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**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*  
**DALLAS, TEXAS**

CORE ANALYSIS REPORT

FOR

PHILLIPS PETROLEUM COMPANY

EUGSAU 3456 NO. 005  
EAST VACUUM FIELD  
LEA COUNTY, NEW MEXICO

**FREELIMINARY PRINT**

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**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*

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PHILLIPS PETROLEUM COMPANY  
 EUGSAU 3456 NO. 005  
 EAST VACUUM FIELD  
 LEA COUNTY, NEW MEXICO

DATE : 6-24-79  
 FORMATION : GRAYBURG  
 DRG. FLUID: BRINE WATER  
 LOCATION : 1030' FNL & 1410' FWL, SEC. 34, T-17-S, R-35-E

FULL DIAMETER ANALYSIS

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD)	FOR. MAXIMUM 90 DEG	FLUID	SATS.	GRAIN DEN	DESCRIPTION
6 1	4360.0-61.0	0.7	<0.1	4.0	5.7	34.6	DOL, ANHY, U/F, STY
6 2	4361.0-62.0	<0.1	<0.1	2.5	6.3	45.1	DOL, ANHY, FF, STY
6 3	4362.0-63.0	<0.1	<0.1	2.1	17.2	38.2	DOL, ANHY, FF, STY
6 4	4363.0-64.0	<0.1	<0.1	1.9	24.1	44.6	DOL, ANHY, SL/F, FF, STY
6 5	4364.0-65.0	<0.1	<0.1	2.9	2.1	51.9	DOL, ANHY, SL/F, FF, STY
6 6	4365.0-66.0	<0.1	<0.1	2.2	5.8	61.7	DOL, ANHY, SL/F, COL, STY
6 7	4366.0-67.0	0.2	0.2	3.4	15.6	30.3	DOL, ANHY, SL/U, SL/F, STY
6 8	4367.0-68.0	0.4	0.2	2.3	22.4	34.2	DOL, ANHY, SL/F, SL/U, STY
6 9	4368.0-69.0	2.3	1.2	9.5	10.0	26.7	DOL, ANHY, FF, SL/U
6 10	4369.0-70.0	0.8	0.7	3.5	11.2	39.3	DOL, U/V, ANHY, SL/U
6 11	4370.0-71.0	57.	45.	11.2	14.2	24.4	DOL, ANHY, SL/F, PP
6 12	4371.0-72.0	133.	26.	12.8	14.5	31.8	DOL, ANHY, SL/V, SU/F, PP
6 13	4372.0-73.0	73.	57.	19.7	29.7	24.0	DOL, ANHY, SL/F, PP, U/F
6 14	4373.0-74.0	57.	44.	14.5	27.0	25.8	DOL, ANHY, U/F, PP, STY
6 15	4374.0-75.0	154.	138.	14.9	25.1	26.8	DOL, ANHY, U/F, PP, STY
6 16	4375.0-76.0	150.	125.	14.2	23.2	31.3	DOL, ANHY, U/F, PP
6 17	4376.0-77.0	142.	93.	17.2	19.8	22.4	DOL, ANHY, U/F, PP, STY
6 18	4377.0-78.0	81.	52.	14.8	21.5	22.3	DOL, ANHY, SL/V, STY
6 19	4378.0-79.0	46.	41.	12.7	22.3	22.8	DOL, ANHY, SL/F, PP
6 20	4379.0-80.0	63.	73.	14.7	18.4	22.4	DOL, ANHY, FP
6 21	4380.0-81.0	10.	6.5	4.7	20.5	35.7	DOL, ANHY, SL/F, SL/U, PP, STY
6 22	4381.0-82.0	<0.1	<0.1	0.7	0.0	6.7	DOL, U/V, ANHY, PP
6 23	4382.0-83.0	0.5	0.4	3.3	18.4	64.6	DOL, ANHY, U/F, SL/U, STY
6 24	4383.0-84.0	0.8	0.3	2.7	4.9	84.2	DOL, ANHY, U/F, PP
6 25	4384.0-85.0	97.	94.	13.5	28.1	26.3	DOL, ANHY, PP

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**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*

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PHILLIPS PETROLEUM COMPANY  
 EVOSAU 3456 NO. 005

DATE : 6-24-79  
 FORMATION : GRAYBURG

FILE NO. : 3202-11177  
 ANALYSTS : GONSEY

FULL DIAMETER ANALYSIS

SAMPLE NUMBER	DEPTH	PERM. TO MAXIMUM	AIR (MD)	FOR. He	FLUID SATS. OIL	WTR	GRAIN DEN	DESCRIPTION	
								21.9	38.2
S 26	4385.0-86.0	3.2	2	4.1	21.9	38.2	2.88	DOL, ANHY, U/F, SL/U, STY	
S 27	4386.0-87.0	3.8	3.7	2.8	12.4	64.5	2.86	DOL, ANHY, U/F, SL/U, STY	
S 28	4387.0-88.0	4.8	4.4	7.1	17.1	38.0	2.84	DOL, ANHY, U/F, SL/U, STY	
S 29	4388.0-89.0	0.5	<0.1	2.9	4.8	55.6	2.89	DOL, ANHY, U/F, SL/U, STY	
S 30	4389.0-90.0	3.8	0.8	6.6	23.4	43.4	2.86	DOL, ANHY, FOSS, PP, SL/U, STY	
S 31	4390.0-91.0	3.0	9.0	7.8	15.3	37.1	2.89	DOL, ANHY, FR, U/F, STY	
S 32	4391.0-92.0	4.0	35.	9.2	16.1	33.4	2.89	DOL, ANHY, SL/F, PP, STY	
S 33	4392.0-93.0	7.7	65.	13.0	28.7	26.6	2.83	DOL, ANHY, SL/F, PP	
S 34	4393.0-94.0	1.3	1.3	1.7	23.1	68.4	2.86	DOL, ANHY, SL/F, STY	
S 35	4394.0-95.0	1.2	1.1	4.8	25.6	30.1	2.87	DOL, ANHY, U/F, PP, STY	
S 36	4395.0-96.0	12.0	59.	10.7	27.5	32.8	2.84	DOL, ANHY, PP, SL/U, SL/F, STY	
S 37	4396.0-97.0	<0.1	<0.1	2.8	0.0	35.9	2.94	DOL, ANHY, SL/F, PP, STY	
S 38	4397.0-98.0	0.9	0.8	1.9	23.8	53.0	2.85	DOL, ANHY, SL/F, PP, STY	
S 39	4398.0-99.0	2.5	2.3	6.2	13.0	32.6	2.87	DOL, ANHY, SL/F, PP, STY	
S 40	4399.0-00.0	7.5	6.6	12.3	21.6	21.6	2.86	DOL, ANHY, SL/U, PP, STY	
S 41	4400.0-01.0	0.7	0.5	1.8	18.4	71.4	2.87	DOL, ANHY, PP, SL/F, STY	
S 42	4401.0-02.0	2.7	2.1	2.7	13.5	73.3	2.85	DOL, ANHY, U/F, STY	
S 43	4402.0-03.0	2.9	1.1	5.5	11.1	63.0	2.86	DOL, ANHY, SL/U, SL/F, STY	
S 44	4403.0-04.0	5.6	3.4	4.9	14.4	49.5	2.82	DOL, ANHY, SL/U, SL/F, STY	
S 45	4404.0-05.0	1.94	1.71	22.7	21.4	21.0	2.82	DOL, ANHY, U/F, STY	
S 46	4405.0-06.0	1.2	1.1	8.2	32.3	35.9	2.80	DOL, ANHY, U/F, STY	
S 47	4406.0-07.0	0.2	0.2	4.8	18.2	50.4	2.87	DOL, ANHY, SL/U, SL/F, STY	
S 48	4407.0-08.0	<0.1	<0.1	3.4	23.1	45.8	2.84	DOL, ANHY, SL/U, PP, SL/F, STY	
S 49	4408.0-09.0	3.6	0.5	2.7	15.9	61.9	2.84	DOL, ANHY, SL/U, PP, STY	
S 50	4409.0-10.0	0.7	0.3	2.8	28.0	66.1	2.85	DOL, ANHY, SL/U, PP, STY	
S 51	4410.0-11.0	4.2	4.1	5.1	17.9	44.8	2.85	DOL, ANHY, SL/U, PP, STY	
S 52	4411.0-12.0	4.5	3.8	2.7	11.9	21.6	2.85	DOL, ANHY, SL/U, PP, STY	
S 53	4412.0-13.0	5.7	4.3	7.3	19.9	35.9	2.85	DOL, ANHY, SL/U, PP, STY	
S 54	4413.0-14.0	7.1	2.2	8.9	11.7	42.9	2.83	DOL, ANHY, SL/U, PP, STY	
S 55	4414.0-15.0	4.4	5.8	13.1	39.8	2.84	DOL, ANHY, U/F, PP, STY		

