0.000	4.489
11773.9	0.967	0.033	0.009	0.099	2282	1331	824	-	0.000	5.104
13388.1	0.975	0.025	0.008	0.088	2595	1514	937	-	0.000	5.804
15222.3	0.984	0.016	0.007	0.065	2950	1721	1065	-	0.000	6.599
17310.6	0.988	0.012	0.006	0.029	3355	1957	1212	-	0.000	7.504
19682.0	0.988	0.012	0.006	0.017	3815	2225	1377	-	0.000	8.532
22379.8	0.988	0.012	0.005	0.035	4337	2530	1566	-	0.000	9.701
25448.8	0.996	0.004	0.004	0.034	4932	2877	1781	-	0.000	11.032
28937.4	0.996	0.004	0.004	0.011	5608	3272	2025	-	0.000	12.544
32902.8	0.996	0.004	0.003	0.000	6377	3720	2303	-	0.000	14.263
37404.9	0.996	0.004	0.003	0.006	7249	4229	2618	-	0.000	16.215
42519.8	0.996	0.004	0.003	0.017	8241	4807	2976	-	0.000	18.432

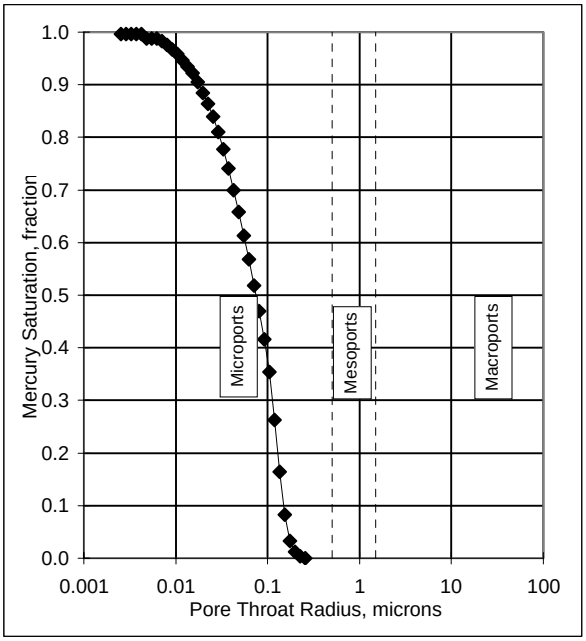
MERCURY INJECTION

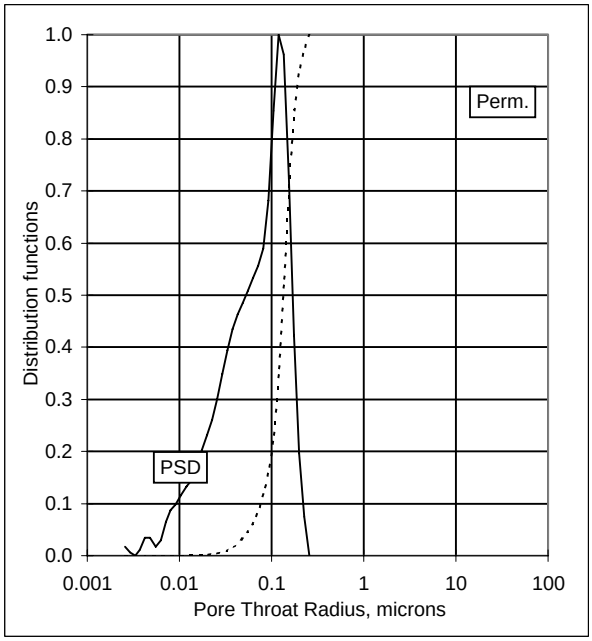
High-Pressure Method

Sample Identification:	63
Sample Depth, m:	5081.42
Kair, mD:	0.034
Plug Porosity, fraction:	0.073
Injection Sample Porosity, fraction:	0.062









MERCURY INJECTION

High-Pressure Method

IFT * Cosine Contact Angle				
	Air-Brine	Air-Oil	Oil-Brine	Air-Hg
Lab --->	72	24	42	372
Res --->	50		26	

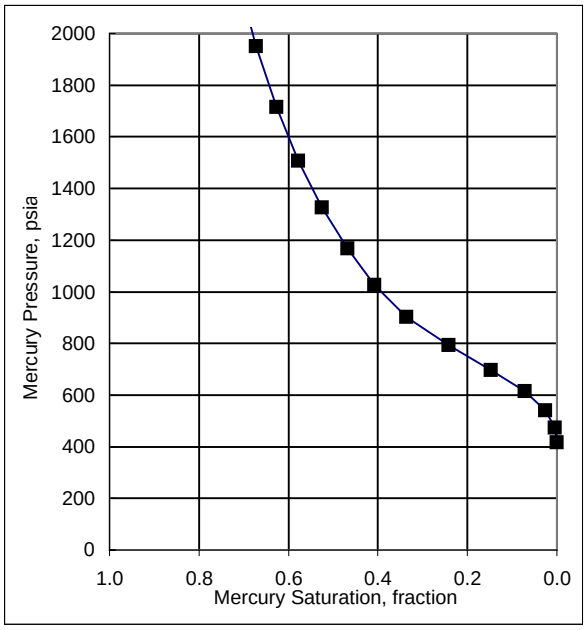
Sample Identification:	65
Sample Depth, m:	5082.41
Kair, mD:	0.033
Plug Porosity, fraction:	0.072
Injection Sample Porosity, fraction:	0.067
Injection Sample Pore Volume, cm3:	0.205
Injection Sample Bulk Volume, cm3:	3.064
Brine Density Gradient, psig/foot:	
Oil Density Gradient, psig/foot:	
Mean Hydraulic Radius, microns:	0.062
Swanson's Parameter:	2.68E-03
FZI:	0.27

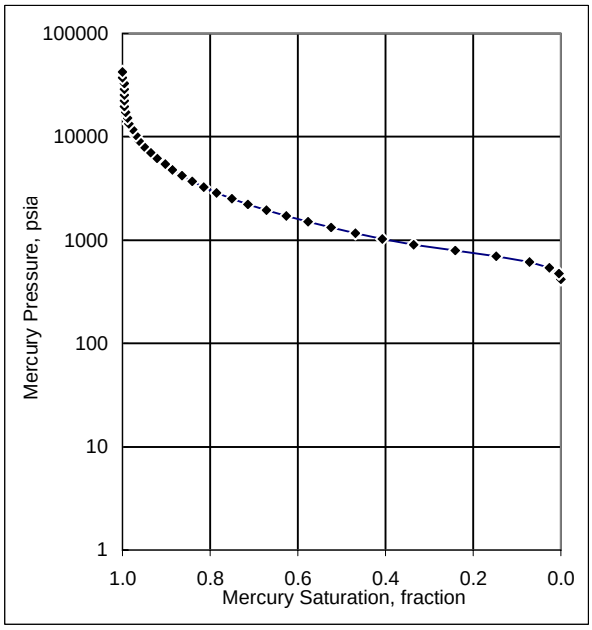
Injection Pressure, psia	Mercury Satn, fraction Vp	Equiv. Water Satn, fraction Vp	Pore Throat Radius, microns	Normalized Pore Size Distribution Function	Equivalent Injection Pressure, psia			Height Above Free Water, feet	Normalized Permeability Distribution Function	J Function
					A/B (Lab)	O/B (Lab)	O/B (Res)			
417.0	0.000	1.000	0.258	0.000	81	47	29	-	1.000	0.171
474.1	0.004	0.996	0.227	0.169	92	54	33	-	0.980	0.194
539.5	0.026	0.974	0.200	0.397	105	61	38	-	0.890	0.221
613.5	0.072	0.928	0.176	0.673	119	69	43	-	0.750	0.251
697.4	0.147	0.853	0.155	0.912	135	79	49	-	0.570	0.286
792.4	0.242	0.758	0.136	1.000	154	90	55	-	0.395	0.324
902.0	0.336	0.664	0.120	0.914	175	102	63	-	0.260	0.369
1025.5	0.408	0.592	0.105	0.766	199	116	72	-	0.181	0.420
1166.2	0.468	0.532	0.092	0.667	226	132	82	-	0.130	0.477
1326.5	0.525	0.475	0.081	0.614	257	150	93	-	0.092	0.543
1507.4	0.577	0.423	0.072	0.572	292	170	105	-	0.065	0.617
1715.0	0.626	0.374	0.063	0.528	332	194	120	-	0.046	0.702
1950.0	0.672	0.328	0.055	0.487	378	220	136	-	0.032	0.798
2217.5	0.713	0.287	0.049	0.445	430	251	155	-	0.022	0.908
2520.8	0.751	0.249	0.043	0.403	489	285	176	-	0.015	1.032
2866.1	0.785	0.215	0.038	0.360	555	324	201	-	0.010	1.174
3259.7	0.815	0.185	0.033	0.318	632	369	228	-	0.007	1.335
3704.9	0.842	0.158	0.029	0.282	718	419	259	-	0.005	1.517
4213.8	0.864	0.136	0.026	0.249	817	476	295	-	0.003	1.725
4788.5	0.887	0.113	0.023	0.217	928	541	335	-	0.002	1.961
5446.9	0.902	0.098	0.020	0.196	1056	616	381	-	0.002	2.230
6195.3	0.921	0.079	0.017	0.185	1201	700	434	-	0.001	2.537
7042.6	0.936	0.064	0.015	0.169	1365	796	493	-	0.001	2.884
8010.2	0.951	0.049	0.013	0.143	1552	906	561	-	0.000	3.280
9106.7	0.962	0.038	0.012	0.111	1765	1030	637	-	0.000	3.729
10355.1	0.970	0.030	0.010	0.090	2007	1171	725	-	0.000	4.240
11774.4	0.977	0.023	0.009	0.080	2282	1331	824	-	0.000	4.821
13388.9	0.985	0.015	0.008	0.064	2595	1514	937	-	0.000	5.482
15223.2	0.989	0.011	0.007	0.048	2950	1721	1065	-	0.000	6.233
17310.5	0.992	0.008	0.006	0.037	3355	1957	1212	-	0.000	7.088
19682.8	0.996	0.004	0.006	0.021	3815	2225	1378	-	0.000	8.059
22379.7	0.996	0.004	0.005	0.005	4337	2530	1566	-	0.000	9.164
25449.2	0.996	0.004	0.004	0.000	4932	2877	1781	-	0.000	10.420
28937.6	0.996	0.004	0.004	0.006	5608	3272	2025	-	0.000	11.849
32903.6	0.996	0.004	0.003	0.016	6377	3720	2303	-	0.000	13.473
37407.6	1.000	0.000	0.003	0.016	7250	4229	2618	-	0.000	15.317
42523.3	1.000	0.000	0.003	0.005	8241	4807	2976	-	0.000	17.411

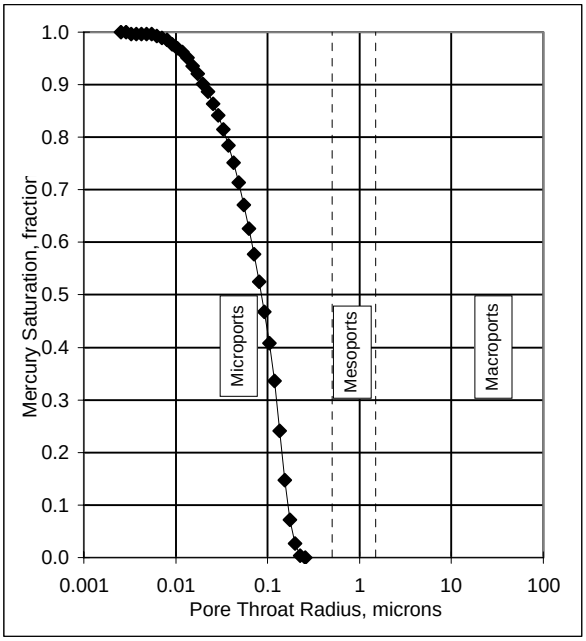
MERCURY INJECTION

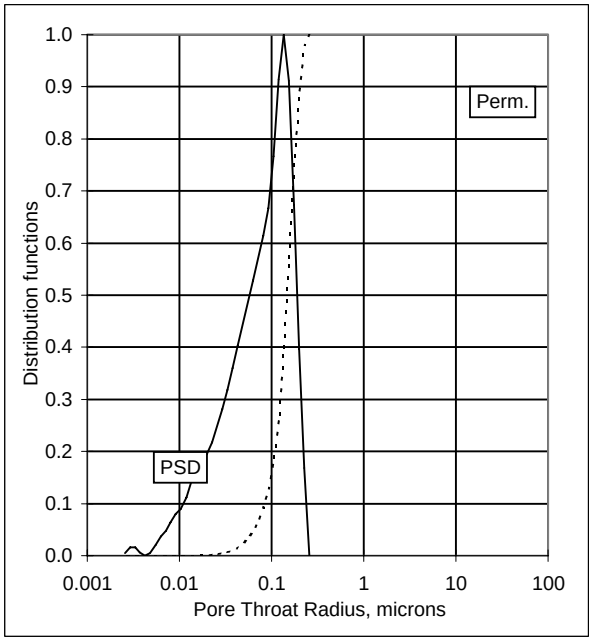
High-Pressure Method

Sample Identification:	65
Sample Depth, m:	5082.41
Kair, mD:	0.033
Plug Porosity, fraction:	0.072
Injection Sample Porosity, fraction:	0.067









MERCURY INJECTION

High-Pressure Method

IFT * Cosine Contact Angle				
	Air-Brine	Air-Oil	Oil-Brine	Air-Hg
Lab --->	72	24	42	372
Res --->	50		26	

Sample Identification:	76
Sample Depth, m:	5086.01
Kair, mD:	0.132
Plug Porosity, fraction:	0.102
Injection Sample Porosity, fraction:	0.096
Injection Sample Pore Volume, cm3:	0.298
Injection Sample Bulk Volume, cm3:	3.093
Brine Density Gradient, psig/foot:	
Oil Density Gradient, psig/foot:	
Mean Hydraulic Radius, microns:	0.121
Swanson's Parameter:	7.26E-03
FZI:	0.31

Injection Pressure, psia	Mercury Satn, fraction Vp	Equiv. Water Satn, fraction Vp	Pore Throat Radius, microns	Normalized Pore Size Distribution Function	Equivalent Injection Pressure, psia			Height Above Free Water, feet	Normalized Permeability Distribution Function	J Function
					A/B (Lab)	O/B (Lab)	O/B (Res)			
169.3	0.000	1.000	0.637	0.000	33	19	12	-	1.000	0.116
192.5	0.002	0.998	0.560	0.035	37	22	13	-	0.980	0.131
218.5	0.007	0.993	0.493	0.067	42	25	15	-	0.946	0.149
249.2	0.015	0.985	0.433	0.126	48	28	17	-	0.906	0.170
283.4	0.027	0.973	0.380	0.271	55	32	20	-	0.855	0.193
321.8	0.060	0.940	0.335	0.536	62	36	23	-	0.753	0.220
366.8	0.127	0.873	0.294	0.844	71	41	26	-	0.588	0.250
416.3	0.229	0.771	0.259	1.000	81	47	29	-	0.394	0.284
473.7	0.339	0.661	0.228	0.882	92	54	33	-	0.234	0.323
539.0	0.406	0.594	0.200	0.646	104	61	38	-	0.158	0.368
612.4	0.454	0.546	0.176	0.501	119	69	43	-	0.116	0.418
697.1	0.499	0.501	0.155	0.453	135	79	49	-	0.086	0.476
792.2	0.541	0.459	0.136	0.430	154	90	55	-	0.064	0.541
900.6	0.581	0.419	0.120	0.417	175	102	63	-	0.048	0.615
1024.6	0.621	0.379	0.105	0.416	199	116	72	-	0.035	0.699
1165.6	0.661	0.339	0.092	0.420	226	132	82	-	0.025	0.796
1324.6	0.703	0.297	0.081	0.407	257	150	93	-	0.017	0.904
1508.4	0.741	0.259	0.071	0.374	292	171	106	-	0.012	1.030
1714.1	0.776	0.224	0.063	0.336	332	194	120	-	0.008	1.170
1948.2	0.805	0.195	0.055	0.301	378	220	136	-	0.006	1.330
2216.9	0.833	0.167	0.049	0.268	430	251	155	-	0.004	1.513
2520.8	0.858	0.142	0.043	0.233	489	285	176	-	0.002	1.721
2866.2	0.878	0.122	0.038	0.197	555	324	201	-	0.002	1.956
3259.4	0.895	0.105	0.033	0.171	632	368	228	-	0.001	2.225
3707.0	0.910	0.090	0.029	0.152	718	419	259	-	0.001	2.530
4215.0	0.925	0.075	0.026	0.130	817	477	295	-	0.000	2.877
4789.7	0.935	0.065	0.023	0.107	928	541	335	-	0.000	3.270
5447.5	0.945	0.055	0.020	0.091	1056	616	381	-	0.000	3.719
6194.6	0.953	0.047	0.017	0.077	1201	700	434	-	0.000	4.229
7042.5	0.960	0.040	0.015	0.065	1365	796	493	-	0.000	4.807
8008.7	0.965	0.035	0.013	0.055	1552	905	561	-	0.000	5.467
9106.7	0.970	0.030	0.012	0.052	1765	1030	637	-	0.000	6.216
10355.2	0.975	0.025	0.010	0.048	2007	1171	725	-	0.000	7.069
11775.5	0.980	0.020	0.009	0.042	2282	1331	824	-	0.000	8.038
13388.1	0.983	0.017	0.008	0.039	2595	1514	937	-	0.000	9.139

MERCURY INJECTION

High-Pressure Method

IFT * Cosine Contact Angle				
	Air-Brine	Air-Oil	Oil-Brine	Air-Hg
Lab --->	72	24	42	372
Res --->	50		26	

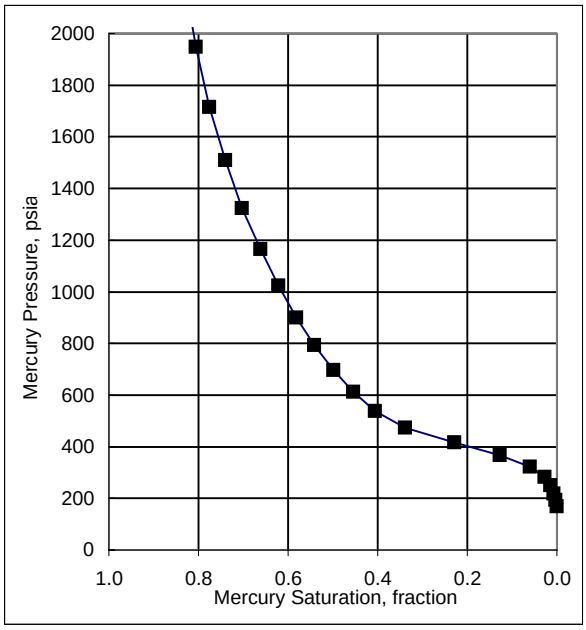
Sample Identification:	76
Sample Depth, m:	5086.01
Kair, mD:	0.132
Plug Porosity, fraction:	0.102
Injection Sample Porosity, fraction:	0.096
Injection Sample Pore Volume, cm3:	0.298
Injection Sample Bulk Volume, cm3:	3.093
Brine Density Gradient, psig/foot:	
Oil Density Gradient, psig/foot:	
Mean Hydraulic Radius, microns:	0.121
Swanson's Parameter:	7.26E-03
FZI:	0.31

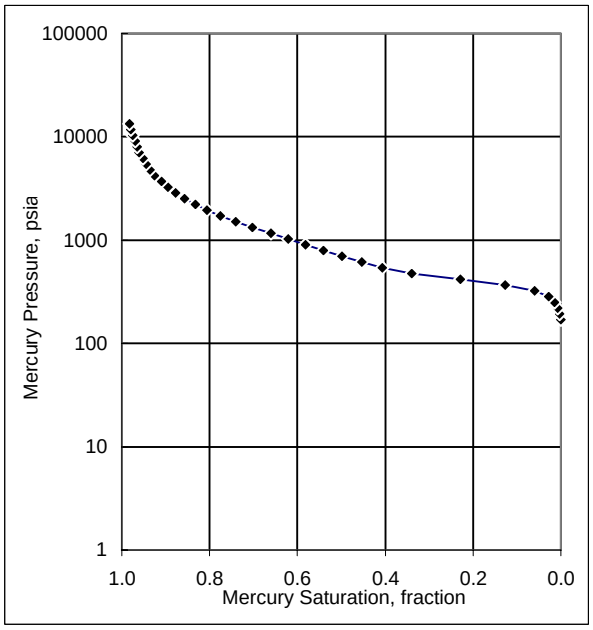
Injection Pressure, psia	Mercury Satn, fraction Vp	Equiv. Water Satn, fraction Vp	Pore Throat Radius, microns	Normalized Pore Size Distribution Function	Equivalent Injection Pressure, psia			Height Above Free Water, feet	Normalized Permeability Distribution Function	J Function
					A/B (Lab)	O/B (Lab)	O/B (Res)			
15223.6	0.988	0.012	0.007	0.033	2950	1721	1065	-	0.000	10.392
17310.4	0.990	0.010	0.006	0.020	3355	1957	1211	-	0.000	11.816
19683.6	0.990	0.010	0.006	0.016	3815	2225	1378	-	0.000	13.436
22381.4	0.993	0.007	0.005	0.022	4338	2530	1566	-	0.000	15.278
25450.2	0.995	0.005	0.004	0.026	4932	2877	1781	-	0.000	17.373
28938.2	0.998	0.002	0.004	0.023	5608	3272	2025	-	0.000	19.754
32904.5	1.000	0.000	0.003	0.013	6377	3720	2303	-	0.000	22.461
37408.5	1.000	0.000	0.003	0.003	7250	4229	2618	-	0.000	25.536
42524.9	1.000	0.000	0.003	0.000	8242	4808	2976	-	0.000	29.028
48351.5	1.000	0.000	0.002	0.000	9371	5466	3384	-	0.000	33.006
54977.0	1.000	0.000	0.002	0.000	10655	6215	3848	-	0.000	37.528

