

31-26-40W
15-075-20198

CORE ANALYSIS REPORT

FOR

AMOCO PRODUCTION COMPANY
MELVIN COMBS GAS UNIT NO. 1
HAMILTON COUNTY, KANSAS

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CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

31-26-40W
15-075-20198
1

AMOCO PRODUCTION COMPANY
MELVIN COMBS GAS UNIT #1
PANOMA FIELD
HAMILTON COUNTY, KANSAS

DATE: 9/1/77
FORMATION: CHASE
DRLG. FLUID: WATER BASE MUD
LOCATION: 1980' FNL & 1980' FEL SEC. 31-26S-40W

FILE NO: 3402-9054
ENGINEER: PUGH
ELEVATION: 2936' KB

SMP. NO.	DEPTH	PERM. TO AIR MD.		POROSITY PERCENT	FLUID SATS.		GR. DEN.	DESCRIPTION
		MAXIMUM	90 DEG		OIL	WTR.		
WHOLE CORE ANALYSIS								
1	2315.0-16.0	<0.1	<0.1	11.7	1.2	94.0	2.80	SLT, SDY, DOL, ANHY
+ 2	2316.0-17.0	8.7	0.3	8.0	1.8	88.8	2.77	SD, SLTY, DOL, ANHY
3	2317.0-18.0	<0.1	<0.1	7.6	1.6	91.9	2.75	LM, V/SLTY, ANHY
4	2318.0-19.0	<0.1	<0.1	5.8	1.4	88.3	2.74	LM, V/SLTY, SL/ANHY
+ 5	2319.0-20.0	27.0	27.0	10.7	2.2	91.8	2.75	SLT, SDY, ANHY
6	2320.0-21.0	<0.1	<0.1	12.1	2.1	93.1	2.81	SLT, V/ANHY
+ 7	2321.0-22.0	1.0	0.1	10.7	1.8	93.1	2.76	SLT, DOL, VF
+ 8	2322.0-23.0	387.0	387.0	18.9	2.3	82.2	2.77	SLT, SDY, DOL
+ 9	2323.0-24.0	73.0	72.0	11.3	2.7	89.3	2.79	SLT, SDY, DOL
10	2324.0-25.0	<0.1	<0.1	13.3	2.0	92.6	2.78	SD, SLTY, ANHY
+ 11	2325.0-26.0	1.6	0.1	13.6	2.4	94.6	2.79	SD, SLTY, ANHY
+ 12	2326.0-27.0	0.9	0.8	12.9	1.9	94.0	2.80	SLT, DOL, ANHY
+ 13	2327.0-28.0	33.0	18.0	8.8	0.0	92.0	2.70	SLT, DOL, ANHY
14	2328.0-29.0	<0.1	<0.1	9.7	0.0	91.4	2.70	SLT, SDY, SL/LMY, ANHY
15	2329.0-30.0	<0.1	<0.1	10.3	0.0	92.9	2.70	SLT, SDY, SL/LMY, ANHY
16	2330.0-31.0	<0.1	<0.1	11.3	0.0	93.9	2.71	SD, SLTY, SL/LMY, ANHY
+ 17	2331.0-32.0	259.0	0.4	10.9	0.0	90.2	2.73	SD, SLTY, SL/LMY, VF
18	2332.0-33.0	<0.1	<0.1	8.8	0.0	91.0	2.71	SD, SLTY, SL/LMY
+ 19	2333.0-34.0	242.0	234.0	11.8	0.0	90.4	2.76	SD, SLTY, DOL
20	2334.0-35.0	<0.1	<0.1	13.4	0.0	93.3	2.77	SD, SLTY, SL/LMY, ANHY
+ 21	2335.0-36.0	<0.1	<0.1	10.7	1.7	92.6	2.74	SD, SLTY, DOL
22	2336.0-37.0	0.1	<0.1	15.9	2.0	93.1	2.80	SD, SLTY, SL/LMY, ANHY
+ 23	2337.0-38.0	69.0	66.0	11.9	2.0	93.8	2.78	SLT, SDY, SL/LMY, ANHY
24	2338.0-39.0	0.4	0.3	12.7	1.7	94.4	2.76	SD, SLTY, SL/LMY
+ 25	2339.0-40.0	0.2	0.2	9.0	0.0	91.0	2.69	SD, SLTY
+ 26	2340.0-41.0	236.0	230.0	16.7	0.0	88.6	2.76	SD, SLTY, SL/ANHY

