

Capillary pressure test data for the following North Slope wells:

Exxon Corp.	Alaska State A No. 1
Exxon Corp.	Alaska State F No. 1
Exxon Corp.	Point Thomson Unit No. 1
Mobil Oil Corp.	Mikkelsen Bay State 13-09-19
Sohio Alaska Pet. Co.	Long Island No. 1
Mobil Oil Corp.	Gwydyr Bay State Unit No. 1
Sinclair Oil & Gas	Colville No. 1
Husky Oil NPR Oper. Inc. (U.S.G.S.)	Inigok Test Well No. 1
Husky Oil NPR Oper. Inc. (U.S.G.S.)	Ikpikpuk Test Well No. 1
U.S. Navy	South Barrow Test Well No. 1
U.S. Navy	Point Barrow Core Test No. 1
U.S. Navy	South Barrow No. 2
U.S. Navy	South Barrow No. 3
Husky Oil NPR Oper. Inc. (U.S.G.S.)	Peard Test Well No. 1

TABLE P-47

Exxon #A-1 Alaska State 12528

feet

Mercury Injection Capillary Pressure (psia)	Approx. Pore Entry Diameter ( $\mu$ m)	Cumulative Wetting Phase Saturation (% pore vol)	Distri- bution Func- tion	Cumula- tive Surface Area ( $\mu^2$ /g)	Equivalent Cylindrical Pore Diameter ( $\mu$ m)	Approx. Reservoir Gas-Oil Capillary Pressure (psia)	Approx. Gas-Oil Height Above Free Water Level (ft)	Burdine-Purcell Calculated	
								Gas Relative Permea- bility (%)	Brine Relative Permea- bility (%)
0	0	100.0	0.0	0.000	0.000	0.00	0.0	0.00	100.00
2	107.	100.0	0.0	0.000	0.000	0.17	1.2	0.00	100.00
4	53.8	100.0	0.0	0.000	0.000	0.35	2.5	0.00	100.00
6	35.8	100.0	0.0	0.000	0.000	0.52	3.7	0.00	100.00
8	26.9	100.0	0.0	0.000	0.000	0.69	4.9	0.00	100.00
10	21.5	100.0	0.0	0.000	0.000	0.87	6.2	0.00	100.00
12	17.9	100.0	0.0	0.000	0.000	1.04	7.4	0.00	100.00
15	14.3	100.0	0.0	0.000	0.000	1.30	9.3	0.00	100.00
18	11.9	100.0	0.0	0.000	0.000	1.56	11.1	0.00	100.00
21	10.2	100.0	0.0	0.000	0.000	1.82	13.0	0.00	100.00
25	8.60	100.0	0.0	0.000	0.000	2.16	15.5	0.00	100.00
30	7.17	100.0	0.0	0.000	0.000	2.60	18.5	0.00	100.00
40	5.37	100.0	0.0	0.000	0.000	3.46	24.7	0.00	100.00
50	4.30	100.0	0.0	0.000	0.000	4.33	30.9	0.00	100.00
60	3.58	100.0	0.0	0.000	0.000	5.19	37.1	0.00	100.00
80	2.69	100.0	0.0	0.000	0.000	6.92	49.4	0.00	100.00
100	2.15	100.0	0.0	0.000	0.000	8.65	61.8	0.00	100.00
200	1.08	75.9	80.6	0.018	0.089	17.30	123.6	4.18	16.17
300	.717	61.5	81.2	0.034	0.593	25.96	185.4	12.99	4.73
400	.537	50.5	87.5	0.051	0.444	34.61	247.2	22.93	1.66
500	.430	41.8	89.6	0.067	0.356	43.26	309.0	32.61	0.64
600	.358	34.5	91.7	0.083	0.296	51.91	370.8	42.00	0.24
800	.268	26.7	62.5	0.107	0.222	69.22	494.4	53.26	0.07
1000	.215	21.5	54.3	0.126	0.178	86.52	618.0	61.35	0.02
1500	.143	13.3	45.9	0.172	0.119	129.79	927.0	74.96	0.00
2000	.107	8.7	37.0	0.206	0.089	173.05	1236.1	83.34	0.00
3000	.072	4.4	24.8	0.255	0.059	259.57	1854.1	91.43	0.00
4000	.054	1.9	19.3	0.291	0.044	346.10	2472.1	96.14	0.00
5000	.043	0.0	20.2	0.327	0.036	432.62	3090.2	100.00	0.00
6000	.035	0.0	0.0	0.327	0.000	519.15	3708.2	100.00	0.00
7000	.031	0.0	0.0	0.327	0.000	605.67	4326.2	100.00	0.00
8000	.027	0.0	0.0	0.327	0.000	692.20	4944.3	100.00	0.00
9000	.024	0.0	0.0	0.327	0.000	778.72	5562.3	100.00	0.00
10000	.022	0.0	0.0	0.327	0.000	865.24	6180.3	100.00	0.00

All Hg calculations assume  $T=484$  dyne/cm<sup>2</sup>, Contact Angle=140deg.Gas-Oil  $P_c$  assumes Gas  $T\cos\theta=32.0832$  dynes/cm.

Density gradient for oil=0.33psi/ft; brine=0.47psi/ft.

# TABLE P-48

Exxon #A-1 Alaska State 12579

feet

Mercury Injection Capillary Pressure (psia)	Approx. Pore Entry Diameter (um)	Cumulative Wetting Phase Saturation (% pore vol)	Distri- bution Func- tion	Cumula- tive Surface Area (m2/g)	Equivalent Cylindrical Pore Diameter (um)	Approx. Reservoir Gas-Oil Capillary Pressure (psia)	Approx. Gas-Oil Height Above Free Water Level (ft)	Burdine-Purcell Calculated	
								Gas Relative Permea- bility (%)	Brine Relative Permea- bility (%)
0	0	100.0	0.0	0.000	0.000	0.00	0.0	0.00	100.00
2	107.	100.0	0.0	0.000	0.000	0.13	0.9	0.00	100.00
4	53.8	100.0	0.0	0.000	0.000	0.27	1.9	0.00	100.00
6	35.8	100.0	0.0	0.000	0.000	0.40	2.8	0.00	100.00
8	26.9	100.0	0.0	0.000	0.000	0.53	3.8	0.00	100.00
10	21.5	100.0	0.0	0.000	0.000	0.66	4.7	0.00	100.00
12	17.9	100.0	0.0	0.000	0.000	0.80	5.7	0.00	100.00
15	14.3	98.8	12.7	0.000	11.852	1.00	7.1	0.00	88.36
18	11.9	98.0	9.0	0.000	9.877	1.19	8.5	0.01	83.55
21	10.2	96.8	18.6	0.000	8.466	1.39	10.0	0.02	77.18
25	8.60	90.5	84.6	0.002	7.111	1.66	11.8	0.31	54.04
30	7.17	63.3	345.2	0.009	5.926	1.99	14.2	11.34	6.39
40	5.37	57.7	43.9	0.011	4.444	2.65	19.0	16.11	3.25
50	4.30	51.4	66.1	0.014	3.556	3.32	23.7	22.38	1.42
60	3.58	47.8	45.3	0.015	2.963	3.98	28.4	26.27	0.85
80	2.69	41.1	53.9	0.020	2.222	5.31	37.9	34.08	0.31
100	2.15	36.7	45.4	0.024	1.778	6.63	47.4	39.69	0.14
200	1.08	23.1	45.3	0.047	0.889	13.27	94.8	58.97	0.01
300	.717	16.0	40.0	0.066	0.593	19.90	142.2	70.49	0.00
400	.537	12.1	31.1	0.079	0.444	26.54	189.6	77.22	0.00
500	.430	10.2	19.9	0.087	0.356	33.17	236.9	80.65	0.00
600	.358	8.1	26.2	0.098	0.296	39.81	284.3	84.45	0.00
800	.268	5.9	17.7	0.113	0.222	53.07	379.1	88.59	0.00
1000	.215	4.2	17.9	0.128	0.178	66.34	473.9	91.85	0.00
1500	.143	1.3	16.2	0.165	0.119	99.51	710.8	97.45	0.00
2000	.107	0.7	5.0	0.176	0.089	132.69	947.8	98.69	0.00
3000	.072	0.7	0.0	0.176	0.000	199.03	1421.6	98.69	0.00
4000	.054	0.7	0.0	0.176	0.000	265.37	1895.5	98.69	0.00
5000	.043	0.7	0.0	0.176	0.000	331.72	2369.4	98.69	0.00
6000	.035	0.7	0.0	0.176	0.000	398.06	2843.3	98.69	0.00
7000	.031	0.7	0.0	0.176	0.000	464.40	3317.2	98.69	0.00
8000	.027	0.7	0.0	0.176	0.000	530.74	3791.0	98.69	0.00
9000	.024	0.7	0.0	0.176	0.000	597.09	4264.9	98.69	0.00
10000	.022	0.0	14.3	0.233	0.018	663.43	4738.8	100.00	0.00

All Hg calculations assume  $T=484$  dyne/cm<sup>2</sup>, Contact Angle=140deg.

Gas-Oil Pc assumes Gas  $T\cos\theta=$  24.6 dynes/cm.

Density gradient for oil=0.33psi/ft; brine=0.47psi/ft.

TABLE P-49

Exxon #F-1 Alaska State 12072

feet

Mercury Injection Capillary Pressure (psia)	Approx. Pore Entry Diameter (um)	Cumulative Wetting Phase Saturation (% pore vol)	Distri- bution Func- tion	Cumula- tive Surface Area (m2/g)	Equivalent Cylindrical Pore Diameter (um)	Approx. Reservoir Oil-Water Capillary Pressure (psia)	Approx. Oil-Water Height Above Free Water Level (ft)	Burdine-Purcell Calculated	
								Oil Relative Permea- bility (%)	Brine Relative Permea- bility (%)
0	0	100.0	0.0	0.000	0.000	0.00	0.0	0.00	100.00
2	107.	100.0	0.0	0.000	0.000	0.14	1.0	0.00	100.00
4	53.8	100.0	0.0	0.000	0.000	0.28	2.0	0.00	100.00
6	35.8	100.0	0.0	0.000	0.000	0.42	3.0	0.00	100.00
8	26.9	100.0	0.0	0.000	0.000	0.56	4.0	0.00	100.00
10	21.5	100.0	0.0	0.000	0.000	0.70	5.0	0.00	100.00
12	17.9	100.0	0.0	0.000	0.000	0.84	6.0	0.00	100.00
15	14.3	98.8	1.2	0.000	11.852	1.05	7.5	0.00	97.66
18	11.9	92.1	6.8	0.002	9.877	1.26	9.0	0.20	79.31
21	10.2	78.8	13.2	0.007	8.466	1.47	10.5	2.97	42.96
25	8.60	70.9	7.9	0.010	7.111	1.75	12.5	6.85	18.02
30	7.17	64.3	6.6	0.014	5.926	2.10	15.0	11.43	8.94
40	5.37	55.2	9.1	0.020	4.444	2.80	20.0	19.55	4.03
50	4.30	49.3	5.9	0.025	3.556	3.51	25.0	25.80	1.51
60	3.58	45.6	3.7	0.029	2.963	4.21	30.1	30.09	0.73
80	2.69	38.7	6.8	0.038	2.222	5.61	40.1	38.66	0.35
100	2.15	34.7	4.0	0.045	1.778	7.01	50.1	44.11	0.13
200	1.08	22.1	12.6	0.088	0.889	14.02	100.2	63.16	0.03
300	.717	15.8	6.2	0.120	0.593	21.04	150.3	73.77	0.00
400	.537	12.0	3.8	0.145	0.444	28.05	200.3	80.56	0.00
500	.430	9.6	2.4	0.166	0.356	35.06	250.4	84.99	0.00
600	.358	7.8	1.8	0.184	0.296	42.07	300.5	88.47	0.00
800	.268	5.6	2.2	0.214	0.222	56.09	400.7	92.73	0.00
1000	.215	4.2	1.4	0.239	0.178	70.12	500.8	95.60	0.00
1500	.143	1.9	2.3	0.297	0.119	105.18	751.3	100.00	0.00
2000	.107	1.1	0.8	0.326	0.089	140.24	1001.7	100.00	0.00
3000	.072	0.0	1.1	0.379	0.059	210.36	1502.5	100.00	0.00
4000	.054	0.0	0.0	0.379	0.000	280.47	2003.4	100.00	0.00
5000	.043	0.0	0.0	0.379	0.000	350.59	2504.2	100.00	0.00
6000	.035	0.0	0.0	0.379	0.000	420.71	3005.1	100.00	0.00
7000	.031	0.0	0.0	0.379	0.000	490.83	3505.9	100.00	0.00
8000	.027	0.0	0.0	0.379	0.000	560.95	4006.8	100.00	0.00
9000	.024	0.0	0.0	0.379	0.000	631.07	4507.6	100.00	0.00
10000	.022	0.0	0.0	0.379	0.000	701.19	5008.5	100.00	0.00

All Hg calculations assume  $T=484$  dyne/cm<sup>2</sup>, Contact Angle=140deg.Oil-Water Pc assumes Gas  $T\cos\theta=$  26 dynes/cm.