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*Petroleum Reservoir Engineering*  
 DALLAS, TEXAS

DATE : 6-24-79  
 FORMATION : GRAYBURG

FILE NO : 3202-11177  
 ANALYSTS : GOSSEY

**FULL DIAMETER ANALYSIS**

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MI)	PORE SIZE HE	FLUID SATS. OIL	WTR	GRAIN DEN	DESCRIPTION
S 56	4415.0-16.0	3.2	3.2	5.7	6.6	40.0	DOL, ANHY, PP, STY
S 57	4416.0-17.0	2.5	2.2	2.3	8.3	48.2	DOL, ANHY, SL/F, PP, STY
S 58	4417.0-18.0	3.6	1.5	5.5	20.5	47.5	DOL, ANHY, SL/F, SL/U, PP, STY
S 59	4418.0-19.0	21.	19.	12.5	21.1	31.2	DOL, ANHY, U/F, PP, STY
S 60	4419.0-20.0	33.	33.	16.4	18.2	29.8	DOL, ANHY, SL/F, SL/U, PP, STY
S 61	4420.0-21.0	3.0	1.7	10.8	18.9	50.9	DOL, ANHY, SL/F, SL/U, PP, STY
S 62	4421.0-22.0	5.5	3.3	12.5	20.6	22.9	DOL, ANHY, U/F, SL/U, DOL, STY
S 63	4422.0-23.0	20.	1.9	14.0	19.1	34.0	DOL, ANHY, U/F, SL/U, DOL, STY
S 64	4423.0-24.0	18.	0.9	5.2	12.8	67.6	DOL, ANHY, SL/F, DOL, SL/U, STY
S 65	4424.0-25.0	14.	5.0	6.2	17.0	36.8	DOL, ANHY, V/F, SL/U, STY
S 66	4425.0-26.0	7.3	6.6	7.2	20.2	39.5	DOL, ANHY, V/F, SL/U, STY
S 67	4426.0-27.0	2.0	1.0	1.9	14.1	82.0	DOL, ANHY, V/F, SL/U, STY
S 68	4427.0-28.0	0.7	0.2	3.5	12.4	69.1	DOL, ANHY, V/F, SL/U, STY
S 69	4428.0-29.0	1.1	6.3	8.5	22.6	27.9	DOL, ANHY, SL/F, STY
S 70	4429.0-30.0	8.0	6.0	12.9	20.7	30.6	DOL, ANHY, SL/F, SL/U, STY
S 71	4430.0-31.0	0.1	*	6.1	18.5	68.6	DOL, ANHY, SL/F, SL/U, STY
S 72	4431.0-32.0	10.	5.0	11.5	22.3	44.2	DOL, ANHY, SL/F, SL/U, STY
S 73	4432.0-33.0	4.8	4.4	4.8	16.9	52.7	DOL, ANHY, SL/F, STY
S 74	4433.0-34.0	4.3	2.0	4.8	16.9	52.7	DOL, ANHY, SL/F, STY
S 75	4434.0-35.0	0.3	*	10.0	16.2	56.8	DOL, ANHY, SL/F, STY
S 76	4435.0-36.0	0.1	0.1	5.1	11.2	37.3	DOL, ANHY, V/F, STY
S 77	4436.0-37.0	1.0	0.2	5.9	14.6	59.6	DOL, ANHY, SL/F, STY
S 78	4437.0-38.0	39.	38.	7.6	11.8	32.9	DOL, ANHY, V/F, STY
S 79	4438.0-39.0	45.	44.	7.1	9.0	35.1	DOL, ANHY, V/F, STY
S 80	4439.0-40.0	4.3	3.4	5.2	15.3	33.9	DOL, ANHY, V/F, STY
S 81	4440.0-41.0	1.5	0.9	4.0	14.3	39.7	DOL, ANHY, SL/F, STY
S 82	4441.0-42.0	4.2	0.5	4.4	9.0	38.7	DOL, ANHY, SL/F, STY
S 83	4442.0-43.0	33.	5.0	11.8	14.5	31.6	DOL, ANHY, SL/F, STY
S 84	4443.0-44.0	1.5	1.4	10.5	16.1	25.7	DOL, ANHY, SL/U, STY
S 85	4444.0-45.0	24.	24.	10.0	36.0	2.84	DOL, ANHY, SL/F, PP, STY

PHILLIPS PETROLEUM COMPANY  
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CORE LABORATORIES, INC.  
*Petroleum Reservoir Engineering*

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DATE : 6-24-79  
FORMATION : GRAYBURG  
DALLAS, TEXAS

FILE NO : 3202-11177  
ANALYSTS : GONSEY

FULL DIAMETER ANALYSIS

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD)	MAXIMUM 90 DEG	FOR. He	FLUID OIL	SATS. WTR	GRAIN DEN	DESCRIPTION
86	4445.0-46.0	7.8	6.0	11.0	17.6	23.5	2.86	DOL, ANHY, SL/U, STY
87	4446.0-47.0	6.5	6.3	10.2	21.4	23.8	2.85	DOL, SL/F, PP, STY
88	4447.0-48.0	13.	10.	10.9	20.3	28.1	2.87	DOL, SL/F, PP, STY
89	4448.0-49.0	1.4	0.6	4.3	35.6	36.5	2.86	DOL, ANHY, SL/F, PP, STY
90	4449.0-50.0	0.3	*	8.6	16.4	31.9	2.86	DOL
CORE NO. 2 4450.0-4540.0 CUT 90° REC 90°								
91	4450.0-51.0	37.	35.	9.4	16.5	48.4	2.83	DOL, ANHY, U/F, STY
92	4451.0-52.0	<0.1	<0.1	1.5	4.4	58.8	2.88	DOL, ANHY, STY
93	4452.0-53.0	<0.1	<0.1	1.6	7.9	57.0	2.87	DOL, ANHY, SL/F
94	4453.0-54.0	1.1.	7.5	8.2	19.7	36.5	2.84	DOL, ANHY, F, STY
95	4454.0-55.0	12.	5.9	8.7	19.6	36.8	2.85	DOL, ANHY, SL/F, PP, STY
96	4455.0-56.0	17.	7.4	7.8	14.5	35.7	2.84	DOL, ANHY, SL/F, SL/U, FOSS, STY
97	4456.0-57.0	25.	19.	9.6	13.1	44.5	2.84	DOL, ANHY, F, STY
98	4457.0-58.0	0.6	0.5	6.1	15.8	42.7	2.87	DOL, ANHY, PP, STY
99	4458.0-59.0	<0.1	<0.1	1.7	6.7	56.0	2.87	DOL, ANHY, PP, STY
100	4459.0-60.0	19.	15.	8.4	16.4	36.4	2.87	DOL, ANHY, DOL, SL/F, STY
101	4460.0-61.0	12.	10.	6.2	10.9	40.6	2.85	DOL, ANHY, U/F, PP
102	4461.0-62.0	3.4	0.7	4.9	11.8	42.5	2.87	DOL, ANHY, U/F, PP
103	4462.0-63.0	15.	12.	8.1	18.6	35.5	2.85	DOL, ANHY, SL/F, PP
104	4463.0-64.0	1.5.	7.8	8.3	20.6	39.3	2.83	DOL, ANHY, U/F, STY
105	4464.0-65.0	2.7	1.9	4.2	16.2	41.9	2.87	DOL, ANHY, STY
106	4465.0-66.0	1.2.	2.6	5.9	25.9	29.3	2.86	DOL, ANHY, U/F, PP, STY
107	4466.0-67.0	1.5.	1.4	9.0	21.8	33.0	2.84	DOL, ANHY, PP
108	4467.0-68.0	1.2.	9.6	5.2	16.9	36.2	2.86	DOL, ANHY, SL/F, STY
109	4468.0-69.0	1.3.	9.6	5.1	14.2	38.3	2.85	DOL, ANHY, PP, F, STY
110.	4469.0-70.0	31.	24.	9.6	13.4	41.0	2.83	DOL, ANHY, SL/F, PP, STY
111	4470.0-71.0	13.	8.0	10.9	17.7	24.6	2.87	DOL, ANHY, F, PP, STY
112	4471.0-72.0	5.6	5.5	8.1	16.2	30.6	2.82	DOL, ANHY, F, STY