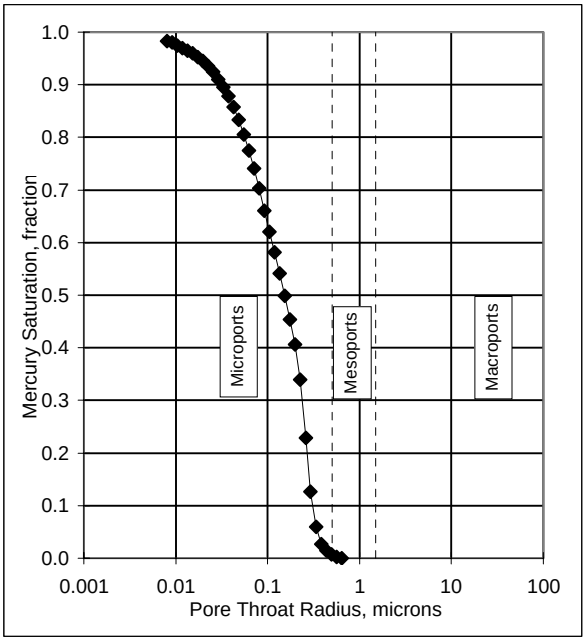
MERCURY INJECTION

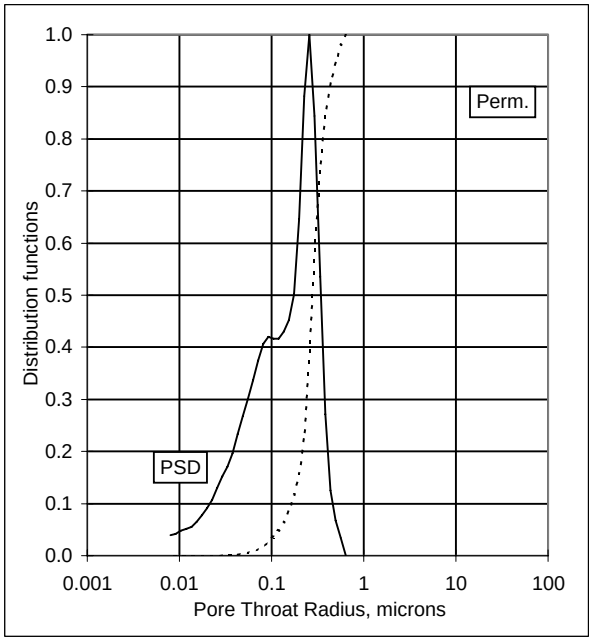
High-Pressure Method

Sample Identification:	76
Sample Depth, m:	5086.01
Kair, mD:	0.132
Plug Porosity, fraction:	0.102
Injection Sample Porosity, fraction:	0.096









MERCURY INJECTION

High-Pressure Method

IFT * Cosine Contact Angle				
	Air-Brine	Air-Oil	Oil-Brine	Air-Hg
Lab --->	72	24	42	372
Res --->	50		26	

Sample Identification:	77
Sample Depth, m:	5086.61
Kair, mD:	0.257
Plug Porosity, fraction:	0.127
Injection Sample Porosity, fraction:	0.116
Injection Sample Pore Volume, cm3:	0.268
Injection Sample Bulk Volume, cm3:	2.304
Brine Density Gradient, psig/foot:	
Oil Density Gradient, psig/foot:	
Mean Hydraulic Radius, microns:	0.164
Swanson's Parameter:	1.29E-02
FZI:	0.31

Injection Pressure, psia	Mercury Satn, fraction Vp	Equiv. Water Satn, fraction Vp	Pore Throat Radius, microns	Normalized Pore Size Distribution Function	Equivalent Injection Pressure, psia			Height Above Free Water, feet	Normalized Permeability Distribution Function	J Function
					A/B (Lab)	O/B (Lab)	O/B (Res)			
193.1	0.000	1.000	0.558	0.000	37	22	14	-	1.000	0.167
218.8	0.015	0.985	0.492	0.415	42	25	15	-	0.947	0.190
249.3	0.086	0.914	0.432	0.825	48	28	17	-	0.748	0.216
282.7	0.214	0.786	0.381	1.000	55	32	20	-	0.471	0.245
322.3	0.340	0.660	0.334	0.835	62	36	23	-	0.260	0.279
366.0	0.405	0.595	0.295	0.575	71	41	26	-	0.176	0.317
416.2	0.455	0.545	0.259	0.432	81	47	29	-	0.125	0.361
473.2	0.499	0.501	0.228	0.377	92	53	33	-	0.091	0.410
538.6	0.539	0.461	0.200	0.347	104	61	38	-	0.067	0.467
612.5	0.577	0.423	0.176	0.329	119	69	43	-	0.050	0.531
696.5	0.612	0.388	0.155	0.320	135	79	49	-	0.037	0.604
791.6	0.648	0.352	0.136	0.317	153	89	55	-	0.027	0.686
901.3	0.683	0.317	0.120	0.314	175	102	63	-	0.020	0.781
1024.9	0.719	0.281	0.105	0.303	199	116	72	-	0.014	0.888
1165.6	0.753	0.247	0.092	0.280	226	132	82	-	0.009	1.010
1325.9	0.782	0.218	0.081	0.252	257	150	93	-	0.006	1.149
1506.9	0.809	0.191	0.072	0.224	292	170	105	-	0.004	1.306
1714.6	0.832	0.168	0.063	0.198	332	194	120	-	0.003	1.486
1949.6	0.853	0.147	0.055	0.177	378	220	136	-	0.002	1.690
2217.2	0.872	0.128	0.049	0.159	430	251	155	-	0.001	1.922
2520.4	0.889	0.111	0.043	0.140	488	285	176	-	0.001	2.185
2865.8	0.904	0.096	0.038	0.124	555	324	201	-	0.001	2.484
3259.4	0.916	0.084	0.033	0.112	632	368	228	-	0.000	2.825
3704.7	0.929	0.071	0.029	0.101	718	419	259	-	0.000	3.211
4213.6	0.939	0.061	0.026	0.084	817	476	295	-	0.000	3.652
4788.4	0.948	0.052	0.023	0.068	928	541	335	-	0.000	4.150
5446.7	0.954	0.046	0.020	0.058	1056	616	381	-	0.000	4.721
6195.2	0.960	0.040	0.017	0.054	1201	700	434	-	0.000	5.369
7042.5	0.966	0.034	0.015	0.047	1365	796	493	-	0.000	6.104
8010.1	0.971	0.029	0.013	0.040	1552	906	561	-	0.000	6.942
9106.6	0.975	0.025	0.012	0.037	1765	1030	637	-	0.000	7.893
10355.0	0.979	0.021	0.010	0.037	2007	1171	725	-	0.000	8.975
11774.4	0.983	0.017	0.009	0.035	2282	1331	824	-	0.000	10.205
13388.8	0.987	0.013	0.008	0.028	2595	1514	937	-	0.000	11.604

MERCURY INJECTION

High-Pressure Method

IFT * Cosine Contact Angle				
	Air-Brine	Air-Oil	Oil-Brine	Air-Hg
Lab --->	72	24	42	372
Res --->	50		26	

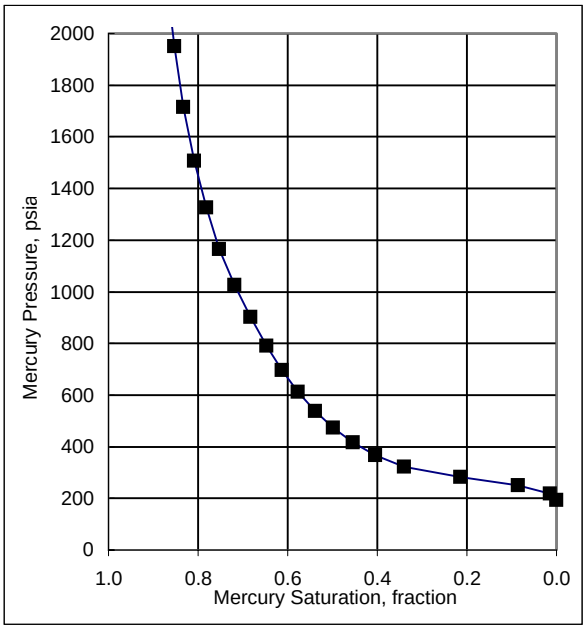
Sample Identification:	77
Sample Depth, m:	5086.61
Kair, mD:	0.257
Plug Porosity, fraction:	0.127
Injection Sample Porosity, fraction:	0.116
Injection Sample Pore Volume, cm3:	0.268
Injection Sample Bulk Volume, cm3:	2.304
Brine Density Gradient, psig/foot:	
Oil Density Gradient, psig/foot:	
Mean Hydraulic Radius, microns:	0.164
Swanson's Parameter:	1.29E-02
FZI:	0.31

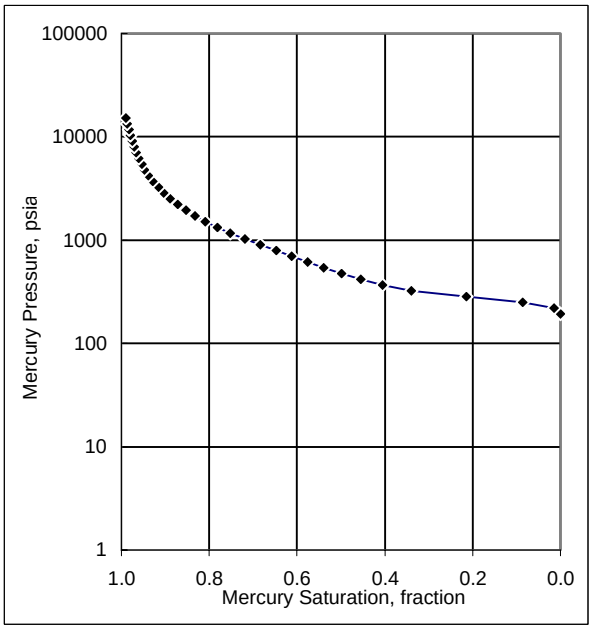
Injection Pressure, psia	Mercury Satn, fraction Vp	Equiv. Water Satn, fraction Vp	Pore Throat Radius, microns	Normalized Pore Size Distribution Function	Equivalent Injection Pressure, psia			Height Above Free Water, feet	Normalized Permeability Distribution Function	J Function
					A/B (Lab)	O/B (Lab)	O/B (Res)			
17310.5	0.992	0.008	0.006	0.009	3355	1957	1211	-	0.000	15.003
19682.8	0.992	0.008	0.006	0.007	3815	2225	1378	-	0.000	17.059
22379.7	0.992	0.008	0.005	0.014	4337	2530	1566	-	0.000	19.397
25449.1	0.996	0.004	0.004	0.016	4932	2877	1781	-	0.000	22.057
28937.5	0.996	0.004	0.004	0.012	5608	3272	2025	-	0.000	25.081
32903.6	0.998	0.002	0.003	0.007	6377	3720	2303	-	0.000	28.518
37407.5	0.998	0.002	0.003	0.005	7250	4229	2618	-	0.000	32.422
42523.3	0.998	0.002	0.003	0.007	8241	4807	2976	-	0.000	36.856
48346.6	1.000	0.000	0.002	0.007	9370	5466	3384	-	0.000	41.903
54967.7	1.000	0.000	0.002	0.002	10653	6214	3847	-	0.000	47.642

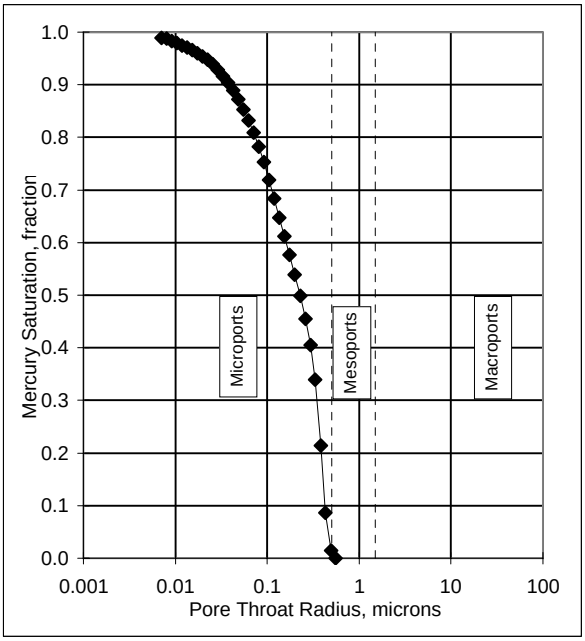
MERCURY INJECTION

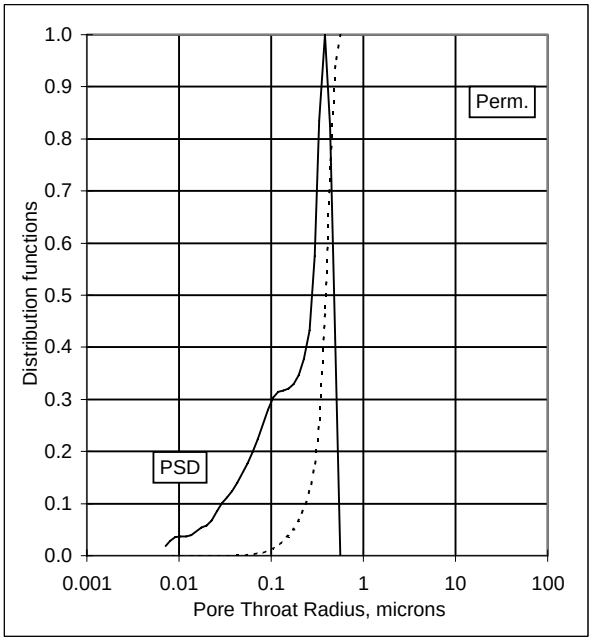
High-Pressure Method

Sample Identification:	77
Sample Depth, m:	5086.61
Kair, mD:	0.257
Plug Porosity, fraction:	0.127
Injection Sample Porosity, fraction:	0.116









MERCURY INJECTION

High-Pressure Method

IFT * Cosine Contact Angle				
	Air-Brine	Air-Oil	Oil-Brine	Air-Hg
Lab --->	72	24	42	372
Res --->	50		26	

Sample Identification:	83
Sample Depth, m:	5088.40
Kair, mD:	0.314
Plug Porosity, fraction:	0.112
Injection Sample Porosity, fraction:	0.102
Injection Sample Pore Volume, cm3:	0.238
Injection Sample Bulk Volume, cm3:	2.335
Brine Density Gradient, psig/foot:	
Oil Density Gradient, psig/foot:	
Mean Hydraulic Radius, microns:	0.213
Swanson's Parameter:	1.68E-02
FZI:	0.42

Injection Pressure, psia	Mercury Satn, fraction Vp	Equiv. Water Satn, fraction Vp	Pore Throat Radius, microns	Normalized Pore Size Distribution Function	Equivalent Injection Pressure, psia			Height Above Free Water, feet	Normalized Permeability Distribution Function	J Function
					A/B (Lab)	O/B (Lab)	O/B (Res)			
169.0	0.000	1.000	0.638	0.000	33	19	12	-	1.000	0.173
191.8	0.051	0.949	0.562	0.684	37	22	13	-	0.866	0.196
218.6	0.220	0.780	0.493	1.000	42	25	15	-	0.522	0.224
250.0	0.391	0.609	0.431	0.846	48	28	17	-	0.255	0.256
283.6	0.466	0.534	0.380	0.546	55	32	20	-	0.164	0.290
321.7	0.522	0.478	0.335	0.383	62	36	23	-	0.112	0.329
366.5	0.570	0.430	0.294	0.320	71	41	26	-	0.077	0.375
416.7	0.611	0.389	0.259	0.279	81	47	29	-	0.055	0.426
474.1	0.647	0.353	0.227	0.251	92	54	33	-	0.039	0.485
539.3	0.681	0.319	0.200	0.232	105	61	38	-	0.028	0.551
612.8	0.713	0.287	0.176	0.215	119	69	43	-	0.019	0.627
697.2	0.742	0.258	0.155	0.198	135	79	49	-	0.014	0.713
792.6	0.768	0.232	0.136	0.181	154	90	55	-	0.010	0.810
901.5	0.792	0.208	0.120	0.163	175	102	63	-	0.007	0.922
1024.9	0.814	0.186	0.105	0.146	199	116	72	-	0.005	1.048
1166.0	0.833	0.167	0.092	0.131	226	132	82	-	0.003	1.192
1325.6	0.850	0.150	0.081	0.120	257	150	93	-	0.002	1.356
1507.4	0.867	0.133	0.072	0.112	292	170	105	-	0.002	1.541
1714.9	0.882	0.118	0.063	0.103	332	194	120	-	0.001	1.754
1950.2	0.896	0.104	0.055	0.095	378	220	136	-	0.001	1.994
2216.0	0.908	0.092	0.049	0.086	429	251	155	-	0.001	2.266
2520.9	0.920	0.080	0.043	0.077	489	285	176	-	0.000	2.578
2866.3	0.930	0.070	0.038	0.071	556	324	201	-	0.000	2.931
3259.4	0.940	0.060	0.033	0.067	632	368	228	-	0.000	3.333
3705.7	0.949	0.051	0.029	0.060	718	419	259	-	0.000	3.789
4213.7	0.957	0.043	0.026	0.052	817	476	295	-	0.000	4.309
4790.6	0.964	0.036	0.023	0.045	928	542	335	-	0.000	4.899
5447.1	0.969	0.031	0.020	0.043	1056	616	381	-	0.000	5.570
6193.1	0.976	0.024	0.017	0.041	1200	700	433	-	0.000	6.333
7042.4	0.981	0.019	0.015	0.032	1365	796	493	-	0.000	7.201
8009.4	0.986	0.014	0.013	0.019	1552	906	561	-	0.000	8.190
9107.8	0.986	0.014	0.012	0.013	1765	1030	637	-	0.000	9.313
10354.6	0.988	0.012	0.010	0.015	2007	1171	725	-	0.000	10.588
11774.2	0.990	0.010	0.009	0.015	2282	1331	824	-	0.000	12.040
13388.7	0.993	0.007	0.008	0.011	2595	1514	937	-	0.000	13.691

MERCURY INJECTION

High-Pressure Method

IFT * Cosine Contact Angle				
	Air-Brine	Air-Oil	Oil-Brine	Air-Hg
Lab --->	72	24	42	372
Res --->	50		26	

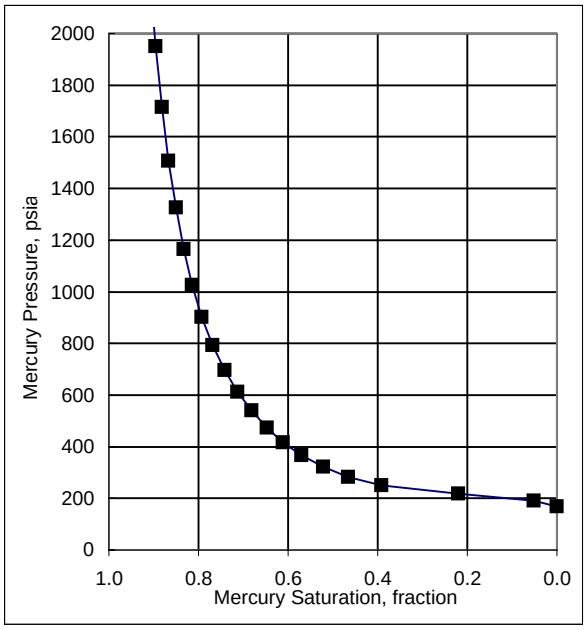
Sample Identification:	83
Sample Depth, m:	5088.40
Kair, mD:	0.314
Plug Porosity, fraction:	0.112
Injection Sample Porosity, fraction:	0.102
Injection Sample Pore Volume, cm3:	0.238
Injection Sample Bulk Volume, cm3:	2.335
Brine Density Gradient, psig/foot:	
Oil Density Gradient, psig/foot:	
Mean Hydraulic Radius, microns:	0.213
Swanson's Parameter:	1.68E-02
FZI:	0.42

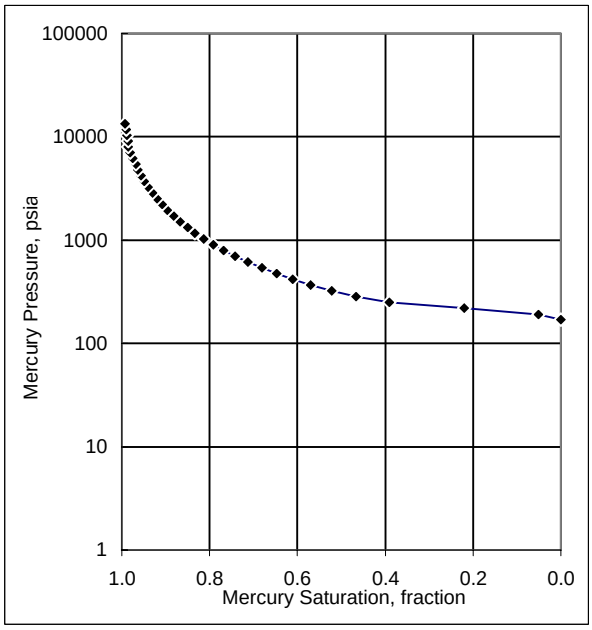
Injection Pressure, psia	Mercury Satn, fraction Vp	Equiv. Water Satn, fraction Vp	Pore Throat Radius, microns	Normalized Pore Size Distribution Function	Equivalent Injection Pressure, psia			Height Above Free Water, feet	Normalized Permeability Distribution Function	J Function
					A/B (Lab)	O/B (Lab)	O/B (Res)			
15223.6	0.993	0.007	0.007	0.009	2950	1721	1065	-	0.000	15.567
17310.0	0.995	0.005	0.006	0.007	3355	1957	1211	-	0.000	17.701
19683.2	0.995	0.005	0.006	0.002	3815	2225	1378	-	0.000	20.128
22380.5	0.995	0.005	0.005	0.000	4338	2530	1566	-	0.000	22.886
25449.0	0.995	0.005	0.004	0.000	4932	2877	1781	-	0.000	26.023
28938.2	0.995	0.005	0.004	0.000	5608	3272	2025	-	0.000	29.591
32903.4	0.995	0.005	0.003	0.000	6377	3720	2303	-	0.000	33.646
37402.5	0.995	0.005	0.003	0.002	7249	4229	2618	-	0.000	38.247
42520.9	0.995	0.005	0.003	0.008	8241	4807	2976	-	0.000	43.481
48345.6	0.998	0.002	0.002	0.010	9370	5466	3384	-	0.000	49.437
54967.7	1.000	0.000	0.002	0.004	10653	6214	3847	-	0.000	56.209