Density gradient for oil=0.33psi/ft; brine=0.47psi/ft.

TABLE P-50

Exxon #F-1 Alaska State 12074 <sup>feet</sup>

Mercury Injection Capillary Pressure (psia)	Approx. Pore Entry Diameter (um)	Cumulative Wetting Phase Saturation (% pore vol)	Distri- bution Func- tion	Cumula- tive Surface Area (m2/g)	Equivalent Cylindrical Pore Diameter (um)	Approx. Reservoir Oil-Water Capillary Pressure (psia)	Approx. Oil-Water Height Above Free Water Level (ft)	Burdine-Purcell Calculated	
								Oil Relative Permea- bility (%)	Brine Relative Permea- bility (%)
0	0	100.0	0.0	0.000	0.000	0.00	0.0	0.00	100.00
2	107.	100.0	0.0	0.000	0.000	0.14	1.0	0.00	100.00
4	53.8	100.0	0.0	0.000	0.000	0.28	2.0	0.00	100.00
6	35.8	100.0	0.0	0.000	0.000	0.42	3.0	0.00	100.00
8	26.9	100.0	0.0	0.000	0.000	0.56	4.0	0.00	100.00
10	21.5	100.0	0.0	0.000	0.000	0.70	5.0	0.00	100.00
12	17.9	100.0	0.0	0.000	0.000	0.84	6.0	0.00	100.00
15	14.3	100.0	0.0	0.000	0.000	1.05	7.5	0.00	100.00
18	11.9	100.0	0.0	0.000	0.000	1.26	9.0	0.00	100.00
21	10.2	100.0	0.0	0.000	0.000	1.47	10.5	0.00	100.00
25	8.60	99.2	0.8	0.000	7.111	1.75	12.5	0.00	98.33
30	7.17	97.3	1.9	0.001	5.926	2.10	15.0	0.02	86.73
40	5.37	96.7	0.6	0.001	4.444	2.80	20.0	0.03	73.09
50	4.30	88.7	8.0	0.007	3.556	3.51	25.0	0.61	59.23
60	3.58	72.3	16.4	0.021	2.963	4.21	30.1	5.99	27.95
80	2.69	60.6	11.7	0.034	2.222	5.61	40.1	14.16	8.97
100	2.15	53.3	7.3	0.045	1.778	7.01	50.1	21.04	3.35
200	1.08	24.8	28.5	0.125	0.889	14.02	100.2	58.63	0.40
300	.717	24.8	0.0	0.125	0.000	21.04	150.3	58.63	0.03
400	.537	18.5	6.3	0.161	0.444	28.05	200.3	69.01	0.01
500	.430	14.1	4.4	0.192	0.356	35.06	250.4	76.75	0.00
600	.358	11.7	2.4	0.213	0.296	42.07	300.5	81.16	0.00
800	.268	7.6	4.1	0.259	0.222	56.09	400.7	88.84	0.00
1000	.215	4.8	2.8	0.298	0.178	70.12	500.8	94.31	0.00
1500	.143	0.0	4.8	0.400	0.119	105.18	751.3	100.00	0.00
2000	.107	0.0	0.0	0.400	0.000	140.24	1001.7	100.00	0.00
3000	.072	0.0	0.0	0.400	0.000	210.36	1502.5	100.00	0.00
4000	.054	0.0	0.0	0.400	0.000	280.47	2003.4	100.00	0.00
5000	.043	0.0	0.0	0.400	0.000	350.59	2504.2	100.00	0.00
6000	.035	0.0	0.0	0.400	0.000	420.71	3005.1	100.00	0.00
7000	.031	0.0	0.0	0.400	0.000	490.83	3505.9	100.00	0.00
8000	.027	0.0	0.0	0.400	0.000	560.95	4006.8	100.00	0.00
9000	.024	0.0	0.0	0.400	0.000	631.07	4507.6	100.00	0.00
10000	.022	0.0	0.0	0.400	0.000	701.19	5008.5	100.00	0.00

All Hg calculations assume  $T=484$  dyne/cm<sup>2</sup>, Contact Angle=140deg.Oil-Water  $P_c$  assumes Gas  $T\cos\theta=$  26 dynes/cm.

Density gradient for oil=0.33psi/ft; brine=0.47psi/ft.

TABLE P-51

Exxon #F-1 Alaska State 12601

feet

Mercury Injection Capillary Pressure (psia)	Approx. Pore Entry Diameter ( $\mu$ m)	Cumulative Wetting Phase Saturation (% pore vol)	Distri- bution Func- tion	Cumula- tive Surface Area (m <sup>2</sup> /g)	Equivalent Cylindrical Pore Diameter ( $\mu$ m)	Approx. Reservoir Oil-Water Capillary Pressure (psia)	Approx. Oil-Water Height Above Free Water Level (ft)	Burdine-Purcell Calculated	
								Oil Relative Permea- bility (%)	Brine Relative Permea- bility (%)
0	0	100.0	0.0	0.000	0.000	0.00	0.0	0.00	100.00
2	107.	100.0	0.0	0.000	0.000	0.14	1.0	0.00	100.00
4	53.8	100.0	0.0	0.000	0.000	0.28	2.0	0.00	100.00
6	35.8	100.0	0.0	0.000	0.000	0.42	3.0	0.00	100.00
8	26.9	100.0	0.0	0.000	0.000	0.56	4.0	0.00	100.00
10	21.5	100.0	0.0	0.000	0.000	0.70	5.0	0.00	100.00
12	17.9	100.0	0.0	0.000	0.000	0.84	6.0	0.00	100.00
15	14.3	86.9	13.1	0.003	11.852	1.05	7.5	0.84	74.87
18	11.9	76.6	10.4	0.005	9.877	1.26	9.0	4.13	30.91
21	10.2	70.7	5.9	0.007	8.466	1.47	10.5	7.39	14.20
25	8.60	65.6	5.1	0.008	7.111	1.75	12.5	11.00	7.96
30	7.17	59.7	5.9	0.011	5.926	2.10	15.0	15.95	4.39
40	5.37	51.0	8.7	0.015	4.444	2.80	20.0	24.77	1.92
50	4.30	47.6	3.4	0.017	3.556	3.51	25.0	28.65	0.69
60	3.58	43.9	3.7	0.020	2.963	4.21	30.1	33.06	0.39
80	2.69	39.0	4.9	0.025	2.222	5.61	40.1	39.31	0.19
100	2.15	34.2	4.9	0.032	1.778	7.01	50.1	46.00	0.08
200	1.08	24.5	9.7	0.057	0.889	14.02	100.2	60.72	0.02
300	.717	18.9	5.6	0.079	0.593	21.04	150.3	70.12	0.00
400	.537	15.5	3.4	0.096	0.444	28.05	200.3	76.11	0.00
500	.430	13.6	1.8	0.108	0.356	35.06	250.4	79.48	0.00
600	.358	11.8	1.8	0.122	0.296	42.07	300.5	82.81	0.00
800	.268	9.8	2.1	0.144	0.222	56.09	400.7	86.76	0.00
1000	.215	7.7	2.1	0.171	0.178	70.12	500.8	90.85	0.00
1500	.143	5.0	2.7	0.224	0.119	105.18	751.3	96.24	0.00
2000	.107	3.1	1.8	0.272	0.089	140.24	1001.7	100.00	0.00
3000	.072	1.3	1.8	0.342	0.059	210.36	1502.5	100.00	0.00
4000	.054	0.0	1.3	0.411	0.044	280.47	2003.4	100.00	0.00
5000	.043	0.0	0.0	0.411	0.000	350.59	2504.2	100.00	0.00
6000	.035	0.0	0.0	0.411	0.000	420.71	3005.1	100.00	0.00
7000	.031	0.0	0.0	0.411	0.000	490.83	3505.9	100.00	0.00
8000	.027	0.0	0.0	0.411	0.000	560.95	4006.8	100.00	0.00
9000	.024	0.0	0.0	0.411	0.000	631.07	4507.6	100.00	0.00
10000	.022	0.0	0.0	0.411	0.000	701.19	5008.5	100.00	0.00

All Hg calculations assume  $T=484$  dyne/cm<sup>2</sup>, Contact Angle=140deg.Oil-Water  $P_c$  assumes Gas  $T\cos\theta=26$  dynes/cm.

Density gradient for oil=0.33psi/ft; brine=0.47psi/ft.

TABLE P-52

Exxon #1 Pt. Thomson: 12876 ft

Mercury Injection Capillary Pressure (psia)	Approx. Pore Entry Diameter ( $\mu$ m)	Cumulative Wetting Phase Saturation (% pore vol)	Distri- bution Func- tion	Cumula- tive Surface Area (m <sup>2</sup> /g)	Equivalent Cylindrical Pore Diameter ( $\mu$ m)	Approx. Reservoir Oil-Water Capillary Pressure (psia)	Approx. Oil-Water Height Above Free Water Level (ft)	Burdine-Purcell Calculated	
								Oil Relative Permea- bility (%)	Brine Relative Permea- bility (%)
0	0	100.0	0.0	0.000	0.000	0.00	0.0	0.00	100.00
2	107.	100.0	0.0	0.000	0.000	0.14	1.0	0.00	100.00
4	53.8	100.0	0.0	0.000	0.000	0.28	2.0	0.00	100.00
6	35.8	100.0	0.0	0.000	0.000	0.42	3.0	0.00	100.00
8	26.9	100.0	0.0	0.000	0.000	0.56	4.0	0.00	100.00
10	21.5	100.0	0.0	0.000	0.000	0.70	5.0	0.00	100.00
12	17.9	100.0	0.0	0.000	0.000	0.84	6.0	0.00	100.00
15	14.3	100.0	0.0	0.000	0.000	1.05	7.5	0.00	100.00
18	11.9	100.0	0.0	0.000	0.000	1.26	9.0	0.00	100.00
21	10.2	100.0	0.0	0.000	0.000	1.47	10.5	0.00	100.00
25	8.60	100.0	0.0	0.000	0.000	1.75	12.5	0.00	100.00
30	7.17	100.0	0.0	0.000	0.000	2.10	15.0	0.00	100.00
40	5.37	100.0	0.0	0.000	0.000	2.80	20.0	0.00	100.00
50	4.30	100.0	0.0	0.000	0.000	3.51	25.0	0.00	100.00
60	3.58	100.0	0.0	0.000	0.000	4.21	30.1	0.00	100.00
80	2.69	100.0	0.0	0.000	0.000	5.61	40.1	0.00	100.00
100	2.15	100.0	0.0	0.000	0.000	7.01	50.1	0.00	100.00
200	1.08	95.4	4.6	0.008	0.089	14.02	100.2	0.06	90.05
300	.717	67.1	28.4	0.084	0.593	21.04	150.3	10.63	30.32
400	.537	53.3	13.8	0.133	0.444	28.05	200.3	25.04	4.75
500	.430	49.2	4.1	0.151	0.356	35.06	250.4	30.42	1.31
600	.358	45.1	4.1	0.174	0.296	42.07	300.5	36.21	0.67
800	.268	41.0	4.0	0.203	0.222	56.09	400.7	42.17	0.33
1000	.215	36.6	4.4	0.242	0.178	70.12	500.8	49.10	0.16
1500	.143	26.8	9.8	0.373	0.119	105.18	751.3	65.90	0.04
2000	.107	21.1	5.7	0.474	0.089	140.24	1001.7	76.66	0.01
3000	.072	14.0	7.1	0.664	0.059	210.36	1502.5	91.24	0.00
4000	.054	10.0	4.1	0.809	0.044	280.47	2003.4	99.98	0.00
5000	.043	6.8	3.1	0.949	0.036	350.59	2504.2	100.00	0.00
6000	.035	6.8	0.0	0.949	0.000	420.71	3005.1	100.00	0.00
7000	.031	6.8	0.0	0.949	0.000	490.83	3505.9	100.00	0.00
8000	.027	6.8	0.0	0.949	0.000	560.95	4006.8	100.00	0.00
9000	.024	6.8	0.0	0.949	0.000	631.07	4507.6	100.00	0.00
10000	.022	6.8	0.0	0.949	0.000	701.19	5008.5	100.00	0.00

All Hg calculations assume air-mercury  $T=484$  dyne/cm<sup>2</sup>, Contact Angle=140deg.Oil-Water  $P_c$  assumes oil-water  $T\cos\theta=26$  dynes/cm

Density gradient for oil=0.33psi/ft; brine=0.47psi/ft.