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*Petroleum Reservoir Engineering*

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 DALLAS, TEXAS

FILE NO : 3202-11177  
 ANALYSTS : GODSEY

FULL DIAMETER ANALYSIS

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD)	AIR MAXIMUM 90 DEG	FOR. He	FLUID SATS.	WTR	GRAIN DEN	DESCRIPTION
S 113	4472 • 0-73 • 0	21 •	17 •	8 • 3	20 • 8	34 • 6	2 • 85	DOL, ANHY, V/F, STY
S 114	4473 • 0-74 • 0	27 •	17 •	9 • 4	18 • 2	38 • 8	2 • 83	DOL, ANHY, F, STY
S 115	4474 • 0-75 • 0	47 •	44 •	7 • 4	19 • 4	41 • 5	2 • 86	DOL, ANHY, F, PP, STY
S 116	4475 • 0-76 • 0	56 •	43 •	14 • 9	19 • 9	38 • 0	2 • 83	DOL, ANHY, OOL, V/F, STY
S 117	4476 • 0-77 • 0	0 • 7	0 • 6	10 • 3	26 • 5	31 • 5	2 • 86	DOL, ANHY, OOL
S 118	4477 • 0-78 • 0	8 • 9	3 • 2	13 • 6	15 • 5	29 • 3	2 • 83	DOL, ANHY, OOL, V/F
S 119	4478 • 0-79 • 0	32 •	22 •	13 • 1	13 • 8	31 • 6	2 • 86	DOL, ANHY, V/F, OOL
S 120	4479 • 0-80 • 0	14 •	55 •	17 • 0	16 • 4	30 • 3	2 • 82	DOL, ANHY, V/F, OOL
S 121	4480 • 0-81 • 0	12 •	4 • 4	8 • 6	19 • 9	36 • 8	2 • 86	DOL, ANHY, V/F, OOL
S 122	4481 • 0-82 • 0	0 • 8	<0 • 1	4 • 7	20 • 7	41 • 8	2 • 87	DOL, ANHY, V/F, STY
S 123	4482 • 0-83 • 0	8 • 7	6 • 3	14 • 6	14 • 6	30 • 9	2 • 85	DOL, ANHY, DOL, STY
S 124	4483 • 0-84 • 0	14 •	12 •	14 • 9	19 • 2	28 • 6	2 • 84	DOL, ANHY, DOL, STY
S 125	4484 • 0-85 • 0	1 • 5	0 • 5	1 • 7	16 • 3	73 • 4	2 • 87	DOL, ANHY, SL/F, PP
S 126	4485 • 0-86 • 0	1 • 7	1 • 5	4 • 1	18 • 1	48 • 5	2 • 86	DOL, ANHY, SL/F, PP
S 127	4486 • 0-87 • 0	2 • 4	1 • 4	5 • 2	30 • 7	35 • 2	2 • 87	DOL, ANHY, PP, SL/F, FOSS
S 128	4487 • 0-88 • 0	19 •	15 •	10 • 9	23 • 3	29 • 1	2 • 87	DOL, ANHY, V/F, PP, STY
S 129	4488 • 0-89 • 0	43 •	41 •	13 • 5	16 • 6	32 • 6	2 • 85	DOL, ANHY, SL/V, SL/F, STY
S 130	4489 • 0-90 • 0	28 •	21 •	6 • 9	20 • 8	26 • 1	2 • 86	DOL, ANHY, SL/F, SL/V, STY
S 131	4490 • 0-91 • 0	30 •	22 •	9 • 4	18 • 0	38 • 8	2 • 87	DOL, ANHY, SL/F, PP, STY
S 132	4491 • 0-92 • 0	28 •	27 •	12 • 2	17 • 0	34 • 9	2 • 86	DOL, ANHY, SL/F, PP, STY
S 133	4492 • 0-93 • 0	32 •	28 •	15 • 9	17 • 1	35 • 7	2 • 85	DOL, ANHY, SL/F, PP, STY
S 134	4493 • 0-94 • 0	43 •	36 •	15 • 0	18 • 8	34 • 7	2 • 90	DOL, ANHY, F, SL/V, STY
S 135	4494 • 0-95 • 0	9 • 0	8 • 2	11 • 0	24 • 6	28 • 0	2 • 86	DOL, ANHY, SL/F, SL/V, STY
S 136	4495 • 0-96 • 0	18 •	11 •	11 • 6	18 • 0	37 • 2	2 • 84	DOL, ANHY, SL/F, SL/V, STY
S 137	4496 • 0-97 • 0	16 •	11 •	9 • 3	18 • 2	34 • 5	2 • 85	DOL, ANHY, SHR, V/F, SL/V, STY
S 138	4497 • 0-98 • 0	8 • 0	7 • 9	10 • 7	15 • 9	28 • 9	2 • 84	DOL, ANHY, F, PP, STY
S 139	4498 • 0-99 • 0	8 • 1	4 • 6	8 • 1	12 • 3	35 • 1	2 • 84	DOL, ANHY, SL/V, V/F, STY
S 140	4499 • 0-00 • 0	4 • 1	3 • 7	2 • 3	21 • 3	22 • 0	2 • 83	DOL
S 141	4500 • 0-01 • 0	10 •	4 • 7	5 • 8	22 • 3	23 • 0	2 • 83	DOL, ANHY, V/F, SL/V, STY
S 142	4501 • 0-02 • 0	2 • 2	1 • 5	4 • 4	29 • 1	46 • 6	2 • 85	DOL, ANHY, V/F, STY

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**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*

DALLAS, TEXAS

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PHILLIPS PETROLEUM COMPANY  
 EUGSAU 3456 NO. 005

