

ORIGINAL

Table 1

CONVENTIONAL CORE ANALYSIS

Anardarko Petroleum Corporation  
 APC Hitch Unit No. 8-3 Well  
 Hitch Unit Field  
 Seward Co., Kansas  
 SRS 2382/RSH 3742

14 - 33.34w

Core Number: 1  
 Depth Interval: 6,147.0 - 6,178.0 ft

Sample	Depth (ft)	Porosity (%BV)	Permeability to Gas (md)	Grain Density (g/cc)	Saturation (%PV)			Lithological Description
					Water	Oil	Gas	
T044	6147.8	1.1	0.015	2.74	85.7	10.3	4.0	ls lt gry dns abd foss incl sdy I.P. calc incl sh lams tr pyr
T045	6148.8	3.2	0.008	2.66	50.3	14.0	35.7	Sst lt gry vfgr wvl consol sl calc
T046	6149.4	4.4	0.019	2.66	56.4	18.4	25.2	Sst lt gry vfgr wvl consol sml calc incl sl calc
T047	6150.5	3.4	0.084	2.69	46.6	13.5	39.9	Sst lt gry vfgr wvl consol abd calc incl sml sh incl tr pyr
T048	6151.6	16.4	718.	2.65	66.5	16.1	17.4	Sst lt gnsh gry f-mgr wl consol
T049	6152.3	17.3	790.	2.65	65.4	25.5	9.1	Sst lt gnsh gry fgr wl consol
T050	6153.4	10.6	53.0	2.66	48.6	21.4	30.0	Sst lt gnsh gry fgr wl consol thn sh lams tr pyr lam frac
T051	6154.5	16.2	764.	2.65	54.2	28.7	17.1	Sst lt yel gry fgr wl consol
T052	6155.5	16.8	761.	2.65	54.8	28.9	16.3	Sst lt yel gry fgr wl consol
T053	6156.4	13.1	315.	2.62	42.3	18.4	39.3	Sst lt yel gry fgr wl consol
T054	6157.3	12.5	225.	2.65	50.4	22.4	27.2	Sst gnsh gry fgr wl consol sl calc
T055	6158.7	16.3	719.	2.65	52.6	30.4	17.0	Sst gnsh gry fgr vfgr I.P. wl consol
T056	6159.5	17.1	726.	2.64	58.7	22.1	19.2	Sst gnsh gry fgr vfgr I.P. wl consol
T057	6160.4	15.9	686.	2.64	59.1	23.4	17.5	Sst gnsh gry fgr wl consol
T058	6161.5	15.8	600.	2.64	59.6	17.4	23.0	Sst gnsh gry fgr wl consol
T059	6162.5	14.3	492.	2.65	48.4	22.1	29.5	Sst gnsh gry fgr vfgr I.P. wl consol lam frac
T060	6163.6	15.7	738.	2.64	49.6	33.7	16.7	Sst gnsh gry fgr vfgr I.P. wl consol thn sh lam
T061	6164.5	10.4	90.9	2.65	32.5	19.8	47.9	Sst lt gnsh gry vf-fgr wl consol
T062	6165.6	9.8	82.5	2.65	26.8	18.6	54.6	Sst lt gnsh gry vf-fgr wl consol tr pyr
T063	6166.4	15.2	508.	2.64	49.1	27.9	23.0	Sst gnsh gry fgr oco vfgr wl consol
T064	6167.3	13.8	414.	2.64	42.9	26.0	31.1	Sst gnsh gry vf-fgr mod consol
T065	6168.5	16.1	627.	2.64	45.6	23.7	30.7	Sst gnsh gry vf-fgr wl consol
T066	6169.4	11.1	115.	2.65	36.8	19.1	44.1	Sst lt gnsh gry fgr vfgr I.P. wl consol thn sh lams tr pyr
T067	6170.3	11.1	125.	2.64	27.7	21.7	50.6	Sst lt gnsh gry fgr vfgr I.P. wl consol thn sh lams tr pyr

\* Sample contains fracture(s). Permeability to gas may be anomalously high  
 \*\* Broken/non-cylindrical sample. Permeability to gas indeterminate

Table 1

CONVENTIONAL CORE ANALYSIS

Anardarko Petroleum Corporation  
 APC Hitch Unit No. 8-3 Well  
 Hitch Unit Field  
 Seward Co., Kansas  
 SRS 2382/RSH 3742