TABLE P-53

Mobil #13-9-19 Nikkelsen Bay State: 11704 ft

Mercury Injection Capillary Pressure (psia)	Approx. Pore Entry Diameter ( $\mu$ m)	Cumulative Wetting Phase Saturation (% pore vol)	Distri- bution Func- tion	Cumula- tive Surface Area (m <sup>2</sup> /g)	Equivalent Cylindrical Pore Diameter ( $\mu$ m)	Approx. Reservoir Oil-Water Capillary Pressure (psia)	Approx. Oil-Water Height Above Free Water Level (ft)	Burdine-Purcell Calculated	
								Oil Relative Permea- bility (%)	Brine Relative Permea- bility (%)
0	0	100.0	0.0	0.000	0.000	0.00	0.0	0.00	100.00
2	107.	100.0	0.0	0.000	0.000	0.14	1.0	0.00	100.00
4	53.8	100.0	0.0	0.000	0.000	0.28	2.0	0.00	100.00
6	35.8	100.0	0.0	0.000	0.000	0.42	3.0	0.00	100.00
8	26.9	100.0	0.0	0.000	0.000	0.56	4.0	0.00	100.00
10	21.5	100.0	0.0	0.000	0.000	0.70	5.0	0.00	100.00
12	17.9	100.0	0.0	0.000	0.000	0.84	6.0	0.00	100.00
15	14.3	100.0	0.0	0.000	0.000	1.05	7.5	0.00	100.00
18	11.9	100.0	0.0	0.000	0.000	1.26	9.0	0.00	100.00
21	10.2	100.0	0.0	0.000	0.000	1.47	10.5	0.00	100.00
25	8.60	100.0	0.0	0.000	0.000	1.75	12.5	0.00	100.00
30	7.17	100.0	0.0	0.000	0.000	2.10	15.0	0.00	100.00
40	5.37	100.0	0.0	0.000	0.000	2.80	20.0	0.00	100.00
50	4.30	100.0	0.0	0.000	0.000	3.51	25.0	0.00	100.00
60	3.58	100.0	0.0	0.000	0.000	4.21	30.1	0.00	100.00
80	2.69	100.0	0.0	0.000	0.000	5.61	40.1	0.00	100.00
100	2.15	100.0	0.0	0.000	0.000	7.01	50.1	0.00	100.00
200	1.08	100.0	0.0	0.000	0.000	14.02	100.2	0.00	100.00
300	.717	68.3	31.7	0.063	0.593	21.04	150.3	12.37	36.45
400	.537	58.3	10.0	0.090	0.444	28.05	200.3	24.91	4.85
500	.430	53.4	4.8	0.106	0.356	35.06	250.4	32.26	1.48
600	.358	50.4	3.0	0.118	0.296	42.07	300.5	37.20	0.69
800	.268	45.9	4.5	0.142	0.222	56.09	400.7	44.88	0.34
1000	.215	42.2	3.7	0.167	0.178	70.12	500.8	51.68	0.14
1500	.143	35.2	7.0	0.237	0.119	105.18	751.3	65.38	0.04
2000	.107	31.2	4.0	0.291	0.089	140.24	1001.7	73.92	0.01
3000	.072	25.9	5.2	0.395	0.059	210.36	1502.5	85.64	0.00
4000	.054	23.5	2.5	0.460	0.044	280.47	2003.4	91.45	0.00
5000	.043	21.6	1.9	0.522	0.036	350.59	2504.2	95.94	0.00
6000	.035	20.8	0.8	0.556	0.030	420.71	3005.1	98.04	0.00
7000	.031	20.8	0.0	0.556	0.000	490.83	3505.9	98.04	0.00
8000	.027	19.7	1.1	0.615	0.022	560.95	4006.8	100.00	0.00
9000	.024	19.7	0.0	0.615	0.000	631.07	4507.6	100.00	0.00
10000	.022	19.7	0.0	0.615	0.000	701.19	5008.5	100.00	0.00

All Hg calculations assume air-mercury  $T=484$  dyne/cm<sup>2</sup>, Contact Angle=140deg.Oil-Water  $P_c$  assumes oil-water  $T\cos\theta=26$  dynes/cm

Density gradient for oil=0.33psi/ft; brine=0.47psi/ft.



TABLE P-54

Mobil #13-9-19 Mikkelsen Bay State: 11733 ft

Mercury Injection Capillary Pressure (psia)	Approx. Pore Entry Diameter ( $\mu$ m)	Cumulative Wetting Phase Saturation (% pore vol)	Distri- bution Func- tion	Cumula- tive Surface Area (m <sup>2</sup> /g)	Equivalent Cylindrical Pore Diameter ( $\mu$ m)	Approx.	Approx.	Burdine-Purcell Calculated	
						Reservoir Oil-Water Capillary Pressure (psia)	Oil-Water Height Above Free Water Level (ft)	Oil Relative Permea- bility (%)	Brine Relative Permea- bility (%)
0	0	100.0	0.0	0.000	0.000	0.00	0.0	0.00	100.00
2	107.	100.0	0.0	0.000	0.000	0.14	1.0	0.00	100.00
4	53.8	100.0	0.0	0.000	0.000	0.28	2.0	0.00	100.00
6	35.8	100.0	0.0	0.000	0.000	0.42	3.0	0.00	100.00
8	26.9	100.0	0.0	0.000	0.000	0.56	4.0	0.00	100.00
10	21.5	100.0	0.0	0.000	0.000	0.70	5.0	0.00	100.00
12	17.9	100.0	0.0	0.000	0.000	0.84	6.0	0.00	100.00
15	14.3	96.7	3.3	0.000	11.852	1.05	7.5	0.04	93.31
18	11.9	94.6	2.1	0.000	9.877	1.26	9.0	0.17	55.68
21	10.2	94.6	0.0	0.000	0.000	1.47	10.5	0.17	41.38
25	8.60	92.2	2.4	0.001	7.111	1.75	12.5	0.40	39.28
30	7.17	87.3	4.9	0.001	5.926	2.10	15.0	1.29	28.11
40	5.37	83.1	4.2	0.002	4.444	2.80	20.0	2.51	16.26
50	4.30	80.4	2.7	0.002	3.556	3.51	25.0	3.48	10.65
60	3.58	72.7	7.7	0.004	2.963	4.21	30.1	7.18	7.22
80	2.69	62.5	10.2	0.007	2.222	5.61	40.1	14.17	3.27
100	2.15	53.3	9.2	0.010	1.778	7.01	50.1	22.51	1.18
200	1.08	36.0	17.4	0.022	0.889	14.02	100.2	43.09	0.24
300	.717	28.0	8.0	0.030	0.593	21.04	150.3	54.62	0.03
400	.537	24.7	3.3	0.035	0.444	28.05	200.3	59.72	0.01
500	.430	18.5	6.3	0.046	0.356	35.06	250.4	70.10	0.00
600	.358	18.5	0.0	0.046	0.000	42.07	300.5	70.10	0.00
800	.268	13.2	5.3	0.061	0.222	56.09	400.7	79.45	0.00
1000	.215	11.3	1.9	0.067	0.178	70.12	500.8	82.95	0.00
1500	.143	6.0	5.3	0.095	0.119	105.18	751.3	93.13	0.00
2000	.107	2.6	3.4	0.119	0.089	140.24	1001.7	100.00	0.00
3000	.072	0.0	2.6	0.147	0.059	210.36	1502.5	100.00	0.00
4000	.054	0.0	0.0	0.147	0.000	280.47	2003.4	100.00	0.00
5000	.043	0.0	0.0	0.147	0.000	350.59	2504.2	100.00	0.00
6000	.035	0.0	0.0	0.147	0.000	420.71	3005.1	100.00	0.00
7000	.031	0.0	0.0	0.147	0.000	490.83	3505.9	100.00	0.00
8000	.027	0.0	0.0	0.147	0.000	560.95	4006.8	100.00	0.00
9000	.024	0.0	0.0	0.147	0.000	631.07	4507.6	100.00	0.00
10000	.022	0.0	0.0	0.147	0.000	701.19	5008.5	100.00	0.00

All Hg calculations assume air-mercury  $T=484$  dyne/cm<sup>2</sup>, Contact Angle=140deg.Oil-Water  $P_c$  assumes oil-water  $T\cos\theta=26$  dynes/cm

Density gradient for oil=0.33psi/ft; brine=0.47psi/ft.