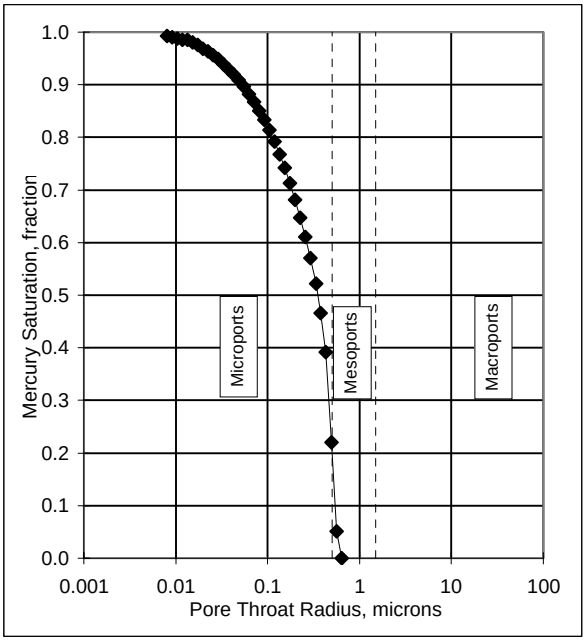
MERCURY INJECTION

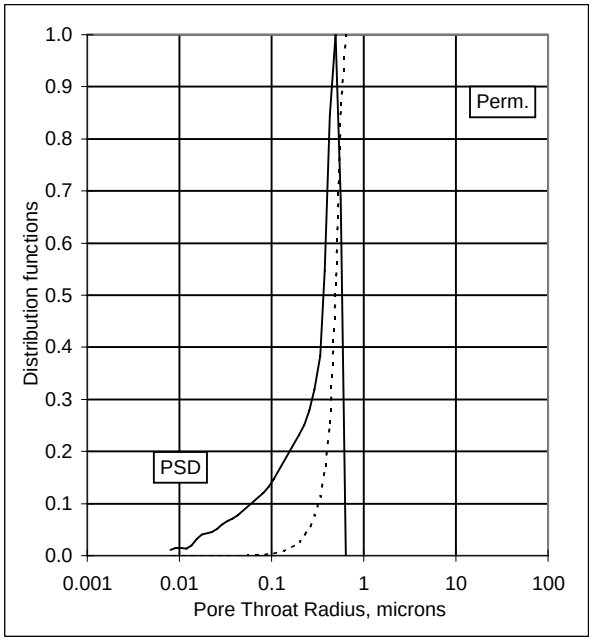
High-Pressure Method

Sample Identification:	83
Sample Depth, m:	5088.40
Kair, mD:	0.314
Plug Porosity, fraction:	0.112
Injection Sample Porosity, fraction:	0.102









MERCURY INJECTION

High-Pressure Method

IFT * Cosine Contact Angle				
	Air-Brine	Air-Oil	Oil-Brine	Air-Hg
Lab --->	72	24	42	372
Res --->	50		26	

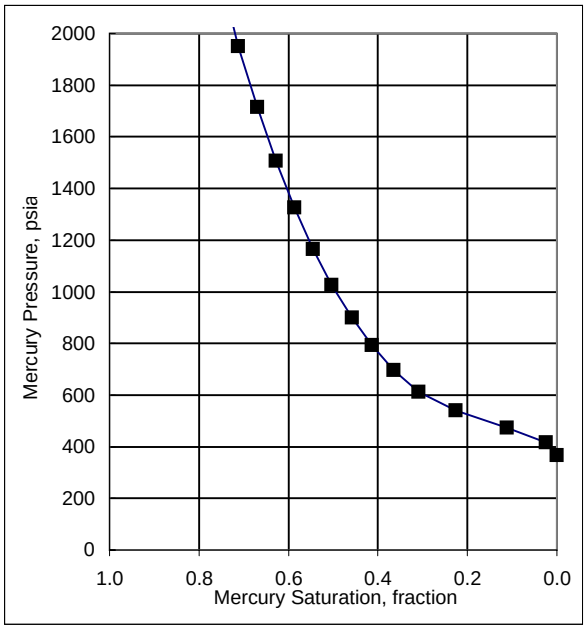
Sample Identification:	19DS
Sample Depth, m:	5090.18
Kair, mD:	0.051
Plug Porosity, fraction:	0.085
Injection Sample Porosity, fraction:	0.074
Injection Sample Pore Volume, cm3:	0.131
Injection Sample Bulk Volume, cm3:	1.786
Brine Density Gradient, psig/foot:	
Oil Density Gradient, psig/foot:	
Mean Hydraulic Radius, microns:	0.086
Swanson's Parameter:	3.85E-03
FZI:	0.26

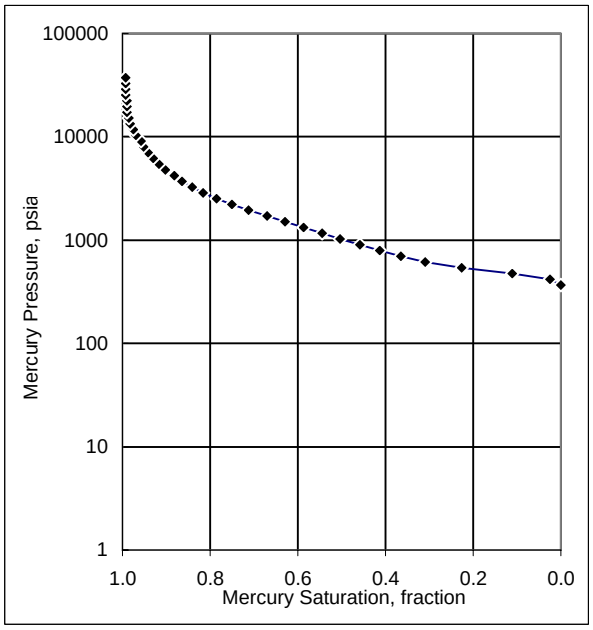
Injection Pressure, psia	Mercury Satn, fraction Vp	Equiv. Water Satn, fraction Vp	Pore Throat Radius, microns	Normalized Pore Size Distribution Function	Equivalent Injection Pressure, psia			Height Above Free Water, feet	Normalized Permeability Distribution Function	J Function
					A/B (Lab)	O/B (Lab)	O/B (Res)			
367.0	0.000	1.000	0.294	0.000	71	41	26	-	1.000	0.178
417.2	0.024	0.976	0.258	0.577	81	47	29	-	0.910	0.203
473.6	0.111	0.889	0.228	0.965	92	54	33	-	0.662	0.230
540.3	0.226	0.774	0.199	1.000	105	61	38	-	0.408	0.262
612.8	0.309	0.691	0.176	0.792	119	69	43	-	0.266	0.298
697.1	0.365	0.635	0.155	0.602	135	79	49	-	0.192	0.338
792.5	0.413	0.587	0.136	0.521	154	90	55	-	0.142	0.385
900.5	0.458	0.542	0.120	0.491	175	102	63	-	0.106	0.437
1025.3	0.503	0.497	0.105	0.472	199	116	72	-	0.079	0.498
1165.1	0.545	0.455	0.093	0.458	226	132	82	-	0.059	0.566
1325.8	0.587	0.413	0.081	0.453	257	150	93	-	0.044	0.644
1507.3	0.628	0.372	0.072	0.453	292	170	105	-	0.032	0.732
1714.0	0.670	0.330	0.063	0.448	332	194	120	-	0.023	0.832
1949.9	0.712	0.288	0.055	0.430	378	220	136	-	0.016	0.947
2216.4	0.750	0.250	0.049	0.397	430	251	155	-	0.011	1.076
2520.7	0.785	0.215	0.043	0.354	489	285	176	-	0.007	1.224
2865.5	0.816	0.184	0.038	0.307	555	324	201	-	0.005	1.391
3258.9	0.840	0.160	0.033	0.265	632	368	228	-	0.003	1.582
3704.4	0.865	0.135	0.029	0.232	718	419	259	-	0.002	1.799
4212.8	0.882	0.118	0.026	0.208	816	476	295	-	0.002	2.046
4788.1	0.903	0.097	0.023	0.184	928	541	335	-	0.001	2.325
5443.9	0.917	0.083	0.020	0.156	1055	615	381	-	0.001	2.643
6192.3	0.931	0.069	0.017	0.132	1200	700	433	-	0.000	3.007
7041.1	0.941	0.059	0.015	0.113	1365	796	493	-	0.000	3.419
8007.5	0.951	0.049	0.013	0.099	1552	905	560	-	0.000	3.888
9105.8	0.958	0.042	0.012	0.094	1765	1029	637	-	0.000	4.421
10353.9	0.969	0.031	0.010	0.090	2007	1171	725	-	0.000	5.027
11773.4	0.976	0.024	0.009	0.076	2282	1331	824	-	0.000	5.717
13387.8	0.983	0.017	0.008	0.057	2595	1514	937	-	0.000	6.500
15221.7	0.986	0.014	0.007	0.038	2950	1721	1065	-	0.000	7.391
17307.9	0.990	0.010	0.006	0.019	3354	1957	1211	-	0.000	8.404
19681.9	0.990	0.010	0.006	0.009	3815	2225	1377	-	0.000	9.557
22379.5	0.990	0.010	0.005	0.014	4337	2530	1566	-	0.000	10.866
25448.8	0.993	0.007	0.004	0.014	4932	2877	1781	-	0.000	12.357
28936.7	0.993	0.007	0.004	0.005	5608	3271	2025	-	0.000	14.050
32902.2	0.993	0.007	0.003	0.005	6377	3720	2303	-	0.000	15.976
37408.2	0.993	0.007	0.003	0.019	7250	4229	2618	-	0.000	18.164

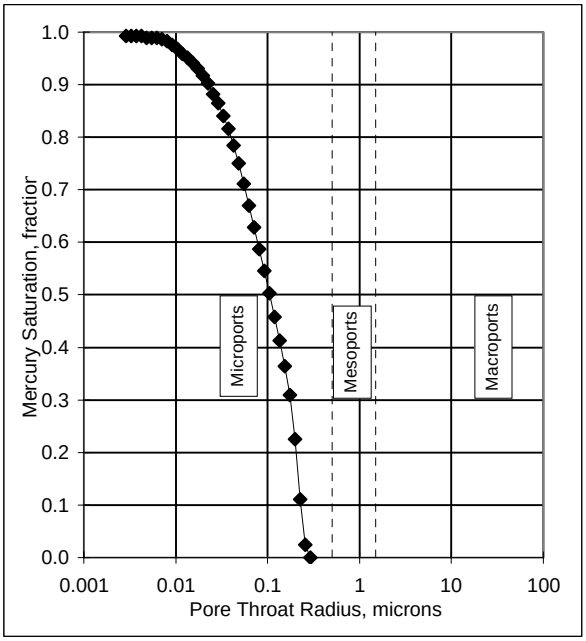
MERCURY INJECTION

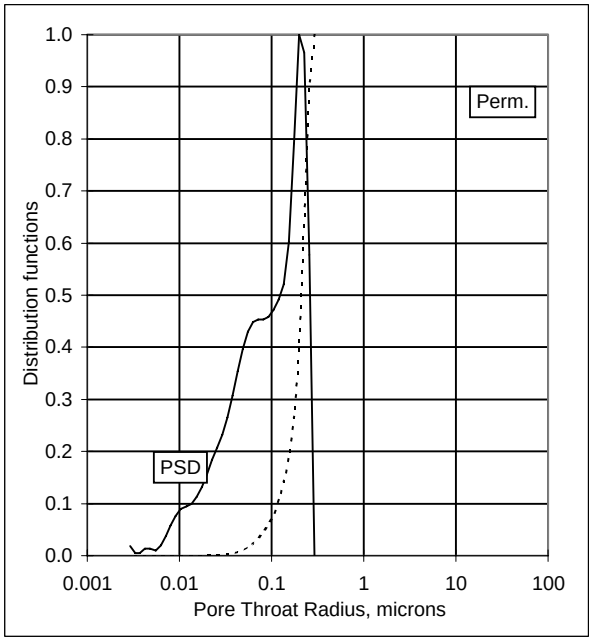
High-Pressure Method

Sample Identification:	19DS
Sample Depth, m:	5090.18
Kair, mD:	0.051
Plug Porosity, fraction:	0.085
Injection Sample Porosity, fraction:	0.074









MERCURY INJECTION

High-Pressure Method

IFT * Cosine Contact Angle				
	Air-Brine	Air-Oil	Oil-Brine	Air-Hg
Lab --->	72	24	42	372
Res --->	50		26	

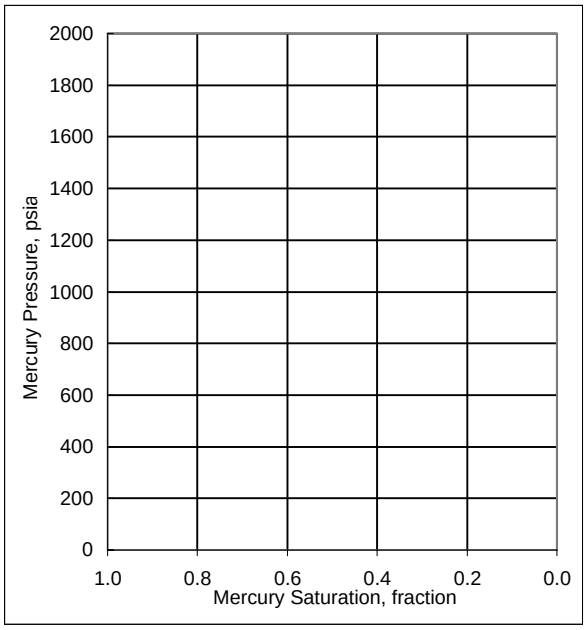
Sample Identification:	104
Sample Depth, m:	5096.08
Kair, mD:	0.008
Plug Porosity, fraction:	0.015
Injection Sample Porosity, fraction:	0.013
Injection Sample Pore Volume, cm3:	0.037
Injection Sample Bulk Volume, cm3:	2.942
Brine Density Gradient, psig/foot:	
Oil Density Gradient, psig/foot:	
Mean Hydraulic Radius, microns:	0.009
Swanson's Parameter:	5.25E-05
FZI:	1.51

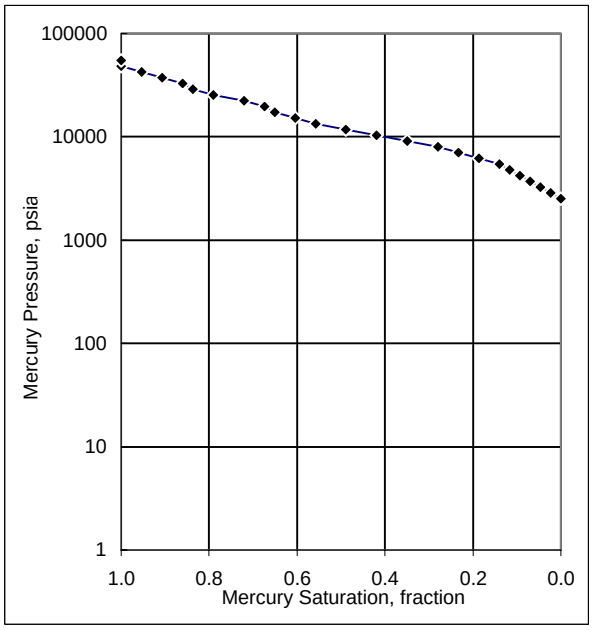
Injection Pressure, psia	Mercury Satn, fraction Vp	Equiv. Water Satn, fraction Vp	Pore Throat Radius, microns	Normalized Pore Size Distribution Function	Equivalent Injection Pressure, psia			Height Above Free Water, feet	Normalized Permeability Distribution Function	J Function
					A/B (Lab)	O/B (Lab)	O/B (Res)			
2523.2	0.000	1.000	0.043	0.000	489	285	177	-	1.000	1.172
2868.7	0.023	0.977	0.038	0.251	556	324	201	-	0.822	1.333
3261.8	0.047	0.953	0.033	0.334	632	369	228	-	0.684	1.516
3708.1	0.070	0.930	0.029	0.334	719	419	260	-	0.577	1.723
4216.1	0.093	0.907	0.026	0.336	817	477	295	-	0.494	1.959
4793.0	0.116	0.884	0.023	0.378	929	542	335	-	0.431	2.227
5449.5	0.140	0.860	0.020	0.501	1056	616	381	-	0.381	2.532
6195.6	0.186	0.814	0.017	0.625	1201	700	434	-	0.304	2.879
7044.9	0.233	0.767	0.015	0.710	1365	796	493	-	0.245	3.273
8011.8	0.279	0.721	0.013	0.837	1553	906	561	-	0.199	3.723
9110.2	0.349	0.651	0.012	0.960	1766	1030	638	-	0.146	4.233
10357.0	0.419	0.581	0.010	1.000	2007	1171	725	-	0.105	4.812
11776.5	0.488	0.512	0.009	0.964	2282	1331	824	-	0.073	5.472
13391.0	0.558	0.442	0.008	0.844	2595	1514	937	-	0.049	6.222
15226.0	0.605	0.395	0.007	0.673	2951	1721	1066	-	0.036	7.074
17312.3	0.651	0.349	0.006	0.535	3355	1957	1212	-	0.026	8.044
19685.5	0.674	0.326	0.005	0.582	3815	2226	1378	-	0.023	9.146
22382.7	0.721	0.279	0.005	0.760	4338	2530	1566	-	0.017	10.400
25451.2	0.791	0.209	0.004	0.755	4933	2877	1781	-	0.010	11.825
28940.4	0.837	0.163	0.004	0.593	5609	3272	2025	-	0.006	13.446
32905.6	0.860	0.140	0.003	0.558	6377	3720	2303	-	0.005	15.289
37404.7	0.907	0.093	0.003	0.634	7249	4229	2618	-	0.003	17.379
42523.1	0.953	0.047	0.003	0.585	8241	4807	2976	-	0.001	19.757
48347.7	1.000	0.000	0.002	0.329	9370	5466	3384	-	0.000	22.464
54969.8	1.000	0.000	0.002	0.080	10654	6215	3847	-	0.000	25.540

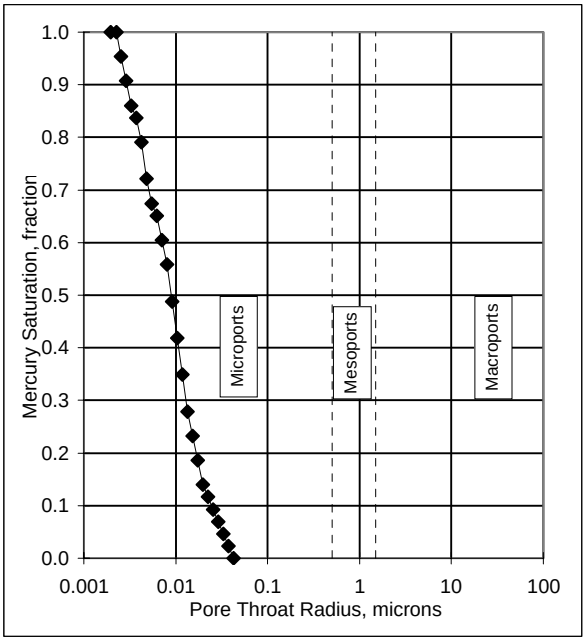
MERCURY INJECTION

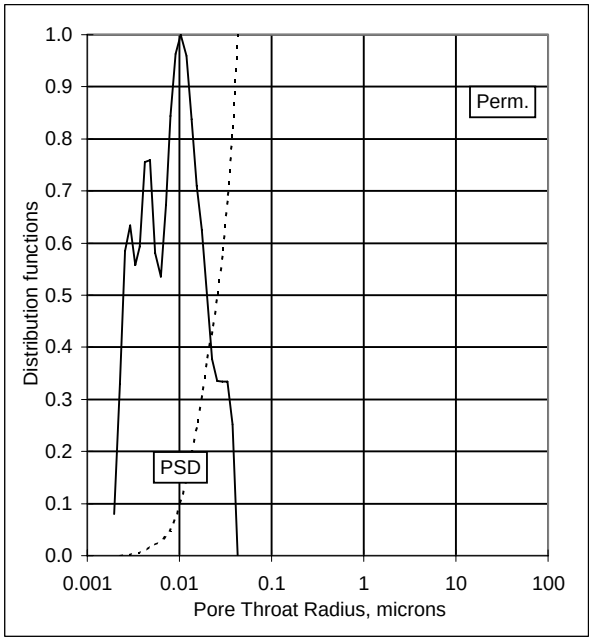
High-Pressure Method

Sample Identification:	104
Sample Depth, m:	5096.08
Kair, mD:	0.008
Plug Porosity, fraction:	0.015
Injection Sample Porosity, fraction:	0.013









MERCURY INJECTION

High-Pressure Method

IFT * Cosine Contact Angle				
	Air-Brine	Air-Oil	Oil-Brine	Air-Hg
Lab --->	72	24	42	372
Res --->	50		26	

Sample Identification:	127
Sample Depth, m:	5106.25
Kair, mD:	0.034
Plug Porosity, fraction:	0.017
Injection Sample Porosity, fraction:	0.011
Injection Sample Pore Volume, cm3:	0.069
Injection Sample Bulk Volume, cm3:	6.552
Brine Density Gradient, psig/foot:	
Oil Density Gradient, psig/foot:	
Mean Hydraulic Radius, microns:	0.080
Swanson's Parameter:	5.19E-04
FZI:	2.57