Core Number: 1  
 Depth Interval: 6,147.0 - 6,178.0 ft

Sample	Depth (ft)	Porosity (%BV)	Permeability to Gas (md)	Grain Density (g/cc)	Saturation (%PV)			Lithological Description
					Water	Oil	Gas	
T088	6171.5	7.4	8.01	2.64	26.9	29.3	43.8	Sst lt gnsh gry vfgr wl consol thn sh lams
T089	6172.7	9.8	8.94	2.63	41.7	24.1	34.2	Sst lt gnsh gry vfgr wl consol
T072	6173.9	12.7	86.9	2.64	39.7	19.5	40.8	Sst lt yel gry vfgr wl consol
T071	6174.7	13.9	118.	2.64	45.1	18.4	36.5	Sst lt gnsh gry vfgr wl consol
T070	6175.6	9.9	19.9	2.60	32.8	20.5	46.7	Sst gnsh gry vfgr wl consol
T073	6176.4	14.8	142.	2.64	42.4	17.0	40.6	Sst lt gnsh gry vfgr wl consol
T074	6177.3	13.7	107.	2.64	34.9	14.7	50.4	Sst lt yel gry vfgr wl consol sml thn sh incl

ORIGINAL

\* Sample contains fracture(s). Permeability to gas may be anomalously high  
 \*\* Broken/non-cylindrical sample. Permeability to gas indeterminable



Table 2

## CONVENTIONAL CORE ANALYSIS

Anadarko Petroleum Corporation  
 APC Hitch Unit No. 8-3 Well  
 Hitch Unit Field  
 Seward Co., Kansas  
 SRS 2382/RSH 3742

Core Number: 2

Depth interval: 6,178.0 - 6,236.0 ft

Sample	Depth (ft)	Porosity (%BV)	Permeability to Gas (md)	Grain Density (g/cc)	Saturation (%PV)			Lithological Description
					Water	Oil	Gas	
T075	6178.0	14.4	156.	2.84	43.2	21.0	35.8	Sst lt yel gry vfgr wl consol
T076	6179.1	13.8	157.	2.84	41.2	18.3	40.5	Sst lt yel gry vfgr wl consol
T077	6180.3	14.9	174.	2.84	45.5	11.5	43.0	Sst lt yel gry vfgr wl consol
T078	6181.2	14.4	200.	2.64	40.5	18.9	40.6	Sst lt yel gry vfgr wl consol
T079	6182.4	15.3	212.	2.64	48.5	18.2	33.3	Sst lt yel gry vfgr wl consol tr pyr
T080	6183.6	14.7	84.4	2.64	43.9	18.9	37.2	Sst lt yel gry vfgr wl consol tr pyr
T081	6184.1	15.3	104.	2.65	42.8	16.8	40.4	Sst lt yel gry vfgr wl consol tr pyr
T083	6184.9	15.4	109.	2.65	42.0	15.5	42.5	Sst lt yel gry vfgr wl consol smi thn sh lams
T082	6185.8	15.0	96.1	2.65	43.4	15.5	41.1	Sst lt yel gry vfgr wl consol
T084	6186.9	15.8	161.	2.65	41.0	17.7	41.3	Sst lt yel gry vfgr wl consol
T085	6187.8	17.2	199.	2.64	40.5	17.8	41.7	Sst lt yel gry vfgr wl consol
T086	6189.0	18.0	272.	2.64	59.8	18.2	22.0	Sst lt yel gry vfgr wl consol
T087	6190.0	16.3	160.	2.65	61.8	12.6	25.6	Sst lt yel gry vfgr wl consol
T088	6191.1	15.2	122.	2.65	50.5	20.1	29.4	Sst lt yel gry vfgr wl consol smi thn sh incl tr pyr
T089	6192.1	14.3	78.8	2.65	46.0	19.5	34.5	Sst lt yel gry vfgr wl consol smi thn sh incl tr pyr
T090	6193.1	15.9	142.	2.65	53.1	18.9	30.0	Sst lt yel gry vfgr wl consol smi thn sh incl tr pyr
T091	6194.1	14.3	87.8	2.65	46.7	27.0	26.3	Sst lt yel gry vfgr wl consol
T092	6195.0	15.1	94.9	2.65	56.5	18.5	25.0	Sst lt yel gry vfgr wl consol
T093	6196.0	15.6	126.	2.65	52.5	15.4	32.1	Sst lt yel gry vfgr wl consol
T094	6197.1	14.7	93.6	2.65	49.9	15.7	34.4	Sst lt yel gry vfgr wl consol
T095	6198.0	14.2	72.5	2.65	45.1	14.0	40.9	Sst lt yel gry vfgr wl consol
T096	6199.2	12.6	48.8	2.63	42.2	12.4	45.4	Sst lt yel gry vfgr wl consol
T097	6199.9	14.4	95.1	2.64	34.5	29.7	35.8	Sst gnsh gry vfgr wl consol
T098	6201.0	14.8	111.	2.65	42.6	22.4	35.0	Sst gnsh gry vfgr wl consol