# TABLE P-55

Sohio Alaska #1 Long Island: 9066 ft

Mercury Injection Capillary Pressure (psia)	Approx. Pore Entry Diameter (um)	Cumulative Wetting Phase Saturation (% pore vol)	Distri- bution Func- tion	Cumula- tive Surface Area (m2/g)	Equivalent Cylindrical Pore Diameter (um)	Approx.	Approx.	Burdine-Purcell Calculated	
						Reservoir Oil-Water Capillary Pressure (psia)	Oil-Water Height Above Free Water Level (ft)	Oil Relative Permea- bility (%)	Brine Relative Permea- bility (%)
0	0	100.0	0.0	0.000	0.000	0.00	0.0	0.00	100.00
2	107.	100.0	0.0	0.000	0.000	0.14	1.0	0.00	100.00
4	53.8	100.0	0.0	0.000	0.000	0.28	2.0	0.00	100.00
6	35.8	100.0	0.0	0.000	0.000	0.42	3.0	0.00	100.00
8	26.9	100.0	0.0	0.000	0.000	0.56	4.0	0.00	100.00
10	21.5	100.0	0.0	0.000	0.000	0.70	5.0	0.00	100.00
12	17.9	100.0	0.0	0.000	0.000	0.84	6.0	0.00	100.00
15	14.3	100.0	0.0	0.000	0.000	1.05	7.5	0.00	100.00
18	11.9	100.0	0.0	0.000	0.000	1.26	9.0	0.00	100.00
21	10.2	100.0	0.0	0.000	0.000	1.47	10.5	0.00	100.00
25	8.60	99.4	0.6	0.000	7.111	1.75	12.5	0.00	97.70
30	7.17	97.7	1.7	0.001	5.926	2.10	15.0	0.05	82.73
40	5.37	92.9	4.7	0.003	4.444	2.80	20.0	0.93	55.00
50	4.30	89.7	3.2	0.005	3.556	3.51	25.0	2.39	27.17
60	3.58	85.9	3.8	0.008	2.963	4.21	30.1	5.12	15.62
80	2.69	80.9	5.1	0.013	2.222	5.61	40.1	10.43	7.65
100	2.15	76.4	4.5	0.019	1.778	7.01	50.1	16.65	3.08
200	1.08	66.3	10.1	0.045	0.889	14.02	100.2	35.18	0.75
300	.717	61.1	5.2	0.064	0.593	21.04	150.3	47.14	0.10
400	.537	59.2	1.9	0.074	0.444	28.05	200.3	51.96	0.02
500	.430	57.7	1.5	0.084	0.356	35.06	250.4	55.91	0.01
600	.358	56.0	1.7	0.097	0.296	42.07	300.5	60.50	0.01
800	.268	53.8	2.2	0.119	0.222	56.09	400.7	66.69	0.00
1000	.215	51.7	2.1	0.146	0.178	70.12	500.8	72.92	0.00
1500	.143	47.3	4.4	0.230	0.119	105.18	751.3	86.88	0.00
2000	.107	43.5	3.8	0.328	0.089	140.24	1001.7	99.98	0.00
3000	.072	36.8	6.7	0.583	0.059	210.36	1502.5	99.99	0.00
4000	.054	31.8	5.0	0.837	0.044	280.47	2003.4	100.00	0.00
5000	.043	27.9	4.0	1.089	0.036	350.59	2504.2	100.00	0.00
6000	.035	25.1	2.8	1.302	0.030	420.71	3005.1	100.00	0.00
7000	.031	22.1	2.9	1.563	0.025	490.83	3505.9	100.00	0.00
8000	.027	20.5	1.6	1.730	0.022	560.95	4006.8	100.00	0.00
9000	.024	18.8	1.6	1.919	0.020	631.07	4507.6	100.00	0.00
10000	.022	17.2	1.6	2.129	0.018	701.19	5008.5	100.00	0.00

All Hg calculations assume air-mercury  $T=484$  dyne/cm<sup>2</sup>, Contact Angle=140deg.

Oil-Water  $P_c$  assumes oil-water  $T\cos\theta=26$  dynes/cm

Density gradient for oil=0.33psi/ft; brine=0.47psi/ft.

TABLE P-56

Sohio Alaska #1 Long Island: 9088 ft

Mercury Injection Capillary Pressure (psia)	Approx. Pore Entry Diameter (um)	Cumulative Wetting Phase Saturation (% pore vol)	Distri- bution Func- tion	Cumula- tive Surface Area (m2/g)	Equivalent Cylindrical Pore Diameter (um)	Approx.	Approx.	Burdine-Purcell Calculated	
						Reservoir Oil-Water Capillary Pressure (psia)	Oil-Water Height Above Free Water Level (ft)	Oil Relative Permea- bility (%)	Brine Relative Permea- bility (%)
0	0	100.0	0.0	0.000	0.000	0.00	0.0	0.00	100.00
2	107.	100.0	0.0	0.000	0.000	0.14	1.0	0.00	100.00
4	53.8	100.0	0.0	0.000	0.000	0.28	2.0	0.00	100.00
6	35.8	100.0	0.0	0.000	0.000	0.42	3.0	0.00	100.00
8	26.9	100.0	0.0	0.000	0.000	0.56	4.0	0.00	100.00
10	21.5	100.0	0.0	0.000	0.000	0.70	5.0	0.00	100.00
12	17.9	100.0	0.0	0.000	0.000	0.84	6.0	0.00	100.00
15	14.3	98.5	1.5	0.000	11.852	1.05	7.5	0.01	95.40
18	11.9	94.7	3.7	0.002	9.877	1.26	9.0	0.26	71.68
21	10.2	91.4	3.3	0.003	8.466	1.47	10.5	0.95	45.17
25	8.60	87.0	4.4	0.005	7.111	1.75	12.5	2.75	28.27
30	7.17	81.8	5.2	0.008	5.926	2.10	15.0	6.37	15.03
40	5.37	75.8	6.0	0.012	4.444	2.80	20.0	12.49	6.44
50	4.30	72.3	3.5	0.016	3.556	3.51	25.0	16.93	2.38
60	3.58	69.9	2.4	0.018	2.963	4.21	30.1	20.23	1.16
80	2.69	66.5	3.4	0.023	2.222	5.61	40.1	25.45	0.61
100	2.15	64.3	2.2	0.027	1.778	7.01	50.1	29.04	0.26
200	1.08	57.7	6.5	0.052	0.889	14.02	100.2	40.79	0.09
300	.717	53.9	3.8	0.073	0.593	21.04	150.3	48.60	0.02
400	.537	51.4	2.5	0.091	0.444	28.05	200.3	54.00	0.01
500	.430	49.2	2.2	0.112	0.356	35.06	250.4	59.12	0.00
600	.358	47.4	1.8	0.132	0.296	42.07	300.5	63.40	0.00
800	.268	44.7	2.6	0.172	0.222	56.09	400.7	69.93	0.00
1000	.215	42.2	2.5	0.218	0.178	70.12	500.8	76.47	0.00
1500	.143	37.4	4.8	0.351	0.119	105.18	751.3	89.58	0.00
2000	.107	33.9	3.5	0.482	0.089	140.24	1001.7	100.00	0.00
3000	.072	28.6	5.3	0.776	0.059	210.36	1502.5	100.00	0.00
4000	.054	24.4	4.2	1.089	0.044	280.47	2003.4	100.00	0.00
5000	.043	21.8	2.6	1.335	0.036	350.59	2504.2	100.00	0.00
6000	.035	19.9	1.9	1.547	0.030	420.71	3005.1	100.00	0.00
7000	.031	18.5	1.4	1.725	0.025	490.83	3505.9	100.00	0.00
8000	.027	17.1	1.4	1.927	0.022	560.95	4006.8	100.00	0.00
9000	.024	16.2	0.9	2.077	0.020	631.07	4507.6	100.00	0.00
10000	.022	15.5	0.8	2.218	0.018	701.19	5008.5	100.00	0.00

All Hg calculations assume air-mercury  $T=484$  dyne/cm<sup>2</sup>, Contact Angle=140deg.Oil-Water  $P_c$  assumes oil-water  $T\cos\theta=26$  dynes/cm

Density gradient for oil=0.33psi/ft; brine=0.47psi/ft.

TABLE P-57

Mobil-Chevron #1 Gwydyr Bay State 8317 <sup>feet</sup>

Mercury Injection Capillary Pressure (psia)	Approx. Pore Entry Diameter (um)	Cumulative Wetting Phase Saturation (% pore vol)	Distri- bution Func- tion	Cumula- tive Surface Area (m2/g)	Equivalent Cylindrical Pore Diameter (um)	Approx. Reservoir Oil-Water Capillary Pressure (psia)	Approx. Oil-Water Height Above Free Water Level (ft)	Burdine-Purcell Calculated	
								Oil Relative Permea- bility (%)	Brine Relative Permea- bility (%)
0	0	100.0	0.0	0.000	0.000	0.00	0.0	0.00	100.00
2	107.	100.0	0.0	0.000	0.000	0.19	1.3	0.00	100.00
4	53.8	100.0	0.0	0.000	0.000	0.37	2.7	0.00	100.00
6	35.8	99.4	3.1	0.000	29.630	0.56	4.0	0.00	98.75
8	26.9	98.8	5.2	0.000	22.222	0.74	5.3	0.00	92.00
10	21.5	89.2	99.0	0.002	17.778	0.93	6.6	0.58	70.19
12	17.9	74.3	187.2	0.005	14.815	1.12	8.0	5.84	31.05
15	14.3	61.2	134.2	0.008	11.852	1.40	10.0	16.72	9.91
18	11.9	55.0	78.0	0.010	9.877	1.67	12.0	23.98	3.35
21	10.2	50.5	67.1	0.011	8.466	1.95	14.0	29.93	1.61
25	8.60	46.1	59.3	0.013	7.111	2.33	16.6	36.24	0.83
30	7.17	41.7	55.6	0.015	5.926	2.79	19.9	43.02	0.40
40	5.37	35.8	46.5	0.019	4.444	3.72	26.6	52.68	0.15
50	4.30	32.8	31.5	0.021	3.556	4.65	33.2	58.00	0.05
60	3.58	30.5	29.2	0.023	2.963	5.58	39.9	62.19	0.02
80	2.69	26.1	35.3	0.029	2.222	7.44	53.2	70.45	0.01
100	2.15	24.3	18.9	0.032	1.778	9.30	66.5	74.03	0.00
200	1.08	19.9	14.7	0.046	0.889	18.61	132.9	82.88	0.00
300	.717	18.3	8.9	0.054	0.593	27.91	199.4	86.18	0.00
400	.537	18.3	0.0	0.054	0.000	37.21	265.8	86.18	0.00
500	.430	18.3	0.0	0.054	0.000	46.52	332.3	86.18	0.00
600	.358	17.6	8.5	0.060	0.296	55.82	398.7	87.61	0.00
800	.268	17.1	4.1	0.067	0.222	74.43	531.6	88.73	0.00
1000	.215	16.1	10.4	0.083	0.178	93.04	664.5	90.88	0.00
1500	.143	13.8	13.2	0.139	0.119	139.55	996.8	96.01	0.00
2000	.107	11.8	15.7	0.203	0.089	186.07	1329.1	100.00	0.00
3000	.072	8.7	17.9	0.353	0.059	279.11	1993.6	100.00	0.00
4000	.054	5.8	22.9	0.538	0.044	372.15	2658.2	100.00	0.00
5000	.043	4.3	15.8	0.661	0.036	465.18	3322.7	100.00	0.00
6000	.035	2.9	17.0	0.792	0.030	558.22	3987.3	100.00	0.00
7000	.031	1.7	18.9	0.925	0.025	651.26	4651.8	100.00	0.00
8000	.027	0.6	17.3	1.065	0.022	744.29	5316.4	100.00	0.00
9000	.024	0.0	13.0	1.159	0.020	837.33	5980.9	100.00	0.00
10000	.022	0.0	0.0	1.159	0.000	930.37	6645.5	100.00	0.00

All Hg calculations assume  $T=484$  dyne/cm<sup>2</sup>, Contact Angle=140deg.Oil-Water  $P_c$  assumes Gas  $T\cos\theta=34$  dynes/cm.

Density gradient for oil=0.33psi/ft; brine=0.47psi/ft.