Injection Pressure, psia	Mercury Satn, fraction Vp	Equiv. Water Satn, fraction Vp	Pore Throat Radius, microns	Normalized Pore Size Distribution Function	Equivalent Injection Pressure, psia			Height Above Free Water, feet	Normalized Permeability Distribution Function	J Function
					A/B (Lab)	O/B (Lab)	O/B (Res)			
321.8	0.000	1.000	0.335	0.000	62	36	23	-	1.000	0.337
366.2	0.025	0.975	0.294	0.220	71	41	26	-	0.863	0.384
416.8	0.050	0.950	0.259	0.331	81	47	29	-	0.758	0.437
474.3	0.075	0.925	0.227	0.443	92	54	33	-	0.676	0.497
539.1	0.125	0.875	0.200	0.593	104	61	38	-	0.550	0.565
612.5	0.175	0.825	0.176	0.739	119	69	43	-	0.453	0.642
697.3	0.250	0.750	0.155	0.886	135	79	49	-	0.340	0.731
793.1	0.325	0.675	0.136	0.999	154	90	56	-	0.252	0.831
901.1	0.425	0.575	0.120	1.000	175	102	63	-	0.162	0.944
1024.9	0.500	0.500	0.105	0.888	199	116	72	-	0.110	1.074
1165.4	0.575	0.425	0.093	0.739	226	132	82	-	0.069	1.221
1325.8	0.625	0.375	0.081	0.628	257	150	93	-	0.049	1.389
1507.4	0.675	0.325	0.072	0.554	292	170	105	-	0.032	1.580
1714.2	0.725	0.275	0.063	0.444	332	194	120	-	0.020	1.796
1949.0	0.750	0.250	0.055	0.333	378	220	136	-	0.015	2.042
2217.1	0.775	0.225	0.049	0.296	430	251	155	-	0.011	2.323
2520.3	0.800	0.200	0.043	0.296	488	285	176	-	0.009	2.641
2866.3	0.825	0.175	0.038	0.296	556	324	201	-	0.006	3.004
3259.2	0.850	0.150	0.033	0.297	632	368	228	-	0.005	3.416
3706.1	0.875	0.125	0.029	0.297	718	419	259	-	0.003	3.884
4213.6	0.900	0.100	0.026	0.296	817	476	295	-	0.002	4.416
4792.3	0.925	0.075	0.023	0.296	929	542	335	-	0.001	5.022
5446.7	0.950	0.050	0.020	0.296	1056	616	381	-	0.001	5.708
6192.8	0.975	0.025	0.017	0.258	1200	700	433	-	0.000	6.490
7042.1	1.000	0.000	0.015	0.148	1365	796	493	-	0.000	7.380
8008.0	1.000	0.000	0.013	0.037	1552	905	560	-	0.000	8.392
9106.7	1.000	0.000	0.012	0.000	1765	1030	637	-	0.000	9.544
10354.4	1.000	0.000	0.010	0.000	2007	1171	725	-	0.000	10.851
11774.5	1.000	0.000	0.009	0.000	2282	1331	824	-	0.000	12.339
13388.5	1.000	0.000	0.008	0.000	2595	1514	937	-	0.000	14.031
15222.8	1.000	0.000	0.007	0.000	2950	1721	1065	-	0.000	15.953
17311.0	1.000	0.000	0.006	0.000	3355	1957	1212	-	0.000	18.141
19682.3	1.000	0.000	0.006	0.000	3815	2225	1377	-	0.000	20.626
22380.7	1.000	0.000	0.005	0.000	4338	2530	1566	-	0.000	23.454
25448.7	1.000	0.000	0.004	0.000	4932	2877	1781	-	0.000	26.669

MERCURY INJECTION

High-Pressure Method

IFT * Cosine Contact Angle				
	Air-Brine	Air-Oil	Oil-Brine	Air-Hg
Lab --->	72	24	42	372
Res --->	50		26	

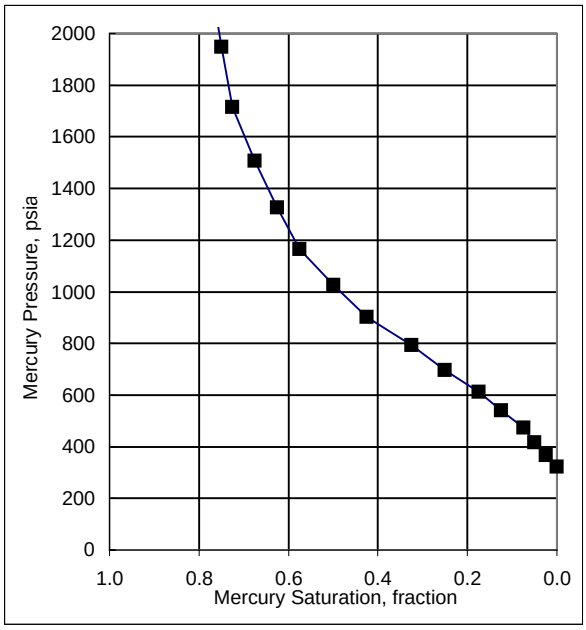
Sample Identification:	127
Sample Depth, m:	5106.25
Kair, mD:	0.034
Plug Porosity, fraction:	0.017
Injection Sample Porosity, fraction:	0.011
Injection Sample Pore Volume, cm3:	0.069
Injection Sample Bulk Volume, cm3:	6.552
Brine Density Gradient, psig/foot:	
Oil Density Gradient, psig/foot:	
Mean Hydraulic Radius, microns:	0.080
Swanson's Parameter:	5.19E-04
FZI:	2.57

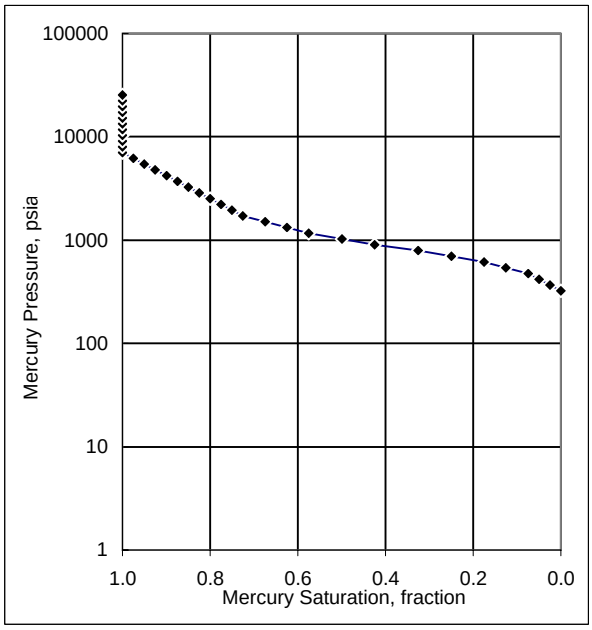
Injection Pressure, psia	Mercury Satn, fraction Vp	Equiv. Water Satn, fraction Vp	Pore Throat Radius, microns	Normalized Pore Size Distribution Function	Equivalent Injection Pressure, psia			Height Above Free Water, feet	Normalized Permeability Distribution Function	J Function
					A/B (Lab)	O/B (Lab)	O/B (Res)			
28937.7	1.000	0.000	0.004	0.000	5608	3272	2025	-	0.000	30.326
32903.3	1.000	0.000	0.003	0.000	6377	3720	2303	-	0.000	34.482
37405.7	1.000	0.000	0.003	0.000	7250	4229	2618	-	0.000	39.200
42525.2	1.000	0.000	0.003	0.000	8242	4808	2976	-	0.000	44.565
48343.9	1.000	0.000	0.002	0.000	9369	5466	3383	-	0.000	50.663
54970.5	1.000	0.000	0.002	0.000	10654	6215	3847	-	0.000	57.607

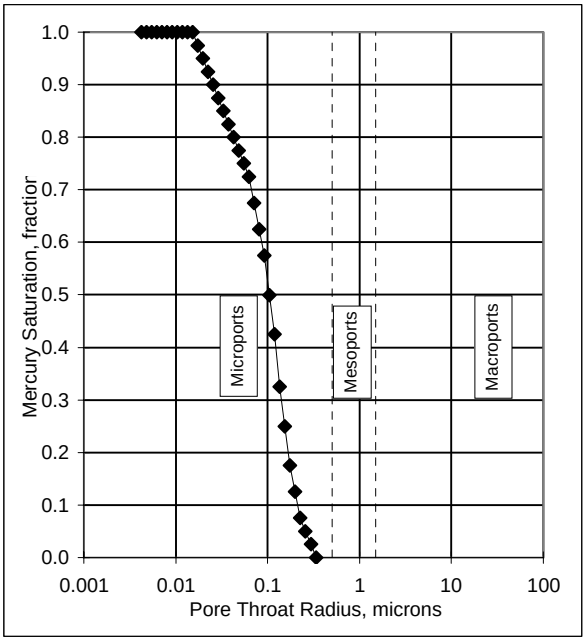
MERCURY INJECTION

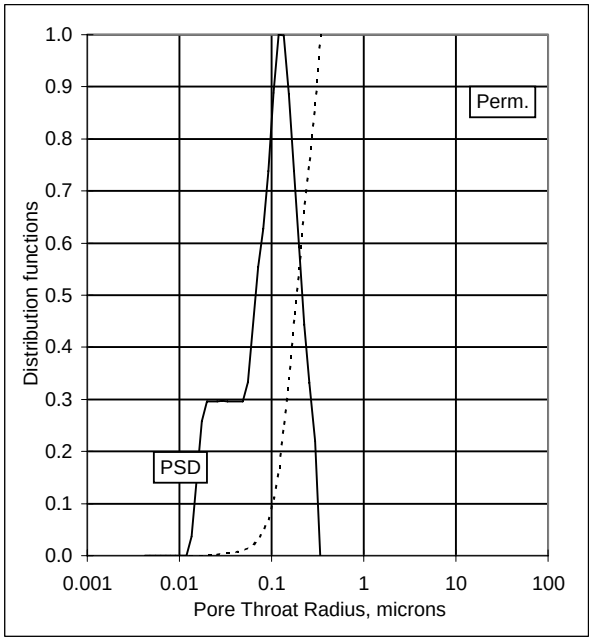
High-Pressure Method

Sample Identification:	127
Sample Depth, m:	5106.25
Kair, mD:	0.034
Plug Porosity, fraction:	0.017
Injection Sample Porosity, fraction:	0.011









MERCURY INJECTION

High-Pressure Method

IFT * Cosine Contact Angle				
	Air-Brine	Air-Oil	Oil-Brine	Air-Hg
Lab --->	72	24	42	372
Res --->	50		26	

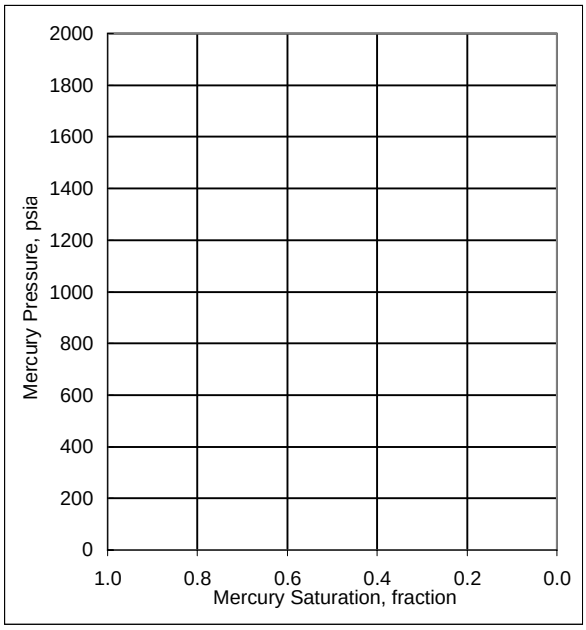
Sample Identification:	149
Sample Depth, m:	5114.47
Kair, mD:	0.003
Plug Porosity, fraction:	0.014
Injection Sample Porosity, fraction:	0.003
Injection Sample Pore Volume, cm3:	0.008
Injection Sample Bulk Volume, cm3:	2.813
Brine Density Gradient, psig/foot:	
Oil Density Gradient, psig/foot:	
Mean Hydraulic Radius, microns:	0.003
Swanson's Parameter:	7.00E-06
FZI:	1.02

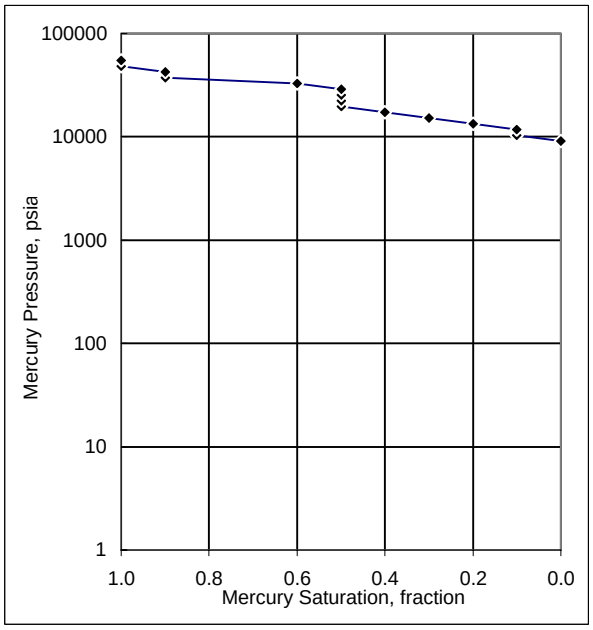
Injection Pressure, psia	Mercury Satn, fraction Vp	Equiv. Water Satn, fraction Vp	Pore Throat Radius, microns	Normalized Pore Size Distribution Function	Equivalent Injection Pressure, psia			Height Above Free Water, feet	Normalized Permeability Distribution Function	J Function
					A/B (Lab)	O/B (Lab)	O/B (Res)			
9107.5	0.000	1.000	0.012	0.000	1765	1030	637	-	1.000	5.540
10355.2	0.100	0.900	0.010	0.240	2007	1171	725	-	0.675	6.299
11775.3	0.100	0.900	0.009	0.404	2282	1331	824	-	0.675	7.162
13389.3	0.200	0.800	0.008	0.569	2595	1514	937	-	0.481	8.144
15223.6	0.300	0.700	0.007	0.651	2950	1721	1065	-	0.330	9.260
17311.7	0.400	0.600	0.006	0.565	3355	1957	1212	-	0.214	10.530
19683.0	0.500	0.500	0.006	0.318	3815	2225	1378	-	0.123	11.972
22381.5	0.500	0.500	0.005	0.078	4338	2530	1566	-	0.123	13.614
25449.4	0.500	0.500	0.004	0.082	4932	2877	1781	-	0.123	15.480
28938.4	0.500	0.500	0.004	0.502	5609	3272	2025	-	0.123	17.602
32904.0	0.600	0.400	0.003	1.000	6377	3720	2303	-	0.091	20.014
37406.4	0.900	0.100	0.003	0.901	7250	4229	2618	-	0.015	22.753
42525.8	0.900	0.100	0.003	0.480	8242	4808	2976	-	0.015	25.867
48344.5	1.000	0.000	0.002	0.235	9370	5466	3383	-	0.000	29.406
54971.1	1.000	0.000	0.002	0.077	10654	6215	3847	-	0.000	33.437

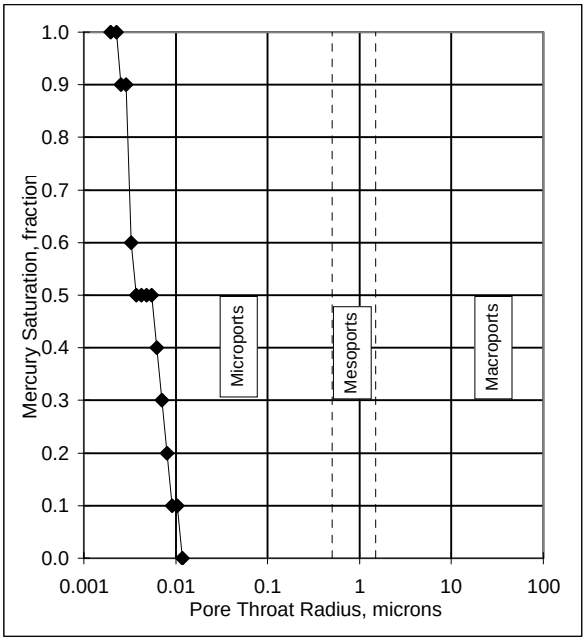
MERCURY INJECTION

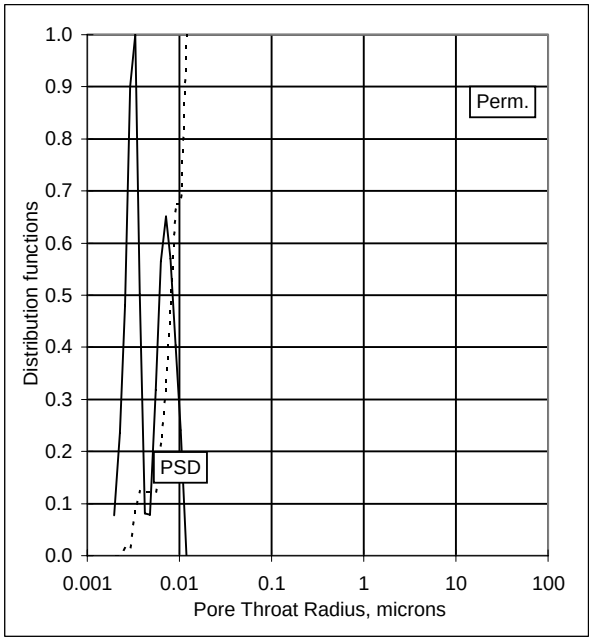
High-Pressure Method

Sample Identification:	149
Sample Depth, m:	5114.47
Kair, mD:	0.003
Plug Porosity, fraction:	0.014
Injection Sample Porosity, fraction:	0.003









MERCURY INJECTION

High-Pressure Method

IFT * Cosine Contact Angle				
	Air-Brine	Air-Oil	Oil-Brine	Air-Hg
Lab --->	72	24	42	372
Res --->	50		26	

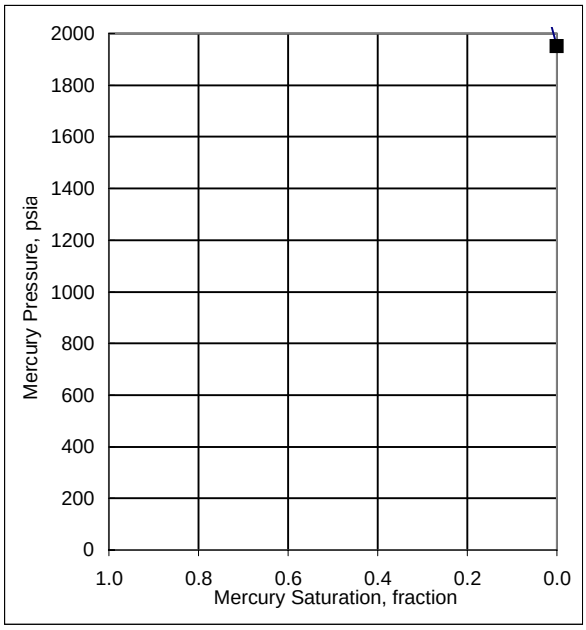
Sample Identification:	150
Sample Depth, m:	5114.73
Kair, mD:	0.005
Plug Porosity, fraction:	0.016
Injection Sample Porosity, fraction:	0.006
Injection Sample Pore Volume, cm3:	0.015
Injection Sample Bulk Volume, cm3:	2.349
Brine Density Gradient, psig/foot:	
Oil Density Gradient, psig/foot:	
Mean Hydraulic Radius, microns:	0.016
Swanson's Parameter:	7.82E-05
FZI:	1.08