DATE : 6-24-79  
 FORMATION : GRAYBURG

FILE NO. : 3202-11177  
 ANALYSTS : GOISEY

FULL DIAMETER ANALYSIS

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD)	FOR. 90 DEG	FLUID	SATS.	GRAIN DEN	DESCRIPTION
143	4502 +0-03 +0	1.7	1.5	4.3	16.9	46.8	2.64
144	4503 +0-04 +0	1.4	0.6	5.5	15.9	53.1	DOL, ANHY, V/F, V, STY
145	4504 +0-05 +0	6.1	5.0	6.9	18.0	11.4	DOL, ANHY, V, V/F, STY
146	4505 +0-06 +0	1.2	1.0	6.7	17.8	44.6	DOL, ANHY, V, V/F, STY
147	4506 +0-07 +0	0.8	0.4	4.8	18.4	42.9	DOL, ANHY, V/F, V, STY
148	4507 +0-08 +0	2.1	18.	10.3	17.6	35.1	DOL, ANHY, F, V, STY
149	4508 +0-09 +0	1.2	1.1	7.1	24.0	38.0	DOL, ANHY, V, V/F, STY
150	4509 +0-10 +0	4.0	3.7	6.0	16.5	41.2	DOL
151	4510 +0-11 +0	7.4	6.8	7.7	11.6	40.5	2.64
152	4511 +0-12 +0	1.5	1.4	2.9	18.8	50.0	DOL, ANHY, V/F, SL/V
153	4512 +0-13 +0	1.3	0.8	2.4	20.5	56.8	DOL, ANHY, V/F, SL/V, STY
154	4513 +0-14 +0	1.3	0.6	4.0	12.2	45.0	DOL, ANHY, F, SL/V, FOSS, STY
155	4514 +0-15 +0	6.9	8.1	6.9	10.0	37.4	DOL, ANHY, F, SL/V, FOSS, STY
156	4515 +0-16 +0	0.9	0.7	3.9	14.3	53.8	DOL, ANHY, F, SL/V, FOSS, STY
157	4516 +0-17 +0	4.5	3.8	9.7	15.3	53.1	2.86
158	4517 +0-18 +0	7.4	4.8	7.9	19.9	29.5	DOL, ANHY, F, SL/V, STY
159	4518 +0-19 +0	1.8	1.6	2.9	10.9	58.7	DOL, ANHY, F, SL/V, STY
160	4519 +0-20 +0	1.0	0.8	2.3	12.6	55.9	2.87
161	4520 +0-21 +0	0.3	0.3	1.2	31.0	54.7	DOL, ANHY, F, PP, STY
162	4521 +0-22 +0	2.9	0.7	1.3	6.3	48.6	2.87
163	4522 +0-23 +0	1.6	1.4	1.9	19.7	65.7	2.85
164	4523 +0-24 +0	3.8	2.9	5.5	8.8	47.4	DOL, ANHY, F, PP, STY
165	4524 +0-25 +0	2.2	2.1	13.1	14.9	25.4	DOL, ANHY, SL/F, SL/V, STY
166	4525 +0-26 +0	3.1	2.0	12.0	15.3	27.1	DOL, ANHY, SL/V, SL/F, STY
167	4526 +0-27 +0	4.4	0.8	4.1	20.5	36.4	DOL, ANHY, F, PP, STY
168	4527 +0-28 +0	2.6	2.3	9.4	22.0	20.7	DOL, ANHY, PP, F, STY
169	4528 +0-29 +0	1.3	1.1	4.2	24.2	28.6	DOL, V/ANHY, F, STY
170	4529 +0-30 +0	1.2	*	13.3	15.3	23.3	DOL, ANHY, V/F, PP, STY
171	4530 +0-31 +0	0.8	0.8	6.0	16.9	37.6	DOL, ANHY, F, PP, STY
172	4531 +0-32 +0	0.6	0.4	4.5	50.0	50.0	DOL, ANHY, SL/V, V/F, STY

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**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*

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PHILLIPS PETROLEUM COMPANY  
EVGSU 3456 NO. 005

DATE : 6-24-79  
FORMATION : GRAYBURN

ESTER ANALYSTS

SAMPLE NUMBER	DEPTH	PERM. TO MAXIMUM 90 DEG	AIR (MD)	POR. He	FLUID SATS. OIL	GRAIN DEN
6	173	4532.0-33.0	0.3	0.2	1.6	7.3
	174	4533.0-34.0	0.3	0.2	2.1	72.6
		4534.0-35.0			28.1	50.0
6	175	4535.0-36.0	1.3	1.0	7.0	2.86
	176	4536.0-32.0	1.2	0.8	7.3	2.89
177	4537.0-38.0	7.1	5.7	3.9	14.6	16.2
					32.5	19.5
						2.90
						2.93

WORK NO. 3 4040.0-4342.0 601 527 REC 524

S	180	4548.0-49.0	<0.1	<0.1	0.9	14.1	78.1	2.85
181	4549.0-50.0	>0.1	>0.1	0.7	0.0	70.0	2.85	DOL, ANHY, U/F, STY
4550.0-55.0	4555.0-56.0	0.3	0.2	2.2	37.5	59.0	2.84	DOL, ANHY, SL/SHY, DOL, ANHY, U/F, STY
182	4555.0-57.0	>0.1	>0.1	5.1	15.7	32.9	2.84	DOL, ANHY, SL/U
183	4557.0-58.0	>0.1	>0.1	5.6	29.0	38.7	2.83	DOL, ANHY, STY
184	4558.0-59.0	0.3	0.2	7.0	11.8	42.1	13.84	DOL, ANHY, U/F, STY
185	4559.0-60.0	0.3	0.1	5.8	14.3	67.7	2.81	DOL, ANHY, U/F, STY
186	4560.0-61.0	26.	20.	11.3	16.0	28.9	2.81	DOL, ANHY, U/F, DOL
187	4561.0-62.0	27.7	27.3	11.8	15.3	30.5	2.81	DOL, ANHY, U/F, DOL
188	4562.0-63.0	26.	22.	12.1	18.3	22.8	2.85	DOL, ANHY, U/F, DOL
189	4563.0-64.0	11.	9.3	10.0	9.4	29.9	2.83	DOL, ANHY, DOL, U/F, STY
190	4564.0-65.0	8.8	8.3	10.0	6.6	28.5	2.82	DOL, ANHY, DOL, FOSS
191	4565.0-66.0	9.2	8.7	11.9	13.3	28.9	2.83	DOL, ANHY, DOL, U/F, PP
192	4566.0-67.0	4.5	*	0.0	0.0	2.9	2.82	DOL, ANHY, DOL, U/F, STY
193	4567.0-68.0	21.	8.9	12.5	17.5	27.9	2.82	DOL, ANHY, U/F, PP, STY
194	4568.0-69.0	4.4	3.5	12.4	25.2	25.9	2.84	DOL, ANHY, U/F, PP, STY
195	4569.0-70.0	3.0	*	0.0	0.0	2.9	2.84	DOL, ANHY, U/F, PP, STY
196	4570.0-71.0	6.4	6.3	12.4	15.6	30.3	2.84	DOL, ANHY, U/F, PP, STY
197	4571.0-72.0	37.	33.	15.5	23.2	28.1	2.84	DOL, ANHY, U/F, STY
198	4572.0-73.0							

