



CMS-300 CONVENTIONAL PLUG ANALYSIS

Sample Number	Depth (ft)	Net Confining Stress (psig)	Porosity (%)	Permeability		b(air) psi	Beta ft(-1)	Alpha (microns)	Saturation		Grain Density (g/cm3)	Footnote
				Klinkenberg	Kair				Oil	Water		
				(md)	(md)				% Pore Volume			
1H	8099.05	800	2.68	.001	.005	136.81	9.36E+15	3.01E+04	25.3	62.3	2.803	
1H	8099.05	2600	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.803	2
2H	8107.10	800	0.22	.0002	.001	270.68	5.99E+17	2.70E+05	2.0	93.2	2.658	1
2H	8107.10	2600	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.658	1,2
3H	8109.85	800	3.75	1.39	1.64	3.44	2.11E+10	8.98E+01	10.4	80.3	2.704	1,3
3H	8109.85	2600	3.59	.515	.535	0.70	7.03E+11	1.17E+03			2.704	1,3
4H	8112.25	Ambient	0.70	N/A	N/A	N/A	N/A	N/A	4.8	51.0	2.712	5
5H	8115.25	Ambient	2.78	N/A	N/A	N/A	N/A	N/A	39.2	55.9	2.822	5
6H	8117.55	800	1.22	.001	.003	165.68	3.30E+16	6.04E+04			2.714	
6H	8117.55	2600	0.82	.0001	.001	269.80	6.27E+17	2.84E+05	10.2	64.6	2.714	
7H	8122.10	800	6.56	2.37	2.61	1.86	1.89E+10	1.31E+02			2.106	1
7H	8122.10	2600	5.07	.138	.246	19.56	1.35E+12	5.98E+02	25.5	58.0	2.106	1
8H	8123.65	Ambient	3.57	N/A	N/A	N/A	N/A	N/A	22.4	72.4	2.712	5
9H	8125.30	Ambient	1.24	N/A	N/A	N/A	N/A	N/A	28.6	42.8	2.713	5
10H	8127.00	Ambient	4.38	N/A	N/A	N/A	N/A	N/A	15.2	79.1	2.710	5
11H	8135.55	800	6.10	2.98	3.69	4.24	7.47E+10	6.52E+02			2.807	1
11H	8135.55	2600	5.68	.156	.275	18.94	1.21E+12	5.77E+02	8.3	87.1	2.807	1
12H	8138.55	Ambient	9.91	N/A	N/A	N/A	N/A	N/A	1.1	91.4	2.699	5
13H	8140.90	Ambient	7.52	N/A	N/A	N/A	N/A	N/A	0.7	95.7	2.765	5
14H	8143.50	800	6.27	.053	.113	30.19	6.11E+12	1.03E+03			2.724	
14H	8143.50	2600	5.73	.014	.039	51.76	5.36E+13	2.47E+03	0.7	95.0	2.724	
15H	8146.30	Ambient	7.20	N/A	N/A	N/A	N/A	N/A	1.4	94.8	2.757	5
16H	8148.55	Ambient	7.64	N/A	N/A	N/A	N/A	N/A	2.1	89.2	2.552	5
17H	8150.30	800	0.86	.578	.615	1.46	1.28E+08	2.22E-01			2.698	1



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				Klinkenberg	Kair				Oil	Water		
				(md)	(md)				% Pore Volume			
17H	8150.30	2600	0.59	.044	.097	32.66	8.10E+12	1.13E+03	22.1	34.2	2.698	1
18H	8152.75	800	3.65	.006	.021	69.35	2.30E+14	4.96E+03			2.766	
18H	8152.75	2600	3.54	.001	.006	121.51	4.87E+15	2.19E+04	3.7	81.8	2.766	
19H	8154.70	800	4.23	.019	.051	46.40	3.01E+13	1.81E+03			2.726	
19H	8154.70	2600	4.07	.004	.016	80.23	4.88E+14	7.11E+03	11.0	85.3	2.726	
20H	8156.60	Ambient	4.37	N/A	N/A	N/A	N/A	N/A	23.2	73.5	2.747	5
21H	8159.45	Ambient	0.77	N/A	N/A	N/A	N/A	N/A	2.3	92.6	2.700	5
22H	8161.15	Ambient	8.03	N/A	N/A	N/A	N/A	N/A	19.3	74.1	2.607	5
23H	8165.30	800	2.18	.003	.013	88.31	8.08E+14	9.09E+03			2.683	1
23H	8165.30	2600	2.04	.0004	.003	176.33	4.05E+16	6.19E+04	26.3	70.0	2.683	1
24H	8167.20	800	3.69	10.5	12.1	2.50	8.79E+11	2.43E+04			2.665	1
24H	8167.20	2600	2.90	.003	.010	88.90	8.34E+14	9.22E+03	15.7	75.1	2.665	1
25H	8169.30	Ambient	3.27	N/A	N/A	N/A	N/A	N/A	35.3	51.8	2.660	5
26H	8171.45	800	0.94	.979	1.08	2.06	4.06E+11	1.29E+03			2.710	1
26H	8171.45	2600	0.30	.065	.134	27.53	4.41E+12	9.13E+02	6.8	89.7	2.710	1
27H	8173.75	800	4.00	.0003	.002	208.27	1.06E+17	9.96E+04			2.804	
27H	8173.75	2600	2.55	.00008	.001	326.62	1.32E+18	3.63E+05	31.7	64.8	2.804	
28H	8175.40	800	6.40	.788	.862	1.82	1.31E+11	3.36E+02			2.124	1
28H	8175.40	2600	3.69	.026	.063	39.76	1.67E+13	1.46E+03	4.2	91.6	2.124	1
29H	8179.60	Ambient	6.86	N/A	N/A	N/A	N/A	N/A	27.8	65.9	2.654	5
30H	8181.35	800	3.50	.009	.028	61.52	1.24E+14	3.67E+03			2.752	
30H	8181.35	2600	3.40	.004	.015	82.46	5.65E+14	7.63E+03	16.7	76.5	2.752	
31H	8183.80	Ambient	4.85	N/A	N/A	N/A	N/A	N/A	12.1	82.9	2.720	5



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				Klinkenberg	Kair				Oil	Water		
				(md)	(md)				% Pore Volume			
32H	8185.05	800	5.86	.269	.450	16.01	6.87E+11	4.71E+02			2.706	
32H	8185.05	2600	4.79	.014	.038	51.30	5.11E+13	2.40E+03	3.0	90.1	2.706	

Footnotes :

- (1) : Denotes fractured or chipped sample. Permeability and/or porosity may be optimistic.
 - (2) : Sample permeability below the measurement range of CMS-300 equipment at indicated net confining stress (NCS). Data unavailable.
 - (3) : Denotes very short sample, porosity may be optimistic due to lack of conformation of boot material to plug surface.
 - (5) : Denotes sample unsuitable for measurement at stress. Porosity determined using Archimedes bulk volume at ambient conditions.
- Permeability greater than 0.1 mD measured using helium gas. Permeability less than 0.1 mD measured using nitrogen gas. All b values converted to b (air)