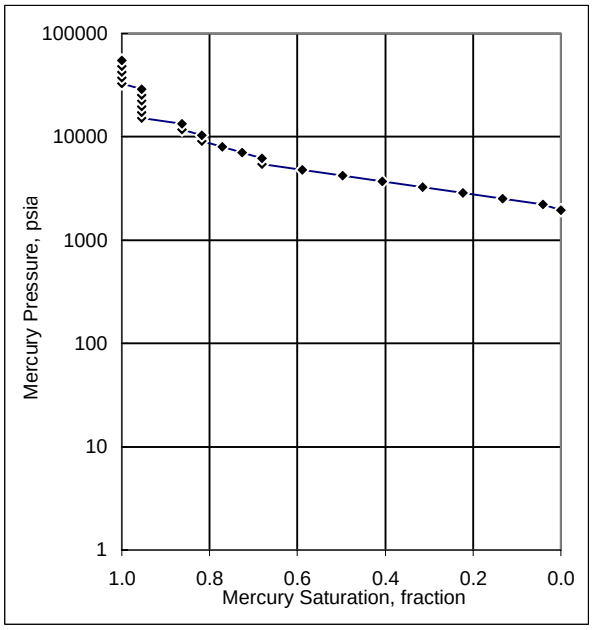
Injection Pressure, psia	Mercury Satn, fraction Vp	Equiv. Water Satn, fraction Vp	Pore Throat Radius, microns	Normalized Pore Size Distribution Function	Equivalent Injection Pressure, psia			Height Above Free Water, feet	Normalized Permeability Distribution Function	J Function
					A/B (Lab)	O/B (Lab)	O/B (Res)			
1950.1	0.000	1.000	0.055	0.000	378	220	136	-	1.000	1.016
2217.0	0.041	0.959	0.049	0.611	430	251	155	-	0.870	1.155
2521.1	0.132	0.868	0.043	0.929	489	285	176	-	0.646	1.314
2866.4	0.224	0.776	0.038	0.997	556	324	201	-	0.473	1.494
3259.4	0.315	0.685	0.033	0.999	632	368	228	-	0.340	1.699
3706.4	0.406	0.594	0.029	1.000	718	419	259	-	0.236	1.931
4213.8	0.498	0.502	0.026	0.998	817	476	295	-	0.156	2.196
4790.7	0.589	0.411	0.023	0.872	928	542	335	-	0.094	2.497
5446.1	0.680	0.320	0.020	0.560	1056	616	381	-	0.046	2.838
6192.8	0.680	0.320	0.017	0.373	1200	700	433	-	0.046	3.227
7043.4	0.726	0.274	0.015	0.436	1365	796	493	-	0.032	3.670
8008.2	0.772	0.228	0.013	0.437	1552	905	560	-	0.021	4.173
9107.0	0.817	0.183	0.012	0.312	1765	1030	637	-	0.012	4.746
10354.2	0.817	0.183	0.010	0.249	2007	1171	725	-	0.012	5.396
11774.1	0.863	0.137	0.009	0.313	2282	1331	824	-	0.007	6.136
13388.7	0.863	0.137	0.008	0.441	2595	1514	937	-	0.007	6.977
15222.7	0.954	0.046	0.007	0.379	2950	1721	1065	-	0.001	7.933
17311.1	0.954	0.046	0.006	0.126	3355	1957	1212	-	0.001	9.021
19682.9	0.954	0.046	0.006	0.000	3815	2225	1378	-	0.001	10.257
22380.4	0.954	0.046	0.005	0.000	4338	2530	1566	-	0.001	11.663
25449.1	0.954	0.046	0.004	0.063	4932	2877	1781	-	0.001	13.262
28937.3	0.954	0.046	0.004	0.192	5608	3272	2025	-	0.001	15.080
32903.7	1.000	0.000	0.003	0.195	6377	3720	2303	-	0.000	17.147
37412.5	1.000	0.000	0.003	0.066	7251	4230	2618	-	0.000	19.496
42524.9	1.000	0.000	0.003	0.000	8242	4808	2976	-	0.000	22.160
48347.0	1.000	0.000	0.002	0.000	9370	5466	3384	-	0.000	25.194
54970.5	1.000	0.000	0.002	0.000	10654	6215	3847	-	0.000	28.646

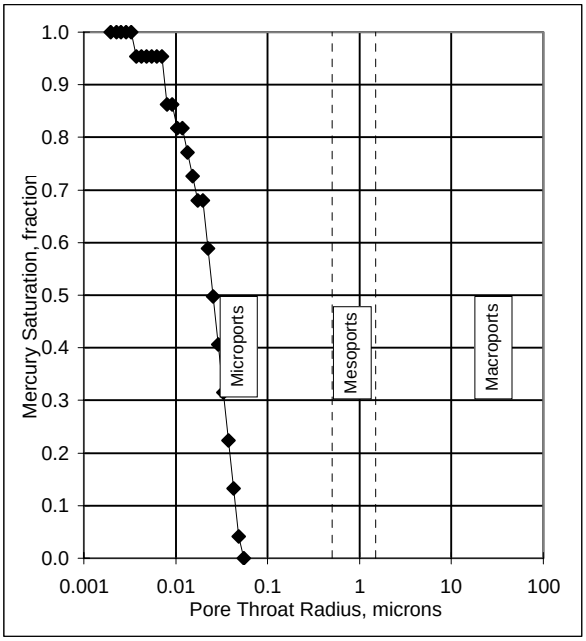
MERCURY INJECTION

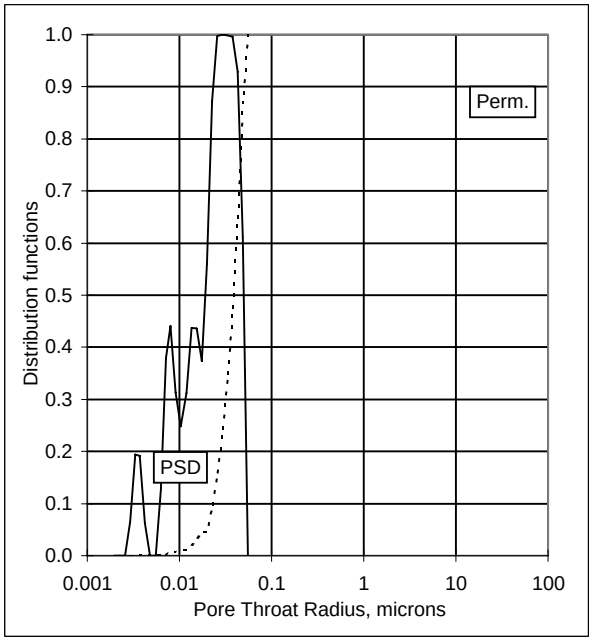
High-Pressure Method

Sample Identification:	150
Sample Depth, m:	5114.73
Kair, mD:	0.005
Plug Porosity, fraction:	0.016
Injection Sample Porosity, fraction:	0.006









MERCURY INJECTION

High-Pressure Method

IFT * Cosine Contact Angle				
	Air-Brine	Air-Oil	Oil-Brine	Air-Hg
Lab --->	72	24	42	372
Res --->	50		26	

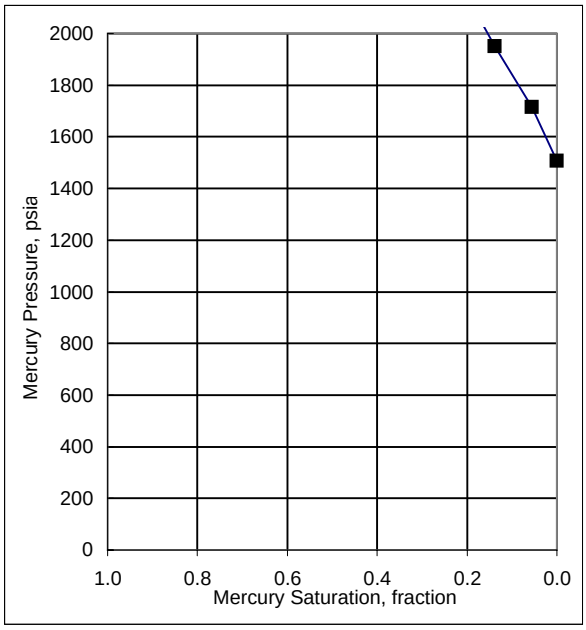
Sample Identification:	154
Sample Depth, m:	5116.34
Kair, mD:	0.009
Plug Porosity, fraction:	0.019
Injection Sample Porosity, fraction:	0.010
Injection Sample Pore Volume, cm3:	0.024
Injection Sample Bulk Volume, cm3:	2.538
Brine Density Gradient, psig/foot:	
Oil Density Gradient, psig/foot:	
Mean Hydraulic Radius, microns:	0.022
Swanson's Parameter:	1.55E-04
FZI:	1.12

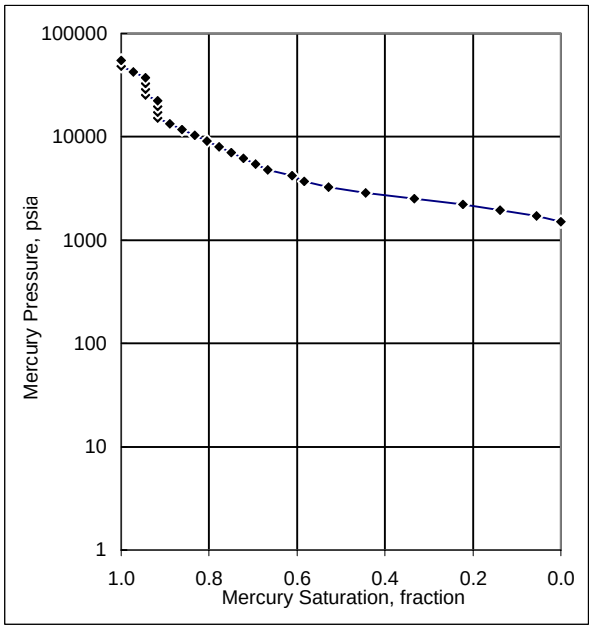
Injection Pressure, psia	Mercury Satn, fraction Vp	Equiv. Water Satn, fraction Vp	Pore Throat Radius, microns	Normalized Pore Size Distribution Function	Equivalent Injection Pressure, psia			Height Above Free Water, feet	Normalized Permeability Distribution Function	J Function
					A/B (Lab)	O/B (Lab)	O/B (Res)			
1508.1	0.000	1.000	0.071	0.000	292	170	106	-	1.000	0.853
1714.5	0.056	0.944	0.063	0.533	332	194	120	-	0.826	0.970
1949.9	0.139	0.861	0.055	0.799	378	220	136	-	0.624	1.103
2216.8	0.222	0.778	0.049	0.934	430	251	155	-	0.467	1.254
2520.8	0.333	0.667	0.043	1.000	489	285	176	-	0.306	1.426
2866.1	0.444	0.556	0.038	0.899	555	324	201	-	0.181	1.621
3259.1	0.528	0.472	0.033	0.667	632	368	228	-	0.109	1.843
3706.1	0.583	0.417	0.029	0.468	718	419	259	-	0.072	2.096
4213.4	0.611	0.389	0.026	0.400	817	476	295	-	0.057	2.383
4790.4	0.667	0.333	0.023	0.366	928	542	335	-	0.035	2.710
5445.8	0.694	0.306	0.020	0.300	1055	616	381	-	0.026	3.080
6192.5	0.722	0.278	0.017	0.266	1200	700	433	-	0.020	3.503
7043.1	0.750	0.250	0.015	0.266	1365	796	493	-	0.015	3.984
8007.8	0.778	0.222	0.013	0.267	1552	905	560	-	0.011	4.529
9106.6	0.806	0.194	0.012	0.266	1765	1030	637	-	0.007	5.151
10353.9	0.833	0.167	0.010	0.266	2007	1171	725	-	0.005	5.856
11773.7	0.861	0.139	0.009	0.267	2282	1331	824	-	0.003	6.659
13388.3	0.889	0.111	0.008	0.236	2595	1514	937	-	0.002	7.573
15222.3	0.917	0.083	0.007	0.135	2950	1721	1065	-	0.001	8.610
17310.7	0.917	0.083	0.006	0.034	3355	1957	1212	-	0.001	9.791
19682.5	0.917	0.083	0.006	0.033	3815	2225	1378	-	0.001	11.133
22380.0	0.917	0.083	0.005	0.099	4337	2530	1566	-	0.001	12.659
25448.8	0.944	0.056	0.004	0.099	4932	2877	1781	-	0.000	14.394
28936.9	0.944	0.056	0.004	0.033	5608	3271	2025	-	0.000	16.367
32903.3	0.944	0.056	0.003	0.033	6377	3720	2303	-	0.000	18.611
37412.2	0.944	0.056	0.003	0.134	7251	4230	2618	-	0.000	21.161
42524.6	0.972	0.028	0.003	0.200	8242	4808	2976	-	0.000	24.053
48346.6	1.000	0.000	0.002	0.131	9370	5466	3384	-	0.000	27.346
54970.1	1.000	0.000	0.002	0.032	10654	6215	3847	-	0.000	31.092

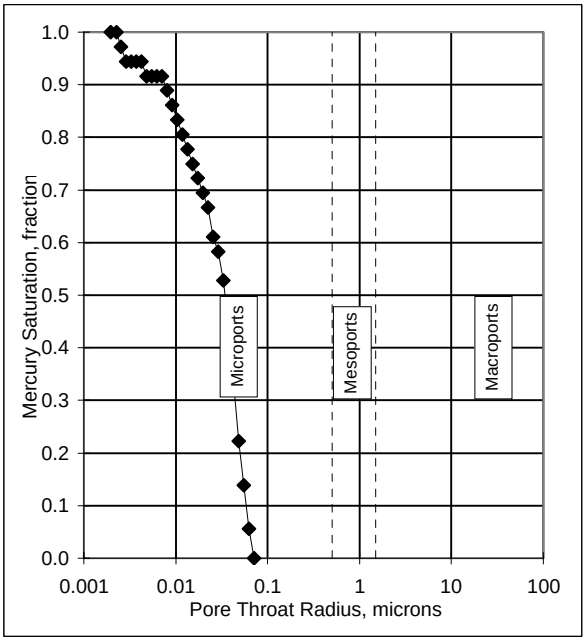
MERCURY INJECTION

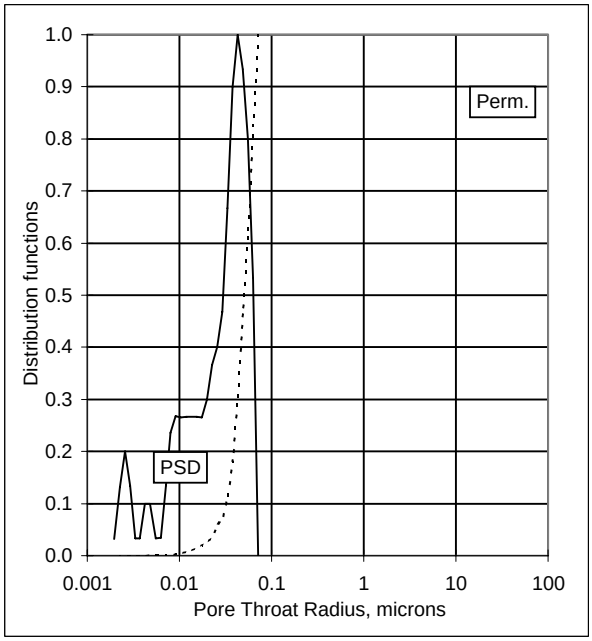
High-Pressure Method

Sample Identification:	154
Sample Depth, m:	5116.34
Kair, mD:	0.009
Plug Porosity, fraction:	0.019
Injection Sample Porosity, fraction:	0.010









MERCURY INJECTION

High-Pressure Method

IFT * Cosine Contact Angle				
	Air-Brine	Air-Oil	Oil-Brine	Air-Hg
Lab --->	72	24	42	372
Res --->	50		26	

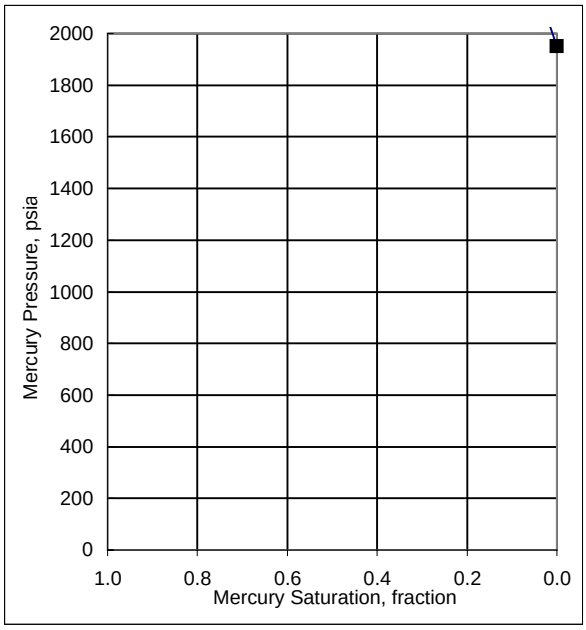
Sample Identification:	168
Sample Depth, m:	5121.21
Kair, mD:	0.008
Plug Porosity, fraction:	0.013
Injection Sample Porosity, fraction:	0.005
Injection Sample Pore Volume, cm3:	0.014
Injection Sample Bulk Volume, cm3:	2.683
Brine Density Gradient, psig/foot:	
Oil Density Gradient, psig/foot:	
Mean Hydraulic Radius, microns:	0.017
Swanson's Parameter:	6.92E-05
FZI:	1.87

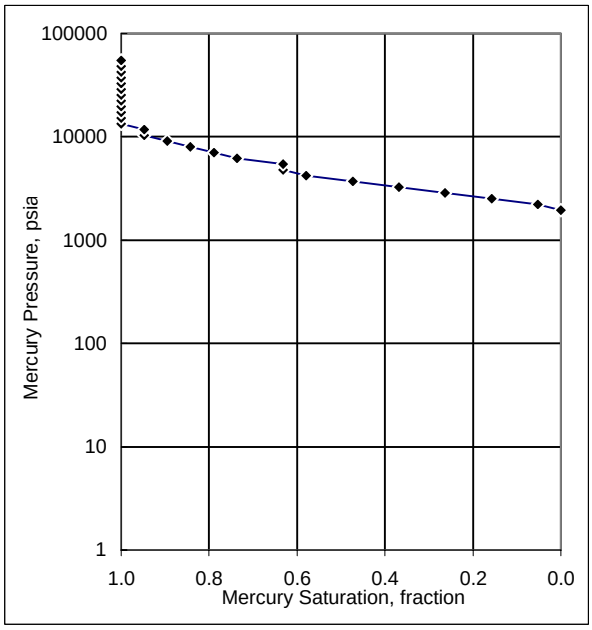
Injection Pressure, psia	Mercury Satn, fraction Vp	Equiv. Water Satn, fraction Vp	Pore Throat Radius, microns	Normalized Pore Size Distribution Function	Equivalent Injection Pressure, psia			Height Above Free Water, feet	Normalized Permeability Distribution Function	J Function
					A/B (Lab)	O/B (Lab)	O/B (Res)			
1950.6	0.000	1.000	0.055	0.000	378	221	137	-	1.000	1.433
2217.2	0.053	0.947	0.049	0.624	430	251	155	-	0.851	1.629
2521.5	0.158	0.842	0.043	0.936	489	285	176	-	0.621	1.853
2866.3	0.263	0.737	0.038	0.998	556	324	201	-	0.443	2.106
3259.7	0.368	0.632	0.033	1.000	632	369	228	-	0.305	2.395
3705.3	0.474	0.526	0.029	0.939	718	419	259	-	0.199	2.722
4213.7	0.579	0.421	0.026	0.687	817	476	295	-	0.116	3.096
4789.0	0.632	0.368	0.023	0.436	928	541	335	-	0.084	3.519
5444.8	0.632	0.368	0.020	0.498	1055	616	381	-	0.084	4.000
6193.3	0.737	0.263	0.017	0.622	1200	700	433	-	0.046	4.550
7042.0	0.789	0.211	0.015	0.561	1365	796	493	-	0.031	5.174
8008.4	0.842	0.158	0.013	0.500	1552	905	560	-	0.020	5.884
9106.7	0.895	0.105	0.012	0.437	1765	1030	637	-	0.011	6.691
10354.8	0.947	0.053	0.010	0.311	2007	1171	725	-	0.004	7.608
11774.4	0.947	0.053	0.009	0.250	2282	1331	824	-	0.004	8.651
13388.8	1.000	0.000	0.008	0.189	2595	1514	937	-	0.000	9.837
15222.7	1.000	0.000	0.007	0.063	2950	1721	1065	-	0.000	11.184
17308.8	1.000	0.000	0.006	0.000	3355	1957	1211	-	0.000	12.717
19682.8	1.000	0.000	0.006	0.000	3815	2225	1378	-	0.000	14.461
22380.5	1.000	0.000	0.005	0.000	4338	2530	1566	-	0.000	16.443
25449.7	1.000	0.000	0.004	0.000	4932	2877	1781	-	0.000	18.698
28937.7	1.000	0.000	0.004	0.000	5608	3272	2025	-	0.000	21.261
32903.2	1.000	0.000	0.003	0.000	6377	3720	2303	-	0.000	24.174
37409.2	1.000	0.000	0.003	0.000	7250	4229	2618	-	0.000	27.485
42524.1	1.000	0.000	0.003	0.000	8242	4808	2976	-	0.000	31.243
48347.6	1.000	0.000	0.002	0.000	9370	5466	3384	-	0.000	35.521
54974.9	1.000	0.000	0.002	0.000	10655	6215	3848	-	0.000	40.391

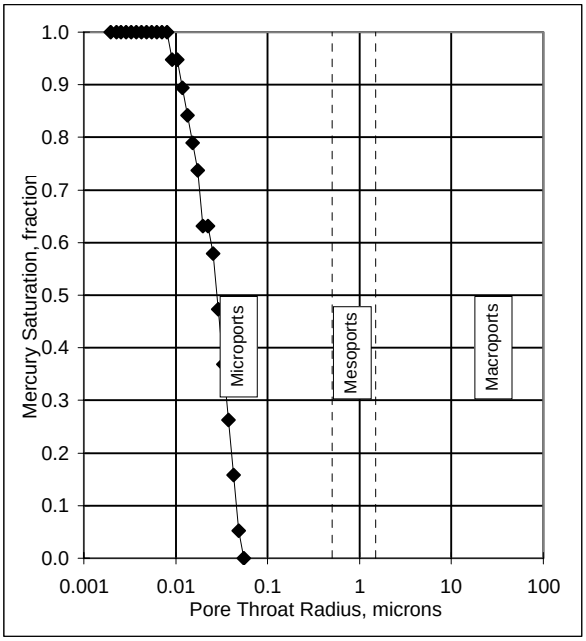
MERCURY INJECTION

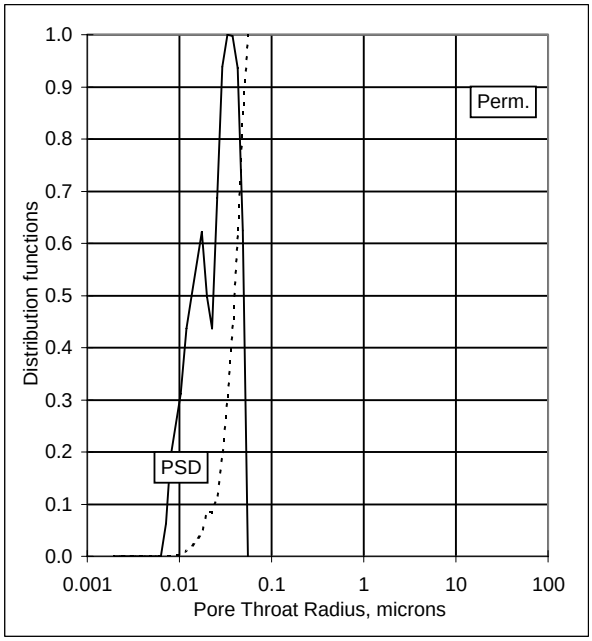
High-Pressure Method

Sample Identification:	168
Sample Depth, m:	5121.21
Kair, mD:	0.008
Plug Porosity, fraction:	0.013
Injection Sample Porosity, fraction:	0.005









SECTION 5
REGAIN PERMEABILITY TO GAS

Summary of regain permeability to gas results

Material samples from the Poseidon-2 Well were provided to Core Laboratories, in Houston, Texas, for regain permeability to gas at initial water saturation to test the effect of oil-based drilling mud. SBM Sample #1 M5, a synthetic mud sample, and Sample 77 a 1.0 inch diameter core plug sample from the depth of 5086.61 meters, were provided by ConocoPhillips for the tests. The specific procedures and test design were discussed and approved prior to project commencement.