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

MOCO PRODUCTION COMPANY
ELVIN COMBS GAS UNIT #1

DATE: 9/1/77
FORMATION: CHASE

FILE NO: 3402-9054
ENGINEER: PUGH

MP. O.	DEPTH	PERM. TO AIR MD.		POROSITY PERCENT	FLUID SATS.		GR. DEN.	DESCRIPTION
		MAXIMUM	90 DEG		OIL	WTR.		
27	2341.0-42.0	0.1	<0.1	9.9	0.0	92.6	2.71	SD, SLTY, DOL, ANHY
28	2342.0-43.0	0.1	<0.1	9.7	0.0	93.3	2.72	SD, SLTY, DOL, ANHY
+ 29	2343.0-44.0	271.0	242.0	12.9	1.3	90.2	2.76	SD, SLTY, ANHY
+ 30	2344.0-45.0	96.0	96.0	12.9	0.8	95.5	2.74	SD, SLTY, SL/LMY, ANHY
+ 31	2345.0-46.0	18.0	17.0	10.9	0.6	95.1	2.86	SLT, LMY, ANHY
+ 32	2346.0-47.0	66.0	15.0	14.4	1.2	95.0	2.87	SLT, LMY, ANHY
+ 33	2347.0-48.0	316.0	266.0	16.7	0.6	89.5	2.78	SD, SLTY, W/DOL INCL
34	2348.0-49.0	0.1	0.1	14.9	0.4	93.5	2.73	LM, V/SLTY
35	2349.0-50.0	0.4	0.4	12.1	0.7	94.1	2.73	SD, SLTY, LMY
36	2350.0-51.0	<0.1	<0.1	16.4	1.1	93.8	2.71	SD, SLTY, LMY
37	2351.0-52.0	1.3	1.3	18.5	1.8	92.5	2.76	SD, SLTY, LMY
+ 38	2352.0-53.0	28.0	26.0	16.6	1.4	93.2	2.74	SD, SLTY, SL/ANHY
+ 39	2353.0-54.0	108.0	10.0	21.6	1.2	92.1	2.83	SLT, SDY, LMY, ANHY
40	2354.0-55.0	0.2	0.1	15.9	1.8	93.9	2.80	SD, SLTY, DOL, ANHY
+ 41	2355.0-56.0	26.0	24.0	14.4	0.8	94.2	2.76	SD, SLTY, LMY, ANHY
+ 42	2356.0-57.0	1.2	1.2	14.9	1.4	94.0	2.79	SD, SLTY, LMY, ANHY
+ 43	2357.0-58.0	241.0	238.0	17.2	1.3	90.9	2.79	SD, SLTY, LMY, ANHY
44	2358.0-59.0	0.7	0.7	11.4	1.3	89.0	2.74	SD, SLTY, SL/LMY, ANHY
45	2359.0-60.0	4.7	4.4	17.8	0.6	93.3	2.71	SD, SLTY, SL/SHY, LMY
46	2360.0-61.0	4.4	4.1	17.1	1.4	91.0	2.72	SD, SLTY, SL/SHY, LMY
47	2361.0-62.0	7.7	7.4	16.5	0.8	91.3	2.72	SD, SLTY, SHY, SL/ANHY
48	2362.0-63.0	4.0	4.0	17.6	0.6	90.0	2.71	SD, SLTY, SHY, SL/ANHY
+ 49	2363.0-64.0	19.0	16.0	17.2	1.2	92.7	2.71	SD, SLTY, V/SHY, ANHY
+ 50	2364.0-65.0	285.0	220.0	15.5	1.7	90.1	2.72	SD, SLTY, V/SHY, ANHY
51	2365.0-66.0	4.7	3.1	11.7	1.1	93.7	2.76	SD, SLTY, V/SHY, ANHY
+ 52	2366.0-67.0	6.4	5.9	11.3	1.0	94.6	2.75	SD, SLTY, V/SHY, ANHY
53	2367.0-68.0	0.1	<0.1	12.7	1.4	94.4	2.81	SD, DOL, SHY, ANHY
54	2368.0-69.0	0.2	0.2	14.6	1.4	92.0	2.81	SD, DOL, SL/SHY, ANHY
55	2369.0-70.0	0.1	0.1	9.1	0.7	92.8	2.85	DOL, SDY, SHY, SL/ANHY
56	2370.0-71.0	0.1	<0.1	6.3	0.9	91.4	2.84	DOL, SDY, SHY, SL/ANHY
57	2371.0-72.0	0.1	<0.1	9.9	1.3	93.1	2.84	DOL, SDY, SHY, SL/ANHY
58	2372.0-73.0	0.1	0.1	22.8	1.0	91.7	2.84	DOL, SDY, V/SHY, ANHY