PHILLIPS PETROLEUM COMPANY  
EVGSUA 3456 NO. 005

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*

DATE : 6-24-79  
FORMATION : GRAYBURG  
DALLAS, TEXAS

FILE NO : 3202-11177  
ANALYSTS : GODSEY

FULL DIAMETER ANALYSIS

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD)	FOR. AIR (MD)	FLUID SATS.	GRAIN DEN	DESCRIPTION	
199	4572.0-73.0	28*	28*	13.0	22.5	29.4	
200	4573.0-74.0	3.8	3.6	12.9	19.8	39.8	
201	4574.0-75.0	4.5	4.0	13.2	19.7	40.5	
202	4575.0-76.0	2.5	0.8	17.9	21.6	39.5	
203	4576.0-77.0	6.5	6.1	17.3	26.0	41.8	
204	4577.0-78.0	5.5	5.3	17.5	24.1	28.9	
205	4578.0-79.0	1.0	9.7	16.5	25.9	27.9	
206	4579.0-80.0	7.8	6.8	17.0	25.9	30.6	
207	4580.0-81.0	1.4	1.2	16.4	24.0	28.9	
208	4581.0-82.0	1.6	1.5	14.2	20.4	27.6	
209	4582.0-83.0	1.2	1.1	12.3	20.3	29.6	
210	4583.0-84.0	5.2	4.4	10.0	18.8	29.3	
211	4584.0-85.0	6.7	6.3	10.5	22.0	28.5	
212	4585.0-86.0	4.6	4.5	7.0	28.4	38.1	
213	4586.0-87.0	3.6	3.3	7.1	25.7	45.7	
214	4587.0-88.0	1.9	1.8	2.9	9.8	54.6	
215	4588.0-89.0	0.8	0.6	3.0	11.4	69.6	
216	4589.0-90.0	0.3	0.3	2.9	4.6	51.5	
217	4590.0-91.0	0.1	*	2.9	27.2	60.9	
	4591.0-92.0					2.89	
CORE NO. 4 4592.0-4682.0 CUT 90' REC 90'							
4592.0-95.0						DOL,DNS	
4593.0-03.0						SD,DOL,DNS	
4603.0-04.0	<0.1	<0.1	5.2	7.6	61.6	2.73	
4604.0-05.0	<0.1	<0.1	8.8	15.3	36.3	2.70	
220	4605.0-06.0	0.2	<0.1	9.7	19.2	40.7	SD,DOL,SH,LAM
221	4606.0-07.0	0.2	0.2	9.7	17.2	42.9	2.68
222	4607.0-08.0	0.2	0.2	7.5	8.7	51.0	SD
						2.69	
						DOL,SHY,DNS	
						DOL,ANHY,V/F,STY	

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*

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PHILLIPS PETROLEUM COMPANY  
 EUGSAU 3456 NO. 005

DATE : 6-24-79  
 FORMATION : GRAYBURG

DALLAS, TEXAS

FILE NO. : 3202-11177  
 ANALYSTS : GOISLEY

FULL DIAMETER ANALYSIS

SAMPLE NUMBER	DEPTH	FERM. TO AIR (MI)	FOR. MAXIMUM 90 DEG	FLUID SATS.	GRAIN DEN	DESCRIPTION
178	4608.0-52.0	0.1	*	6.3	16.2	DOL, ANHY, INS
179	4638.0-39.0	<0.1	*	3.8	14.1	DOL, ANHY, U/F, SL/V, STY
228	4639.0-40.0	0.9	0.9	3.5	20.1	DOL, ANHY, U/F, SL/V, STY
229	4652.0-77.0	1.5	1.3	1.4	21.7	DOL, ANHY, INS
223	4677.0-78.0	0.2	<0.1	2.3	2.3	DOL, ANHY, U/F, STY
224	4678.0-79.0	0.3	0.2	3.4	3.7	DOL, ANHY, SL/F, STY
225	4679.0-80.0	4.3	0.2	2.2	0.0	DOL, ANHY, U/F, STY
	4680.0-82.0					DOL, ANHY, INS

CORE NO. 5 4682.0-4774.0 CUT 90' REC 92'

226	4682.0-33.0	0.5	0.5	2.2	5.3	65.1	2.85	DOL, F, SL/V
227	4683.0-84.0	2.3	2.2	2.4	0.5	49.9	2.86	DOL, F, SL/V
228	4684.0-85.0	0.9	0.9	3.5	20.1	40.9	2.85	DOL, ANHY, F, SL/V
229	4685.0-86.0	1.5	1.3	1.4	21.7	36.1	2.86	DOL, ANHY, F
230	4686.0-87.0	2.8	2.6	1.2	20.5	68.2	2.87	DOL, ANHY, F
231	4687.0-88.0	2.7	1.8	3.6	5.6	43.3	2.85	DOL, ANHY, F, SL/V
232	4688.0-89.0	6.6	5.4	8.4	11.1	30.1	2.85	DOL, ANHY, F, SL/V
233	4689.0-90.0	7.6	5.8	9.2	8.3	32.1	2.85	DOL, ANHY, F, SL/V
234	4690.0-91.0	6.8	4.3	2.9	4.6	56.7	2.83	DOL, ANHY, F, STY
235	4691.0-92.0	1.2	5.9	5.9	3.3	43.7	2.85	DOL, ANHY, F, SL/V, STY
236	4692.0-93.0	1.1	9.2	9.3	8.1	31.4	2.85	DOL, ANHY, F, SL/V, STY
237	4693.0-94.0	5.2	4.9	8.0	2.6	31.3	2.85	DOL, ANHY, F, SL/V, STY
238	4694.0-95.0	2.8	15.	7.8	1.2.2	35.5	2.84	DOL, ANHY, F, SL/V, STY
239	4695.0-96.0	2.2	9.5	6.1	10.5	36.0	2.84	DOL, ANHY, F, SL/V, STY
240	4696.0-97.0	135.	40.	10.9	1.1.6	33.8	2.85	DOL, ANHY, F, SL/V, STY
241	4697.0-98.0	19.	18.	9.0	8.7	34.7	2.84	DOL, ANHY, F, SL/V
242	4698.0-99.0	9.7	73.	10.6	6.5	34.7	2.86	DOL, ANHY, F, SL/V
243	4699.0-00.0	74.	65.	15.0	9.1	32.4	2.84	DOL, ANHY, F, SL/V
244	4700.0-01.0	23.	23.	12.5	5.8	34.6	2.85	DOL, ANHY, F, SL/V

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**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*

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PHILLIPS PETROLEUM COMPANY  
 EVGSAU 3456 NO. 005

DATE : 6-24-79  
 FORMATION : GRAYBURG  
 DALLAS, TEXAS

FILE NO : 3202-11177  
 ANALYSTS : GODSEY

FULL DIAMETER ANALYSIS

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MU)	MAXIMUM °O DEG	FOR. He	FLUID SATS.	GRAIN DEN	DESCRIPTION
245	4701.0-02.0	8.5	8.3	7.8	6.6	36.6	2.84
246	4702.0-03.0	22.	21.	11.9	10.7	32.1	2.84
247	4703.0-04.0	25.	24.	13.5	2.7	39.5	2.84
248	4704.0-05.0	2185.	31.	15.2	3.7	35.2	2.85
249	4705.0-06.0	26.	11.	12.9	7.0	40.2	2.84
250	4706.0-07.0	8.2	6.2	10.0	10.4	37.6	2.85
251	4707.0-08.0	20.	14.	12.9	13.9	32.1	2.86
252	4708.0-09.0	14.	12.	7.2	21.7	30.1	2.89
253	4709.0-10.0	15.	12.	13.1	23.2	29.2	2.87
254	4710.0-11.0	11.	6.6	14.3	22.5	25.5	2.87
255	4711.0-12.0	40.	27.	16.9	7.5	39.7	2.85
256	4712.0-13.0	1.8	1.7	5.2	25.7	38.6	2.85
257	4713.0-14.0	2.3	2.0	9.0	19.5	25.3	2.86
258	4714.0-15.0	0.4	0.4	3.7	7.9	54.8	2.85
259	4715.0-16.0	7.0	3.8	3.6	9.2	56.5	2.83
260	4716.0-17.0	25.	20.	16.6	19.3	29.7	2.87
261	4717.0-18.0	45.	43.	16.5	13.1	34.1	2.86
262	4718.0-19.0	8.3	7.1	14.6	18.6	24.9	2.87
263	4719.0-20.0	6.6	6.6	14.5	10.6	32.4	2.84
264	4720.0-21.0	21.	9.5	12.9	10.5	37.0	2.84
265	4721.0-22.0	17.	16.	10.9	11.1	33.2	2.84
266	4722.0-23.0	6.8	6.6	11.3	6.3	38.5	2.84
267	4723.0-24.0	5.4	5.3	10.1	8.3	34.1	2.84
268	4724.0-25.0	5.0	4.3	7.8	8.7	37.9	2.83
269	4725.0-26.0	3.8	2.8	12.4	4.0	40.6	2.84
270	4726.0-27.0	1.2	9.9	13.2	11.8	30.1	2.86
271	4727.0-28.0	1.9	1.8	9.3	2.3	39.1	2.83
272	4728.0-29.0	4.4	3.6	7.7	5.2	44.5	2.84
273	4729.0-30.0	9.0	7.2	8.2	14.8	37.1	2.89
274	4730.0-31.0	7.8	7.3	12.7	6.9	34.4	2.84

