CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

CORE ANALYSIS REPORT

FOR

PHILLIPS PETROLEUM CO.

EVGSA UNIT 3328-002
VACUUM FIELD
LEA COUNTY, NEW MEXICO

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

PHILLIPS PETROLEUM CO.
EVGSA UNIT 3328-002
VACUUM FIELD
LEA COUNTY, NEW MEXICO

DATE : 5-30-79
FORMATION : GRAYBURG/SAN ANDRES
DRLG. FLUID: SALT BASE MUD
LOCATION : 1310' FSL & 1160' FWL, SEC. 33, T-17-S, R-35-E

FILE NO : 3202-11148
ANALYSTS : GODSEY
ELEVATION: 3952' GL

FULL DIAMETER ANALYSIS

SAMPLE NUMBER		DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	POR. He	FLUID SATS. OIL	WTR	GRAIN DEN	DESCRIPTION
		CORE NO. 1 4450.0-4510.0 CUT 60' REC 60'							
S	1	4450.0-51.0	0.1	0.1	6.5	30.5	53.4	2.83	DOL,ANHY,OOL
S	2	4451.0-52.0	0.4	0.3	6.1	28.6	46.4	2.85	DOL,ANHY,V/F
S	3	4452.0-53.0	0.9	0.4	6.9	24.1	40.0	2.84	DOL,ANHY,OOL,STY
S	4	4453.0-54.0	3.9	2.2	7.5	29.2	27.7	2.86	DOL,ANHY,OOL,SL/F,STY
S	5	4454.0-55.0	19.	19.	13.6	27.3	28.4	2.86	DOL,ANHY,OOL,SL/F,STY
S	6	4455.0-56.0	0.9	0.7	5.8	24.3	29.7	2.87	DOL,ANHY,OOL,SL/F,STY
S	7	4456.0-57.0	13.	0.7	9.5	17.8	35.7	2.86	DOL,ANHY,SL/F,OOL
	8	4457.0-58.0	121.	98.	16.3	15.6	38.7	2.87	DOL,ANHY,OOL
	9	4458.0-59.0	1.0	0.9	9.0	21.2	27.8	2.89	DOL,OOL,STY
S	10	4459.0-60.0	9.7	9.7	13.1	23.9	35.8	2.87	DOL,ANHY,OOL,STY
S	11	4460.0-61.0	3.8	3.7	12.4	26.7	33.3	2.85	DOL,ANHY,OOL,STY
	12	4461.0-62.0	6.7	5.6	12.6	21.6	31.6	2.83	DOL,ANHY,OOL
S	13	4462.0-63.0	29.	3.6	10.7	24.2	33.6	2.85	DOL,ANHY,V/F,OOL
	14	4463.0-64.0	6.0	*	9.4	23.7	40.8	2.84	DOL,ANHY,V/F,OOL
	15	4464.0-65.0	19.	4.9	10.5	26.6	32.1	2.84	DOL,ANHY,OOL,SL/F,STY
S	16	4465.0-66.0	1.8	0.6	8.6	15.9	41.4	2.84	DOL,ANHY,FOSS,SL/F,OOL,STY
S	17	4466.0-67.0	0.2	0.1	4.8	20.3	37.5	2.87	DOL,ANHY,OOL
S	18	4467.0-68.0	0.5	0.5	7.6	22.0	36.6	2.85	DOL,ANHY,OOL,SL/F,FOSS,STY
	19	4468.0-69.0	104.	99.	21.0	27.3	29.3	2.82	DOL,ANHY,OOL,SL/F,FOSS,STY
S	20	4469.0-70.0	62.	56.	18.7	19.7	33.9	2.80	DOL,SL/F,SL/V,FOSS,STY
S	21	4470.0-71.0	72.	5.0	12.3	15.8	27.9	2.84	DOL,ANHY,F,STY
S	22	4471.0-72.0	<0.1	<0.1	4.7	7.6	51.5	2.86	DOL,ANHY,OOL,STY
S	23	4472.0-73.0	<0.1	*	4.5	8.1	50.0	2.82	DOL,ANHY,SL/F,OOL,STY
	24	4473.0-74.0	39.	1.8	13.4	17.0	28.8	2.82	DOL,ANHY,V/F,OOL,STY
S	25	4474.0-75.0	14.	13.	9.2	23.5	28.7	2.86	DOL,ANHY,OOL,STY

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DALLAS, TEXAS

PHILLIPS PETROLEUM CO.
EVGSA UNIT 3328-002

DATE : 5-30-79
FORMATION : GRAYBURG/SAN ANDRES

FILE NO : 3202-11148
ANALYSTS : GODSEY

FULL DIAMETER ANALYSIS

	SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	POR. He	FLUID SATS. OIL	WTR	GRAIN DEN	DESCRIPTION
	26	4475.0-76.0	11.	7.4	9.5	22.5	31.9	2.83	DOL,ANHY,SL/F,OOL,STY
S	27	4476.0-77.0	2.8	2.4	7.6	20.7	36.9	2.85	DOL,ANHY,SHY,OOL,STY
S	28	4477.0-78.0	71.	70.	12.9	23.1	26.9	2.87	DOL,ANHY,OOL,SL/F,STY
S	29	4478.0-79.0	5.8	5.7	9.3	24.1	39.3	2.87	DOL,ANHY,OOL,STY
S	30	4479.0-80.0	2.6	1.4	5.3	21.7	36.1	2.87	DOL,ANHY,OOL,STY
	31	4480.0-81.0	3.3	3.0	10.1	32.1	29.6	2.87	DOL,ANHY,OOL,STY
S	32	4481.0-82.0	3.4	2.5	8.1	40.6	18.8	2.89	DOL,ANHY,OOL
S	33	4482.0-83.0	1.6	1.3	5.6	32.5	24.1	2.87	DOL,ANHY,SL/F,OOL,STY
S	34	4483.0-84.0	<0.1	<0.1	1.8	26.3	57.9	2.88	DOL,ANHY,OOL,STY
S	35	4484.0-85.0	1.4	1.3	9.0	27.6	37.9	2.86	DOL,ANHY,OOL,V/F,STY
S	36	4485.0-86.0	3.9	1.6	17.1	28.1	42.9	2.87	DOL,ANHY,OOL
	37	4486.0-87.0	5.6	5.5	15.8	29.0	40.5	2.86	DOL,ANHY,OOL,SL/F
S	38	4487.0-88.0	6.0	3.3	5.8	21.7	39.1	2.87	DOL,ANHY,OOL
S	39	4488.0-89.0	<0.1	<0.1	4.0	8.9	44.4	2.87	DOL,ANHY,OOL
S	40	4489.0-90.0	14.	6.2	9.6	22.1	31.0	2.86	DOL,ANHY,F,OOL
S	41	4490.0-91.0	19.	16.	12.5	27.8	28.4	2.86	DOL,ANHY,OOL,F,STY
S	42	4491.0-92.0	<0.1	<0.1	3.8	7.1	62.5	2.85	DOL,ANHY,OOL,SL/F,STY
S	43	4492.0-93.0	21.	16.	13.4	24.8	30.4	2.81	DOL,ANHY,SL/F,OOL
S	44	4493.0-94.0	54.	38.	13.6	25.1	38.5	2.84	DOL,ANHY,V/F,OOL,SL/V,STY
S	45	4494.0-95.0	320.	135.	18.4	19.4	36.1	2.84	DOL,ANHY,V/F,FOSS,SL/V,OOL
	46	4495.0-96.0	85.	9.1	16.0	22.4	31.7	2.82	DOL,ANHY,OOL,FOSS
S	47	4496.0-97.0	24.	22.	8.5	14.2	39.8	2.85	DOL,ANHY,OOL,FOSS
S	48	4497.0-98.0	39.	17.	4.4	6.2	53.8	2.85	DOL,ANHY,OOL,FOSS
S	49	4498.0-99.0	33.	*	15.9	23.4	49.6	2.84	DOL,ANHY,V,OOL,STY
S	50	4499.0-00.0	13.	4.4	9.1	21.4	36.6	2.85	DOL,ANHY,OOL,FOSS,SL/F
S	51	4500.0-01.0	75.	0.8	5.1	16.3	45.0	2.86	DOL,ANHY,V/F,OOL
S	52	4501.0-02.0	<0.1	<0.1	3.4	13.0	48.1	2.86	DOL,ANHY,OOL
S	53	4502.0-03.0	47.	43.	15.7	25.2	40.9	2.85	DOL,OOL,FOSS
S	54	4503.0-04.0	4.6	2.7	7.7	27.8	33.9	2.84	DOL,ANHY,OOL,FOSS,STY
	55	4504.0-05.0	11.	11.	9.9	22.6	38.7	2.83	DOL,ANHY,SL/F,OOL,STY