ORIGINAL

\* Sample contains fracture(s). Permeability to gas may be anomalously high

\*\* Broken/non-cylindrical sample. Permeability to gas indeterminate

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Table 2

CONVENTIONAL CORE ANALYSIS

Anadarko Petroleum Corporation  
 APC Hitch Unit No. 8-3 Well  
 Hitch Unit Field  
 Seward Co., Kansas  
 SRS 2382/RSR 3742

Core Number: 2  
 Depth Interval: 8,178.0 - 8,238.0 ft

Sample	Depth (ft)	Porosity (%BV)	Permeability to Gas (md)	Grain Density (g/cc)	Saturation (%PV)			Lithological Description
					Water	Oil	Gas	
T099	6202.2	13.2	55.4	2.65	41.2	18.6	40.2	Sst gnsh gry vfgr wl consol
T100	6203.1	12.2	34.4	2.84	46.4	16.1	37.5	Sst gnsh gry vfgr wl consol thn sh lams
T101	6204.0	13.8	64.8	2.65	39.4	22.6	38.0	Sst yel gry vfgr wl consol
T102	6205.0	13.4	53.3	2.65	53.2	14.3	32.5	Sst yel gry vfgr wl consol sml thn sh lams
T103	6205.9	11.5	27.7	2.64	50.1	17.2	32.7	Sst yel gry vfgr wl consol sml thn sh lams
T104	6206.9	9.3	6.33	2.64	34.3	13.8	51.8	Sst yel gry vfgr wl consol
T105	6208.1	11.0	40.1	2.64	32.1	17.9	50.0	Sst yel gry vfgr wl consol thn sh lams
T106	6208.2	11.7	18.9	2.64	33.6	18.3	48.1	Sst lt yel gry vfgr wl consol
T107	6210.1	11.6	15.9	2.63	30.7	18.3	51.0	Sst lt yel gry vfgr wl consol
T108	6210.9	6.7	0.843	2.66	39.1	16.8	44.1	Sst yel gry vfgr wl consol
T109	6211.8	9.5	3.65	2.81	32.1	12.4	55.5	Sst yel gry vfgr wl consol
T110	6213.1	8.0	4.74	2.60	36.2	13.0	50.8	Sst yel gry vfgr wl consol
T111	6213.2	8.2	2.11	2.59	52.9	18.0	29.1	Sst dk gry vfgr wl consol thn calc lams
T112	6214.8	3.3	0.041	2.58	51.1	18.6	30.3	Sst dk gry vfgr wwl consol
T113	6216.0	4.7	0.386	2.58	61.2	9.3	29.5	Sst dk gry vfgr wwl consol sml sh lams
T114	6217.1	5.9	0.190	2.58	51.3	12.7	36.0	Sst dk gry vfgr wwl consol sml sh lams
T115	6217.9	4.8	0.529	2.57	63.1	23.3	13.6	Sst dk gry vfgr wwl consol abd thn sh lams
T116	6219.1	5.7	0.262	2.58	43.4	12.0	44.6	Sst dk gry vfgr wwl consol abd thn sh lams
T117	6220.1	6.9	0.507	2.60	31.6	13.6	54.8	Sst gnsh gry vfgr wl consol
T118	6221.1	8.4	1.80	2.56	32.7	17.0	50.3	Sst gnsh gry vfgr wl consol
T119	6221.7	4.8	0.185	2.56	45.6	28.6	25.8	Sst gnsh gry vfgr wl consol thn sh lams
T120	6223.3	5.8	4.87 *	2.54	42.7	36.2	21.1	Sst dk gnsh gry vfgr wl consol sh lams frac
T121	6224.0	8.5	2.02	2.57	29.0	24.3	46.7	Sst gnsh gry vfgr wl consol sml sh incl
T122	6225.3	1.5	0.012	2.68	47.9	35.2	16.9	Sst wh w/gry I.P. vfgr wwl consol

ORIGINAL

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Geo-Source  
 Inc.