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*

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PHILLIPS PETROLEUM COMPANY  
 EVOSAU 3456 NO. 005

DATE : 6-24-79  
 FORMATION : GRAYBURG

DALLAS, TEXAS

FILE NO. : 3202-11177  
 ANALYSTS : GODSEY

**FULL DIAMETER ANALYSIS**

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD)	POR. %	FLUID SATS.	GRAIN DEN	DESCRIPTION
S 275	4731.0-32.0	1.1	9.1	14.3	15.1	32.0 2.85 DOL, ANHY, SL/F, STY
S 276	4732.0-33.0	17.	16.	13.1	5.1	33.3 2.84 DOL, ANHY, SL/F, V, STY
S 277	4733.0-34.0	20.	19.	13.8	14.5	26.9 2.86 DOL, ANHY, SL/F, V, STY
S 278	4734.0-35.0	17.	16.	14.5	6.9	29.8 2.84 DOL, ANHY, F, V, FOSS, STY
S 279	4735.0-36.0	16.	*	15.0	12.2	25.9 2.81 DOL, ANHY, V/F, SL/V, STY
S 280	4736.0-37.0	20.	19.	13.8	4.5	30.2 2.84 DOL, ANHY, F, SL/V, STY
S 281	4737.0-38.0	20.	19.	12.8	8.5	25.8 2.85 DOL, ANHY, F, STY
S 282	4738.0-39.0	23.	22.	16.4	8.8	27.3 2.86 DOL, ANHY, SL/V, STY
S 283	4739.0-40.0	54.	52.	16.2	11.0	29.9 2.85 DOL, ANHY, FOSS, SL/F, V, STY
S 284	4740.0-41.0	63.	62.	12.0	13.2	28.0 2.85 DOL, ANHY, F, V, FOSS, STY
S 285	4741.0-42.0	13.	12.	11.5	3.8	33.1 2.82 DOL, ANHY, F, V, FOSS, STY
S 286	4742.0-43.0	37.	36.	11.5	2.1	36.3 2.83 DOL, ANHY, SL/F, V, FOSS, STY
S 287	4743.0-44.0	43.	41.	16.4	8.1	31.6 2.85 DOL, ANHY, SL/V, STY
S 288	4744.0-45.0	29.	28.	13.7	9.9	33.5 2.84 DOL, ANHY, SL/F, V, FOSS, STY
S 289	4745.0-46.0	34.	34.	13.3	10.6	29.5 2.85 DOL, ANHY, SL/F, V, FOSS, STY
S 290	4746.0-47.0	10.	10.	11.4	20.2	24.5 2.84 DOL, ANHY, SL/F, V, FOSS, STY
S 291	4747.0-48.0	26.	25.	11.6	9.9	29.8 2.85 DOL, ANHY, V, FOSS, STY
S 292	4748.0-49.0	9.6	9.0	12.2	13.7	26.7 2.84 DOL, ANHY, SL/F, V, FOSS, STY
S 293	4749.0-50.0	12.	4.2	8.7	7.4	31.4 2.85 DOL, ANHY, F, V, FOSS, STY
S 294	4750.0-51.0	0.7	0.3	4.7	8.8	34.1 2.91 DOL, V/ANHY, F, V, FOSS, STY
S 295	4751.0-52.0	1.6.	3.6	10.4	11.7	29.6 2.87 DOL, ANHY, V, F, STY
S 296	4752.0-53.0	12.	11.	11.7	8.9	30.8 2.84 DOL, ANHY, F, V, STY
S 297	4753.0-54.0	1.1.	4.5	9.3	11.4	31.0 2.82 DOL, ANHY, F, SL/V, STY
S 298	4754.0-55.0	12.	12.	13.3	15.3	26.8 2.84 DOL, ANHY, SL/V, STY
S 299	4755.0-56.0	9.0	8.3	12.0	14.8	31.9 2.84 DOL, ANHY, F, V, STY
S 300	4756.0-57.0	3.6	3.6	4.5	10.1	39.3 2.83 DOL, ANHY, F, V, STY
S 301	4757.0-58.0	4.6	3.9	5.3	9.6	33.0 2.84 DOL, ANHY, F, V, FOSS, STY
S 302	4758.0-59.0	7.9	6.0	7.0	9.6	35.1 2.84 DOL, ANHY, F, V, STY
S 303	4759.0-60.0	3.4	7.9	7.3	13.8	37.1 2.83 DOL, ANHY, F, V, STY
S 304	4760.0-61.0	5.3	5.3	17.1	30.8 2.85 DOL, ANHY, F, V, STY	

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PHILLIPS PETROLEUM COMPANY  
EVUSAU 3456 NO. 005

DATE : 6-24-79  
FORMATION : GRAYBURG

CORE LABORATORIES, INC.  
*Petroleum Reservoir Engineering*  
DALLAS, TEXAS

FILE NO : 3202-11177  
ANALYSTS : GONSEY

FULL DIAMETER ANALYSIS

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD)	FOR. MAXIMUM 90 DEG	FLUID SATS.	GRAIN DEN	DESCRIPTION
305	4761.0-62.0	31.	24.	14.4	13.1	31.7 2.85
306	4762.0-63.0	14.	14.	10.0	17.1	26.7 2.87
310	4766.0-67.0	31.	9.5	12.0	11.7	32.6 2.83
311	4767.0-68.0	27.	26.	16.4	16.2	29.8 2.85
312	4768.0-69.0	25.	23.	14.5	11.2	42.9 2.84
313	4769.0-70.0	17.	17.	15.6	20.5	29.5 2.85
314	4770.0-71.0	18.	16.	16.5	23.6	25.2 2.86
315	4771.0-72.0	63.	16.	18.4	18.3	27.5 2.85
316	4772.0-73.0	147.	*	17.3	27.4	38.0 2.82
317	4773.0-74.0	21.	*	12.4	27.7	33.4 2.82
CORE NO. 6 4774.0-4802.0 CUT 28' REC 28'						
318	4774.0-75.0	27.	21.	17.3	17.8	25.7 2.87
319	4775.0-76.0	22.	21.	15.4	19.8	26.1 2.86
320	4776.0-77.0	5.4	*	11.9	25.9	35.0 2.84
321	4777.0-78.0	60.	*	13.4	14.8	36.2 2.85
322	4778.0-79.0	19.	19.	10.0	16.8	28.0 2.85
323	4779.0-80.0	30.	*	12.6	19.2	41.0 2.85
324	4780.0-81.0	211.	185.	17.6	15.4	36.1 2.84
325	4781.0-82.0	102.	53.	17.3	15.3	31.4 2.83
326	4782.0-83.0	122.	101.	20.3	18.0	24.3 2.86
327	4783.0-84.0	48.	20.	13.4	7.9	40.6 2.81
328	4784.0-85.0	11.	*	6.3	7.3	64.5 2.83
329	4785.0-86.0	104.	50.	10.6	8.0	35.7 2.83
330	4786.0-87.0	32.	*	12.0	25.5	35.8 2.83
331	4787.0-88.0	254.	*	13.9	20.4	45.3 2.83
332	4788.0-89.0	286.	*	10.6	21.2	47.1 2.87
333	4789.0-90.0	49.	18.	13.2	21.8	21.2 2.83
334	4790.0-91.0	117.	59.	18.0	32.0	DOL, ANHY, U/F, STY

