

PRELIMINARY PRINT

CORE ANALYSIS RESULTS

Company PHILLIPS PETROLEUM COMPANY Formation GRAYBURG File WP-3-3187
Well LEAMEX NO. 13 Core Type DIAMOND 4 3/8" Date Report 6-6-69
Field MALJAMAR Drilling Fluid WATER BASE MUD Analysts NEFE
County LEA State NEW MEX. Elev. 660' FNL 1980' FEL SEC 16-T17S-R33E

Lithological Abbreviations

SAND-SD SHALE-SH LIME-LM DOLOMITE-DOL CHEMT-CH GYPSUM-GYP ANHYDRITE-ANHY CONGLOMERATE-CONG FOSSILIFEROUS-FOSS SANDY-SDY SHALY-SHY LIMY-LMY FINE-FN MEDIUM-MED COARSE-CSE CRYSTALLINE-XLN GRAIN-GRN GRANULAR-GRNL BROWN-BRN GRAY-GY VUGGY-VGY FRACTURED-FRAC LAMINATION-LAM STYLOLITIC-STY SLIGHTLY-SLT VERY-VRY WITH-WTH

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYS	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS
				OIL	TOTAL WATER	

CONVENTIONAL ANALYSIS

CORE NO. 1 - 4250-4301

4250.0-58.5	Dolomite, anhy
4258.5-62.0	Anhydrite
4262.0-63.0	Dolomite
4263.0-64.0	Sand, dol
4264.0-67.0	Anhydrite, w/dol
4267.0-70.0	Dolomite, anhy
4270.0-71.0	Anhydrite
4271.0-73.5	Sand, anhydrite
4273.5-77.5	Anhydrite & dolomite
4277.5-92.5	Dolomite, anhy
4282.5-93.5	Anhydrite
4293.5-94.0	Dolomite, anhy
4294.0-95.0	Anhydrite
4295.0-01.0	Dolomite, anhy

CORE NO. 2 - 4301-435

4301.0-06.0	Dolomite, anhy
4306.0-08.5	Dolomite, sdy
4308.5-13.5	Dolomite

1	4313.5-14.0	<0.1	4.4	0.0	81.8	Sand, gry, fn grn, shy
2	14.0-15.0	3.3	6.7	23.9	29.8	Sand, gry, fn grn
3	15.0-16.0	8.2	10.0	28.0	24.0	Sand, gry, fn grn
4	16.0-17.0	6.2	12.1	34.7	25.6	Sand, gry, fn grn
5	17.0-18.0	2.3	7.9	20.2	50.7	Sand, gry, fn grn
6	4318.0-19.0	6.2	11.6	25.0	47.5	Sand, gry, fn grn
	4319.0-42.0					Dolomite, anhy
	4342.0-46.0					Sand, dol
	4346.0-49.0					Dolomite, shy
7	4349.0-50.0	2.0	7.4	21.6	33.7	Sand, gry, fn grn, dol
8	4350.0-51.0	41	18.3	14.2	40.4	Sand, gry, fn grn
9	4351.0-52.0	33	17.5	15.4	37.8	Sand, gry, fn grn

CORE NO. 3 - 4352-4402

10	4352.0-53.0	33	18.9	13.8	44.5	Sand, gry, fn grn
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Petroleum Reservoir Engineering
DALLAS, TEXAS

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CORE ANALYSIS RESULTS

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SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYs	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS
				OIL	TOTAL WATER	
11	4353.0-54.0	37	16.9	17.8	35.0	Sand, gry, fn grn
12	4354.0-55.0	6.5	13.9	17.3	42.5	Sand, gry, fn grn
	4355.0-62.0					Dolomite
	4362.0-66.0					Dolomite, shy
	4366.0-75.0					Dolomite
13	4375.0-76.0	<0.1	3.8	0.0	79.2	Sand, gry, fn grn, dol, shy
14	76.0-77.0	<0.1	5.1	0.0	74.5	Sand, gry, fn grn, dol
15	77.0-78.0	<0.1	6.1	0.0	77.0	Sand, gry, fn grn, dol
16	78.0-79.0	<0.1	7.0	0.0	75.7	Sand, gry, fn grn, dol
17	4379.0-80.0	<0.1	7.2	0.0	72.2	Sand, gry, fn grn, dol
	4380.0-92.0					Dolomite
	4392.0-92.5					Shale
	4392.5-00.0					Dolomite, w/shy lam
18	4400.0-01.0	4.9	14.7	17.7	30.6	Sand, gry, fn grn
19	4401.0-02.0	37	18.2	14.3	37.9	Sand, gry, fn grn
	CORE NO. 4 - 4402-4452					
20	4402.0-03.0	25	14.1	18.4	27.0	Sand, gry, fn grn
21	4403.0-04.0	4.9	12.1	12.4	39.6	Sand, gry, fn grn
	4404.0-25.0					Dolomite, w/shy lam
22	4425.0-26.0	0.3	5.3	13.2	28.3	Dolomite, gry, fn xln
	4426.0-33.0					Dolomite, w/shy lam
23	4433.0-34.0	1.3	7.7	28.7	16.9	Dolomite, gry, fn xln
24	34.0-35.0	0.3	6.1	24.6	16.4	Dolomite, gry, fn xln
25	35.0-36.0	<0.1	5.6	0.0	68.0	Sand, gry, fn grn, dol
26	36.0-37.0	<0.1	6.4	0.0	57.8	Sand, gry, fn grn, dol
27	37.0-38.0	0.3	6.9	2.9	66.7	Sand, gry, fn grn
28	38.0-39.0	6.2	10.7	15.0	40.2	Sand, gry, fn grn
29	39.0-40.0	20	16.3	17.2	42.3	Sand, gry, fn grn
30	40.0-41.0	33	18.5	16.7	46.5	Sand, gry, fn grn
31	41.0-42.0	25	18.7	15.5	43.8	Sand, gry, fn grn
32	42.0-43.0	3.9	10.9	24.8	28.5	Sand, gry, fn grn
33	4443.0-43.5	<0.1	6.2	0.0	59.7	Sand, gry, fn grn, dol
	4443.5-49.0					Dolomite
	4449.0-50.0					Sand, shy
34	4450.0-51.0	<0.1	5.6	0.0	71.5	Sand, red, fn grn, shy
	4451.0-51.5					Sand, shy
	4451.5-52.0					Dolomite
	CORE NO. 5 - 4452-4500					
	4452.0-53.0					Shale, dol

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				OIL	TOTAL WATER	
	4453.0-55.0					Dolomite
	4455.0-58.0					Shale, w/dol streaks
	4458.0-60.0					Shale, w/dol
	4460.0-62.5					Dolomite
	4462.5-73.0					Shale, sdy, dol
	4473.0-75.5					Dolomite
	4475.5-79.5					Shale, w/dol streaks
	4479.5-00.0					Dolomite