TABLE P-58

Sinclair #1 Colville 2374 <sup>feet</sup>

Mercury Injection Capillary Pressure (psia)	Approx. Pore Entry Diameter ( $\mu$ m)	Cumulative Wetting Phase Saturation (% pore vol)	Distri- bution Func- tion	Cumula- tive Surface Area (m <sup>2</sup> /g)	Equivalent Cylindrical Pore Diameter ( $\mu$ m)	Approx. Reservoir Oil-Water Capillary Pressure (psia)	Approx. Oil-Water Height Above Free Water Level (ft)	Burdine-Purcell Calculated	
								Oil Relative Permea- bility (%)	Brine Relative Permea- bility (%)
0	0	100.0	0.0	0.000	0.000	0.00	0.0	0.00	100.00
2	107.	100.0	0.0	0.000	0.000	0.14	1.0	0.00	100.00
4	53.8	100.0	0.0	0.000	0.000	0.28	2.0	0.00	100.00
6	35.8	100.0	0.0	0.000	0.000	0.42	3.0	0.00	100.00
8	26.9	99.3	0.7	0.000	22.222	0.56	4.0	0.00	98.64
10	21.5	98.7	0.7	0.000	17.778	0.70	5.0	0.01	80.56
12	17.9	98.7	0.0	0.000	0.000	0.84	6.0	0.01	70.18
15	14.3	97.2	1.5	0.000	11.852	1.05	7.5	0.03	68.02
18	11.9	95.9	1.3	0.001	9.877	1.26	9.0	0.08	56.73
21	10.2	94.1	1.8	0.001	8.466	1.47	10.5	0.18	49.32
25	8.60	90.5	3.6	0.003	7.111	1.75	12.5	0.57	40.63
30	7.17	83.5	7.0	0.005	5.926	2.10	15.0	2.06	28.35
40	5.37	68.9	14.5	0.013	4.444	2.80	20.0	8.81	13.58
50	4.30	58.2	10.8	0.021	3.556	3.51	25.0	17.24	4.65
60	3.58	50.2	8.0	0.027	2.963	4.21	30.1	25.31	1.80
80	2.69	40.4	9.8	0.038	2.222	5.61	40.1	37.16	0.64
100	2.15	34.7	5.7	0.046	1.778	7.01	50.1	45.04	0.19
200	1.08	21.9	12.8	0.081	0.889	14.02	100.2	64.99	0.03
300	.717	17.0	4.9	0.101	0.593	21.04	150.3	73.39	0.00
400	.537	14.4	2.6	0.116	0.444	28.05	200.3	78.13	0.00
500	.430	12.4	2.0	0.129	0.356	35.06	250.4	81.85	0.00
600	.358	11.2	1.2	0.139	0.296	42.07	300.5	84.09	0.00
800	.268	9.4	1.8	0.159	0.222	56.09	400.7	87.51	0.00
1000	.215	7.6	1.8	0.183	0.178	70.12	500.8	91.03	0.00
1500	.143	5.0	2.6	0.237	0.119	105.18	751.3	96.19	0.00
2000	.107	3.2	1.9	0.288	0.089	140.24	1001.7	100.00	0.00
3000	.072	1.1	2.0	0.372	0.059	210.36	1502.5	100.00	0.00
4000	.054	0.0	1.1	0.434	0.044	280.47	2003.4	100.00	0.00
5000	.043	0.0	0.0	0.434	0.000	350.59	2504.2	100.00	0.00
6000	.035	0.0	0.0	0.434	0.000	420.71	3005.1	100.00	0.00
7000	.031	0.0	0.0	0.434	0.000	490.83	3505.9	100.00	0.00
8000	.027	0.0	0.0	0.434	0.000	560.95	4006.8	100.00	0.00
9000	.024	0.0	0.0	0.434	0.000	631.07	4507.6	100.00	0.00
10000	.022	0.0	0.0	0.434	0.000	701.19	5008.5	100.00	0.00

All Hg calculations assume  $T=484$  dyne/cm<sup>2</sup>, Contact Angle=140deg.Oil-Water  $P_c$  assumes Gas  $T\cos\theta=$  26 dynes/cm.

Density gradient for oil=0.33psi/ft; brine=0.47psi/ft.

TABLE P-59

Husky NPR #1 Inigok Test Well 2632 *feet*

Mercury Injection Capillary Pressure (psia)	Approx. Pore Entry Diameter (um)	Cumulative Wetting Phase Saturation (% pore vol)	Distri- bution Func- tion	Cumula- tive Surface Area (m <sup>2</sup> /g)	Equivalent Cylindrical Pore Diameter (um)	Approx. Reservoir Oil-Water Capillary Pressure (psia)	Approx. Oil-Water Height Above Free Water Level (ft)	Burdine-Purcell Calculated	
								Oil Relative Permea- bility (%)	Brine Relative Permea- bility (%)
0	0	100.0	0.0	0.000	0.000	0.00	0.0	0.00	96.14
2	107.	100.0	0.0	0.000	0.000	0.14	1.0	0.00	96.14
4	53.8	100.0	0.0	0.000	0.000	0.28	2.0	0.00	96.14
6	35.8	100.0	0.0	0.000	0.000	0.42	3.0	0.00	96.14
8	26.9	100.0	0.0	0.000	0.000	0.56	4.0	0.00	96.14
10	21.5	100.0	0.0	0.000	0.000	0.70	5.0	0.00	96.14
12	17.9	100.0	0.0	0.000	0.000	0.84	6.0	0.00	96.14
15	14.3	100.0	0.0	0.000	0.000	1.05	7.5	0.00	96.14
18	11.9	100.0	0.0	0.000	0.000	1.26	9.0	0.00	96.14
21	10.2	100.0	0.0	0.000	0.000	1.47	10.5	0.00	96.14
25	8.60	100.0	0.0	0.000	0.000	1.75	12.5	0.00	96.14
30	7.17	100.0	0.0	0.000	0.000	2.10	15.0	0.00	96.14
40	5.37	100.0	0.0	0.000	0.000	2.80	20.0	0.00	96.14
50	4.30	100.0	0.0	0.000	0.000	3.51	25.0	0.00	96.14
60	3.58	100.0	0.0	0.000	0.000	4.21	30.1	0.00	96.14
80	2.69	100.0	0.0	0.000	0.000	5.61	40.1	0.00	96.14
100	2.15	100.0	0.0	0.000	0.000	7.01	50.1	0.00	96.14
200	1.08	100.0	0.0	0.000	0.000	14.02	100.2	0.00	96.14
300	.717	100.0	0.0	0.000	0.000	21.04	150.3	0.00	96.14
400	.537	100.0	0.0	0.000	0.000	28.05	200.3	0.00	96.14
500	.430	95.4	4.6	0.018	0.356	35.06	250.4	0.11	82.42
600	.358	86.7	8.8	0.060	0.296	42.07	300.5	2.11	46.97
800	.268	66.4	20.2	0.188	0.222	56.09	400.7	24.06	10.58
1000	.215	58.4	8.1	0.252	0.178	70.12	500.8	41.02	1.61
1500	.143	46.2	12.2	0.397	0.119	105.18	751.3	73.82	0.10
2000	.107	38.6	7.6	0.518	0.089	140.24	1001.7	98.30	0.00
3000	.072	30.8	7.8	0.703	0.059	210.36	1502.5	99.38	0.00
4000	.054	26.0	4.8	0.854	0.044	280.47	2003.4	99.72	0.00
5000	.043	22.9	3.1	0.977	0.036	350.59	2504.2	99.85	0.00
6000	.035	20.6	2.3	1.085	0.030	420.71	3005.1	99.91	0.00
7000	.031	18.8	1.8	1.186	0.025	490.83	3505.9	99.95	0.00
8000	.027	17.4	1.5	1.278	0.022	560.95	4006.8	99.97	0.00
9000	.024	16.1	1.3	1.367	0.020	631.07	4507.6	99.99	0.00
10000	.022	15.0	1.1	1.454	0.018	701.19	5008.5	100.00	0.00

All Hg calculations assume T=484 dyne/cm<sup>2</sup>, Contact Angle=140deg.Oil-Water P<sub>c</sub> assumes Gas T<sub>cos</sub>0= 26 dynes/cm.

Density gradient for oil=0.33psi/ft; brine=0.47psi/ft.

TABLE P-60

Husky NPR #1 Inigok Test Well 2655.9 *See*

Mercury Injection Capillary Pressure (psia)	Approx. Pore Entry Diameter ( $\mu$ m)	Cumulative Wetting Phase Saturation (% pore vol)	Distri- bution Func- tion	Cumula- tive Surface Area (m <sup>2</sup> /g)	Equivalent Cylindrical Pore Diameter ( $\mu$ m)	Approx. Reservoir Oil-Water Capillary Pressure (psia)	Approx. Oil-Water Height Above Free Water Level (ft)	Burdine-Purcell Calculated	
								Oil Relative Permea- bility (%)	Brine Relative Permea- bility (%)
0	0	100.0	0.0	0.000	0.000	0.00	0.0	0.00	100.00
2	107.	100.0	0.0	0.000	0.000	0.14	1.0	0.00	100.00
4	53.8	100.0	0.0	0.000	0.000	0.28	2.0	0.00	100.00
6	35.8	100.0	0.0	0.000	0.000	0.42	3.0	0.00	100.00
8	26.9	100.0	0.0	0.000	0.000	0.56	4.0	0.00	100.00
10	21.5	100.0	0.0	0.000	0.000	0.70	5.0	0.00	100.00
12	17.9	100.0	0.0	0.000	0.000	0.84	6.0	0.00	100.00
15	14.3	100.0	0.0	0.000	0.000	1.05	7.5	0.00	100.00
18	11.9	100.0	0.0	0.000	0.000	1.26	9.0	0.00	100.00
21	10.2	100.0	0.0	0.000	0.000	1.47	10.5	0.00	100.00
25	8.60	100.0	0.0	0.000	0.000	1.75	12.5	0.00	100.00
30	7.17	100.0	0.0	0.000	0.000	2.10	15.0	0.00	100.00
40	5.37	99.3	0.7	0.000	4.444	2.80	20.0	0.00	98.33
50	4.30	96.4	2.9	0.002	3.556	3.51	25.0	0.04	86.65
60	3.58	88.1	8.3	0.007	2.963	4.21	30.1	0.95	59.29
80	2.69	68.0	20.1	0.025	2.222	5.61	40.1	12.89	20.40
100	2.15	59.7	8.3	0.034	1.778	7.01	50.1	22.86	4.31
200	1.08	45.4	14.3	0.065	0.889	14.02	100.2	44.62	0.79
300	.717	39.8	5.6	0.084	0.593	21.04	150.3	54.77	0.10
400	.537	35.9	3.9	0.101	0.444	28.05	200.3	62.31	0.03
500	.430	33.4	2.4	0.114	0.356	35.06	250.4	67.22	0.01
600	.358	31.4	2.0	0.127	0.296	42.07	300.5	71.34	0.00
800	.268	28.3	3.1	0.155	0.222	56.09	400.7	78.04	0.00
1000	.215	26.0	2.3	0.180	0.178	70.12	500.8	83.15	0.00
1500	.143	21.6	4.4	0.252	0.119	105.18	751.3	93.28	0.00
2000	.107	18.9	2.8	0.312	0.089	140.24	1001.7	99.99	0.00
3000	.072	15.5	3.4	0.423	0.059	210.36	1502.5	100.00	0.00
4000	.054	13.4	2.1	0.515	0.044	280.47	2003.4	100.00	0.00
5000	.043	11.9	1.5	0.599	0.036	350.59	2504.2	100.00	0.00
6000	.035	10.6	1.2	0.680	0.030	420.71	3005.1	100.00	0.00
7000	.031	9.5	1.1	0.764	0.025	490.83	3505.9	100.00	0.00
8000	.027	8.8	0.7	0.828	0.022	560.95	4006.8	100.00	0.00
9000	.024	8.2	0.6	0.886	0.020	631.07	4507.6	100.00	0.00
10000	.022	7.6	0.6	0.950	0.018	701.19	5008.5	100.00	0.00

All Hg calculations assume  $T=484$  dyne/cm<sup>2</sup>, Contact Angle=140deg.Oil-Water  $P_c$  assumes Gas  $T\cos\theta=$  26 dynes/cm.

Density gradient for oil=0.33psi/ft; brine=0.47psi/ft.