PHILLIPS PETROLEUM COMPANY  
EVGSU 3456 NO. 005

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*

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DATE : 6-24-79  
FORMATION : GRAYBURG  
DALLAS, TEXAS

FILE NO : 3202-11177  
ANALYSTS : GONSEY

FULL DIAMETER ANALYSIS

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD)	FOR. MAXIMUM	FLUID SATS.	GRAIN DEN	DESCRIPTION
335	4791.0-92.0	506.	110.	4.2	17.5	DOL,V,F,SL/V,STY
336	4792.0-93.0	313.	133.	6.3	26.9	DOL,V,ANHY,F,V,STY
337	4793.0-94.0	67.	66.	18.0	26.0	DOL,V,ANHY,OL,SL/F,STY
338	4794.0-95.0	31.	25.	14.7	27.8	DOL,V,ANHY,OL,SL/F,STY
339	4795.0-96.0	46.	41.	14.1	19.8	DOL,V,ANHY,OL,PP,SL/F,STY
340	4796.0-97.0	39.	37.	12.8	27.7	DOL,V,ANHY,OL,PP,SL/F,STY
341	4797.0-98.0	104.	101.	16.2	27.0	DOL,V,ANHY,OL,SHR,SL/V
342	4798.0-99.0	72.	72.	16.0	17.5	DOL,V,ANHY,OL,SHR,SL/V
343	4799.0-00.0	34.	*	17.6	26.5	DOL,V,ANHY,SHR,OL,V
344	4800.0-01.0	20.	*	14.2	16.9	DOL,V,ANHY,V/F,V
345	4801.0-02.0	4.5	*	12.3	19.1	DOL,V/F,SL/V
CORE NO. 7 4802.0-4840.0 CUT 38' REC 37.5'						
346	4802.0-03.0	20.	12.	9.2	14.3	DOL,V,SL/F
347	4803.0-04.0	164.	13.	10.3	11.5	DOL,V,SL/F
348	4804.0-05.0	496.	331.	13.5	13.3	DOL,V,V/F,FOSS
349	4805.0-06.0	461.	145.	13.2	13.2	DOL,V,SL/F,FOSS
350	4806.0-07.0	182.	103.	16.8	11.5	DOL,V,F,FOSS
351	4807.0-08.0	223.	161.	17.3	10.5	DOL,V,F,FOSS
352	4808.0-09.0	67.	65.	13.3	6.3	DOL,V,F,FOSS,STY
353	4809.0-10.0	61.	28.	14.8	7.3	DOL,V,FOSS,STY
354	4810.0-11.0	68.	53.	14.1	5.8	DOL,SL/F,V,FOSS
355	4811.0-12.0	241.	176.	14.3	7.4	DOL,V,FOSS,STY
356	4812.0-13.0	260.	90.	13.3	22.0	DOL,V,F,V,FOSS
357	4813.0-14.0	274.	179.	14.8	13.2	DOL,V,ANHY,V,SL/F
358	4814.0-15.0	41.	*	13.6	11.6	DOL,V,F,V,FOSS
359	4815.0-16.0	32.	*	13.5	17.0	DOL,V/F,V
360	4816.0-17.0	45.	*	16.8	13.8	DOL,V,SL/V
361	4817.0-18.0	40.	18.	7.5	32.0	DOL,V,SHR,V/F,SL/V

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**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*

DALLAS, TEXAS

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PHILLIPS PETROLEUM COMPANY  
EVGS/SAU 3456 NO. 005