The regain permeability to gas test began by saturating the selected core plug with a synthetic formation brine equivalent to 9.6 ppg NaCl at 20ºC. The plug was spun by centrifuge to irreducible water saturation (Swi). Testing was performed at a temperature of 170ºC, at 5600 psi net confining stress. Humidified nitrogen gas was used to saturate the remaining pore space within the core plugs and then was injected in the production direction until a stable delta pressure was established.

Synthetic (oil-based) drilling mud was circulated across the injection face of the sample at the overbalance pressure of 1000 psi for twenty-four hours and then the sample was shut in at an overbalance pressure of 500 psi for seventy-two hours. Humidified nitrogen was injected across the face of the sample to remove excess drilling mud and then injected in the production direction at two rates.

Results of the regain permeability to gas tests are summarized in the following table:

Regain Permeability to Gas at Swi Conditions, 170ºC and 5600 psi

Sample Number	Depth Feet	Test	Apparent Permeability to Gas, md	Retained Permeability Kf/Ki
77	5086.61	170°C Humidified Nitrogen after Circulating Mud at Over Balance of 1000 psi for 24 hours and then Locking Sample in with Over Balance of 500 psi for 72 hours	0.0136	26.0%
		ambient temperature Humidified Nitrogen after Removal of Mud Cake	0.0505	96.6%

LEAKOFF VERSUS TIME

Net Confining Stress: 5600 psi Temperature: 170°C

ConocoPhillips
Well: Poseiden-2
File: PRP-09079A/HOU-050821

Sample Number:	77
Depth, meters:	5086.61
Permeability to Air, millidarcys	0.103
Porosity, fraction	0.128
Initial Fluid Saturation, fractior	0.282

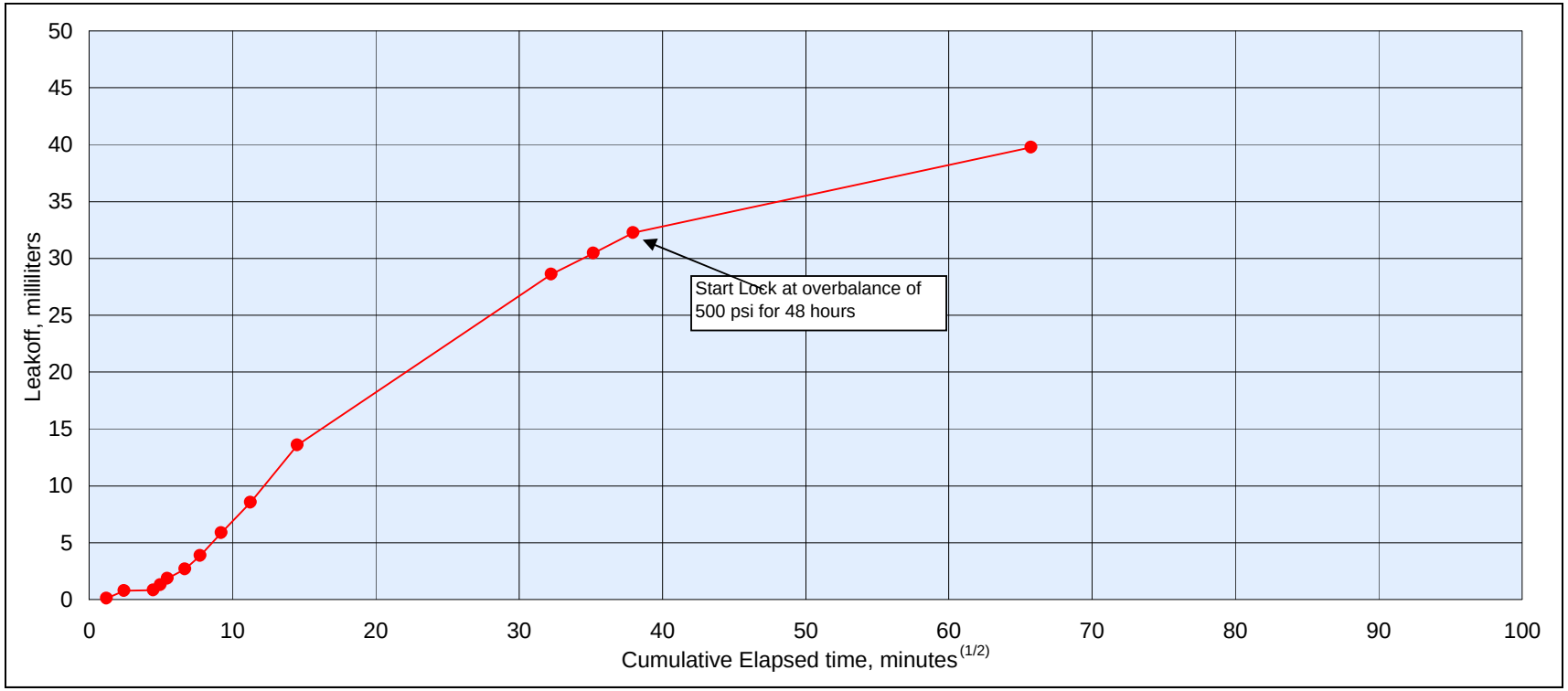
Cumulative Produced Volume		Cumulative Time		Cumulative Penetration,	Incremental Penetration Rate,
milliliters	pore volumes	minutes	minutes$^{(1/2)}$	centimeters	cm/min
0.12	0.038	1.53	1.24	0.184	0.120
0.77	0.247	6.00	2.45	1.193	0.226
0.83	0.266	20.00	4.47	1.285	0.007
1.26	0.406	25.00	5.00	1.964	0.136
1.83	0.589	30.00	5.48	2.845	0.176
2.66	0.854	45.00	6.71	4.129	0.086
3.84	1.234	60.00	7.75	5.965	0.122
5.84	1.880	85.07	9.22	9.085	0.124
8.56	2.753	126.77	11.26	13.306	0.101
13.57	4.367	210.82	14.52	21.106	0.093
28.58	9.197	1041.53	32.27	44.451	0.028
30.47	9.805	1239.92	35.21	47.388	0.015
32.24	10.375	1441.17	38.0	50.141	0.014
39.77	12.797	4320.00	65.7	61.850	0.005

LEAKOFF VERSUS TIME

Net Confining Stress: 5600 psi Temperature: 170°C

ConocoPhillips
Well: Poseiden-2
File: PRP-09079A/HOU-050821

Sample Number:	77
Depth, meters:	5086.61
Permeability to Air, millidarcys	0.103
Porosity, fraction	0.128
Initial Fluid Saturation, fraction:	0.282

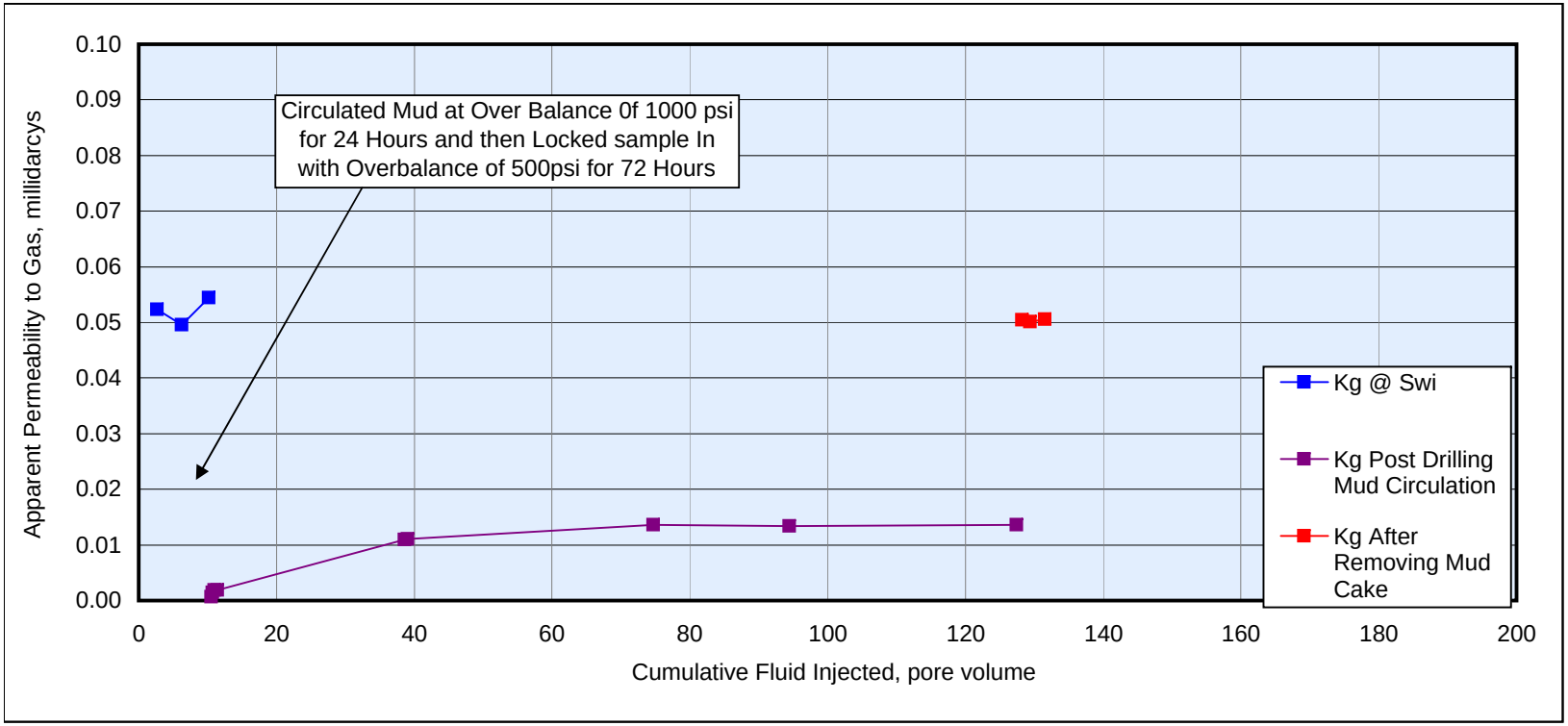


LEAKOFF VERSUS TIME

Net Confining Stress: 5600 psi Temperature: 170°C

ConocoPhillips
Well: Poseiden-2
File: PRP-09079A/HOU-050821

Sample Number:	77
Depth, meters:	5086.61
Permeability to Air, millidarcys	0.103
Porosity, fraction	0.128
Initial Fluid Saturation, fraction:	0.282



LEAKOFF VERSUS TIME

Net Confining Stress: 5600 psi Temperature: 170°C

ConocoPhillips
Well: Poseiden-2
File: PRP-09079A/HOU-050821

Sample Number:	77
Depth, meters:	5086.61
Permeability to Air, millidarcys	0.103
Porosity, fraction	0.128
Initial Fluid Saturation, fraction:	0.282

Fluid Injected	Cumulative Fluid Injected, Pore Volumes		Apparent Permeability to Gas, millidarcys	Permeability, Permeability Initial
	fluid	total		
Humidified Nitrogen	2.65	2.6	0.052	1.000
	6.23	6.2	0.050	0.947
	10.23	10.2	0.054	1.040
Circulated Mud at Over Balance 0f 1000psi for 24 Hours and then Locked sample In with Overbalance of 500psi for 72 Hours				
Humidified Nitrogen	0.31	10.5	0.0006	0.012
	0.47	10.7	0.0015	0.028
	0.78	11.0	0.0018	0.035
	1.24	11.	0.0019	0.036
	28.38	39.	0.0109	0.209
	28.85	39.	0.0110	0.211
	64.46	75.	0.0136	0.260
	84.20	94.	0.0134	0.256
	117.17	127.	0.0136	0.260
After Removal of Mud Cake				
Humidified Nitrogen	0.81	128.2	0.0505	0.965
	2.01	129.4	0.0502	0.959
	4.12	131.5	0.0505	0.966

APPENDIX-1
LABORATORY PROCEDURES

LABORATORY PROCEDURES

Formation resistivity

Each fully saturated sample was loaded into a core holder at the reservoir equivalent NOBP (5600 psi) and the electrical resistivities measured on consecutive days until they were stable, indicating ionic equilibrium in the pore spaces. Formation factor (FRF) and cementation exponent ("m") values were then calculated.

Each sample was then de-saturated using centrifuge to a lower saturation point. Electrical resistivities of each sample were measured at this saturation. When the sample had attained electrical equilibrium at this lower saturation stage, values of resistivity index (RI) and saturation exponent "n" were calculated.

The trimmed ends of the plugs which underwent FRF and FRI measurements were cleaned in toluene and methanol, dried in a conventional oven then crushed and subjected to determinations of cation exchange capacity (CEC) using the ammonium acetate wet chemistry technique. These CEC values are used to calculate idealised "m*" and "n*" values using Waxman-Smits-Thomas equations.

Results from the electrical analysis are presented within SECTION 3 of this report.

Air-brine capillary pressure by centrifuge at ambient

The brine saturated (100% Sw) samples were loaded into individual centrifuge core holders and spun at incremental rotational speeds effecting a maximum equivalent air-brine capillary pressure of 500 psi. Each speed (RPM) was maintained for a minimum of twenty-four hours until production was stable. Volumes of brine produced were monitored as the samples achieved capillary equilibrium at each incremental pressure. The speed was then raised to the next increment. The samples were unloaded and the weights recorded.

Capillary pressure and inlet-face saturation data were then calculated from the raw data using data reduction techniques developed by Forbes. These inlet-face saturation data are presented within SECTION 4 of this report.

Water-oil (decane) capillary pressure by centrifuge at ambient

Upon completion of the centrifuge air-brine capillary pressure (i.e samples at immobile water saturation, Swi), three selected samples were loaded into individual coreholder and flushed with mineral oil (decane) against backpressure to dispel air from the pore spaces.

The samples were loaded into individual centrifuge core holders and subjected to non-stop centrifugation at rotational rates that were increased incrementally to generate equivalent pressures ranging from 0.5 to 100 psi in a water-displacing-oil system (imbibition cycle). By convention, the pressures are presented as negative values. Effluent oil volumes were monitored as the samples achieved capillary equilibrium at each incremental pressure.

Capillary pressure and inlet-face saturation data were then calculated from the raw data using data reduction techniques developed by Forbes. These inlet-face saturation data are presented within SECTION 4 of this report.

High Pressure (0-55,000 psia) Mercury Injection Capillary Pressure

Twenty-six off-cuts from selected RCA samples were used for high pressure mercury injection analysis.

The clean, dry samples were weighed and each placed in the bulb of a penetrometer selected so that the pore volume of the sample was approximately 70 - 80% of the volume of the penetrometer stem. The sample and penetrometer were weighed together.

The penetrometer containing the sample was loaded into the low pressure chamber of a Micromeritics Autopore II 9220 porosimeter. The penetrometer was evacuated to a pressure of less than 50 μm of mercury, and then filled with mercury at a pressure of 0.5 psia. The bulk volume of the sample was determined at this point.

For drainage, mercury (non-wetting phase) saturation increasing, mercury was injected into the core plug at increasing incremental pressures from 0.5 to approximately 25.0 psia. At each pressure point, mercury intrusion was monitored while the pressure was held constant. Equilibrium was identified when the rate of intrusion dropped below 0.001 μL/g-sec. The pressure and the total volume for that point were recorded.

The injection pressure was reduced to atmospheric and the penetrometer was removed and weighed with the sample and mercury in place. It was then loaded into the high pressure chamber of the Autopore system.

For drainage only, and calculation of pore size distribution, the cumulative volume of mercury injected is increased by incremental pressure changes up to the requested maximum of approximately 55,000 psia with data being recorded at each pressure as described in the paragraph above. Neither closure nor clay corrections have been applied to the data set.

<u>Calculation of mercury injection data</u>

- Sample weight, sample and penetrometer weights with and without mercury were used to calculate grain density and bulk density.

- Volumes of mercury injected at each injection pressure were recorded.

- Initial apparent intrusion at low pressures may be the result of mercury conforming to the surface irregularities of the core sample. These irregularities are not representative of the pore structure. The threshold pressure, where mercury injection into the pore structure begins, is identified as the pressure where the rate of mercury injection increases rapidly. Cumulative apparent injection up to this threshold pressure is subtracted as surface porosity from measured data before subsequent calculations are made.

- Cumulative volumes of mercury injected are expressed as a fraction of the total pore volume of the sample.

- At any mercury displacement pressure the minimum radius of pore throat that can be penetrated by mercury is given by :

$$r = \frac{2\sigma.\cos\theta.C}{Pc}$$

where:

r	= pore throat radius, μm
σ	= Interfacial tension between air and mercury, dynes/cm (485)
θ	= Contact angle between air and mercury, degrees (140)
Pc	= capillary pressure, psia
C	= conversion constant (0.145)

Using this relationship, a graph of fraction of pore volume injected (v) versus pore throat radius can be constructed. The differential of this gives a pore throat size distribution (PSD) function:

$$PSD = \frac{dv}{d\log(r)}$$

PSD is smoothed using 1 - 2 - 1 smoothing:

$$PSD_i = (PSD_{i-1} + 2PSD_i + PSD_{i+1})/4$$

PSD is then normalised to 1 as follows:

$$PSD_{normal\ i} = PSD_i/PSD_{Max}$$

- Normalised PSD is presented in graphical form along with saturation against pore throat radius and permeability distribution function against pore throat radius. The normalised pore throat size distribution function can be used to identify pore throat size groupings and the relative proportions of pore volume controlled by Macro pore throats (>1.5μm), Meso pores throats (1.5 to 0.5 μm) and Micro pore throats (<0.5 μm) - labelled as (Macroports, Mesoports and Microports) respectively.

- Oil-brine capillary pressure (reservoir) data is obtained from air-mercury data by the following conversion:

$$Pc_{o\_b} = Pc_{a\_Hg} \cdot \frac{\sigma_2 \cdot \cos\theta_2}{\sigma_1 \cdot \cos\theta_1}$$

where :

$Pc_{o\text{-}b}$	= oil-brine capillary pressure (reservoir), psia
$Pc_{a\text{-}Hg}$	= air-mercury capillary pressure, psia
σ_2	= interfacial tension between oil and brine (reservoir), dynes/cm (30)
θ_2	= contact angle between oil and brine (reservoir), degrees (30)
σ_1	= interfacial tension between air and mercury, dynes/cm (485)
θ_1	= contact angle between air and mercury, degrees (140)

- Height above free water level can be calculated as follows:

$$H = \frac{Pc_{(res)}}{(\rho_w - \rho_o)}$$

where:

H =	height above free water level, feet
$Pc_{(res)}$ =	equivalent oil/brine reservoir capillary pressure
ρ_w =	water density gradient at reservoir conditions, psi/ft
ρ_o =	oil density gradient at reservoir conditions, psi/ft

- The mean hydraulic radius (MHR), is the average pore throat size of the sample and is given by:

$$MHR = \frac{\sum_{i=0}^{n} (r_i^2 . (S_i - S_{i-1}))}{2 . \sum_{i=0}^{n} (r_i . (S_i - S_{i-1}))}$$

where:

S = mercury saturation, fraction of pore volume

- Swanson's parameter is another means of correlating capillary pressure with permeability. The technique involves determining Swanson's parameter $(Sb / Pc)_A$ (where Sb = mercury saturation, % bulk volume) which is related to the effective pore space contributing to fluid flow and the corresponding injection pressure. The Swanson parameter is determined by calculating (Sb/Pc) at all pressures for any sample and taking the maximum of these values.

  It is recommended that a cross plot of actual measured permeabilities against the Swanson parameter be used to better define the correlation coefficients for the formation in question.

  Reference:
  Swanson, B.F.: "A Simple Correlation Between Permeabilities and Mercury Capillary Pressures", JPT, December 1981, pp 2498 - 2504.

- Theoretical cumulative permeability, kt_i of a sample with a given pore size distribution, (r_0 to r_i), can be expressed as:

$$Kt_i = \sum_{i=0}^{n} r_i^2 \cdot \Delta S_i$$

  (adapted from: Purcell, W.R.: "Capillary Pressures - Their Measurement Using Mercury and the Calculation of Permeability Therefrom", Trans., AIME (1949) 186, 39 - 48.)

- kt_i in equation Hg-7 is then normalised such that the maximum value is 1.0. A cumulative Permeability Distribution Function (PDF) is given by the following equation:

$$PDF_{normal\ i} = Kt_i / Kt_{max}$$

- A method for averaging capillary pressure data from various systems is the use of the Leverett J function. The J function is a dimensionless capillary pressure function and can be expressed as:

$$J = 0.2166 . \frac{Pc}{\sigma \cos\Theta} . \sqrt{\frac{k}{\phi}}$$

  where:

  J = Leverett capillary pressure function, dimensionless
  Pc = Capillary pressure, psia

σ = Air-mercury interfacial tension, dynes/cm (485)

Θ = Air-mercury contact angle, degrees (140)

k = Permeability, md

ϕ = Porosity, fraction

There are several accepted approaches to J-function calculation concerning the contact angle term in the above equation. All data contained in this report uses a contact angle of 40^o measured through the wetting phase as has been used historically by Core Laboratories. However a contact angle of 0^o is also widely used.