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DATE : 5-30-79
FORMATION : GRAYBURG/SAN ANDRES
DRLG. FLUID: SALT BASE MUD
LOCATION : 1310' FSL & 1160' FWL, SEC. 33, T-17-S, R-35-E

FILE NO : 3202-11148
ANALYSTS : GODSEY
ELEVATION: 3952' GL

FULL DIAMETER ANALYSIS

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	POR. He	FLUID SATS. OIL	WTR	GRAIN DEN	DESCRIPTION
S 56	4505.0-06.0	54.	52.	17.0	25.8	46.1	2.82	DOL,ANHY,OOL,SL/F
S 57	4506.0-07.0	48.	45.	20.5	30.5	26.3	2.86	DOL,ANHY,OOL,STY
S 58	4507.0-08.0	9.0	8.7	18.1	20.9	33.3	2.84	DOL,SHR,OOL,SL/F
S 59	4508.0-09.0	2.5	1.6	4.0	10.7	56.9	2.85	DOL,ANHY,SHR,OOL,SL/F,STY
S 60	4509.0-10.0	2.5	2.3	3.6	16.6	46.7	2.86	DOL,ANHY,SL/F,OOL
	CORE NO. 2 4510.0-4569.0 CUT 59' REC 59'							
S 61	4510.0-11.0	3.3	3.1	13.9	10.9	43.9	2.82	DOL,ANHY,SL/V
S 62	4511.0-12.0	39.	33.	18.9	24.0	35.3	2.83	DOL,ANHY,OOL,PP,STY
S 63	4512.0-13.0	73.	36.	21.1	23.1	29.3	2.83	DOL,ANHY,PP,OOL
S 64	4513.0-14.0	91.	86.	24.6	23.8	30.7	2.83	DOL,ANHY,OOL,PP
S 65	4514.0-15.0	28.	19.	20.5	25.5	27.6	2.82	DOL,ANHY,SL/F,OOL,PP
S 66	4515.0-16.0	24.	21.	19.0	15.0	24.4	2.83	DOL,ANHY,OOL,PP,STY
S 67	4516.0-17.0	13.	8.9	17.6	16.9	26.7	2.85	DOL,ANHY,SL/V,OOL,PP
S 68	4517.0-18.0	0.8	0.4	5.7	13.8	40.0	2.86	DOL,ANHY,SHR,PP,STY
S 69	4518.0-19.0	2.1	1.7	6.3	22.7	27.8	2.86	DOL,ANHY,PP,STY
S 70	4519.0- 20.0	2.6	1.7	7.8	22.9	26.0	2.87	DOL,ANHY,PP
S 71	4520.0 - 21.0	1.1	0.9	4.8	15.9	31.9	2.86	DOL,ANHY,PP
S 72	4521 .0-22.0	32.	2.1	5.0	9.4	37.8	2.86	DOL,ANHY,PP,STY
S 73	4522.0-23.0	21.	16.	9.8	18.2	34.7	2.84	DOL,ANHY,PP,FOSS,OOL,STY
S 74	4523.0-24.0	22.	15.	8.5	16.3	30.6	2.86	DOL,ANHY,PP,STY
S 75	4524.0-25.0	94.	83.	13.1	21.8	34.5	2.85	DOL,ANHY,OOL,PP
76	4525.0-26.0	5.2	4.1	8.5	22.5	27.9	2.85	DOL,ANHY,PP,STY
S 77	4526.0-27.0	4.6	1.3	6.6	15.1	34.5	2.87	DOL,ANHY,FOSS,PP,STY
78	4527.0-28.0	2.6	2.5	8.3	15.6	29.6	2.85	DOL,ANHY,PP,SL/F,STY
S 79	4528.0-29.0	2.1	1.5	5.7	12.7	36.6	2.85	DOL,ANHY,V/F
S 80	4529.0-30.0	0.9	0.4	5.1	16.8	51.6	2.83	DOL,F,STY

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ANALYSTS : GODSEY

FULL DIAMETER ANALYSIS

	SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	POR. He	FLUID SATS. OIL	WTR	GRAIN DEN	DESCRIPTION
	81	4530.0-31.0	15.	15.	15.9	29.1	32.2	2.85	DOL,ANHY,OOL,PP
S	82	4531.0-32.0	23.	20.	13.5	40.6	30.6	2.85	DOL,ANHY,OOL,PP
S	83	4532.0-33.0	23.	21.	15.0	19.8	38.5	2.85	DOL,ANHY,OOL,PP
S	84	4533.0-34.0	30.	27.	14.3	20.7	29.2	2.86	DOL,ANHY,OOL,SL/F,PP,STY
S	85	4534.0-35.0	15.	14.	16.0	26.9	34.0	2.85	DOL,ANHY,PP,OOL
S	86	4535.0-36.0	26.	23.	13.0	28.0	30.1	2.87	DOL,ANHY,F,PP,SHR
S	87	4536.0-37.0	14.	7.5	11.8	28.0	32.0	2.89	DOL,ANHY,F,SHR,PP
S	88	4537.0-38.0	50.	45.	13.5	25.7	28.9	2.89	DOL,ANHY,SHR,SL/V,STY
S	89	4538.0-39.0	9.4	9.0	8.8	14.5	40.8	2.83	DOL,ANHY,SHR
S	90	4539.0 -40.0	9.7	1.7	5.8	5.7	47.1	2.86	DOL,ANHY,F,STY
S	91	4540.0-41.0	2.3	1.9	4.9	9.3	53.4	2.86	DOL,ANHY,V/F,STY
S	92	4541.0-42.0	0.3	0.2	6.9	27.5	39.6	2.85	DOL,ANHY,F,SHR,STY
S	93	4542.0-43.0	0.7	0.3	2.8	12.2	68.2	2.86	DOL,ANHY,SHR,F,STY
S	94	4543.0-44.0	0.2	0.1	4.0	12.7	49.1	2.87	DOL,ANHY,F,STY
S	95	4544.0-45.0	0.7	0.4	2.5	11.4	68.6	2.85	DOL,ANHY,F,STY
S	96	4545.0-46.0	1.8	0.3	3.5	11.1	58.3	2.86	DOL,ANHY,V,STY
S	97	4546.0-47.0	12.	9.8	14.4	27.6	32.6	2.87	DOL,ANHY,SL/V,STY
S	98	4547.0-48.0	3.6	2.8	10.1	17.9	34.1	2.83	DOL,ANHY,F,PP,STY
S	99	4548.0-49.0	2.6	1.0	10.1	15.1	44.3	2.83	DOL,F,PP,STY
S	100	4549.0-50.0	1.6	1.3	9.0	17.2	39.7	2.85	DOL,ANHY,SL/V
S	101	4550.0-51.0	4.9	1.4	6.4	12.0	50.0	2.84	DOL,ANHY,SL/V
S	102	4551.0-52.0	6.0	2.8	7.5	10.6	44.7	2.85	DOL,ANHY,SL/V
S	103	4552.0-53.0	4.2	2.1	4.2	19.6	41.1	2.87	DOL,ANHY,SL/V
S	104	4553.0-54.0	0.8	0.5	4.9	22.0	37.3	2.89	DOL,ANHY,STY
S	105	4554.0-55.0	3.0	2.4	8.1	7.6	46.2	2.85	DOL,ANHY,SL/V,STY
S	106	4555.0-56.0	1.3	1.1	6.4	6.1	43.9	2.87	DOL,ANHY,SL/V,STY
S	107	4556.0-57.0	18.	11.	14.2	15.7	33.8	2.84	DOL,ANHY,SL/V,STY
S	108	4557.0-58.0	2.5	1.7	11.0	20.0	30.0	2.82	DOL,ANHY,SL/V,STY
S	109	4558.0-59.0	23.	17.	11.6	15.4	33.8	2.83	DOL,ANHY,SL/V,STY
S	110	4559.0-60.0	1.2	1.2	4.4	7.7	48.4	2.84	DOL,ANHY,SL/V,SL/F,STY