DATE : 6-24-79  
FORMATION : GRAYBURG

FULL DIAMETER ANALYSIS

FILE NO. : 3202-11177  
ANALYSTS : GOSEY

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD)	FOR. MAXIMUM 90 DEG	FLUID	SATS.	GRAIN DEN	DESCRIPTION
S 362	4318.0-19.0	20.	17.	5.5	15.6	41.1	2.84
S 363	4619.0-20.0	57.	45.	12.2	21.1	35.1	2.85
S 364	4820.0-21.0	77.	69.	14.9	25.1	23.2	2.87
S 365	4821.0-22.0	1.5	0.8	11.4	22.2	28.5	2.81
S 366	4822.0-23.0	3.1	2.6	7.4	15.8	44.4	2.82
S 367	4823.0-24.0	14.	12.	9.8	14.7	33.6	2.82
S 368	4824.0-25.0	16.	10.	11.4	10.0	30.0	2.84
S 369	4825.0-26.0	18.	13.	10.0	10.0	30.0	2.84
S 370	4826.0-27.0	20.	15.	10.0	10.0	30.0	2.84
S 371	4827.0-28.0	22.	17.	10.0	10.0	30.0	2.84
S 372	4828.0-29.0	24.	19.	10.0	10.0	30.0	2.84
S 373	4829.0-30.0	26.	21.	10.0	10.0	30.0	2.84
S 374	4830.0-31.0	28.	23.	10.0	10.0	30.0	2.84
S 375	4831.0-32.0	30.	25.	10.0	10.0	30.0	2.84
S 376	4832.0-33.0	32.	27.	10.0	10.0	30.0	2.84
S 377	4833.0-34.0	34.	29.	10.0	10.0	30.0	2.84
S 378	4834.0-35.0	36.	31.	10.0	10.0	30.0	2.84
S 379	4835.0-36.0	38.	33.	10.0	10.0	30.0	2.84
S 380	4836.0-37.0	40.	35.	10.0	10.0	30.0	2.84
S 381	4837.0-38.0	42.	37.	10.0	10.0	30.0	2.84
S 382	4838.0-39.0	44.	39.	10.0	10.0	30.0	2.84
S 383	4839.0-40.0	46.	41.	10.0	10.0	30.0	2.84
S 384	4840.0-41.0	48.	43.	10.0	10.0	30.0	2.84
S 385	4841.0-42.0	50.	45.	10.0	10.0	30.0	2.84
S 386	4842.0-43.0	52.	47.	10.0	10.0	30.0	2.84
S 387	4843.0-44.0	54.	49.	10.0	10.0	30.0	2.84
S 388	4844.0-45.0	56.	51.	10.0	10.0	30.0	2.84
S 389	4845.0-46.0	58.	53.	10.0	10.0	30.0	2.84
S 390	4846.0-47.0	60.	55.	10.0	10.0	30.0	2.84
S 391	4847.0-48.0	62.	57.	10.0	10.0	30.0	2.84
S 392	4848.0-49.0	64.	59.	10.0	10.0	30.0	2.84
S 393	4849.0-50.0	66.	61.	10.0	10.0	30.0	2.84
S 394	4850.0-51.0	68.	63.	10.0	10.0	30.0	2.84
S 395	4851.0-52.0	70.	65.	10.0	10.0	30.0	2.84
S 396	4852.0-53.0	72.	67.	10.0	10.0	30.0	2.84
S 397	4853.0-54.0	74.	69.	10.0	10.0	30.0	2.84
S 398	4854.0-55.0	76.	71.	10.0	10.0	30.0	2.84
S 399	4855.0-56.0	78.	73.	10.0	10.0	30.0	2.84
S 400	4856.0-57.0	80.	75.	10.0	10.0	30.0	2.84
S 401	4857.0-58.0	82.	77.	10.0	10.0	30.0	2.84
S 402	4858.0-59.0	84.	79.	10.0	10.0	30.0	2.84
S 403	4859.0-60.0	86.	81.	10.0	10.0	30.0	2.84
S 404	4860.0-61.0	88.	83.	10.0	10.0	30.0	2.84
S 405	4861.0-62.0	90.	85.	10.0	10.0	30.0	2.84
S 406	4862.0-63.0	92.	87.	10.0	10.0	30.0	2.84
S 407	4863.0-64.0	94.	89.	10.0	10.0	30.0	2.84
S 408	4864.0-65.0	96.	91.	10.0	10.0	30.0	2.84
S 409	4865.0-66.0	98.	93.	10.0	10.0	30.0	2.84
S 410	4866.0-67.0	100.	95.	10.0	10.0	30.0	2.84
S 411	4867.0-68.0	102.	97.	10.0	10.0	30.0	2.84
S 412	4868.0-69.0	104.	99.	10.0	10.0	30.0	2.84
S 413	4869.0-70.0	106.	101.	10.0	10.0	30.0	2.84
S 414	4870.0-71.0	108.	103.	10.0	10.0	30.0	2.84
S 415	4871.0-72.0	110.	105.	10.0	10.0	30.0	2.84
S 416	4872.0-73.0	112.	107.	10.0	10.0	30.0	2.84
S 417	4873.0-74.0	114.	109.	10.0	10.0	30.0	2.84
S 418	4874.0-75.0	116.	111.	10.0	10.0	30.0	2.84
S 419	4875.0-76.0	118.	113.	10.0	10.0	30.0	2.84
S 420	4876.0-77.0	120.	115.	10.0	10.0	30.0	2.84
S 421	4877.0-78.0	122.	117.	10.0	10.0	30.0	2.84
S 422	4878.0-79.0	124.	119.	10.0	10.0	30.0	2.84
S 423	4879.0-80.0	126.	121.	10.0	10.0	30.0	2.84
S 424	4880.0-81.0	128.	123.	10.0	10.0	30.0	2.84
S 425	4881.0-82.0	130.	125.	10.0	10.0	30.0	2.84
S 426	4882.0-83.0	132.	127.	10.0	10.0	30.0	2.84
S 427	4883.0-84.0	134.	129.	10.0	10.0	30.0	2.84
S 428	4884.0-85.0	136.	131.	10.0	10.0	30.0	2.84
S 429	4885.0-86.0	138.	133.	10.0	10.0	30.0	2.84
S 430	4886.0-87.0	140.	135.	10.0	10.0	30.0	2.84
S 431	4887.0-88.0	142.	137.	10.0	10.0	30.0	2.84
S 432	4888.0-89.0	144.	139.	10.0	10.0	30.0	2.84
S 433	4889.0-90.0	146.	141.	10.0	10.0	30.0	2.84
S 434	4890.0-91.0	148.	143.	10.0	10.0	30.0	2.84
S 435	4891.0-92.0	150.	145.	10.0	10.0	30.0	2.84
S 436	4892.0-93.0	152.	147.	10.0	10.0	30.0	2.84
S 437	4893.0-94.0	154.	149.	10.0	10.0	30.0	2.84
S 438	4894.0-95.0	156.	151.	10.0	10.0	30.0	2.84
S 439	4895.0-96.0	158.	153.	10.0	10.0	30.0	2.84
S 440	4896.0-97.0	160.	155.	10.0	10.0	30.0	2.84
S 441	4897.0-98.0	162.	157.	10.0	10.0	30.0	2.84
S 442	4898.0-99.0	164.	159.	10.0	10.0	30.0	2.84
S 443	4899.0-100.0	166.	161.	10.0	10.0	30.0	2.84
S 444	4900.0-101.0	168.	163.	10.0	10.0	30.0	2.84
S 445	4901.0-102.0	170.	165.	10.0	10.0	30.0	2.84
S 446	4902.0-103.0	172.	167.	10.0	10.0	30.0	2.84
S 447	4903.0-104.0	174.	169.	10.0	10.0	30.0	2.84
S 448	4904.0-105.0	176.	171.	10.0	10.0	30.0	2.84
S 449	4905.0-106.0	178.	173.	10.0	10.0	30.0	2.84
S 450	4906.0-107.0	180.	175.	10.0	10.0	30.0	2.84
S 451	4907.0-108.0	182.	177.	10.0	10.0	30.0	2.84
S 452	4908.0-109.0	184.	179.	10.0	10.0	30.0	2.84
S 453	4909.0-110.0	186.	181.	10.0	10.0	30.0	2.84
S 454	4910.0-111.0	188.	183.	10.0	10.0	30.0	2.84
S 455	4911.0-112.0	190.	185.	10.0	10.0	30.0	2.84
S 456	4912.0-113.0	192.	187.	10.0	10.0	30.0	2.84
S 457	4913.0-114.0	194.	189.	10.0	10.0	30.0	2.84
S 458	4914.0-115.0	196.	191.	10.0	10.0	30.0	2.84
S 459	4915.0-116.0	198.	193.	10.0	10.0	30.0	2.84
S 460	4916.0-117.0	200.	195.	10.0	10.0	30.0	2.84
S 461	4917.0-118.0	202.	197.	10.0	10.0	30.0	2.84
S 462	4918.0-119.0	204.	199.	10.0	10.0	30.0	2.84
S 463	4919.0-120.0	206.	201.	10.0	10.0	30.0	2.84
S 464	4920.0-121.0	208.	203.	10.0	10.0	30.0	2.84
S 465	4921.0-122.0	210.	205.	10.0	10.0	30.0	2.84
S 466	4922.0-123.0	212.	207.	10.0	10.0	30.0	2.84
S 467	4923.0-124.0	214.	209.	10.0	10.0	30.0	2.84
S 468	4924.0-125.0	216.	211.	10.0	10.0	30.0	2.84
S 469	4925.0-126.0	218.	213.	10.0	10.0	30.0	2.84
S 470	4926.0-127.0	220.	215.	10.0	10.0	30.0	2.84
S 471	4927.0-128.0	222.	217.	10.0	10.0	30.0	2.84
S 472	4928.0-129.0	224.	219.	10.0	10.0	30.0	2.84
S 473	4929.0-130.0	226.	221.	10.0	10.0	30.0	2.84
S 474	4930.0-131.0	228.	223.	10.0	10.0	30.0	2.84
S 475	4931.0-132.0	230.	225.	10.0	10.0	30.0	2.84
S 476	4932.0-133.0	232.	227.	10.0	10.0	30.0	2.84
S 477	4933.0-134.0	234.	229.	10.0	10.0	30.0	2.84
S 478	4934.0-135.0	236.	231.	10.0	10.0	30.0	2.84
S 479	4935.0-136.0	238.	233.	10.0	10.0	30.0	2.84
S 480	4936.0-137.0	240.	235.	10.0	10.0	30.0	2.84
S 481	4937.0-138.0	242.	237.	10.0	10.0	30.0	2.84
S 482	4938.0-139.0	244.	239.	10.0	10.0	30.0	2.84
S 483	4939.0-140.0	246.	241.	10.0	10.0	30.0	2.84
S 484	4940.0-141.0	248.	243.	10.0	10.0	30.0	2.84
S 485	4941.0-142.0	250.	245.	10.0	10.0	30.0	2.84
S 486	4942.0-143.0	252.	247.	10.0	10.0	30.0	2.84
S 487	4943.0-144.0	254.	249.	10.0	10.0	30.0	2.84
S 488	4944.0-145.0	256.	251.	10.0	10.0	30.0	2.84
S 489	4945.0-146.0	258.	253.	10.0	10.0	30.0	2.84
S 490	4946.0-147.0	260.	255.	10.0	10.0	30.0	2.84
S 491	4947.0-148.0	262.	257.	10.0	10.0	30.0	2.84
S 492	4948.0-149.0	264.	259.	10.0	10.0	30.0	2.84
S 493	4949.0-150.0	266.</td					