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CORE LABORATORIES, INC.
 Petroleum Reservoir Engineering
 DALLAS, TEXAS

MOCO PRODUCTION COMPANY
 ELVIN COMBS GAS UNIT #1

DATE: 9/1/77
 FORMATION: CHASE

FILE NO: 3402-9054
 ENGINEER: PUGH

MP. O.	DEPTH	PERM. MAXIMUM	TO AIR MD. 90 DEG	POROSITY PERCENT	FLUID SATS. OIL WTR.	GR. DEN.	DESCRIPTION
59	2373.0-74.0	0.1	0.1	14.4	1.4 94.8	2.74	SD, DOL, SLTY, SL/SHY
60	2374.0-75.0	5.6	5.1	19.0	1.6 92.3	2.71	SD, DOL, SLTY
61	2375.0-76.0	5.6	5.2	18.1	1.3 93.8	2.72	SD, DOL, SLTY
62	2376.0-77.0	5.0	5.0	18.2	1.2 92.6	2.71	SD, DOL, SLTY
63	2377.0-78.0	5.1	5.0	20.2	1.2 93.8	2.71	SD, DOL, SLTY
64	2378.0-79.0	5.7	5.3	17.6	1.1 92.0	2.71	SD, DOL, SLTY, SHY
+ 65	2379.0-80.0	162.0	162.0	13.6	1.9 91.0	2.73	SLT, SDY, SHY, ANHY
66	2380.0-81.0	0.1	0.1	10.5	2.0 94.2	2.72	SD, SLTY, LMY, SL/ANHY
67	2381.0-82.0	0.1	0.1	14.7	1.6 93.6	2.74	SD, SLTY, LMY, SL/ANHY
+ 68	2382.0-83.0	0.4	0.4	10.3	1.4 94.3	2.71	SD, SLTY, LMY, SHY, ANHY
+ 69	2383.0-84.0	154.0	152.0	13.3	2.1 93.1	2.77	SLT, SDY, SHY, ANHY
+ 70	2384.0-85.0	20.0	19.0	13.4	2.6 94.7	2.77	SLT, SDY, SHY, ANHY
+ 71	2385.0-86.0	149.0	145.0	15.3	2.7 90.9	2.80	SLT, V/SHY, ANHY
72	2386.0-87.0	0.2	0.2	13.4	2.1 92.3	2.84	SLT, SHY, DOL, ANHY, VF
73	2387.0-88.0	0.2	0.2	15.0	0.9 95.3	2.81	SLT, SHY, DOL, ANHY
74	2388.0-89.0	0.1	0.1	9.4	0.6 94.3	2.71	SLT, SHY, SL/SDY, ANHY
75	2389.0-90.0	0.2	0.1	12.5	0.6 95.3	2.71	SD, SLTY, SL/SHY, ANHY
76	2390.0-91.0	0.1	0.1	13.3	1.1 95.2	2.73	SD, SLTY, SL/SHY, ANHY
77	2391.0-92.0	0.1	0.1	11.1	1.7 94.5	2.69	SD, SLTY, SL/ANHY
+ 78	2392.0-93.0	4.1	3.7	13.6	1.8 94.6	2.71	SD, SLTY, SHY, SL/ANHY
+ 79	2393.0-94.0	14.0	13.0	13.0	2.1 91.8	2.74	SD, SLTY, SHY, ANHY
+ 80	2394.0-95.0	45.0	43.0	12.6	2.2 91.8	2.73	SD, SLTY, SHY, SL/ANHY
+ 81	2395.0-96.0	120.0	115.0	12.5	2.6 91.4	2.75	SD, SLTY, SHY, SL/ANHY
82	2396.0-97.0	<0.1	<0.1	11.0	2.0 94.0	2.71	SD, SLTY, SL/ANHY
+ 83	2397.0-98.0	20.0	18.0	14.4	1.8 94.6	2.76	SD, SLTY, SHY, ANHY
84	2398.0-99.0	0.3	0.3	17.4	1.9 89.0	2.75	SD, SLTY, DOL, ANHY
85	2399.0-00.0	0.5	0.4	16.9	2.1 92.5	2.75	SD, SLTY, DOL, ANHY
86	2400.0-01.0	0.5	0.5	15.9	1.6 94.0	2.74	SD, SLTY, DOL, ANHY
87	2401.0-02.0	0.5	0.5	16.9	2.0 94.2	2.74	SD, SLTY, DOL, ANHY
88	2402.0-03.0	0.8	0.8	19.4	2.3 90.2	2.74	SD, SLTY, DOL, ANHY
89	2403.0-04.0	1.0	1.0	17.8	1.7 87.6	2.74	SD, SLTY, DOL
90	2404.0-05.0	1.1	1.1	17.2	1.4 88.9	2.74	SD, SLTY, DOL

