



CORE ANALYSIS

Company Anadarko Production File no. DC049
 Well Nordling A-1 Date _____
 Location Sec 23 - TWN 32S - R38W Stevens County
 State Kansas Field Gentzler
 Remarks _____ Page 1 of 2

Sample No.	INTERVAL from - to	POROSITY (%)	Grain DENSITY (gm/cc)	PERMEABILITY (md.)		Residual SATURATION (% Pore Vol.)		SAMPLE DESCRIPTION	Fracs.
				to Air	to Liquid	Oil	Water		
15	2584-85	17.0	2.74	5.1		0	97.0	Dol: m-dk gy, f xl, sl calc, mic, anhy inclu, cl/sh strgr	
36	2615-16	18.3	2.84	44.2		0	31.3	Dol: m-dk gy, f xl, Calc xl, v vug, anhy/cl & sh infill	
39	2618-19	11.6	2.87	.4		0	74.6	Dol: m-dk gy, f xl, Calc xl, v vug, anhy/cl & sh infill	
40	2619-20	18.1	2.86	12.1		0	24.0	Dol: m-dk gy, f xl, Calc xl, v vug, anhy/cl & sh infill	
62	2660-61	9.5	2.71	.3		0	44.7	Ls: crm-lt gy, f xl, Calc nod, vug, cl/sh infill, re xl foss	
63	2661-62	9.7	2.71	.2		0	30.7	Ls: crm-lt gy, f xl, Calc nod, vug, cl/sh infill, re xl foss	
66	2664-65	13.2	2.82	<.01		0	71.3	Dol: crm-lt gy, cryptoxl, calc material/abdnt cl infill & sh I.P., anhy infill	
78	2708-09	19.3	2.69	17.2		0	75.7	Ls: m gy, cryptoxl, anhy I.P., sh & cl inclu	
79	2709-10	19.5	2.69	20.8		0	85.3	Ls: m gy, cryptoxl, anhy I.P. sh & cl inclu	
115	2760-61	4.6	2.67	42.3		0	94.1	Sh: m-dk gy, v calc, mic, anhy inclu & infill, sil, cl/strgr	

¹Empirical

²Calculated

³Assumed

Measured if not noted

^{*}Fractured

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Sample No.	INTERVAL from - to	POROSITY (%)	Grain DENSITY (gm/cc)	PERMEABILITY (md.)		Residual SATURATION (% Pore Vol.)		SAMPLE DESCRIPTION	Fracs.
				to Air	to Liquid	Oil	Water		
149	2797-98	12.5	2.72	<0.01		0	77.5	Ls: m-dk gy, vf xl, abdnt anhy inclu & fill/cl & sh, foss	
150	2798-99	7.7	2.71	<0.01		0	73.7	Ls: m-dk gy, vf xl, abdnt anhy inclu & fill/cl & sh, foss	
151	2807-08	9.0	2.69	<0.01		0	95.1	Ls: m-dk gy, vf xl, abdnt anhy inclu & fill/cl & sh, foss	
152	2808-09	6.1	2.64	<0.01		0	71.4	Ls: m-dk gy, vf xl, abdnt anhy inclu & filled/cl & sh, foss	
153	2809-10	8.7	2.68	<0.01		0	48.0	Ls: m-dk gy, vf xl, abdnt anhy inclu & filled/cl & sh, foss	
154	2813-14	7.8	2.68	<0.01		0	60.6	Ls: m-dk gy, vf xl, abdnt anhy inclu & filled/cl & sh, foss	
155	2814-15	7.3	2.71	<0.01		0	95.3	Ls: dk gy, cryptoxl, anhy inclu, cl/sh I.P., foss	
158	2822-23	3.6	2.69	<0.01		0	96.8	Ls: dk gy, cryptoxl, anhy inclu, cl/sh I.P., foss	
159	2823-24	5.6	2.71	<0.01		0	83.5	Ls: dk gy, cryptoxl, anhy inclu, cl/sh I.P., foss	
Plug analysis due to fractured whole core samples									

¹Empirical ²Calculated ³Assumed Measured if not noted

*Fractured



CORE ANALYSIS

Company Anadarko Production File no. DC 056
 Well Nordling A#1 Date 4 AUG 82
 Location Stevens County
 State Kansas Field N/A
 Remarks _____ Page 1 of _____

Sample No.	INTERVAL from - to	POROSITY (%)	Grain DENSITY (gm/cc)	PERMEABILITY (md.)		Residual SATURATION (% Pore Vol.)		SAMPLE DESCRIPTION <i>15-184-20567</i> <i>23-37-254</i>	Fracs.
				to Air	to Liquid	Oil	Water		
1	2574.5 2564.5	12.2	2.74	3.54	2.84			<i>No</i> Dol: wh-lt gy to tn, vf xln, suc, vc alc, sl mic, vug, sh strgr Dol: m gy-m brn, mic-f xln, vug/Calc xl in vug, tr cl infill Dol: m-dk gy, mic-f xln, vug, calc, foss, sl sh Dol: m gy-brn, mic-vf xln, vug, sl calc Ls: m brn to rd brn, vf-f xln, suc, sl mic, arg Ls: crm to lt gy, f xln, sl vug, occ Calc xl, foss Ls: m gy to crm, f xln, foxx, occ Calc xl, sl sh Ls: m-dk gy, crypt xln, sil, sh ip, tr anhy Ls: wh-lt gy to tan, crypt xln, foss, sl ool, sh ip Ls: dk gy, crypt xln, suc, mic, sil, v arg Ls: m-dk gy, crypt xln, suc, sl mic, sil, v arg/sh lam Ls: lt gy-lt brn to tn, f xln, Calc xl, ool vug Ls: lt gy to lt brn, f xln, Calc xl, vug ool, foss sh ip	
2	2607.5	15.8	2.85	23.9	.31				
3	2611.7 2513.2	11.4	2.86	.15	.05				
4	2622.9	26.7	2.86	199.8	48.4				
5	2645.6	14.3	2.71	.69	<.01				
6	2662.3	10.0	2.70	.39	.12				
7	2670.8	9.4	2.71	.17	.04				
8	2712.6	13.3	2.69	1.40	.30				
9	2723.3	15.3	2.69	2.00	1.04				
10A*	2743.2	16.4	2.69	12.2	2.73				
10B	2743.5	12.3	2.74	.19	<.01				
11	2765.7	13.2	2.73	.61	.32				
12	2772.3	16.9	2.73	1.30	.56				

*Two samples were taken from 2743 due to the heterogeneity of the rock.

Samples Numbered 2, 4, and 10A had both the air and liquid permeabilities rechecked to substantiate the large decrease in permeability to brine.