FZI (Flow Zone Indicator) Calculation

- Statistical analysis of FZI values can be used to group layers of the rock into hydraulic units within which production properties should be similar.

- FZI is calculated from permeability and porosity values, the best indicator being Klinkenberg permeability (K_∞) and porosity both determined at reservoir overburden stress:

$$FZI = \frac{0.0314\sqrt{\left[\frac{K}{\phi}\right]}}{\left[\frac{\phi}{1-\phi}\right]}$$

where:

FZI	=	flow zone indicator, microns
K	=	permeability, millidarcies
ϕ	=	porosity, fraction

- FZI values presented in the tables of mercury injection data are calculated from values of Kair and porosity at minimal stress.

Regain Permeability to Gas

1. Synthetic formation brine was prepared based on the provided analysis using deionized water and reagent grade chemicals. The brine was filtered to 0.45 microns and degassed. Fluid parameters including viscosity and density were measured at ambient temperature.

2. The clean and dry selected core plug sample was evacuated of air and pressure-saturated with the prepared synthetic formation brine.

3. The sample was loaded into an air displacing brine centrifuge and spun to initial water saturation at 200 psi capillary pressure.

4. The sample was loaded in a hydrostatic coreholder inside an air bath oven with an 1/8" thick spacer ring installed on the injection face of the sample to allow for the circulation of drilling mud. Net confining stress of 5600 psi was applied, and 200 psi pore pressure was established using humidified nitrogen through the system and around the sample. Sample and system were elevated to 170°C while maintaining net confining stress and pore pressure.

5. Humidified nitrogen was injected in the production flow direction at a constant rate. Effective permeability to gas at initial water saturation was determined at two rates in the production direction.

6. Drilling mud was circulated across the injection face of the sample at the calculated overbalance pressure of 1000 psi for a period of 24 hours. Leakoff volume as a function of time was recorded. A shut-in period of 72 hours was completed. Static leakoff volume as a function of time was recorded.

7. Synthetic formation brine and humidified nitrogen were injected across the face of the sample to flush excess drilling mud out of the system. Humidified nitrogen was then re-injected in the production flow direction at an initial low constant pressure while monitoring the effluent flow rate. The constant pressure was increased in stepwise increments until there was a significant increase in flow. Liftoff pressure was determined.

8. Humidified nitrogen was injected through the core plug at a constant pressure in the production direction while monitoring the flow rate. Regain effective permeability to humidified nitrogen at residual fluid saturation was determined at two rates.

9. Coreholder, sample, and system were cooled to ambient temperature while bypassing nitrogen through the system and around the sample. Pore pressure and net confining stress were slowly removed. Each sample was unloaded from the hydrostatic coreholder.

10. The mud cake was carefully removed from the injection face of each sample, placed in a sample bag, labeled, and inventoried. The sample was re-loaded and humidified nitrogen was injected through the core plug at a constant rate in the production direction while monitoring differential pressure. Regain effective permeability to humidified nitrogen at residual fluid saturation was determined at two rates.

11. Permeability to gas versus throughput data, liftoff pressure and leakoff versus time were calculated from the experimental data and measured sample and fluid parameters using Darcy's law.

APPENDIX-2
CORE PLUG HISTORY CHART

Core Plug History Chart

Plug Parameters

Sample No.: 2DS
Depth (m) : 5063.03
Length (cm) : 4.73
Diameter (cm) : 3.79

Plug Base Data

Ambient

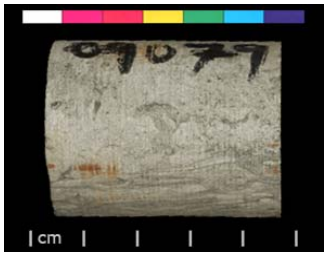
Air Permeability (md) : 0.026
Porosity (%) : 5.7
Grain Density (g/cc) : 2.666

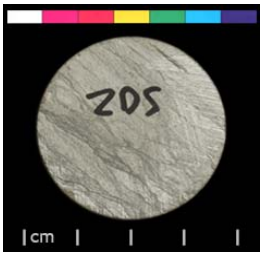
Study Flow Chart

Oven dried at 95°C
↓
Pre-test permeability and porosity at ambient condition
↓
Pre-test plug photography
↓
Formation Resistivity Factor at NOBP
↓
Resistivity Index at NOBP
↓
Re-cleaned and dried
↓
Post-test permeability and porosity at ambient condition
↓
Post-test plug photography
↓
Report

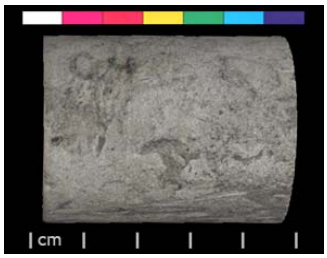
Digital Images: Side and End Face

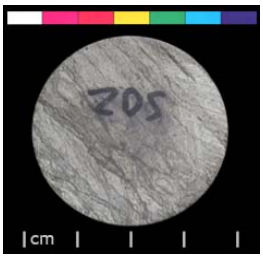
Pre-test photographs :

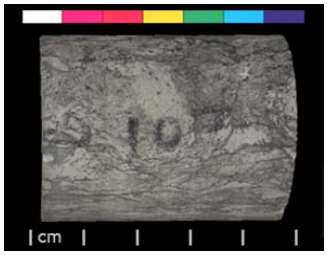




Post-test photographs:







Core Plug History Chart

Plug Parameters

Sample No.: S2-3
Depth (m) : 5064.25
Length (cm) : 4.92
Diameter (cm) : 3.81

Plug Base Data

Ambient

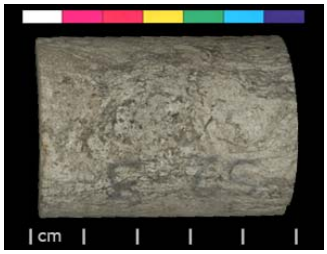
Air Permeability (md) : 0.016
Porosity (%) : 5.2
Grain Density (g/cc) : 2.697

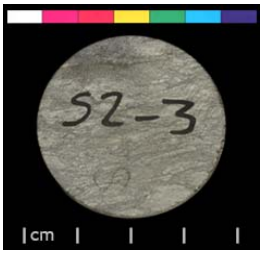
Study Flow Chart

Hot solvent extraction
↓
Oven dried at 95°C
↓
Pre-test permeability and porosity at ambient condition
↓
Pre-test plug photography
↓
Centrifuge air/water capillary pressure
↓
Re-cleaned and dried
↓
Post-test permeability and porosity at ambient condition
↓
Post-test plug photography
↓
Report

Digital Images: Side and End Face

Pre-test photographs :





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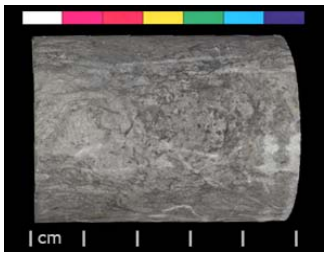
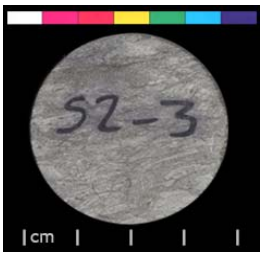
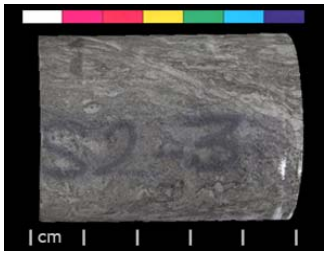






Core Plug History Chart

Plug Parameters

Sample No.: S2-12
Depth (m) : 5078.68
Length (cm) : 4.73
Diameter (cm) : 3.81

Plug Base Data

Ambient

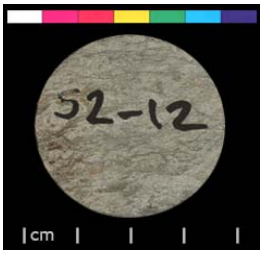
Air Permeability (md) : 0.027
Porosity (%) : 6.1
Grain Density (g/cc) : 2.700

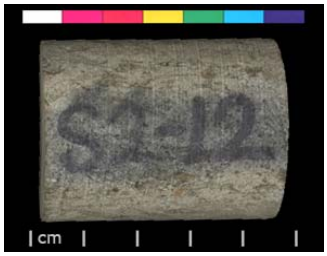
Study Flow Chart

Hot solvent extraction
⬇
Oven dried at 95°C
⬇
Pre-test permeability and porosity at ambient condition
⬇
Pre-test plug photography
⬇
Centrifuge air/water capillary pressure
⬇
Re-cleaned and dried
⬇
Post-test permeability and porosity at ambient condition
⬇
Post-test plug photography
⬇
Report

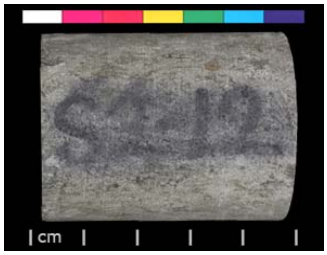
Digital Images: Side and End Face

Pre-test photographs :





Post-test photographs:



Core Plug History Chart

Plug Parameters

Sample No.: S2-14
Depth (m) : 5080.24
Length (cm) : 4.95
Diameter (cm) : 3.80

Plug Base Data

Ambient

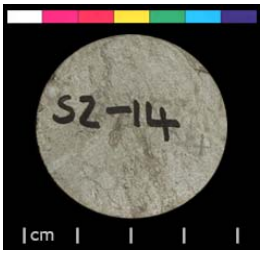
Air Permeability (md) : 0.021
Porosity (%) : 5.5
Grain Density (g/cc) : 2.690

Study Flow Chart

Hot solvent extraction
↓
Oven dried at 95°C
↓
Pre-test permeability and porosity at ambient condition
↓
Pre-test plug photography
↓
Centrifuge air/water capillary pressure
↓
Re-cleaned and dried
↓
Post-test permeability and porosity at ambient condition
↓
Post-test plug photography
↓
Report

Digital Images: Side and End Face

Pre-test photographs :



Post-test photographs:

Core Plug History Chart

Plug Parameters

Sample No.: S2-15
Depth (m) : 5081.48
Length (cm) : 4.94
Diameter (cm) : 3.80

Plug Base Data

Ambient

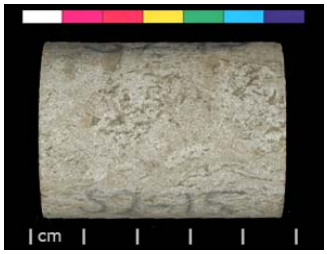
Air Permeability (md) : 0.029
Porosity (%) : 7.0
Grain Density (g/cc) : 2.708

Study Flow Chart

Hot solvent extraction
⬇
Oven dried at 95°C
⬇
Pre-test permeability and porosity at ambient condition
⬇
Pre-test plug photography
⬇
Centrifuge air/water capillary pressure
⬇
Re-cleaned and dried
⬇
Post-test permeability and porosity at ambient condition
⬇
Post-test plug photography
⬇
Report

Digital Images: Side and End Face

Pre-test photographs :



Post-test photographs:

Core Plug History Chart

Plug Parameters

Sample No.: 11DS
Depth (m) : 5081.78
Length (cm) : 4.64
Diameter (cm) : 3.80

Plug Base Data

Ambient

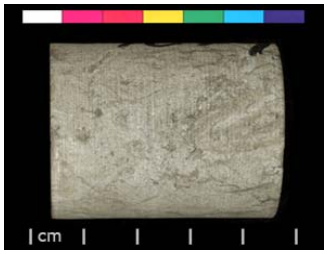
Air Permeability (md) : 0.019
Porosity (%) : 7.1
Grain Density (g/cc) : 2.694

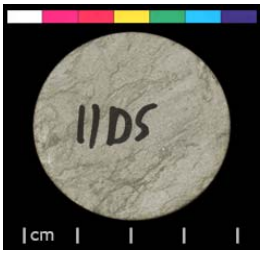
Study Flow Chart

Oven dried at 95°C
↓
Pre-test permeability and porosity at ambient condition
↓
Pre-test plug photography
↓
Formation Resistivity Factor at NOBP
↓
Resistivity Index at NOBP
↓
Re-cleaned and dried
↓
Post-test permeability and porosity at ambient condition
↓
Post-test plug photography
↓
Report

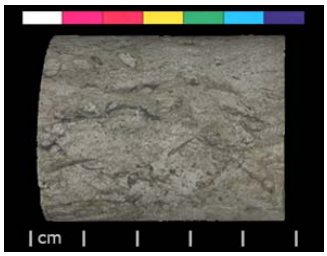
Digital Images: Side and End Face

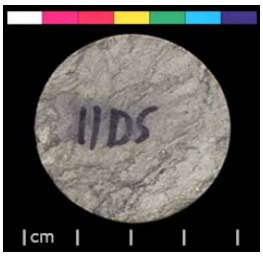
Pre-test photographs :

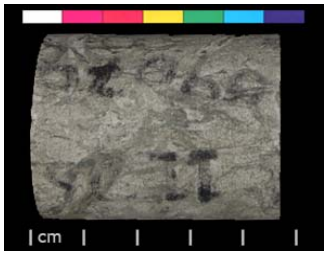




Post-test photographs:







Core Plug History Chart

Plug Parameters

Sample No.: S1-6
Depth (m) : 5082.15
Length (cm) : 4.89
Diameter (cm) : 3.81

Plug Base Data

Ambient

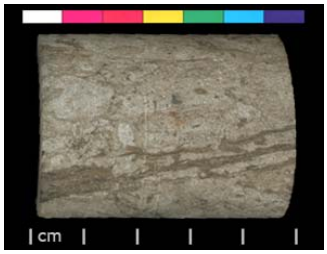
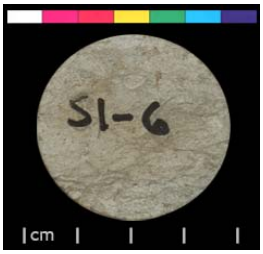
Air Permeability (md) : 0.025
Porosity (%) : 7.5
Grain Density (g/cc) : 2.718

Study Flow Chart

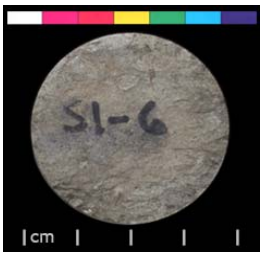
Hot solvent extraction
↓
Oven dried at 95°C
↓
Pre-test permeability and porosity at ambient condition
↓
Pre-test plug photography
↓
Formation Resistivity Factor at NOBP
↓
Resistivity Index at NOBP
↓
Re-cleaned and dried
↓
Post-test permeability and porosity at ambient condition
↓
Post-test plug photography
↓
Report

Digital Images: Side and End Face

Pre-test photographs :

Post-test photographs:

Core Plug History Chart

Plug Parameters

Sample No.: S2-16
Depth (m) : 5082.15
Length (cm) : 4.99
Diameter (cm) : 3.81

Plug Base Data

Ambient

Air Permeability (md) : 0.031
Porosity (%) : 8.0
Grain Density (g/cc) : 2.725

Study Flow Chart

Hot solvent extraction
↓
Oven dried at 95°C
↓
Pre-test permeability and porosity at ambient condition
↓
Pre-test plug photography
↓
Centrifuge air/water capillary pressure
↓
Re-cleaned and dried
↓
Post-test permeability and porosity at ambient condition
↓
Post-test plug photography
↓
Report

Digital Images: Side and End Face

Pre-test photographs :

Post-test photographs:

Core Plug History Chart

Plug Parameters

Sample No.: 13DS
Depth (m) : 5084.35
Length (cm) : 4.65
Diameter (cm) : 3.79

Plug Base Data

Ambient

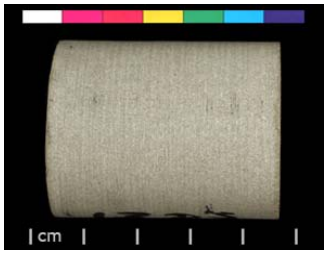
Air Permeability (md) : 0.059
Porosity (%) : 7.2
Grain Density (g/cc) : 2.715

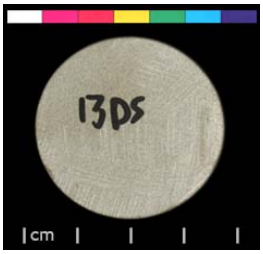
Study Flow Chart

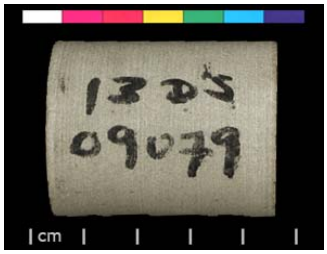
Oven dried at 95°C
↓
Pre-test permeability and porosity at ambient condition
↓
Pre-test plug photography
↓
Formation Resistivity Factor at NOBP
↓
Resistivity Index at NOBP
↓
Re-cleaned and dried
↓
Post-test permeability and porosity at ambient condition
↓
Post-test plug photography
↓
Report

Digital Images: Side and End Face

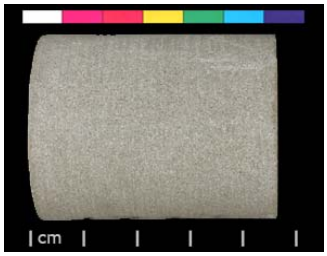
Pre-test photographs :

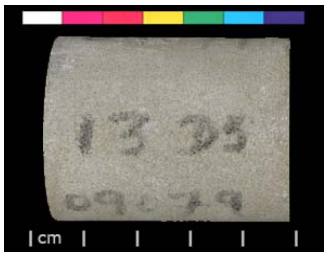






Post-test photographs:





Core Plug History Chart

Plug Parameters

Sample No.: S2-17
Depth (m) : 5085.76
Length (cm) : 4.88
Diameter (cm) : 3.81

Plug Base Data

Ambient

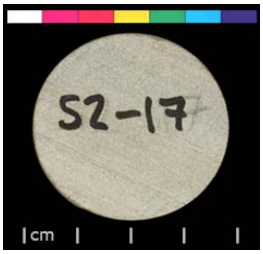
Air Permeability (md) : 0.169
Porosity (%) : 10.7
Grain Density (g/cc) : 2.672

Study Flow Chart

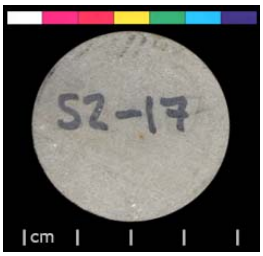
Hot solvent extraction
⬇
Oven dried at 95°C
⬇
Pre-test permeability and porosity at ambient condition
⬇
Pre-test plug photography
⬇
Centrifuge air/water capillary pressure
⬇
Centrifuge water/oil capillary pressure
⬇
Re-cleaned and dried
⬇
Post-test permeability and porosity at ambient condition
⬇
Post-test plug photography
⬇
Report

Digital Images: Side and End Face

Pre-test photographs :



Post-test photographs:



Core Plug History Chart

Plug Parameters

Sample No.: 14DS
Depth (m) : 5086.29
Length (cm) : 4.43
Diameter (cm) : 3.80

Plug Base Data

Ambient

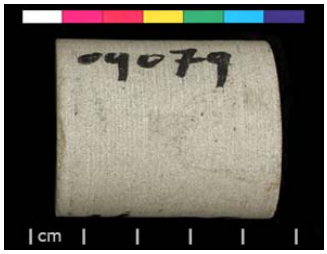
Air Permeability (md) : 0.22
Porosity (%) : 10.6
Grain Density (g/cc) : 2.678

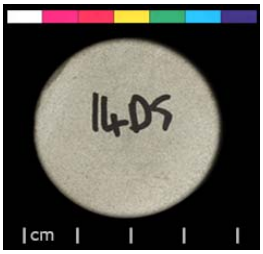
Study Flow Chart

Oven dried at 95°C
↓
Pre-test permeability and porosity at ambient condition
↓
Pre-test plug photography
↓
Formation Resistivity Factor at NOBP
↓
Resistivity Index at NOBP
↓
Re-cleaned and dried
↓
Post-test permeability and porosity at ambient condition
↓
Post-test plug photography
↓
Report

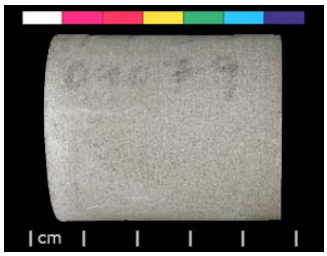
Digital Images: Side and End Face

Pre-test photographs :





Post-test photographs:



Core Plug History Chart

Plug Parameters

Sample No.: S2-18
Depth (m) : 5086.56
Length (cm) : 4.84
Diameter (cm) : 3.81

Plug Base Data

Ambient

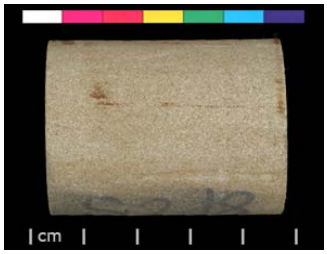
Air Permeability (md) : 0.363
Porosity (%) : 13.2
Grain Density (g/cc) : 2.771

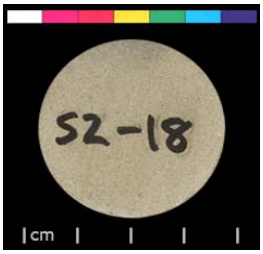
Study Flow Chart

Hot solvent extraction
⬇
Oven dried at 95°C
⬇
Pre-test permeability and porosity at ambient condition
⬇
Pre-test plug photography
⬇
Centrifuge air/water capillary pressure
⬇
Centrifuge water/oil capillary pressure
⬇
Re-cleaned and dried
⬇
Post-test permeability and porosity at ambient condition
⬇
Post-test plug photography
⬇
Report

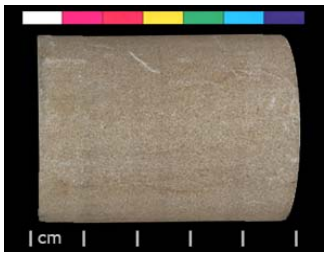
Digital Images: Side and End Face

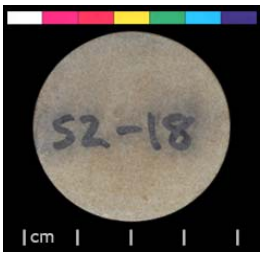
Pre-test photographs :