TABLE P-61

Husky NPR #1 Inigok Test Well 3081 <sup>feet</sup>

Mercury Injection Capillary Pressure (psia)	Approx. Pore Entry Diameter (um)	Cumulative Wetting Phase Saturation (% pore vol)	Distri- bution Func- tion	Cumula- tive Surface Area (m2/g)	Equivalent Cylindrical Pore Diameter (um)	Approx. Reservoir Oil-Water Capillary Pressure (psia)	Approx. Oil-Water Height Above Free Water Level (ft)	Burdine-Purcell Calculated	
								Oil Relative Permea- bility (%)	Brine Relative Permea- bility (%)
0	0	100.0	0.0	0.000	0.000	0.00	0.0	0.00	100.00
2	107.	100.0	0.0	0.000	0.000	0.14	1.0	0.00	100.00
4	53.8	100.0	0.0	0.000	0.000	0.28	2.0	0.00	100.00
6	35.8	100.0	0.0	0.000	0.000	0.42	3.0	0.00	100.00
8	26.9	100.0	0.0	0.000	0.000	0.56	4.0	0.00	100.00
10	21.5	100.0	0.0	0.000	0.000	0.70	5.0	0.00	100.00
12	17.9	100.0	0.0	0.000	0.000	0.84	6.0	0.00	100.00
15	14.3	100.0	0.0	0.000	0.000	1.05	7.5	0.00	100.00
18	11.9	100.0	0.0	0.000	0.000	1.26	9.0	0.00	100.00
21	10.2	96.4	3.6	0.001	8.466	1.47	10.5	0.02	91.99
25	8.60	91.6	4.9	0.003	7.111	1.75	12.5	0.27	69.92
30	7.17	70.3	21.2	0.014	5.926	2.10	15.0	8.30	31.08
40	5.37	53.9	16.4	0.025	4.444	2.80	20.0	25.76	6.36
50	4.30	48.4	5.5	0.030	3.556	3.51	25.0	33.81	1.39
60	3.58	44.9	3.4	0.033	2.963	4.21	30.1	39.15	0.57
80	2.69	40.4	4.5	0.039	2.222	5.61	40.1	46.49	0.25
100	2.15	38.1	2.4	0.043	1.778	7.01	50.1	50.48	0.09
200	1.08	30.3	7.7	0.069	0.889	14.02	100.2	64.22	0.03
300	.717	26.6	3.8	0.088	0.593	21.04	150.3	71.40	0.00
400	.537	24.4	2.2	0.102	0.444	28.05	200.3	75.79	0.00
500	.430	22.6	1.8	0.118	0.356	35.06	250.4	79.47	0.00
600	.358	21.2	1.4	0.131	0.296	42.07	300.5	82.32	0.00
800	.268	19.3	1.9	0.157	0.222	56.09	400.7	86.33	0.00
1000	.215	17.7	1.6	0.183	0.178	70.12	500.8	89.80	0.00
1500	.143	15.0	2.7	0.251	0.119	105.18	751.3	95.81	0.00
2000	.107	13.1	1.8	0.313	0.089	140.24	1001.7	100.00	0.00
3000	.072	10.9	2.2	0.422	0.059	210.36	1502.5	100.00	0.00
4000	.054	9.4	1.6	0.527	0.044	280.47	2003.4	100.00	0.00
5000	.043	8.4	1.0	0.610	0.036	350.59	2504.2	100.00	0.00
6000	.035	7.5	0.9	0.700	0.030	420.71	3005.1	100.00	0.00
7000	.031	6.8	0.6	0.775	0.025	490.83	3505.9	100.00	0.00
8000	.027	6.4	0.5	0.840	0.022	560.95	4006.8	100.00	0.00
9000	.024	5.9	0.5	0.913	0.020	631.07	4507.6	100.00	0.00
10000	.022	5.4	0.5	0.989	0.018	701.19	5008.5	100.00	0.00

All Hg calculations assume T=484 dyne/cm2, Contact Angle=140deg.

Oil-Water Pc assumes Gas Tcos0= 26 dynes/cm.

Density gradient for oil=0.33psi/ft; brine=0.47psi/ft.



TABLE P-62

Husky NPR #1 Inigok Test Well: 8851 ft

Mercury Injection Capillary Pressure (psia)	Approx. Pore Entry Diameter ( $\mu$ m)	Cumulative Wetting Phase Saturation (% pore vol)	Distri- bution Func- tion	Cumula- tive Surface Area (m <sup>2</sup> /g)	Equivalent Cylindrical Pore Diameter ( $\mu$ m)	Approx. Reservoir Oil-Water Capillary Pressure (psia)	Approx. Oil-Water Height Above Free Water Level (ft)	Burdine-Purcell Calculated	
								Oil Relative Permea- bility (%)	Brine Relative Permea- bility (%)
0	0	100.0	0.0	0.000	0.000	0.00	0.0	0.00	100.00
2	107.	100.0	0.0	0.000	0.000	0.14	1.0	0.00	100.00
4	53.8	100.0	0.0	0.000	0.000	0.28	2.0	0.00	100.00
6	35.8	100.0	0.0	0.000	0.000	0.42	3.0	0.00	100.00
8	26.9	100.0	0.0	0.000	0.000	0.56	4.0	0.00	100.00
10	21.5	100.0	0.0	0.000	0.000	0.70	5.0	0.00	100.00
12	17.9	100.0	0.0	0.000	0.000	0.84	6.0	0.00	100.00
15	14.3	100.0	0.0	0.000	0.000	1.05	7.5	0.00	100.00
18	11.9	100.0	0.0	0.000	0.000	1.26	9.0	0.00	100.00
21	10.2	100.0	0.0	0.000	0.000	1.47	10.5	0.00	100.00
25	8.60	100.0	0.0	0.000	0.000	1.75	12.5	0.00	100.00
30	7.17	100.0	0.0	0.000	0.000	2.10	15.0	0.00	100.00
40	5.37	100.0	0.0	0.000	0.000	2.80	20.0	0.00	100.00
50	4.30	100.0	0.0	0.000	0.000	3.51	25.0	0.00	100.00
60	3.58	100.0	0.0	0.000	0.000	4.21	30.1	0.00	100.00
80	2.69	100.0	0.0	0.000	0.000	5.61	40.1	0.00	100.00
100	2.15	100.0	0.0	0.000	0.000	7.01	50.1	0.00	100.00
200	1.08	99.4	0.6	0.001	0.889	14.02	100.2	0.00	94.08
300	.717	99.4	0.0	0.001	0.000	21.04	150.3	0.00	66.85
400	.537	99.4	0.0	0.001	0.000	28.05	200.3	0.00	66.85
500	.430	99.4	0.0	0.001	0.000	35.06	250.4	0.00	66.85
600	.358	98.7	0.7	0.004	0.296	42.07	300.5	0.02	65.19
800	.268	82.1	16.5	0.093	0.222	56.09	400.7	6.17	31.33
1000	.215	63.7	18.4	0.217	0.178	70.12	500.8	34.45	4.40
1500	.143	48.3	15.4	0.373	0.119	105.18	751.3	77.88	0.10
2000	.107	42.6	5.8	0.450	0.089	140.24	1001.7	98.05	0.00
3000	.072	35.1	7.5	0.602	0.059	210.36	1502.5	99.25	0.00
4000	.054	30.7	4.4	0.721	0.044	280.47	2003.4	99.60	0.00
5000	.043	27.1	3.6	0.841	0.036	350.59	2504.2	99.78	0.00
6000	.035	24.2	2.9	0.959	0.030	420.71	3005.1	99.88	0.00
7000	.031	21.5	2.6	1.083	0.025	490.83	3505.9	99.94	0.00
8000	.027	19.9	1.7	1.172	0.022	560.95	4006.8	99.97	0.00
9000	.024	18.5	1.4	1.259	0.020	631.07	4507.6	99.99	0.00
10000	.022	17.2	1.2	1.340	0.018	701.19	5008.5	100.00	0.00

All Hg calculations assume  $T=484$  dyne/cm<sup>2</sup>, Contact Angle=140deg.Oil-Water  $P_c$  assumes Gas  $T\cos\theta=$  26 dynes/cm.

Density gradient for oil=0.33psi/ft; brine=0.47psi/ft.

# TABLE P-63

Husky NPR #1 Ikpihpuk Test Well 7141.2

feet

Mercury Injection Capillary Pressure (psia)	Approx. Pore Entry Diameter (um)	Cumulative Wetting Phase Saturation (% pore vol)	Distri- bution Func- tion	Cumula- tive Surface Area (m2/g)	Equivalent Cylindrical Pore Diameter (um)	Approx. Reservoir Oil-Water Capillary Pressure (psia)	Approx. Oil-Water Height Above Free Water Level (ft)	Burdine-Purcell Calculated	
								Oil Relative Permea- bility (%)	Brine Relative Permea- bility (%)
0	0	100.0	0.0	0.000	0.000	0.00	0.0	0.00	99.49
2	107.	100.0	0.0	0.000	0.000	0.14	1.0	0.00	99.49
4	53.8	100.0	0.0	0.000	0.000	0.28	2.0	0.00	99.49
6	35.8	100.0	0.0	0.000	0.000	0.42	3.0	0.00	99.49
8	26.9	100.0	0.0	0.000	0.000	0.56	4.0	0.00	99.49
10	21.5	100.0	0.0	0.000	0.000	0.70	5.0	0.00	99.49
12	17.9	100.0	0.0	0.000	0.000	0.84	6.0	0.00	99.49
15	14.3	100.0	0.0	0.000	0.000	1.05	7.5	0.00	99.49
18	11.9	100.0	0.0	0.000	0.000	1.26	9.0	0.00	99.49
21	10.2	100.0	0.0	0.000	0.000	1.47	10.5	0.00	99.49
25	8.60	100.0	0.0	0.000	0.000	1.75	12.5	0.00	99.49
30	7.17	100.0	0.0	0.000	0.000	2.10	15.0	0.00	99.49
40	5.37	100.0	0.0	0.000	0.000	2.80	20.0	0.00	99.49
50	4.30	100.0	0.0	0.000	0.000	3.51	25.0	0.00	99.49
60	3.58	100.0	0.0	0.000	0.000	4.21	30.1	0.00	99.49
80	2.69	100.0	0.0	0.000	0.000	5.61	40.1	0.00	99.49
100	2.15	100.0	0.0	0.000	0.000	7.01	50.1	0.00	99.49
200	1.08	100.0	0.0	0.000	0.000	14.02	100.2	0.00	99.49
300	.717	96.1	3.9	0.008	0.593	21.04	150.3	0.03	89.98
400	.537	60.6	35.5	0.107	0.444	28.05	200.3	18.63	21.90
500	.430	46.7	13.9	0.155	0.356	35.06	250.4	40.78	2.56
600	.358	41.1	5.6	0.179	0.296	42.07	300.5	51.94	0.59
800	.268	34.8	6.3	0.214	0.222	56.09	400.7	65.53	0.16
1000	.215	30.4	4.5	0.245	0.178	70.12	500.8	75.78	0.03
1500	.143	24.3	6.1	0.308	0.119	105.18	751.3	90.29	0.00
2000	.107	20.5	3.8	0.361	0.089	140.24	1001.7	99.75	0.00
3000	.072	16.1	4.5	0.454	0.059	210.36	1502.5	99.91	0.00
4000	.054	13.4	2.6	0.527	0.044	280.47	2003.4	99.95	0.00
5000	.043	11.1	2.3	0.609	0.036	350.59	2504.2	99.98	0.00
6000	.035	9.8	1.3	0.662	0.030	420.71	3005.1	99.99	0.00
7000	.031	8.6	1.3	0.724	0.025	490.83	3505.9	99.99	0.00
8000	.027	7.7	0.8	0.770	0.022	560.95	4006.8	100.00	0.00
9000	.024	7.1	0.6	0.808	0.020	631.07	4507.6	100.00	0.00
10000	.022	6.4	0.8	0.862	0.018	701.19	5008.5	100.00	0.00

All Hg calculations assume T=484 dyne/cm2, Contact Angle=140deg.

Oil-Water Pc assumes Gas TCos0= 26 dynes/cm.

Density gradient for oil=0.33psi/ft; brine=0.47psi/ft.