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LOCATION : 1310' FSL & 1160' FWL, SEC. 33, T-17-S, R-35-E

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ELEVATION: 3952' GL

FULL DIAMETER ANALYSIS

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	POR. He	FLUID SATS. OIL	WTR	GRAIN DEN	DESCRIPTION
S 111	4560.0-61.0	0.1	<0.1	2.4	13.3	63.3	2.85	DOL,STY
S 112	4561.0-62.0	0.7	0.7	6.8	9.1	47.5	2.84	DOL,STY
S 113	4562.0-63.0	3.1	1.6	7.5	12.7	47.1	2.83	DOL,PP,STY
S 114	4563.0-64.0	5.6	3.0	11.9	11.0	31.5	2.83	DOL,SL/V,STY
S 115	4564.0-65.0	27.	22.	11.9	13.8	33.3	2.84	DOL,ANHY,SL/V,FOSS,STY
S 116	4565.0-66.0	21.	6.4	10.7	18.5	35.5	2.84	DOL,ANHY,SL/F,STY
S 117	4566.0-67.0	52.	25.	15.9	24.9	38.3	2.86	DOL,ANHY,PP
S 118	4567.0-68.0	16.	13.	14.5	20.8	38.5	2.86	DOL,ANHY,PP,SL/F,FOSS
S 119	4568.0-69.0	17.	15.	14.2	20.7	36.0	2.85	DOL,ANHY,PP,STY
	CORE NO. 3 4569.0-4629.0 CUT 60' REC 59'							
S 120	4569.0-70.0	18.	12.	14.3	17.5	47.2	2.85	DOL,ANHY,OOL,PP,SL/F,STY
S 121	4570.0-71.0	7.6	6.8	12.6	18.7	35.9	2.85	DOL,ANHY,OOL,PP,STY
S 122	4571.0-72.0	22.	14.	17.8	22.6	29.5	2.87	DOL,ANHY,OOL,PP,STY
S 123	4572.0-73.0	28.	15.	14.2	21.3	41.0	2.84	DOL,OOL,PP,STY
S 124	4573.0-74.0	24.	13.	13.3	16.8	43.0	2.87	DOL,ANHY,OOL,PP,STY
S 125	4574.0-75.0	13.	8.2	13.2	9.7	50.0	2.85	DOL,ANHY,OOL,PP,STY
S 126	4575.0-76.0	16.	12.	14.7	10.5	47.4	2.86	DOL,ANHY,OOL,PP
S 127	4576.0-77.0	12.	11.	15.0	13.8	43.3	2.84	DOL,ANHY,OOL,P
S 128	4577.0-78.0	4.8	2.9	11.9	21.2	41.4	2.86	DOL,ANHY,OOL,SL/F,PP,STY
S 129	4578.0-79.0	4.8	3.6	7.9	23.6	30.3	2.87	DOL,ANHY,V/F,OOL
S 130	4579.0-80.0	1.1	0.6	6.4	14.7	34.1	2.86	DOL,ANHY,OOL,STY
S 131	4580.0-81.0	4.1	3.4	7.1	11.7	46.7	2.85	DOL,ANHY,SL/F,OOL,STY
S 132	4581.0-82.0	4.5	3.9	7.7	18.6	39.0	2.85	DOL,ANHY,V/F
S 133	4582.0-83.0	5.9	4.0	10.5	22.4	35.5	2.87	DOL,ANHY,FOSS,STY
S 134	4583.0-84.0	4.5	4.2	11.4	14.2	35.4	2.84	DOL,ANHY,OOL,SL/F
S 135	4584.0-85.0	8.4	7.2	12.8	17.7	31.0	2.81	DOL,ANHY,OOL,PP,SL/F,STY

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FILE NO : 3202-11148
ANALYSTS : GODSEY

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SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	POR. He	FLUID OIL	SATS. WTR	GRAIN DEN	DESCRIPTION
S 136	4585.0-86.0	8.3	6.9	13.9	18.6	29.0	2.83	DOL,ANHY,PP,STY
S 137	4586.0-87.0	34.	34.	14.1	23.7	32.2	2.87	DOL,ANHY,OOL,PP,STY
S 138	4587.0-88.0	14.	8.0	12.4	17.7	31.1	2.83	DOL,ANHY,SL/V,OOL
S 139	4588.0-89.0	31.	28.	15.1	18.8	34.1	2.86	DOL,ANHY,OOL,PP
S 140	4589.0-90.0	24.	23.	14.9	10.4	40.3	2.84	DOL,ANHY,OOL,PP,STY
S 141	4590.0-91.0	24.	23.	12.1	17.8	35.7	2.86	DOL,ANHY,OOL,FOSS,PP,STY
S 142	4591.0-92.0	21.	17.	15.4	17.5	43.4	2.86	DOL,ANHY,OOL,FOSS,PP
S 143	4592.0-93.0	33.	22.	15.9	24.7	33.8	2.87	DOL,ANHY,PP,STY
S 144	4593.0-94.0	16.	11.	13.2	18.1	32.2	2.85	DOL,ANHY,OOL,SL/V,STY
S 145	4594.0-95.0	29.	26.	15.2	24.1	34.2	2.86	DOL,ANHY,SHR,SL/V,OOL,STY
S 146	4595.0-96.0	22.	22.	15.5	22.3	34.6	2.87	DOL,ANHY,SHR,PP,OOL,STY
S 147	4596.0-97.0	9.6	8.3	10.2	28.3	23.4	2.87	DOL,ANHY,SHR,OOL,PP,STY
S 148	4597.0-98.0	20.	18.	10.9	19.9	27.4	2.85	DOL,ANHY,SHR,OOL,PP
S 149	4598.0-99.0	0.3	0.2	5.1	6.1	63.0	2.83	DOL,ANHY,FOSS,SL/V,SL/F,STY
S 150	4599.0-00.0	24.	17.	20.4	20.5	29.8	2.82	DOL,ANHY,FOSS,V
S 151	4600.0-01.0	1.2	0.5	3.3	18.9	56.8	2.84	DOL,ANHY,SL/F,FOSS,STY
S 152	4601.0-02.0	0.4	0.2	3.6	7.8	62.7	2.84	DOL,ANHY,FOSS
S 153	4602.0-03.0	1.3	0.9	7.7	11.8	42.3	2.84	DOL,ANHY,PP,STY
S 154	4603.0-04.0	<0.1	<0.1	3.4	0.0	82.5	2.86	DOL,ANHY,OOL,STY
S 155	4604.0-05.0	13.	0.5	7.5	9.2	34.0	2.84	DOL,ANHY,PP,FOSS,STY
S 156	4605.0-06.0	1.4	0.6	4.0	7.1	20.2	2.85	DOL,ANHY,SL/F,STY
S 157	4606.0-07.0	2.4	<0.1	1.9	16.6	53.3	2.89	DOL,V/ANHY,SL/F
S 158	4607.0-08.0	10.	4.4	7.7	20.1	31.2	2.84	DOL,ANHY,V/F
S 159	4608.0-09.0	38.	25.	14.5	21.3	31.6	2.86	DOL,ANHY,SL/F
S 160	4609.0-10.0	0.4	0.3	6.1	10.8	38.6	2.85	DOL,ANHY,V/F
S 161	4610.0-11.0	33.	17.	11.3	12.9	40.3	2.82	DOL,ANHY,SL/V,SL/F,STY
S 162	4611.0-12.0	13.	11.	11.2	11.8	34.1	2.84	DOL,SL/V,V/F
S 163	4612.0-13.0	0.3	0.1	3.1	3.9	80.4	2.83	DOL,ANHY,SH LAM,STY
S 164	4613.0-14.0	3.1	2.3	5.4	12.5	46.5	2.82	DOL,ANHY,SH LAM,SL/V
S 165	4614.0-15.0	79.	73.	16.0	29.0	31.4	2.84	DOL,ANHY,SL/V,STY