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CORE LABORATORIES, INC.
 Petroleum Reservoir Engineering
 DALLAS, TEXAS

AMOCO PRODUCTION COMPANY
 MELVIN COMBS GAS UNIT #1

DATE: 9/1/77
 FORMATION: CHASE

FILE NO: 3402-9054
 ENGINEER: PUGH

SMP. NO.	DEPTH	PERM. TO AIR MD. MAXIMUM	90 DEG	POROSITY PERCENT	FLUID SATS. OIL	WTR.	GR. DEN.	DESCRIPTION
91	2405.0-06.0	1.7	1.6	16.5	1.2	90.6	2.71	SD, SLTY, DOL
+ 92	2406.0-07.0	33.0	32.0	16.1	1.9	93.5	2.74	SD, SLTY, DOL, SHY
#+ 93	2407.0-08.0	250.0	212.0	14.2	0.0	88.1	2.74	SLT, SHY, SL/SDY, DOL
94	2408.0-09.0	0.1	<0.1	14.8	0.0	92.3	2.73	SD, SLTY, DOL, SL/ANHY
95	2409.0-10.0	<0.1	<0.1	11.8	0.0	91.3	2.74	SD, SLTY, DOL
96	2410.0-11.0	<0.1	<0.1	15.6	0.0	93.6	2.73	SD, SLTY, DOL
97	2411.0-12.0	<0.1	<0.1	16.8	1.6	93.3	2.74	SD, SLTY, DOL
#+ 98	2412.0-13.0	22.0	21.0	12.1	1.7	86.4	2.75	SLT, SHY, ANHY
#+ 99	2413.0-14.0	0.1	0.1	12.0	1.2	85.9	2.75	SLT, SHY, ANHY
#+100	2414.0-15.0	0.4	0.4	14.7	1.1	89.8	2.79	SD, SLTY, SHY, DOL, ANHY
	2415.0-24.0							SH, ANHY
+ 101	2424.0-25.0	39.0	38.0	12.5	1.4	88.2	2.78	DOL, SL/SDY, SH LAMS
	2425.0-30.0							ANHY, SH STKS
102	2430.0-31.0	<0.1	<0.1	13.3	0.3	95.0	2.72	SLT, SDY, SHY, DOL
103	2431.0-32.0	<0.1	<0.1	14.0	1.6	80.0	2.73	SD, SLTY, SHY, DOL
104	2432.0-33.0	<0.1	<0.1	11.6	1.6	85.7	2.75	SD, SLTY, DOL
105	2433.0-34.0	<0.1	<0.1	11.3	0.0	89.5	2.75	SD, SLTY, DOL, SL/ANHY
106	2434.0-35.0	<0.1	<0.1	12.6	0.0	93.2	2.74	SD, SLTY, DOL, SL/ANHY
107	2435.0-36.0	<0.1	<0.1	14.9	0.0	92.2	2.73	SD, SLTY, DOL
+ 108	2436.0-37.0	0.1	<0.1	13.2	0.0	93.5	2.72	SD, SLTY, DOL