# TABLE P-69

U.S. Navy #1 S. Barrow Test Well: 1912.6 ft

Mercury Injection Capillary Pressure (psia)	Approx. Pore Entry Diameter (um)	Cumulative Wetting Phase Saturation (% pore vol)	Distri- bution Func- tion	Cumula- tive Surface Area (m2/g)	Equivalent Cylindrical Pore Diameter (um)	Approx. Reservoir Oil-Water Capillary Pressure (psia)	Approx. Oil-Water Height Above Free Water Level (ft)	Burdine-Purcell Calculated	
								Oil Relative Permea- bility (%)	Brine Relative Permea- bility (%)
0	0	100.0	0.0	0.000	0.000	0.00	0.0	0.00	100.00
2	107.	100.0	0.0	0.000	0.000	0.14	1.0	0.00	100.00
4	53.8	98.4	1.6	0.000	44.444	0.28	2.0	0.01	96.83
6	35.8	98.4	0.0	0.000	0.000	0.42	3.0	0.01	70.07
8	26.9	97.4	1.0	0.000	22.222	0.56	4.0	0.02	68.59
10	21.5	80.4	17.0	0.004	17.778	0.70	5.0	2.62	44.04
12	17.9	65.7	14.7	0.008	14.815	0.84	6.0	10.42	14.86
15	14.3	56.1	9.6	0.011	11.852	1.05	7.5	18.78	4.82
18	11.9	49.9	6.1	0.014	9.877	1.26	9.0	25.35	1.79
21	10.2	46.7	3.2	0.015	8.466	1.47	10.5	29.13	0.81
25	8.60	43.7	3.0	0.017	7.111	1.75	12.5	32.80	0.47
30	7.17	40.1	3.7	0.020	5.926	2.10	15.0	37.51	0.25
40	5.37	36.9	3.2	0.022	4.444	2.80	20.0	41.75	0.12
50	4.30	34.6	2.3	0.025	3.556	3.51	25.0	44.96	0.06
60	3.58	32.2	2.3	0.028	2.963	4.21	30.1	48.28	0.03
80	2.69	28.5	3.7	0.035	2.222	5.61	40.1	53.80	0.01
100	2.15	26.2	2.3	0.040	1.778	7.01	50.1	57.36	0.01
200	1.08	24.6	1.6	0.047	0.889	14.02	100.2	59.86	0.00
300	.717	15.4	9.3	0.110	0.593	21.04	150.3	75.48	0.00
400	.537	13.0	2.3	0.130	0.444	28.05	200.3	79.68	0.00
500	.430	11.5	1.6	0.148	0.356	35.06	250.4	82.57	0.00
600	.358	10.4	1.1	0.163	0.296	42.07	300.5	84.62	0.00
800	.268	8.4	1.9	0.198	0.222	56.09	400.7	88.33	0.00
1000	.215	7.2	1.3	0.227	0.178	70.12	500.8	90.84	0.00
1500	.143	3.5	3.6	0.349	0.119	105.18	751.3	98.07	0.00
2000	.107	2.6	0.9	0.391	0.089	140.24	1001.7	100.00	0.00
3000	.072	1.3	1.3	0.476	0.059	210.36	1502.5	100.00	0.00
4000	.054	0.4	0.9	0.560	0.044	280.47	2003.4	100.00	0.00
5000	.043	0.0	0.4	0.603	0.036	350.59	2504.2	100.00	0.00
6000	.035	0.0	0.0	0.603	0.000	420.71	3005.1	100.00	0.00
7000	.031	0.0	0.0	0.603	0.000	490.83	3505.9	100.00	0.00
8000	.027	0.0	0.0	0.603	0.000	560.95	4006.8	100.00	0.00
9000	.024	0.0	0.0	0.603	0.000	631.07	4507.6	100.00	0.00
10000	.022	0.0	0.0	0.603	0.000	701.19	5008.5	100.00	0.00

All Hg calculations assume air-mercury  $T=484$  dyne/cm<sup>2</sup>, Contact Angle=140deg.

Oil-Water  $P_c$  assumes oil-water  $T\cos\theta=$  26 dynes/cm

Density gradient for oil=0.33psi/ft; brine=0.47psi/ft.

TABLE P-70

Point  
U.S. Navy #1 Barrow Coretest: 179 ft

Mercury Injection Capillary Pressure (psia)	Approx. Pore Entry Diameter ( $\mu$ m)	Cumulative Wetting Phase Saturation (% pore vol)	Distri- bution Func- tion	Cumula- tive Surface Area (m <sup>2</sup> /g)	Equivalent Cylindrical Pore Diameter ( $\mu$ m)	Approx. Reservoir Oil-Water Capillary Pressure (psia)	Approx. Oil-Water Height Above Free Water Level (ft)	Burdine-Purcell Calculated	
								Oil Relative Permea- bility (%)	Brine Relative Permea- bility (%)
0	0	100.0	0.0	0.000	0.000	0.00	0.0	0.00	100.00
2	107.	100.0	0.0	0.000	0.000	0.14	1.0	0.00	100.00
4	53.8	100.0	0.0	0.000	0.000	0.28	2.0	0.00	100.00
6	35.8	100.0	0.0	0.000	0.000	0.42	3.0	0.00	100.00
8	26.9	100.0	0.0	0.000	0.000	0.56	4.0	0.00	100.00
10	21.5	99.8	0.2	0.000	17.778	0.70	5.0	0.00	100.00
12	17.9	99.8	0.0	0.000	0.000	0.84	6.0	0.00	97.42
15	14.3	97.4	2.4	0.001	11.852	1.05	7.5	0.01	92.45
18	11.9	95.4	2.0	0.002	9.877	1.26	9.0	0.04	79.91
21	10.2	66.8	28.6	0.019	8.466	1.47	10.5	9.17	34.04
25	8.60	52.3	14.5	0.029	7.111	1.75	12.5	24.17	6.85
30	7.17	47.2	5.1	0.033	5.926	2.10	15.0	31.16	1.80
40	5.37	43.1	4.2	0.038	4.444	2.80	20.0	37.18	0.74
50	4.30	39.9	3.2	0.042	3.556	3.51	25.0	41.88	0.32
60	3.58	37.8	2.2	0.046	2.963	4.21	30.1	45.18	0.16
80	2.69	34.4	3.3	0.053	2.222	5.61	40.1	50.41	0.09
100	2.15	31.9	2.6	0.060	1.778	7.01	50.1	54.55	0.04
200	1.08	24.2	7.7	0.103	0.889	14.02	100.2	67.70	0.01
300	.717	19.9	4.3	0.138	0.593	21.04	150.3	75.56	0.00
400	.537	17.6	2.3	0.165	0.444	28.05	200.3	80.06	0.00
500	.430	15.9	1.7	0.188	0.356	35.06	250.4	83.38	0.00
600	.358	14.2	1.7	0.217	0.296	42.07	300.5	86.81	0.00
800	.268	12.2	2.0	0.261	0.222	56.09	400.7	90.89	0.00
1000	.215	10.9	1.3	0.296	0.178	70.12	500.8	93.49	0.00
1500	.143	9.0	2.0	0.378	0.119	105.18	751.3	97.67	0.00
2000	.107	7.9	1.1	0.438	0.089	140.24	1001.7	100.00	0.00
3000	.072	6.8	1.1	0.529	0.059	210.36	1502.5	100.00	0.00
4000	.054	6.1	0.7	0.609	0.044	280.47	2003.4	100.00	0.00
5000	.043	5.7	0.4	0.666	0.036	350.59	2504.2	100.00	0.00
6000	.035	5.4	0.3	0.717	0.030	420.71	3005.1	100.00	0.00
7000	.031	5.1	0.2	0.761	0.025	490.83	3505.9	100.00	0.00
8000	.027	5.1	0.0	0.761	0.000	560.95	4006.8	100.00	0.00
9000	.024	5.1	0.0	0.761	0.000	631.07	4507.6	100.00	0.00
10000	.022	5.1	0.0	0.761	0.000	701.19	5008.5	100.00	0.00

All Hg calculations assume air-mercury  $T=484$  dyne/cm<sup>2</sup>, Contact Angle=140deg.

Oil-Water  $P_c$  assumes oil-water  $T\cos\theta=26$  dynes/cm

Density gradient for oil=0.33psi/ft; brine=0.47psi/ft.

TABLE P-71

U.S. Navy #2 S. Barrow Test Well: 1763 Ft

Mercury Injection Capillary Pressure (psia)	Approx. Pore Entry Diameter ( $\mu$ m)	Cumulative Wetting Phase Saturation (% pore vol)	Distri- bution Func- tion	Cumula- tive Surface Area (m <sup>2</sup> /g)	Equivalent Cylindrical Pore Diameter ( $\mu$ m)	Approx. Reservoir Oil-Water Capillary Pressure (psia)	Approx. Oil-Water Height Above Free Water Level (ft)	Burdine-Purcell Calculated	
								Oil Relative Permea- bility (%)	Brine Relative Permea- bility (%)
0	0	100.0	0.0	0.000	0.000	0.00	0.0	0.00	100.00
2	107.	100.0	0.0	0.000	0.000	0.14	1.0	0.00	100.00
4	53.8	100.0	0.0	0.000	0.000	0.28	2.0	0.00	100.00
6	35.8	100.0	0.0	0.000	0.000	0.42	3.0	0.00	100.00
8	26.9	100.0	0.0	0.000	0.000	0.56	4.0	0.00	100.00
10	21.5	100.0	0.0	0.000	0.000	0.70	5.0	0.00	100.00
12	17.9	100.0	0.0	0.000	0.000	0.84	6.0	0.00	100.00
15	14.3	100.0	0.0	0.000	0.000	1.05	7.5	0.00	100.00
18	11.9	100.0	0.0	0.000	0.000	1.26	9.0	0.00	100.00
21	10.2	100.0	0.0	0.000	0.000	1.47	10.5	0.00	100.00
25	8.60	100.0	0.0	0.000	0.000	1.75	12.5	0.00	100.00
30	7.17	100.0	0.0	0.000	0.000	2.10	15.0	0.00	100.00
40	5.37	100.0	0.0	0.000	0.000	2.80	20.0	0.00	100.00
50	4.30	100.0	0.0	0.000	0.000	3.51	25.0	0.00	100.00
60	3.58	100.0	0.0	0.000	0.000	4.21	30.1	0.00	100.00
80	2.69	91.4	8.6	0.007	2.222	5.61	40.1	0.40	79.64
100	2.15	72.6	18.8	0.025	1.778	7.01	50.1	9.41	28.30
200	1.08	53.9	18.7	0.062	0.889	14.02	100.2	31.97	3.59
300	.717	46.7	7.2	0.084	0.593	21.04	150.3	43.80	0.41
400	.537	42.3	4.4	0.101	0.444	28.05	200.3	51.69	0.11
500	.430	38.9	3.3	0.117	0.356	35.06	250.4	57.98	0.04
600	.358	36.8	2.2	0.130	0.296	42.07	300.5	62.31	0.02
800	.268	33.0	3.7	0.160	0.222	56.09	400.7	69.94	0.01
1000	.215	30.2	2.8	0.187	0.178	70.12	500.8	75.97	0.00
1500	.143	25.8	4.5	0.253	0.119	105.18	751.3	86.02	0.00
2000	.107	23.0	2.8	0.309	0.089	140.24	1001.7	92.73	0.00
3000	.072	19.4	3.6	0.416	0.059	210.36	1502.5	99.99	0.00
4000	.054	17.1	2.3	0.506	0.044	280.47	2003.4	100.00	0.00
5000	.043	15.3	1.8	0.593	0.036	350.59	2504.2	100.00	0.00
6000	.035	14.1	1.2	0.665	0.030	420.71	3005.1	100.00	0.00
7000	.031	12.9	1.3	0.751	0.025	490.83	3505.9	100.00	0.00
8000	.027	12.2	0.6	0.801	0.022	560.95	4006.8	100.00	0.00
9000	.024	11.6	0.7	0.861	0.020	631.07	4507.6	100.00	0.00
10000	.022	11.0	0.5	0.912	0.018	701.19	5008.5	100.00	0.00

All Hg calculations assume air-mercury  $T=484$  dyne/cm<sup>2</sup>, Contact Angle=140deg.Oil-Water  $P_c$  assumes oil-water  $T\cos\theta=$  26 dynes/cm

Density gradient for oil=0.33psi/ft; brine=0.47psi/ft.