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

PHILLIPS PETROLEUM CO.
EVGSA UNIT 3328-002
VACUUM FIELD
LEA COUNTY, NEW MEXICO

DATE : 5-30-79
FORMATION : GRAYBURG/SAN ANDRES
DRLG. FLUID: SALT BASE MUD
LOCATION : 1310' FSL & 1160' FWL, SEC. 33, T-17-S, R-35-E

FILE NO : 3202-11118
ANALYSTS : GODSEY
ELEVATION: 3952' GL

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	POR. He	FLUID SATS. OIL	WTR	GRAIN DEN	DESCRIPTION
S 166	4615.0-16.0	0.2	*	6.2	30.7	49.0	2.82	DOL,V/F,SL/V,STY
S 167	4616.0-17.0	95.	70.	15.2	10.0	34.3	2.81	DOL,ANHY,V
S 168	4617.0-18.0	4.7	3.6	7.1	12.5	41.7	2.82	DOL,ANHY,V
S 169	4618.0-19.0	7.0	3.3	7.3	19.8	32.5	2.85	DOL,ANHY,V/F,V
S 170	4619.0-20.0	131.	73.	19.1	30.5	30.9	2.85	DOL,ANHY,V,SL/F,STY
S 171	4620.0-21.0	2.1	0.4	5.8	7.5	47.8	2.84	DOL,V/F,SL/V
S 172	4621.0-22.0	0.3	<0.1	3.5	17.5	55.0	2.84	DOL,SL/F
S 173	4622.0-23.0	47.	10.	11.6	25.6	28.9	2.84	DOL,PP,SL/F
S 174	4623.0-24.0	16.	6.9	9.3	15.8	29.8	2.85	DOL,V,V/F
175	4624.0-25.0	3.8	2.3	5.8	14.1	38.5	2.82	DOL,PP,STY
176	4625.0-26.0	2.0	0.6	5.7	12.7	47.3	2.82	DOL,SL/V,V/F
S 177	4626.0-27.0	0.4	<0.1	2.8	6.4	61.3	2.85	DOL,ANHY,SL/F
S 178	4627.0-28.0	16.	3.7	7.8	8.5	48.9	2.82	DOL,ANHY,V/F,STY
	4628.0-29.0							LOST CORE
S 179	4629.0-30.0	0.2	0.1	3.7	7.8	54.9	2.85	DOL,V/F
S 180	4630.0-31.0	0.4	<0.1	4.9	15.3	41.6	2.81	DOL,ANHY,STY
S 181	4631.0-32.0	0.2	0.1	6.0	10.0	43.1	2.83	DOL,PP,SL/F,STY
182	4632.0-33.0	1.5	0.9	5.6	14.3	44.4	2.82	DOL,V/F,PP,STY
S 183	4633.0-34.0	0.3	<0.1	2.3	12.5	68.7	2.85	DOL,SL/F,STY
S 184	4634.0-35.0	<0.1	<0.1	1.8	7.4	88.8	2.83	DOL,ANHY,SL/F
S 185	4635.0-36.0	27.	13.	12.2	22.2	28.8	2.84	DOL,ANHY,V/F,STY
S 186	4636.0-37.0	3.7	2.9	8.3	5.9	45.4	2.80	DOL,ANHY,SL/F,STY
S 187	4637.0-38.0	38.	38.	14.6	12.4	34.9	2.83	DOL,ANHY,STY
S 188	4638.0-39.0	15.	14.	7.6	18.8	37.7	2.87	DOL,ANHY,V/F,STY
S 189	4639.0-40.0	32.	32.	16.0	23.7	37.9	2.81	DOL,ANHY,SL/F,STY

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

PHILLIPS PETROLEUM CO.
EVGSA UNIT 3328-002

DATE : 5-30-79
FORMATION : GRAYBURG/SAN ANDRES

FILE NO : 3202-11148
ANALYSTS : GODSEY

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	POR. He	FLUID OIL	SATS. WTR	GRAIN DEN	DESCRIPTION
S 190	4640.0-41.0	7.7	4.4	12.6	20.4	37.1	2.81	DOL,ANHY,V/F,STY
S 191	4641.0-42.0	13.	10.	15.0	18.9	28.9	2.83	DOL,ANHY,SL/F,STY
192	4642.0-43.0	5.0	3.6	15.1	17.1	24.4	2.84	DOL,ANHY,STY
S 193	4643.0-44.0	1.3	1.2	11.3	14.0	29.6	2.85	DOL,ANHY,SL/F,STY
194	4644.0-45.0	0.2	0.2	6.8	11.5	37.2	2.83	DOL,ANHY,SL/F,STY
S 195	4645.0-46.0	11.	4.7	16.9	17.8	25.9	2.83	DOL,ANHY,SL/V,SL/F,STY
196	4646.0-47.0	0.4	<0.1	3.1	8.9	53.3	2.85	DOL,ANHY,SL/F,STY
S 197	4647.0-48.0	4.6	3.1	8.6	15.5	28.4	2.83	DOL,SL/F,PP,STY
198	4648.0-49.0	11.	6.9	15.8	12.8	29.2	2.82	DOL,SL/F,STY
S 199	4649.0-50.0	13.	2.7	9.1	13.8	31.5	2.85	DOL,ANHY,SL/F,STY
S 200	4650.0-51.0	3.4	2.4	9.8	17.9	30.1	2.82	DOL,STY
201	4651.0-52.0	7.4	5.7	9.1	7.8	39.8	2.83	DOL,ANHY,V/F,STY
S 202	4652.0-53.0	10.	9.4	11.6	17.2	35.1	2.84	DOL,ANHY,SL/F,STY
S 203	4653.0-54.0	2.9	2.8	8.2	19.8	33.6	2.85	DOL,ANHY,SL/F,STY
S 204	4654.0-55.0	2.7	2.6	9.7	19.5	25.0	2.88	DOL,ANHY,SL/F,STY
S 205	4655.0-56.0	1.7	1.1	8.9	17.4	31.0	2.87	DOL,ANHY,V/F,STY
206	4656.0-57.0	2.2	2.0	10.5	17.5	31.6	2.85	DOL,ANHY,V/F,FOSS,STY
207	4657.0-58.0	14.	8.8	13.2	13.2	38.8	2.84	DOL,ANHY,FOSS,SL/V,SL/F,STY
208	4658.0-59.0	15.	*	10.8	29.9	26.4	2.86	DOL,ANHY,V/F,SL/V,PP
S 209	4659.0-60.0	2.7	2.1	11.6	13.5	28.1	2.81	DOL,V/F,SL/V,STY
S 210	4660.0-61.0	9.0	4.8	13.0	14.6	34.0	2.84	DOL,ANHY,SL/V,STY
211	4661.0-62.0	11.	9.9	12.2	16.0	41.6	2.83	DOL,OOL,SL/F,STY
S 212	4662.0-63.0	34.	26.	13.3	17.2	37.1	2.82	DOL,ANHY,OOL,SL/F,STY
S 213	4663.0-64.0	18.	15.	15.4	12.8	29.9	2.81	DOL,ANHY,PP,OOL
S 214	4664.0-65.0	17.	16.	16.3	24.1	26.4	2.82	DOL,ANHY,OOL,SL/F,STY
S 215	4665.0-66.0	23.	20.	16.4	15.9	31.5	2.81	DOL,ANHY,OOL,SL/V
216	4666.0-67.0	5.5	*	15.0	11.1	42.7	2.83	DOL,OOL
217	4667.0-68.0	18.	*	16.2	11.3	40.0	2.83	DOL,ANHY,OOL,STY
218	4668.0-69.0	14.	*	15.8	10.9	41.2	2.83	DOL,ANHY,OOL
S 219	4669.0-70.0	51.	22.	15.6	14.6	42.5	2.81	DOL,ANHY,PP,OOL,STY