CORE LABORATORIES, INC.
 Petroleum Reservoir Engineering
 DALLAS, TEXAS

CORE SUMMARY

Company AMOCO PRODUCTION COMPANY
 Well MELVIN COMBS GAS UNIT NO. 1
 Page 5 of 5 File 3402-9054

DEPTH FEET	HORIZONTAL PERMEABILITY, Md.		POROSITY PER CENT	SATURATION		GRAIN DENSITY
	MAXIMUM	90 DEGREES		OIL	WATER	
2315-2317	4.4	0.2	9.9	1.5	91.4	2.79
2317-2319	<0.1	<0.1	6.7	1.5	90.1	2.75
2319-2326	70	70	12.9	2.2	91.0	2.78
2326-2328	17	9.4	10.9	1.0	93.0	2.75
2328-2348	79	58	12.0	0.6	92.4	2.75
2348-2349	0.1	0.1	14.9	0.4	93.5	2.73
2349-2369	37	28	15.6	1.2	92.5	2.75
2369-2373	0.1	0.1	12.0	1.0	92.3	2.84
2373-2379	4.5	4.3	17.9	1.3	93.2	2.72
2379-2380	162	162	13.6	1.9	91.0	2.73
2380-2383	0.2	0.2	11.8	1.7	94.0	2.72
2383-2386	108	105	14.0	2.5	92.9	2.78
2386-2389	0.2	0.2	12.6	1.2	94.0	2.79
2389-2392	0.1	0.1	12.3	1.1	95.0	2.71
2392-2398	34	32	12.9	2.1	93.0	2.73
2398-2406	0.8	0.8	17.3	1.8	90.9	2.74
2406-2408	142	122	15.2	1.0	90.8	2.74
2408-2412	<0.1	<0.1	14.8	0.4	92.6	2.74
2412-2413	22	21	12.1	1.7	86.4	2.75
2413-2415	0.3	0.3	13.4	1.2	87.9	2.77
2424-2425	39	38	12.5	1.4	88.2	2.78
2430-2437	<0.1	<0.1	13.0	0.5	89.9	2.73

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CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

COMPANY AMOCO PRODUCTION COMPANY FIELD PANOMA FILE 3402-9054
 WELL MELVIN COMBS GAS UNIT NO. 1 COUNTY HAMILTON DATE 9-1-77
1980' FNL & 1980' FEL
 LOCATION SEC. 31-26S-40W STATE KANSAS ELEV. 2936' KB

CORE-GAMMA CORRELATION

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VERTICAL SCALE: 5" = 100'

TOTAL WATER 0000
PERCENT PORE SPACE

80 60 40 20 0

GAMMA RAY
RADIATION INCREASE

PERMEABILITY
MILLIDARCYS

POROSITY
PERCENT

OIL SATURATION XXXX
PERCENT PORE SPACE

100.0 10.0 1.0 0.1

30

20

10

0 0 20 40 60 80