Table 2

CONVENTIONAL CORE ANALYSIS

Anardarko Petroleum Corporation  
 APC Hitch Unit No. 8-3 Well  
 Hitch Unit Field  
 Seward Co., Kansas  
 SRS 2382/RSR 3742

Core Number: 2  
 Depth Interval: 6,178.0 - 6,236.0 ft

Sample	Depth (ft)	Porosity (%BV)	Permeability to Gas (md)	Grain Density (g/cc)	Saturation (%PV)			Lithological Description
					Water	Oil	Gas	
T123	6226.2	5.6	0.200	2.60	24.2	31.0	44.8	Sst gnsh gry vgr wl consol
T124	6226.9	6.7	0.412	2.59	22.1	36.6	41.3	Sst gnsh gry vgr wl consol
T125	6228.2	8.0	0.948	2.58	23.3	26.9	47.8	Sst gnsh gry vgr wl consol
T126	6229.3	7.1	0.904	2.57	28.8	29.8	41.4	Sst gnsh gry vgr wl consol thn sh lams
T127	6230.1	7.3	1.15	2.58	24.7	31.6	43.7	Sst gnsh gry vgr wl consol thn sh lams
T128	6231.2	6.6	0.007	2.54	46.4	27.5	26.1	Sst gnsh gry vgr wl consol thn sh lams
T129	6232.2	7.4	1.68	2.56	35.3	26.6	38.1	Sst dk gry vgr wl consol thn sh lams sh incl
T130	6233.1	8.6	2.94	2.59	36.4	20.5	43.1	Sst dk gry vgr wl consol thn sh lams sh incl
T131	6234.1	6.3	1.21	2.62	40.1	19.7	40.2	Sst dk gry vgr wl consol thn sh lams sh incl
T132	6235.1	5.2	0.231	2.60	41.6	22.2	36.2	Sst gnsh gry vgr wl consol abd thn sh lams sh incl

ORIGINAL

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 \*\* Broken/non-cylindrical sample. Permeability to gas indeterminate

Reynolds  
 Inc.

Table 3

CONVENTIONAL CORE ANALYSIS

Anardarko Petroleum Corporation  
 APC Hitch Unit No. 8-3 Well  
 Hitch Unit Field  
 Seward Co., Kansas  
 SRS 2382/RSH 3742

Core Number: 3

Depth interval: 8,236.0 - 8,258.0 ft

Sample	Depth (ft)	Porosity (%BV)	Permeability to Gas (md)	Grain Density (g/cc)	Saturation (%PV)			Lithological Description
					Water	Oil	Gas	
T133	8236.6	5.6	1.19	2.61	50.4	16.1	33.5	Sst gnsh gry vfgr wl consol abd thn sh lams sh inclc
T134	8237.6	7.9	0.578	2.64	35.3	13.9	50.8	Sst lt yel gry vfgr wl consol thn sh inclc
T135	8238.6	10.0	6.18	2.64	36.6	13.1	50.4	Sst lt yel gry vfgr wl consol thn sh inclc
T136	8239.7	12.0	41.1	2.64	42.3	19.4	38.3	Sst yel wh vfgr wl consol sml sh inclc
T137	8240.8	12.1	34.8	2.64	39.2	16.0	44.8	Sst yel wh vfgr wl consol sml sh inclc
T138	8241.6	12.0	46.6	2.64	29.8	18.0	62.2	Sst yel wh vfgr wl consol sml sh inclc
T139	8242.5	12.2	35.7	2.64	30.0	17.4	52.6	Sst yel wh vfgr wl consol sml sh inclc
T140	8243.5	12.1	32.3	2.64	30.2	15.8	54.0	Sst yel wh vfgr wl consol sml sh inclc
T141	8244.3	12.1	44.3	2.64	28.7	24.6	46.7	Sst yel wh vfgr wl consol sml sh inclc
T142	8245.5	10.7	58.7	2.64	32.4	19.7	47.9	Sst yel wh vfgr wl consol sml sh inclc
T143	8246.5	9.1	16.1	2.64	28.5	13.4	58.1	Sst yel wh vfgr wl consol tr pyr
T144	8247.6	5.6	0.207*	2.64	75.3	3.2	21.5	Sst yel gry vfgr wl consol abd sh lams fracs
T145	8248.2	7.1	0.544*	2.66	60.7	2.7	16.6	Sst lt yel gry vfgr wl consol abd sh lams
T146	8249.7	7.1	0.820*	2.63	61.6	2.9	15.5	Sst yel gry vfgr wl consol abd thn sh lams fracs
T147	8250.7	7.9	0.187	2.64	67.4	1.4	11.2	Sst yel gry vfgr wl consol abd thn sh lams
T148	8254.7	2.1	0.018	2.69	79.1	0.8	20.1	Sst yel gry vfgr wwl consol abd thn sh lams calc
T149	8255.9	5.8	**	2.70	81.9	0.8	17.3	Sst yel gry vfgr stly wl consol shly abd sh lams pyr

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