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

PHILLIPS PETROLEUM CO.
EVGSA UNIT 3328-002

DATE : 5-30-79
FORMATION : GRAYBURG/SAN ANDRES

FILE NO : 3202-[illegible]
ANALYSTS : GODSEY

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	POR. He	FLUID OIL	SATS. WTR	GRAIN DEN	DESCRIPTION
S 220	4670.0-71.0	19.	7.8	14.9	19.2	33.0	2.81	DOL,ANHY,OOL,PP
S 232	4682.0-83.0	16.	4.2	15.6	26.7	23.8	2.83	DOL,ANHY,SL/V
S 233	4683.0-84.0	3.8	2.3	10.3	24.3	37.1	2.82	DOL,ANHY,F,STY
S 234	4684.0-85.0	41.	5.7	13.3	24.4	34.8	2.85	DOL,ANHY,PP
S 235	4685.0-86.0	16.	16.	14.7	28.4	27.9	2.85	DOL,ANHY,SL/V,STY
S 236	4686.0-87.0	17.	13.	14.9	33.3	23.0	2.86	DOL,ANHY,SL/V,STY
237	4687.0-88.0	16.	*	15.0	15.1	46.6	2.83	DOL,ANHY
238	4688.0-89.0	21.	*	15.8	12.5	45.5	2.83	DOL,ANHY
	CORE NO. 5 4689.0-4749.0 CUT 60' REC 60'							
S 239	4689.0-90.0	48.	13.	17.5	27.2	31.2	2.87	DOL,ANHY,SL/V
S 240	4690.0-91.0	8.2	7.7	13.6	29.1	23.6	2.83	DOL,ANHY,SL/V,SL/F
S 241	4691.0-92.0	8.6	5.7	10.7	20.8	34.7	2.84	DOL,ANHY,SL/V,STY
S 242	4692.0-93.0	6.4	4.5	11.2	27.9	26.0	2.86	DOL,ANHY,PP,STY
S 243	4693.0-94.0	11.	8.2	11.6	28.7	27.7	2.88	DOL,ANHY,SL/F,PP,STY
S 244	4694.0-95.0	2.9	2.7	13.1	28.0	26.1	2.89	DOL,ANHY,SL/V
S 245	4695.0-96.0	7.5	6.8	15.4	22.2	31.7	2.86	DOL,ANHY,V/F,PP
S 246	4696.0-97.0	9.9	3.4	15.0	11.6	41.9	2.86	DOL,ANHY,SL/F
247	4697.0-98.0	103.	5.4	15.8	11.4	45.7	2.85	DOL,ANHY,F,STY
S 248	4698.0-99.0	3.6	2.2	15.8	10.9	45.5	2.85	DOL,ANHY,SL/F
S 249	4699.0-00.0	14.	14.	17.2	13.3	44.4	2.84	DOL,ANHY,SL/F,PP
S 250	4700.0-01.0	6.1	4.0	17.3	12.5	44.5	2.85	DOL,ANHY,SL/F,PP,STY
S 251	4701.0-02.0	14.	9.7	13.9	18.1	39.0	2.83	DOL,ANHY,SL/V,F,STY
S 252	4702.0-03.0	302.	17.	14.6	10.0	42.7	2.85	DOL,ANHY,F,PP,STY
S 253	4703.0-04.0	18.	12.	15.1	14.9	34.5	2.83	DOL,ANHY,SL/V,SL/F,STY
S 254	4704.0-05.0	11.	7.2	16.4	26.5	24.3	2.85	DOL,ANHY,SL/V,PP
S 255	4705.0-06.0	7.1	7.0	16.5	27.3	30.3	2.86	DOL,PP
S 256	4706.0-07.0	4.8	2.8	17.8	19.0	40.5	2.85	DOL,PP
S 257	4707.0-08.0	5.0	4.0	16.1	26.8	34.2	2.85	DOL,ANHY,PP

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

PHILLIPS PETROLEUM CO.
EVGSA UNIT 3328-002

DATE : 5-30-79
FORMATION : GRAYBURG/SAN ANDRES

FILE NO : 3202-11148
ANALYSTS : GODSEY

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	POR. He	FLUID OIL	SATS. WTR	GRAIN DEN	DESCRIPTION
S 258	4708.0-09.0	7.4	6.0	17.9	24.9	31.5	2.88	DOL,ANHY,SL/F,PP
S 259	4709.0-10.0	13.	8.4	16.1	21.2	40.1	2.85	DOL,ANHY,PP,V/F,STY
S 260	4710.0-11.0	21.	14.	16.0	14.6	45.5	2.85	DOL,PP,STY
S 261	4711.0-12.0	31.	1.1	16.3	16.4	45.4	2.82	DOL,ANHY,V/F,PP
S 262	4712.0-13.0	11.	4.0	16.1	21.6	37.2	2.85	DOL,ANHY,SL/F,PP
S 263	4713.0-14.0	23.	21.	13.0	18.9	39.4	2.85	DOL,ANHY,PP,STY
S 264	4714.0-15.0	37.	29.	15.8	30.0	30.9	2.87	DOL,ANHY,F,PP,STY
S 265	4715.0-16.0	21.	18.	13.0	24.5	30.7	2.83	DOL,ANHY,SL/V,PP,STY
S 266	4716.0-17.0	16.	14.	11.5	22.9	25.7	2.85	DOL,ANHY,SL/V,SL/F,FOSS,STY
S 267	4717.0-18.0	13.	11.	11.4	19.8	25.2	2.84	DOL,ANHY,FOSS,STY
S 268	4718.0-19.0	26.	23.	10.7	10.4	37.8	2.81	DOL,FOSS,F,PP,STY
S 269	4719.0-20.0	55.	24.	12.3	23.5	26.5	2.84	DOL,V/F,PP,STY
S 270	4720.0-21.0	14.	1.2	9.3	23.1	32.4	2.83	DOL,V/F,SL/V,STY
S 271	4721.0-22.0	6.7	6.3	4.9	23.3	33.3	2.86	DOL,ANHY,FOSS,SL/F,STY
S 272	4722.0-23.0	14.	11.	7.2	14.5	36.8	2.83	DOL,ANHY,SL/F,FOSS,STY
S 273	4723.0-24.0	224.	14.	13.3	23.8	36.4	2.83	DOL,V/F,PP
S 274	4724.0-25.0	7.3	6.1	12.9	13.2	40.6	2.82	DOL,PP
S 275	4725.0-26.0	31.	14.	14.4	21.6	34.6	2.82	DOL,ANHY,V/F,PP,STY
S 276	4726.0-27.0	24.	18.	16.4	18.6	29.9	2.85	DOL,ANHY,SL/V,SL/F,STY
S 277	4727.0-28.0	15.	14.	11.4	24.3	25.2	2.82	DOL,ANHY,F,SL/V,STY
S 278	4728.0-29.0	17.	13.	5.3	14.6	39.6	2.83	DOL,ANHY,F,SL/V,STY
S 279	4729.0-30.0	10.	9.5	12.3	23.7	24.3	2.84	DOL,ANHY,V,SL/F,STY
S 280	4730.0-31.0	18.	14.	14.7	11.4	38.6	2.82	DOL,ANHY,PP,SL/F,STY
S 281	4731.0-32.0	14.	13.	17.7	27.6	32.1	2.86	DOL,ANHY,SL/V,SL/F,STY
S 282	4732.0-33.0	18.	17.	17.5	27.6	34.9	2.87	DOL,ANHY,F,STY
S 283	4733.0-34.0	12.	11.	14.0	24.5	27.9	2.84	DOL,ANHY,V,F,STY
284	4734.0-35.0	12.	11.	12.6	18.2	27.0	2.84	DOL,ANHY,V,SL/F,FOSS,STY
S 285	4735.0-36.0	12.	11.	12.9	14.7	22.9	2.85	DOL,ANHY,V,SL/F,FOSS,STY
S 286	4736.0-37.0	13.	12.	14.5	17.8	35.7	2.85	DOL,ANHY,V,SL/F,STY
S 287	4737.0-38.0	25.	15.	11.1	20.4	30.3	2.83	DOL,ANHY,F,V,STY

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

PHILLIPS PETROLEUM CO.
EVGSA UNIT 3328-002
VACUUM FIELD
LEA COUNTY, NEW MEXICO

DATE : 5-30-79
FORMATION : GRAYBURG/SAN ANDRES
DRLG. FLUID: SALT BASE MUD
LOCATION : 1310' FSL & 1160' FWL, SEC. 33, T-17-S, R-35-E