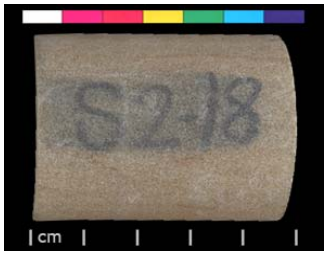




Post-test photographs:







Core Plug History Chart

Plug Parameters

Sample No.: 15DS
Depth (m) : 5087.35
Length (cm) : 4.84
Diameter (cm) : 3.81

Plug Base Data

Ambient

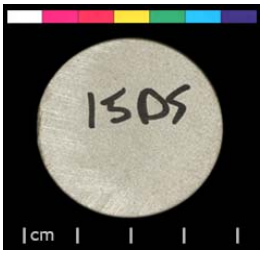
Air Permeability (md) : 0.247
Porosity (%) : 10.2
Grain Density (g/cc) : 2.670

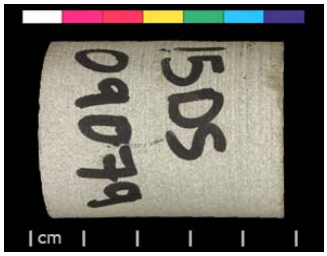
Study Flow Chart

Oven dried at 95°C
↓
Pre-test permeability and porosity at ambient condition
↓
Pre-test plug photography
↓
Formation Resistivity Factor at NOBP
↓
Resistivity Index at NOBP
↓
Re-cleaned and dried
↓
Post-test permeability and porosity at ambient condition
↓
Post-test plug photography
↓
Report

Digital Images: Side and End Face

Pre-test photographs :





Post-test photographs:

Core Plug History Chart

Plug Parameters

Sample No.: S2-19
Depth (m) : 5088.35
Length (cm) : 4.43
Diameter (cm) : 3.81

Plug Base Data

Ambient

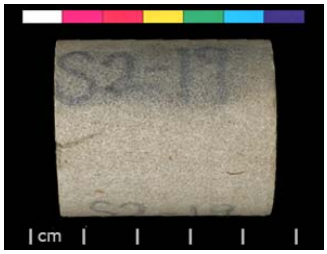
Air Permeability (md) : 0.199
Porosity (%) : 9.6
Grain Density (g/cc) : 2.674

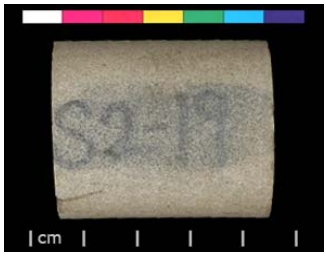
Study Flow Chart

Hot solvent extraction
↓
Oven dried at 95°C
↓
Pre-test permeability and porosity at ambient condition
↓
Pre-test plug photography
↓
Centrifuge air/water capillary pressure
↓
Centrifuge water/oil capillary pressure
↓
Re-cleaned and dried
↓
Post-test permeability and porosity at ambient condition
↓
Post-test plug photography
↓
Report

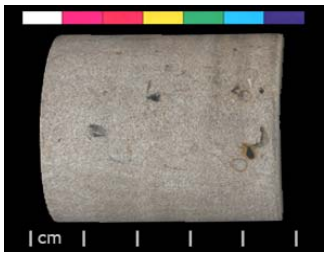
Digital Images: Side and End Face

Pre-test photographs :





Post-test photographs:



Core Plug History Chart

Plug Parameters

Sample No.: 19DS
Depth (m) : 5090.18
Length (cm) : 4.13
Diameter (cm) : 3.81

Plug Base Data

Ambient

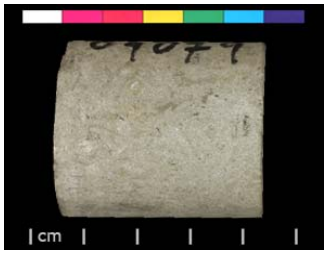
Air Permeability (md) : 0.055
Porosity (%) : 8.3
Grain Density (g/cc) : 2.760

Study Flow Chart

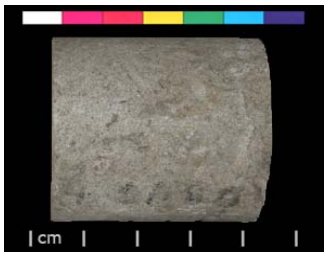
Oven dried at 95°C
↓
Pre-test permeability and porosity at ambient condition
↓
Pre-test plug photography
↓
Formation Resistivity Factor at NOBP
↓
Resistivity Index at NOBP
↓
Re-cleaned and dried
↓
Post-test permeability and porosity at ambient condition
↓
Post-test plug photography
↓
Report

Digital Images: Side and End Face

Pre-test photographs :



Post-test photographs:



Core Plug History Chart

Plug Parameters

Sample No.: 23DS
Depth (m) : 5104.09
Length (cm) : 4.28
Diameter (cm) : 3.78

Plug Base Data

Ambient

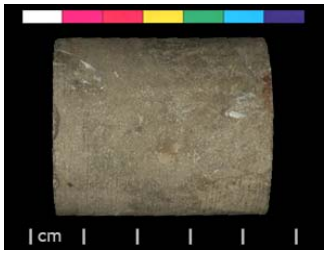
Air Permeability (md) : 0.019
Porosity (%) : 4.3
Grain Density (g/cc) : 3.124

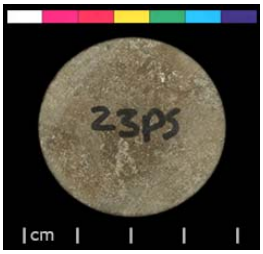
Study Flow Chart

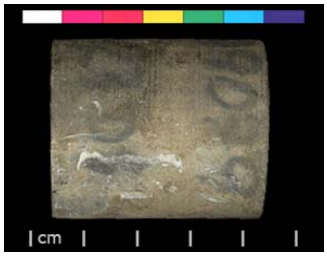
Oven dried at 95°C
↓
Pre-test permeability and porosity at ambient condition
↓
Pre-test plug photography
↓
Formation Resistivity Factor at NOBP
↓
Resistivity Index at NOBP
↓
Re-cleaned and dried
↓
Post-test permeability and porosity at ambient condition
↓
Post-test plug photography
↓
Report

Digital Images: Side and End Face

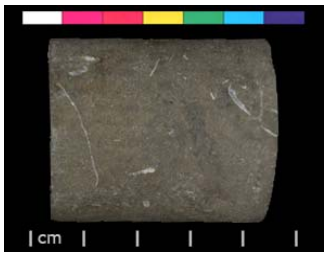
Pre-test photographs :







Post-test photographs:



APPENDIX-3
TEST RAWDATA

COMPANY : CONOCOPHILLIPS (BROWSE BASIN) PTY LTD
WELL : POSEIDON-2

POROSITY BY ARCHIMEDES' PRINCIPLE

Density of Saturant (g/cc): 1.015

SAMPLE No.	DIAMETER (cm)	LENGTH (cm)	DRY WEIGHT (g)	SAT. WEIGHT (g)	IMMERSED WEIGHT (g)	BULK VOLUME (cc)	PORE VOLUME (cc)	GRAIN VOLUME (cc)	POR. (%)	GRAIN DENSITY (g/cc)
S1-6	3.81	4.89	139.6397	144.0122	87.505	55.6721	4.308	51.3642	7.7	2.72
S2-3	3.81	4.92	143.4841	146.5182	89.463	56.2120	2.989	53.2228	5.3	2.70
S2-12	3.81	4.73	136.3615	139.7915	85.093	53.8901	3.379	50.5108	6.3	2.70
S2-14	3.80	4.95	143.3584	146.6616	89.32	56.4942	3.254	53.2398	5.8	2.69
S2-15	3.80	4.94	141.9584	146.0555	88.739	56.4695	4.037	52.4329	7.1	2.71
S2-16	3.81	4.99	142.6995	147.4255	89.555	57.0153	4.656	52.3591	8.2	2.73
S2-17	3.81	4.88	132.9796	139.1012	82.487	55.7775	6.031	49.7464	10.8	2.67
S2-18	3.81	4.84	132.2771	139.7446	83.829	55.0893	7.357	47.7321	13.4	2.77
S2-19	3.81	4.43	121.8144	126.8448	75.575	50.5121	4.956	45.5561	9.8	2.67
2DS	3.79	4.73	133.9221	137.1881	83.028	53.3597	3.218	50.1420	6.0	2.67
11DS	3.80	4.64	131.9636	135.8782	82.668	52.4238	3.857	48.5671	7.4	2.72
13DS	3.79	4.65	132.1794	136.1142	82.786	52.5401	3.877	48.6634	7.4	2.72
14DS	3.80	4.43	119.9219	125.3941	74.973	49.6760	5.391	44.2846	10.9	2.71
15DS	3.81	4.84	131.2993	137.1017	81.409	54.8697	5.717	49.1530	10.4	2.67
19DS	3.81	4.13	118.5188	122.5777	74.965	46.9091	3.999	42.9101	8.5	2.76
23DS	3.78	4.28	143.3232	145.4954	96.725	48.0497	2.140	45.9096	4.5	3.12

Sleeve conformance during FRF

Sample : 2DS

NOB psi	Water out cc
50	1.80
100	1.86
150	1.90
200	1.92
400	2.00
800	2.02
5600	2.22

Sample : 11DS

NOB psi	Water out cc
50	1.63
100	1.70
150	1.71
200	1.71
400	1.75
800	1.81
5600	2.07

Sample : S1-6

NOB psi	Water out cc
50	0.90
100	1.00
150	1.03
200	1.05
400	1.10
800	1.20
5600	1.46

Sample :13 DS

NOB psi	Water out cc
50	0.72
100	0.78
150	0.86
200	0.91
400	0.93
800	0.95
5600	1.11

Sample : 14DS

NOB psi	Water out cc
50	0.33
100	0.40
150	0.46
200	0.49
400	0.53
800	0.59
5600	0.78

Sample : 15DS

NOB psi	Water out cc
50	0.20
100	0.25
150	0.28
200	0.30
400	0.35
800	0.40
5600	0.73

Sample : 19DS

NOB psi	Water out cc
50	0.90
100	1.08
150	1.13
200	1.20
400	1.32
800	1.41
5600	1.55

Sample : 23DS

NOB psi	Water out cc
50	0.44
100	0.53
150	0.60
200	0.65
400	0.69
800	0.72
5600	0.82

COMPANY : **CONOCOPHILLIPS (BROWSE BASIN) PTY LTD**
WELL : **POSEIDON-2**

Sample no.	Depth (m)	CEC meq/100g	Grain Density g/cc	Porosity (frac) At NOBP
2DS	5063.03	4.75	2.666	0.056
11DS	5081.78	5.98	2.694	0.067
S1-6	5082.15	5.86	2.718	0.071
13DS	5084.35	2.35	2.715	0.070
14DS	5086.29	3.19	2.678	0.103
15DS	5087.35	3.07	2.67	0.097
19DS	5090.18	2.98	2.76	0.081
23DS	5104.09	5.86	3.124	0.041

COMPANY : CONOCOPHILLIPS (BROWSE BASIN) PTY LTD

WELL : POSEIDON-2

FORMATION RESISTIVITY FACTOR AND RESISTIVITY INDEX AT OVERBURDEN PRESSURE

Sample : 2DS **Rw = 0.2429 ohmm**

FORMATION RESISTIVITY FACTOR						
NOB psi	PV cc	Porosity frac	ro at 77 F	Ro	FF	"m"
400	3.22	0.060	1161.47	27.70	114	-1.69
5600	3.00	0.056	2270.82	54.09	223	-1.88

FORMATION RESISTIVITY INDEX							
Brine Out cc	Sat frac	rt at 77 F	Rt Ohm-m	RI using FF Ro	N using FF Ro		
0.42	0.86	2608.59	62.13	1.15	-0.92		
0.55	0.82	2719.29	64.77	1.20	-0.89	Dean-Stark (cc)	2.31

Sample : 11DS

FORMATION RESISTIVITY FACTOR						
NOB psi	PV cc	Porosity frac	ro at 77 F	Ro	FF	"m"
200	3.86	0.074	1268.87	31.01	128	-1.86
5600	3.50	0.067	1874.36	45.71	188	-1.94

FORMATION RESISTIVITY INDEX							
Brine Out cc	Sat frac	rt at 77 F	Rt Ohm-m	RI using FF Ro	N using FF Ro		
0.74	0.79	2511.59	61.25	1.34	-1.23		
1.06	0.70	2818.67	68.74	1.50	-1.13	Dean-Stark (cc)	2.35

Sample : S1-6

FORMATION RESISTIVITY FACTOR						
NOB psi	PV cc	Porosity frac	ro at 77 F	Ro	FF	"m"
400	4.31	0.077	906.46	21.13	87.0	-1.74
5600	3.95	0.071	1609.06	37.43	154	-1.91

FORMATION RESISTIVITY INDEX							
Brine Out cc	Sat frac	rt at 77 F	Rt Ohm-m	RI using FF Ro	N using FF Ro		
0.75	0.81	1855.39	43.16	1.15	-0.68		
1.05	0.73	2211.77	51.46	1.37	-1.03	Dean-Stark (cc)	2.60

Sample : 13DS

FORMATION RESISTIVITY FACTOR						
NOB psi	PV cc	Porosity frac	ro at 77 F	Ro	FF	"m"
200	3.877	0.074	1032.95	25.06	103	-1.78
5600	3.677	0.070	1868.43	45.27	186	-1.97

FORMATION RESISTIVITY INDEX							
Brine Out cc	Sat frac	rt at 77 F	Rt Ohm-m	RI using FF Ro	N using FF Ro		
1.96	0.47	4042.12	97.94	2.16	-1.01		
2.09	0.43	5564.87	134.84	2.98	-1.30	Dean-Stark (cc)	1.56

COMPANY : CONOCOPHILLIPS (BROWSE BASIN) PTY LTD

WELL : POSEIDON-2

FORMATION RESISTIVITY FACTOR AND RESISTIVITY INDEX AT OVERBURDEN PRESSURE

Sample : 14DS **Rw = 0.2429 ohmm**

FORMATION RESISTIVITY FACTOR						
NOB psi	PV cc	Porosity frac	ro at 77 F	Ro	FF	"m"
200	5.44	0.108	669.27	17.13	70.5	-1.91
5600	5.15	0.103	1058.45	27.04	111	-2.07

FORMATION RESISTIVITY INDEX							
Brine Out cc	Sat frac	rt at 77 F	Rt Ohm-m	RI using FF Ro	N using FF Ro		
3.45	0.33	3968.19	101.39	3.75	-1.19		
3.85	0.25	6350.22	162.26	6.00	-1.31	Dean-Stark (cc)	1.09

Sample : 15DS

FORMATION RESISTIVITY FACTOR						
NOB psi	PV cc	Porosity frac	ro at 77 F	Ro	FF	"m"
400	5.72	0.104	716.19	18.34	75.5	-1.91
5600	5.34	0.097	1141.39	29.16	120	-2.06

FORMATION RESISTIVITY INDEX							
Brine Out cc	Sat frac	rt at 77 F	Rt Ohm-m	RI using FF Ro	N using FF Ro		
3.71	0.31	5375.76	137.34	4.71	-1.31		
4.08	0.23	7457.76	190.53	6.53	-1.30	Dean-Stark (cc)	1.06

Sample : 19DS

FORMATION RESISTIVITY FACTOR						
NOB psi	PV cc	Porosity frac	ro at 77 F	Ro	FF	"m"
400	4.00	0.085	756.73	20.89	86.0	-1.81
5600	3.77	0.081	1204.79	33.20	137	-1.95

FORMATION RESISTIVITY INDEX							
Brine Out cc	Sat frac	rt at 77 F	Rt Ohm-m	RI using FF Ro	N using FF Ro		
1.71	0.55	2376.09	65.49	1.97	-1.12		
2.06	0.45	3792.86	104.53	3.15	-1.45	Dean-Stark (cc)	1.55

Sample : 23DS

FORMATION RESISTIVITY FACTOR						
NOB psi	PV cc	Porosity frac	ro at 77 F	Ro	FF	"m"
200	2.140	0.045	2911.45	97.87	403	-1.93
5600	1.970	0.041	3793.02	127.32	524	-1.96

FORMATION RESISTIVITY INDEX							
Brine Out cc	Sat frac	rt at 77 F	Rt Ohm-m	RI using FF Ro	N using FF Ro		
0.19	0.90	3955.91	132.79	1.04	-0.42		
0.24	0.88	4512.54	151.47	1.19	-1.34	Dean-Stark (cc)	1.54

COMPANY : CONOCOPHILLIPS (BROWSE BASIN) PTY LTD
WELL : POSEIDON-2

CENTRIFUGE CAPILLARY PRESSURE RAWDATA

Sample	S2-3
Pore Vol, cc	2.989
Length, cm	4.92
Radius of Rotation	9.13
Density of air	0.001
Density of brine	1.015
Dean-Stark (cc)	0.87

Drainage		
RPM	Pc, psi	Water Out, cc
2210	25.6	0.00
3120	51.1	0.00
4420	102.6	0.00
6250	205.1	0.08
7660	308.0	0.20
9890	513.5	0.40

Sample	S2-12
Pore Vol, cc	3.379
Length, cm	4.73
Radius of Rotation	9.13
Density of air	0.001
Density of brine	1.015
Dean-Stark (cc)	1.12

Drainage		
RPM	Pc, psi	Water Out, cc
2210	25.0	0.00
3120	49.8	0.00
4420	100.0	0.00
6250	200.0	0.10
7660	300.4	0.39
9890	500.7	0.80

Sample	S2-14
Pore Vol, cc	3.254
Length, cm	4.95
Radius of Rotation	9.13
Density of air	0.001
Density of brine	1.015
Dean-Stark (cc)	0.82

Drainage		
RPM	Pc, psi	Water Out, cc
2210	25.7	0.00
3120	51.3	0.00
4420	103.0	0.05
6250	205.9	0.40
7660	309.2	0.72
9890	515.5	1.10

Sample	S2-15
Pore Vol, cc	4.037
Length, cm	4.94
Radius of Rotation	9.13
Density of air	0.001
Density of brine	1.015
Dean-Stark (cc)	1.02

Drainage		
RPM	Pc, psi	Water Out, cc
2210	25.7	0.00
3120	51.2	0.00
4420	102.8	0.00
6250	205.6	0.60
7660	308.8	1.00
9890	514.8	1.41

Sample	S2-16
Pore Vol, cc	4.656
Length, cm	4.99
Radius of Rotation	9.13
Density of air	0.001
Density of brine	1.015
Dean-Stark (cc)	0.76

Drainage		
RPM	Pc, psi	Water Out, cc
2210	25.9	0.00
3120	51.6	0.00
4420	103.5	0.05
6250	206.9	0.90
7660	310.8	1.40
9890	518.1	1.90

Sample	S2-17
Pore Vol, cc	6.031
Length, cm	4.88
Radius of Rotation	9.13
Density of air	0.001
Density of brine	1.015
Dean-Stark (cc)	2.80

Drainage		
RPM	Pc, psi	Water Out, cc
2210	25.5	0.00
3120	50.8	0.59
4420	102.0	1.78
6250	204.0	2.91
7660	306.5	3.45
9890	510.9	4.05

COMPANY : **CONOCOPHILLIPS (BROWSE BASIN) PTY LTD**
WELL : **POSEIDON-2**

CENTRIFUGE CAPILLARY PRESSURE RAWDATA

Sample	S2-18
Pore Vol, cc	7.357
Length, cm	4.84
Radius of Rotation	9.13
Density of air	0.001
Density of brine	1.015
Dean-Stark (cc)	3.50

Drainage		
RPM	**Pc, psi**	**Water Out, cc**
2210	25.4	0.00
3120	50.6	1.78
4420	101.5	3.29
6250	202.9	4.48
7660	304.8	5.07
9890	508.2	5.56

Sample	S2-19
Pore Vol, cc	4.956
Length, cm	4.43
Radius of Rotation	9.13
Density of air	0.001
Density of brine	1.015
Dean-Stark (cc)	2.00

Drainage		
RPM	**Pc, psi**	**Water Out, cc**
2210	23.9	0.00
3120	47.7	0.65
4420	95.7	1.80
6250	191.4	2.80
7660	287.5	3.20
9890	479.3	3.60

COMPANY : CONOCOPHILLIPS (BROWSE BASIN) PTY LTD
WELL : POSEIDON-2

CENTRIFUGE CAPILLARY PRESSURE RAWDATA

Sample	S2-17
Pore Vol, cc	6.031
Length, cm	4.88
Radius of Rotation	16.63
Density of oil	0.727
Density of brine	1.015
Dean-Stark (cc)	

Imbibition		
RPM	Pc, psi	Oil Out, cc
400	0.5	0.85
570	1.0	0.90
800	2.0	1.02
1270	5.1	1.05
2210	15.4	1.05
3130	30.8	1.05
5710	102.6	1.05

Sample	S2-18
Pore Vol, cc	7.357
Length, cm	4.84
Radius of Rotation	16.63
Density of brine	0.727
Density of air	1.015
Dean-Stark (cc)	

Imbibition		
RPM	Pc, psi	Oil Out, cc
400	0.5	1.32
570	1.0	1.40
800	2.0	1.64
1270	5.0	1.68
2210	15.3	1.72
3130	30.6	1.73
5710	101.9	1.73

Sample	S2-19
Pore Vol, cc	4.956
Length, cm	4.43
Radius of Rotation	16.63
Density of brine	0.727
Density of air	1.015
Dean-Stark (cc)	

Imbibition		
RPM	Pc, psi	Oil Out, cc
400	0.5	0.25
570	0.9	0.45
800	1.9	0.68
1270	4.7	0.70
2210	14.2	0.70
3130	28.4	0.70
5710	94.6	0.71