TABLE P-72

U.S. Navy #3 S. Barrow Test Well: 225.5 ft

Mercury Injection Capillary Pressure (psia)	Approx. Pore Entry Diameter ( $\mu$ m)	Cumulative Wetting Phase Saturation (% pore vol)	Distri- bution Func- tion	Cumula- tive Surface Area ( $m^2/g$ )	Equivalent Cylindrical Pore Diameter ( $\mu$ m)	Approx. Reservoir Oil-Water Capillary Pressure (psia)	Approx. Oil-Water Height Above Free Water Level (ft)	Burdine-Purcell Calculated	
								Oil Relative Permea- bility (%)	Brine Relative Permea- bility (%)
0	0	100.0	0.0	0.000	0.000	0.00	0.0	0.00	100.00
2	107.	100.0	0.0	0.000	0.000	0.14	1.0	0.00	100.00
4	53.8	100.0	0.0	0.000	0.000	0.28	2.0	0.00	100.00
6	35.8	100.0	0.0	0.000	0.000	0.42	3.0	0.00	100.00
8	26.9	100.0	0.0	0.000	0.000	0.56	4.0	0.00	100.00
10	21.5	100.0	0.0	0.000	0.000	0.70	5.0	0.00	100.00
12	17.9	100.0	0.0	0.000	0.000	0.84	6.0	0.00	100.00
15	14.3	55.7	44.3	0.017	11.852	1.05	7.5	17.39	28.56
18	11.9	47.4	8.3	0.020	9.877	1.26	9.0	27.54	3.96
21	10.2	43.2	4.2	0.023	8.466	1.47	10.5	33.48	1.59
25	8.60	39.5	3.7	0.025	7.111	1.75	12.5	38.92	0.81
30	7.17	35.4	4.1	0.028	5.926	2.10	15.0	45.17	0.39
40	5.37	31.5	3.9	0.032	4.444	2.80	20.0	51.26	0.16
50	4.30	29.4	2.1	0.035	3.556	3.51	25.0	54.72	0.06
60	3.58	27.5	1.8	0.037	2.963	4.21	30.1	57.74	0.03
80	2.69	24.5	3.1	0.044	2.222	5.61	40.1	62.84	0.02
100	2.15	22.4	2.1	0.049	1.778	7.01	50.1	66.44	0.01
200	1.08	16.4	6.0	0.079	0.889	14.02	100.2	77.14	0.00
300	.717	13.7	2.7	0.099	0.593	21.04	150.3	82.24	0.00
400	.537	12.0	1.7	0.116	0.444	28.05	200.3	85.49	0.00
500	.430	10.8	1.2	0.131	0.356	35.06	250.4	87.86	0.00
600	.358	9.9	0.9	0.144	0.296	42.07	300.5	89.55	0.00
800	.268	8.7	1.2	0.169	0.222	56.09	400.7	92.05	0.00
1000	.215	7.7	1.0	0.195	0.178	70.12	500.8	94.13	0.00
1500	.143	5.9	1.7	0.260	0.119	105.18	751.3	97.71	0.00
2000	.107	4.8	1.1	0.315	0.089	140.24	1001.7	100.00	0.00
3000	.072	3.3	1.5	0.431	0.059	210.36	1502.5	100.00	0.00
4000	.054	2.2	1.1	0.537	0.044	280.47	2003.4	100.00	0.00
5000	.043	1.6	0.6	0.612	0.036	350.59	2504.2	100.00	0.00
6000	.035	1.2	0.5	0.681	0.030	420.71	3005.1	100.00	0.00
7000	.031	0.6	0.6	0.781	0.025	490.83	3505.9	100.00	0.00
8000	.027	0.3	0.3	0.843	0.022	560.95	4006.8	100.00	0.00
9000	.024	0.0	0.3	0.913	0.020	631.07	4507.6	100.00	0.00
10000	.022	0.0	0.0	0.913	0.000	701.19	5008.5	100.00	0.00

All Hg calculations assume air-mercury  $T=484$  dyne/cm<sup>2</sup>, Contact Angle=140deg.Oil-Water  $P_c$  assumes oil-water  $T\cos\theta=26$  dynes/cm

Density gradient for oil=0.33psi/ft; brine=0.47psi/ft.

# TABLE P-74

Husky NPR #1 Peard Test Well: 3052.1 ft

Mercury Injection Capillary Pressure (psia)	Approx. Pore Entry Diameter (um)	Cumulative Wetting Phase Saturation (% pore vol)	Distri- bution Func- tion	Cumula- tive Surface Area (m2/g)	Equivalent Cylindrical Pore Diameter (um)	Approx. Reservoir Oil-Water Capillary Pressure (psia)	Approx. Oil-Water Height Above Free Water Level (ft)	Burdine-Purcell Calculated	
								Oil Relative Permea- bility (%)	Brine Relative Permea- bility (%)
0	0	100.0	0.0	0.000	0.000	0.00	0.0	0.00	100.00
2	107.	100.0	0.0	0.000	0.000	0.14	1.0	0.00	100.00
4	53.8	100.0	0.0	0.000	0.000	0.28	2.0	0.00	100.00
6	35.8	100.0	0.0	0.000	0.000	0.42	3.0	0.00	100.00
8	26.9	100.0	0.0	0.000	0.000	0.56	4.0	0.00	100.00
10	21.5	100.0	0.0	0.000	0.000	0.70	5.0	0.00	100.00
12	17.9	100.0	0.0	0.000	0.000	0.84	6.0	0.00	100.00
15	14.3	100.0	0.0	0.000	0.000	1.05	7.5	0.00	100.00
18	11.9	100.0	0.0	0.000	0.000	1.26	9.0	0.00	100.00
21	10.2	100.0	0.0	0.000	0.000	1.47	10.5	0.00	100.00
25	8.60	100.0	0.0	0.000	0.000	1.75	12.5	0.00	100.00
30	7.17	100.0	0.0	0.000	0.000	2.10	15.0	0.00	100.00
40	5.37	100.0	0.0	0.000	0.000	2.80	20.0	0.00	100.00
50	4.30	84.4	15.6	0.008	3.556	3.51	25.0	1.80	66.82
60	3.58	78.9	5.5	0.011	2.963	4.21	30.1	4.06	26.11
80	2.69	64.2	14.6	0.022	2.222	5.61	40.1	15.28	11.30
100	2.15	56.4	7.8	0.030	1.778	7.01	50.1	24.39	3.00
200	1.08	41.7	14.8	0.059	0.889	14.02	100.2	45.84	0.58
300	.717	35.8	5.9	0.076	0.593	21.04	150.3	55.88	0.07
400	.537	32.0	3.9	0.091	0.444	28.05	200.3	62.95	0.02
500	.430	29.0	2.9	0.105	0.356	35.06	250.4	68.58	0.01
600	.358	27.0	2.1	0.117	0.296	42.07	300.5	72.64	0.00
800	.268	23.7	3.2	0.143	0.222	56.09	400.7	79.25	0.00
1000	.215	21.2	2.5	0.167	0.178	70.12	500.8	84.53	0.00
1500	.143	17.0	4.3	0.229	0.119	105.18	751.3	93.93	0.00
2000	.107	14.4	2.6	0.281	0.089	140.24	1001.7	99.99	0.00
3000	.072	10.9	3.4	0.382	0.059	210.36	1502.5	100.00	0.00
4000	.054	8.7	2.3	0.470	0.044	280.47	2003.4	100.00	0.00
5000	.043	6.9	1.8	0.556	0.036	350.59	2504.2	100.00	0.00
6000	.035	5.6	1.2	0.629	0.030	420.71	3005.1	100.00	0.00
7000	.031	4.6	1.1	0.701	0.025	490.83	3505.9	100.00	0.00
8000	.027	3.9	0.6	0.751	0.022	560.95	4006.8	100.00	0.00
9000	.024	3.4	0.5	0.795	0.020	631.07	4507.6	100.00	0.00
10000	.022	2.8	0.6	0.854	0.018	701.19	5008.5	100.00	0.00

All Hg calculations assume air-mercury  $T=484$  dyne/cm<sup>2</sup>, Contact Angle=140deg.

Oil-Water  $P_c$  assumes oil-water  $T\cos\theta=26$  dynes/cm

Density gradient for oil=0.33psi/ft; brine=0.47psi/ft.

TABLE P-75

Husky NPR #1 Peard Test Well: 5416.8 ft

Mercury Injection Capillary Pressure (psia)	Approx. Pore Entry Diameter (um)	Cumulative Wetting Phase Saturation (% pore vol)	Distri- bution func- tion	Cumula- tive Surface Area (m2/g)	Equivalent Cylindrical Pore Diameter (um)	Approx. Reservoir Oil-Water Capillary Pressure (psia)	Approx. Oil-Water Height Above Free Water Level (ft)	Burdine-Purcell Calculated	
								Oil Relative Permea- bility (%)	Brine Relative Permea- bility (%)
0	0	100.0	0.0	0.000	0.000	0.00	0.0	0.00	100.00
2	107.	100.0	0.0	0.000	0.000	0.14	1.0	0.00	100.00
4	53.8	100.0	0.0	0.000	0.000	0.28	2.0	0.00	100.00
6	35.8	100.0	0.0	0.000	0.000	0.42	3.0	0.00	100.00
8	26.9	100.0	0.0	0.000	0.000	0.56	4.0	0.00	100.00
10	21.5	100.0	0.0	0.000	0.000	0.70	5.0	0.00	100.00
12	17.9	100.0	0.0	0.000	0.000	0.84	6.0	0.00	100.00
15	14.3	100.0	0.0	0.000	0.000	1.05	7.5	0.00	100.00
18	11.9	100.0	0.0	0.000	0.000	1.26	9.0	0.00	100.00
21	10.2	100.0	0.0	0.000	0.000	1.47	10.5	0.00	100.00
25	8.60	100.0	0.0	0.000	0.000	1.75	12.5	0.00	100.00
30	7.17	100.0	0.0	0.000	0.000	2.10	15.0	0.00	100.00
40	5.37	100.0	0.0	0.000	0.000	2.80	20.0	0.00	100.00
50	4.30	100.0	0.0	0.000	0.000	3.51	25.0	0.00	100.00
60	3.58	100.0	0.0	0.000	0.000	4.21	30.1	0.00	100.00
80	2.69	100.0	0.0	0.000	0.000	5.61	40.1	0.00	100.00
100	2.15	100.0	0.0	0.000	0.000	7.01	50.1	0.00	100.00
200	1.08	99.4	0.6	0.001	0.889	14.02	100.2	0.00	98.30
300	.717	75.6	23.8	0.070	0.593	21.04	150.3	6.79	43.97
400	.537	56.4	19.2	0.143	0.444	28.05	200.3	29.97	6.20
500	.430	51.2	5.2	0.168	0.356	35.06	250.4	39.26	1.15
600	.358	47.9	3.3	0.187	0.296	42.07	300.5	45.56	0.48
800	.268	42.9	5.0	0.225	0.222	56.09	400.7	55.68	0.19
1000	.215	39.8	3.1	0.255	0.178	70.12	500.8	62.25	0.06
1500	.143	34.7	5.1	0.327	0.119	105.18	751.3	73.54	0.02
2000	.107	31.1	3.6	0.396	0.089	140.24	1001.7	82.00	0.00
3000	.072	26.2	4.9	0.537	0.059	210.36	1502.5	94.22	0.00
4000	.054	22.9	3.3	0.664	0.044	280.47	2003.4	99.96	0.00
5000	.043	21.0	1.9	0.754	0.036	350.59	2504.2	99.98	0.00
6000	.035	19.2	1.8	0.859	0.030	420.71	3005.1	99.99	0.00
7000	.031	17.7	1.5	0.958	0.025	490.83	3505.9	99.99	0.00
8000	.027	16.7	1.0	1.036	0.022	560.95	4006.8	100.00	0.00
9000	.024	16.0	0.7	1.096	0.020	631.07	4507.6	100.00	0.00
10000	.022	14.9	1.1	1.203	0.018	701.19	5008.5	100.00	0.00

All Hg calculations assume air-mercury  $\gamma = 484$  dyne/cm<sup>2</sup>, Contact Angle = 140deg.Oil-Water  $P_c$  assumes oil-water  $\gamma \cos \theta = 26$  dynes/cm

Density gradient for oil = 0.33psi/ft; brine = 0.47psi/ft.