FILE NO : 3202-11148
ANALYSTS : GODSEY
ELEVATION: 3952' GL

FULL DIAMETER ANALYSIS

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	POR. He	FLUID OIL	SATS. WTR	GRAIN DEN	DESCRIPTION
S 288	4738.0-39.0	12.	9.7	8.8	12.4	37.9	2.85	DOL,ANHY,F,V,STY
S 289	4739.0-40.0	15.	15.	3.8	13.5	50.0	2.83	DOL,ANHY,F,V,STY
S 290	4740.0-41.0	52.	51.	7.9	15.8	31.6	2.86	DOL,ANHY,F,V,STY
S 291	4741.0-42.0	10.	10.	6.3	17.4	36.9	2.83	DOL,ANHY,F,V,STY
S 292	4742.0-43.0	13.	12.	9.7	21.1	29.9	2.84	DOL,ANHY,F,SL/V,STY
S 293	4743.0-44.0	18.	17.	6.9	12.3	40.3	2.81	DOL,ANHY,SL/V,SL/F,STY
S 294	4744.0-45.0	14.	14.	10.6	16.2	30.3	2.84	DOL,ANHY,SL/F,V,FOSS,STY
S 295	4745.0-46.0	8.4	6.0	12.1	12.5	23.5	2.83	DOL,ANHY,V,SL/F,FOSS,STY
S 296	4746.0-47.0	41.	40.	14.1	8.5	24.8	2.85	DOL,ANHY,V,V/F,FOSS,STY
S 297	4747.0-48.0	13.	12.	9.5	11.7	33.6	2.88	DOL,ANHY,V,SL/F,STY
S 298	4748.0-49.0	14.	14.	15.2	13.7	47.8	2.87	DOL,ANHY,STY,SL/F
	CORE NO. 6 4749.0-4809.0 CUT 60' REC 60'							
S 299	4749.0-50.0	15.	14.	13.9	11.0	40.3	2.85	DOL,SL/F,STY,OOL
S 300	4750.0-51.0	14.	14.	15.0	20.3	38.9	2.86	DOL,SL/F,STY,OOL
301	4751.0-52.0	21.	17.	11.5	15.6	32.1	2.87	DOL,SL/ANHY,SL/V,STY
S 302	4752.0-53.0	25.	7.9	12.4	22.8	28.1	2.83	DOL,SL/ANHY,V/F,SL/V,STY,OOL
S 303	4753.0-54.0	13.	12.	11.8	15.5	35.9	2.84	DOL,OOL,SL/V
S 304	4754.0-55.0	10.	6.0	12.7	31.9	20.7	2.85	DOL,V/F,SL/V,PP
305	4755.0-56.0	8.1	*	12.1	18.6	31.4	2.88	DOL,V/F,PP
S 306	4756.0-57.0	58.	45.	14.4	27.8	27.8	2.85	DOL,SHY,SL/V
307	4757.0-58.0	17.	14.	13.4	32.0	21.5	2.84	DOL,PP
S 308	4758.0-59.0	13.	12.	13.0	27.4	22.1	2.87	DOL,PP
S 309	4759.0-60.0	18.	15.	13.9	26.9	26.9	2.85	DOL,SL/F,PP,STY
S 310	4760.0-61.0	18.	12.	12.2	26.5	35.7	2.86	DOL,SL/F,PP,STY
S 311	4761.0-62.0	12.	12.	12.2	18.1	42.7	2.82	DOL,PP,STY
312	4762.0-63.0	3.4	3.2	9.2	16.5	31.1	2.82	DOL,SHR,PP,STY

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

PHILLIPS PETROLEUM CO.
EVGSA UNIT 3328-002

DATE : 5-30-79
FORMATION : GRAYBURG/SAN ANDRES

FILE NO : 3202-111
ANALYSTS : GODSEY

FULL DIAMETER ANALYSIS

	SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	POR. He	FLUID SATS. OIL	WTR	GRAIN DEN	DESCRIPTION
	313	4763.0-64.0	2.9	2.3	4.8	6.3	29.4	2.83	DOL,V/F,STY
	314	4764.0-65.0	2.6	1.3	4.5	10.4	52.1	2.85	DOL,SL/V,STY
	315	4765.0-66.0	1.0	0.8	3.8	13.2	56.6	2.84	DOL,ANHY,V/F,SL/V,FOSS,STY
	316	4766.0-67.0	14.	2.9	4.7	16.4	52.7	2.83	DOL,ANHY,V/F,SL/V,FOSS,STY
S	317	4767.0-68.0	32.	31.	14.7	30.7	23.0	2.85	DOL,ANHY,PP,STY
S	318	4768.0-69.0	21.	18.	13.4	28.9	26.8	2.85	DOL,SL/F,FOSS,PP
S	319	4769.0-70.0	11.	5.5	6.4	20.0	50.0	2.84	DOL,ANHY,SL/V,FOSS,STY
	320	4770.0-71.0	14.	11.	7.1	18.5	38.6	2.84	DOL,ANHY,SL/V,FOSS,STY
	321	4771.0-72.0	6.9	5.7	5.7	15.2	38.0	2.84	DOL,ANHY,SL/V
S	322	4772.0-73.0	54.	4.9	4.2	17.7	43.5	2.85	DOL,ANHY,SL/V,SL/F,STY
	323	4773.0-74.0	6.7	3.9	5.3	19.7	36.6	2.84	DOL,ANHY,SL/V,FOSS,STY
S	324	4774.0-75.0	3.9	3.6	6.6	23.0	34.6	2.84	DOL,SL/V,STY
S	325	4775.0-76.0	6.7	6.3	8.5	24.0	30.1	2.87	DOL,ANHY,SL/V,PP,STY
	326	4776.0-77.0	5.1	5.1	7.0	24.4	32.7	2.86	DOL,ANHY,SL/V,STY
	327	4777.0-78.0	16.	16.	9.9	28.8	30.6	2.84	DOL,SHR,SL/V
S	328	4778.0-79.0	3.9	2.5	7.4	12.9	34.6	2.84	DOL,ANHY,SHR,SL/V,FOSS
S	329	4779.0-80.0	4.8	3.4	6.9	15.2	49.1	2.85	DOL,ANHY
	330	4780.0-81.0	2.4	1.9	7.0	21.1	29.8	2.85	DOL,ANHY,PP
	331	4781.0-82.0	3.0	1.5	6.1	17.6	34.3	2.85	DOL,SL/ANHY,FOSS,PP
S	332	4782.0-83.0	1.8	1.2	4.6	7.7	44.2	2.85	DOL,STY,FOSS
S	333	4783.0-84.0	0.1	<0.1	2.4	6.5	61.2	2.85	DOL,SL/ANHY,SL/F
S	334	4784.0-85.0	0.7	0.2	3.8	15.8	38.6	2.86	DOL,SL/ANHY,FOSS
S	335	4785.0-86.0	0.4	0.3	3.6	8.9	46.6	2.85	DOL,SL/ANHY,FOSS
	336	4786.0-87.0	0.9	0.6	3.7	8.0	40.0	2.87	DOL,ANHY,STY
	337	4787.0-88.0	0.3	<0.1	2.4	11.1	55.5	2.87	DOL,SL/ANHY
S	338	4788.0-89.0	0.7	0.4	7.7	16.6	38.1	2.84	DOL,SL/ANHY,FOSS,STY
S	339	4789.0-90.0	6.9	4.2	6.1	15.3	43.1	2.83	DOL,SL/ANHY,STY,SL/V,SL/F,PP
S	340	4790.0-91.0	15.	9.4	12.6	24.6	32.9	2.86	DOL,SL/ANHY,SL/F,FOSS
S	341	4791.0-92.0	15.	8.5	8.3	23.6	34.1	2.86	DOL,SL/ANHY,PP
S	342	4792.0-93.0	14.	11.	8.8	24.6	35.7	2.86	DOL,SL/ANHY,SL/F,PP

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

PHILLIPS PETROLEUM CO.
EVGSA UNIT 3328-002

DATE : 5-30-79
FORMATION : GRAYBURG/SAN ANDRES

FILE NO : 3202-11148
ANALYSTS : GODSEY

FULL DIAMETER ANALYSIS

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	POR. He	FLUID OIL	SATS. WTR	GRAIN DEN	DESCRIPTION
S 343	4793.0-94.0	30.	22.	8.2	16.8	38.6	2.85	DOL,SL/ANHY,PP
S 344	4794.0-95.0	11.	3.2	6.8	18.2	36.4	2.86	DOL,SL/ANHY,PP,STY
345	4795.0-96.0	26.	18.	10.2	28.6	30.6	2.86	DOL,SL/ANHY,PP,SL/F
S 346	4796.0-97.0	25.	22.	10.3	18.3	38.5	2.84	DOL,PP
S 347	4797.0-98.0	39.	38.	11.0	16.1	38.5	2.84	DOL,PP,STY
S 348	4798.0-99.0	32.	30.	11.9	8.9	42.5	2.83	DOL,SL/ANHY,STY,PP
S 349	4799.0-00.0	7.5	6.7	5.6	13.7	39.2	2.87	DOL,V/ANHY,PP
S 350	4800.0-01.0	56.	54.	12.5	7.5	42.7	2.83	DOL,SL/ANHY,PP
S 351	4801.0-02.0	3.2	2.8	4.3	13.2	39.7	2.86	DOL,SL/ANHY,PP
S 352	4802.0-03.0	69.	67.	8.5	21.5	36.3	2.85	DOL,SL/ANHY,SL/V,PP
S 353	4803.0-04.0	17.	16.	10.4	26.4	26.4	2.87	DOL,ANHY,FOSS,SL/V
354	4804.0-05.0	20.	19.	12.2	22.4	32.6	2.85	DOL,SL/ANHY,FOSS,SL/V
355	4805.0-06.0	15.	14.	15.9	28.2	30.3	2.87	DOL,SL/ANHY,SL/V,FOSS,PP
S 356	4806.0-07.0	11.	11.	14.4	16.7	39.3	2.83	DOL,SL/ANHY,SL/V
S 357	4807.0-08.0	14.	13.	7.1	38.7	24.3	2.87	DOL,SL/ANHY,STY,PP
S 358	4808.0-09.0	7.9	5.5	5.0	10.4	40.3	2.86	DOL,PP
CORE NO. 7 4809.0-4869.0 CUT 60' REC 60'								
S 359	4809.0-10.0	5.4	5.3	5.8	15.2	38.0	2.86	DOL,SL/ANHY,STY,V/F,OOL
S 360	4810.0-11.0	26.	25.	7.3	17.8	41.6	2.86	DOL,SL/ANHY,STY,FOSS,OOL
S 361	4811.0-12.0	13.	12.	5.3	21.7	30.1	2.87	DOL,SL/ANHY,SL/F,SL/V,PP
362	4812.0-13.0	11.	9.8	5.6	7.0	34.0	2.86	DOL,ANHY,STY,PP,SL/V,SHR
363	4813.0-14.0	13.	12.	6.8	16.3	31.4	2.86	DOL,SL/ANHY,STY,PP,SL/F,SHR
364	4814.0-15.0	9.1	3.9	10.0	29.8	25.8	2.86	DOL,SL/ANHY,V/F,STY,OOL,SHR
365	4815.0-16.0	10.	8.7	11.0	30.1	41.8	2.85	DOL,SL/ANHY,STY,OOL,V/F
366	4816.0-17.0	9.9	4.2	7.8	7.7	41.5	2.86	DOL,SL/ANHY,V/F,STY,OOL
S 367	4817.0-18.0	21.	12.	11.7	14.0	40.0	2.86	DOL,SL/ANHY,V/F,OOL
S 368	4818.0-19.0	19.	10.	11.9	12.8	42.4	2.85	DOL,SL/ANHY,OOL,V/F
S 369	4819.0-20.0	22.	17.	13.6	13.5	45.8	2.85	DOL,ANHY,F,OOL

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

PHILLIPS PETROLEUM CO.
EVGSA UNIT 3328-002

DATE : 5-30-79
FORMATION : GRAYBURG/SAN ANDRES

FILE NO : 3202-11148
ANALYSTS : GODSEY

FULL DIAMETER ANALYSIS

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	POR. He	FLUID SATS. OIL	WTR	GRAIN DEN	DESCRIPTION
S 370	4820.0-21.0	10.	8.4	8.3	18.3	39.7	2.85	DOL,SL/ANHY,OOL,SL/F
S 371	4821.0-22.0	11.	8.2	9.4	21.1	36.1	2.86	DOL,SL/ANHY,STY,OOL,SL/F
372	4822.0-23.0	17.	16.	8.7	19.4	36.9	2.84	DOL,SL/ANHY,OOL
373	4823.0-24.0	15.	15.	10.4	18.6	33.3	2.82	DOL,SL/ANHY,STY,OOL,SL/F,SHR
S 374	4824.0-25.0	1.0	0.1	4.8	9.6	44.4	2.85	DOL,SL/ANHY,OOL,STY,SL/F
375	4825.0-26.0	6.4	5.8	5.4	12.2	44.4	2.84	DOL,SL/ANHY,V/F,STY,OOL
376	4826.0-27.0	36.	36.	16.5	27.7	32.5	2.84	DOL,SL/ANHY,OOL,SL/F
S 377	4827.0-28.0	36.	14.	9.9	24.5	33.6	2.84	DOL,SL/ANHY,OOL,STY,SL/F
378	4828.0-29.0	1.8	1.7	10.8	21.6	32.4	2.85	DOL,SL/ANHY,OOL,STY,SL/F
S 379	4829.0-30.0	0.2	0.2	3.8	6.6	45.9	2.86	DOL,ANHY,OOL,STY
S 380	4830.0-31.0	0.5	0.3	4.3	6.8	40.7	2.87	DOL,SL/ANHY,STY,PP,SL/F
S 381	4831.0-32.0	4.9	3.0	9.7	18.9	56.6	2.83	DOL,SL/ANHY,PP,SL/V
S 382	4832.0-33.0	4.7	4.0	11.5	19.5	39.9	2.85	DOL,SL/ANHY,PP,STY
S 383	4833.0-34.0	1.8	1.7	5.4	14.6	34.7	2.85	DOL,SL/ANHY,PP,FOSS
S 384	4834.0-35.0	1.3	1.1	7.9	9.4	39.3	2.85	DOL,SL/ANHY,SL/V,STY,FOSS
385	4834.0-35.0	0.8	0.5	5.5	14.6	39.4	2.86	DOL,SL/ANHY,OOL,SL/F
S 386	4835.0-37.0	0.4	0.3	5.0	8.1	39.3	2.87	DOL,SL/ANHY,SL/V
S 387	4837.0-38.0	7.7	7.6	8.2	18.9	31.9	2.86	DOL,SL/ANHY,SL/V,STY
S 388	4838.0-39.0	17.	16.	9.6	20.6	31.9	2.87	DOL,SL/ANHY,OOL
S 389	4839.0-40.0	8.1	7.5	6.8	17.5	31.3	2.88	DOL,SL/ANHY,STY,OOL,F
S 390	4840.0-41.0	3.4	3.2	8.6	15.3	34.4	2.87	DOL,SL/ANHY,F,OOL,STY
391	4841.0-42.0	4.7	4.3	9.6	19.5	29.6	2.87	DOL,SL/ANHY,SL/F,SL/V,OOL,STY
S 392	4842.0-43.0	4.8	4.6	9.1	5.4	28.0	2.86	DOL,ANHY,SL/F,V
S 393	4843.0-44.0	1.4	1.1	9.5	4.9	28.4	2.85	DOL,ANHY,V,FOSS
S 394	4844.0-45.0	1.2	1.0	7.8	4.5	33.3	2.86	DOL,ANHY,V,STY,FOSS
395	4845.0-46.0	1.4	1.3	11.1	4.1	40.2	2.84	DOL,ANHY,SL/V,FOSS
S 396	4846.0-47.0	1.2	1.1	7.7	9.1	31.5	2.87	DOL,SL/ANHY,SL/V,SL/F,FOSS
397	4847.0-48.0	7.3	5.2	12.8	15.2	31.4	2.85	DOL,SL/ANHY,SL/V,STY
398	4848.0-49.0	0.9	0.8	5.9	10.2	30.7	2.87	DOL,ANHY,SL/V
S 399	4849.0-50.0	0.8	0.5	4.8	9.0	35.9	2.85	DOL,ANHY,SL/V

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

PHILLIPS PETROLEUM CO.
EVGSA UNIT 3328-002
VACUUM FIELD
LEA COUNTY, NEW MEXICO

DATE : 5-30-79
FORMATION : GRAYBURG/SAN ANDRES
DRLG. FLUID: SALT BASE MUD
LOCATION : 1310' FSL & 1160' FWL, SEC. 33, T-17-S, R-35-E

FILE NO : 3202-11148
ANALYSTS : GODSEY
ELEVATION: 3952' GL

FULL DIAMETER ANALYSIS

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	POR. He	FLUID SATS. OIL	WTR	GRAIN DEN	DESCRIPTION
S 400	4850.0-51.0	1.1	0.9	8.8	7.8	27.7	2.85	DOL,ANHY,V
401	4851.0-52.0	1.2	1.1	10.2	9.2	27.0	2.84	DOL,ANHY,SL/V
S 402	4852.0-53.0	1.5	1.2	10.4	5.7	30.3	2.86	DOL,ANHY,SL/V,FOSS
403	4853.0-54.0	7.5	5.0	6.0	6.1	47.6	2.86	DOL,SL/ANHY,STY,OOL,SL/F
S 404	4854.0-55.0	9.6	9.0	6.6	6.9	32.8	2.89	DOL,SL/ANHY ,STY,SL/F,OOL
S 405	4855.0-56.0	10.	9.7	7.6	11.6	38.8	2.87	DOL,SL/ANHY,SL/F,OOL,STY
S 406	4856.0-57.0	29.	26.	13.7	22.1	34.6	2.86	DOL,SL/ANHY,OOL,STY
S 407	4857.0-58.0	7.2	1.8	5.4	7.4	41.5	2.86	DOL,SL/ANHY,SL/F,OOL,STY
408	4858.0-59.0	13.	12.	8.8	6.2	38.5	2.89	DOL,SL/ANHY,OOL,STY
S 409	4859.0-60.0	23.	8.0	10.2	17.6	34.6	2.85	DOL,SL/ANHY,OOL
410	4860.0-61.0	9.5	3.6	9.2	17.8	33.2	2.87	DOL,SL/ANHY,OOL,STY
S 411	4861.0-62.0	14.	7.5	9.2	22.4	40.8	2.88	DOL,ANHY,SL/F,OOL,STY
S 412	4862.0-63.0	24.	18.	10.0	17.1	32.9	2.86	DOL,ANHY,SL/F,OOL,STY
S 413	4863.0-64.0	18.	14.	8.1	19.1	34.2	2.86	DOL,ANHY,SL/F,OOL,STY
414	4864.0-65.0	22.	20.	12.7	18.8	36.2	2.85	DOL,SL/ANHY,OOL,STY
415	4865.0-66.0	2.4	2.0	5.6	10.5	39.9	2.86	DOL,SL/ANHY,SL/F,OOL,STY
S 416	4866.0-67.0	9.4	8.8	9.1	12.5	37.3	2.86	DOL,SL/ANHY,SL/F,OOL,STY
417	4867.0-68.0	4.2	3.6	9.0	10.4	41.9	2.86	DOL,SL/ANHY,SL/F,OOL,STY
S 418	4868.0-69.0	16.	12.	10.3	19.2	36.8	2.88	DOL,SL/ANHY,SL/F,OOL,STY
CORE NO. 8 4869.0-4900.0 CUT 31' REC 31'								
419	4869.0-70.0	4.4	3.8	8.4	3.1	37.4	2.85	DOL,SL/V,STY,FOSS
420	4870.0-71.0	5.2	4.8	12.7	19.7	31.9	2.85	DOL,SL/V,STY,FOSS
S 421	4871.0-72.0	1019.	44.	14.8	18.7	31.1	2.87	DOL,OOL,STY
S 422	4872.0-73.0	20.	18.	13.8	22.0	30.3	2.85	DOL,SL/V,STY,OOL
S 423	4873.0-74.0	16.	14.	16.0	25.0	31.0	2.86	DOL,SL/F,OOL,STY
S 424	4874.0-75.0	28.	27.	17.2	23.5	30.3	2.86	DOL,SL/V,OOL

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering

DALLAS, TEXAS

PHILLIPS PETROLEUM CO.
EVGSA UNIT 3328-002

DATE : 5-30-79
FORMATION : GRAYBURG/SAN ANDRES

FILE NO : 3202-111[illegible]
ANALYSTS : GODSEY

FULL DIAMETER ANALYSIS

SAMPLE NUMBER	DEPTH	PERM. TO AIR (MD) MAXIMUM	90 DEG	POR. He	FLUID SATS. OIL	WTR	GRAIN DEN	DESCRIPTION
S 425	4875.0-76.0	22.	12.	16.5	18.8	33.2	2.85	DOL,SL/F,OOL
S 426	4876.0-77.0	29.	28.	17.7	24.3	30.6	2.86	DOL,SL/ANHY,OOL,SL/F
427	4877.0-78.0	8.2	*	16.9	33.5	29.3	2.82	DOL,SL/ANHY,OOL
S 428	4878.0-79.0	14.	*	17.7	29.2	32.4	2.83	DOL,SL/ANHY,OOL
S 429	4879.0-80.0	24.	20.	14.7	20.8	37.0	2.86	DOL,ANHY,STY,SL/F,OOL
S 430	4880.0-81.0	12.	11.	13.8	11.9	43.0	2.83	DOL,SL/ANHY,STY,F,OOL
S 431	4881.0-82.0	13.	12.	18.3	28.3	29.7	2.86	DOL,SL/ANHY,STY,FOSS,OOL
S 432	4882.0-83.0	19.	18.	17.9	28.4	29.7	2.86	DOL,SL/ANHY,STY,FOSS,OOL
S 433	4883.0-84.0	22.	21.	18.9	27.2	28.7	2.87	DOL,SL/ANHY,FOSS,SL/F,OOL
S 434	4884.0-85.0	27.	9.0	17.0	23.7	35.4	2.84	DOL,SL/ANHY,STY,FOSS,OOL
S 435	4885.0-86.0	20.	18.	16.5	16.7	30.4	2.84	DOL,SL/ANHY,FOSS,STY,OOL
S 436	4886.0-87.0	14.	14.	17.4	16.2	36.0	2.84	DOL,FOSS,STY
S 437	4887.0-88.0	28.	14.	18.3	18.1	38.5	2.84	DOL,FOSS
S 438	4888.0-89.0	22.	20.	18.0	14.1	42.2	2.85	DOL,SL/ANHY,FOSS
S 439	4889.0-90.0	31.	30.	17.4	22.5	35.7	2.84	DOL,F,OOL,STY
S 440	4890.0-91.0	20.	16.	17.4	26.0	30.8	2.85	DOL,FOSS,STY
S 441	4891.0-92.0	20.	20.	17.3	26.2	32.9	2.82	DOL,FOSS,STY
S 442	4892.0-93.0	24.	23.	16.2	14.7	38.9	2.82	DOL,SL/ANHY,FOSS,SL/V
S 443	4893.0-94.0	20.	*	15.9	28.2	37.8	2.83	DOL,SL/ANHY,F,STY
S 444	4894.0-95.0	36.	34.	15.9	20.9	35.3	2.84	DOL,SL/ANHY,FOSS,SL/V,OOL
S 445	4895.0-96.0	27.	24.	16.0	26.1	27.1	2.85	DOL,SL/ANHY,SL/V,FOSS,OOL
S 446	4896.0-97.0	27.	24.	17.3	26.5	36.8	2.82	DOL,SL/ANHY,STY,FOSS
S 447	4897.0-98.0	34.	27.	17.3	18.1	30.7	2.83	DOL,SL/ANHY,FOSS,SL/F
448	4898.0-99.0	38.	31.	14.4	17.6	31.4	2.82	DOL,SL/ANHY,STY,SL/F
S 449	4899.0-00.0	23.	22.	10.3	12.3	34.2	2.81	DOL,SL/ANHY,F,STY,FOSS
450	4900.0-01.0	3.1	*	9.1	17.3	38.0	2.81	DOL,SL/ANHY,V,F,STY

* INDICATES PLUG PERM

S INDICATES PRESERVED SAMPLE