

## CORE LABORATORIES, INC.

Petroleum Reservoir Engineering  
DALLAS, TEXAS

1

Page No. \_\_\_\_\_

## CORE ANALYSIS RESULTS

Company	El Paso Natural Gas Company	Formation	Dakota	File	RP-3-997
Well	San Juan 30-6 No. 31	Core Type	Diamond Conv.	Date Report	6/1/59
Field	Wildcat	Drilling Fluid	Gas	Analysts	English
County	Rio Arriba	State N.Mexico	Elev. 6364 DF	Location	Sec 33 30N 6W

## Lithological Abbreviations

SAND-SD	DOLOMITE-DOL	ANHYDRITE-ANHY	SANDY-SCY	FINE-FN	CRYSTALLINE-XLN	BROWN-BRN	FRACTURED-FRAC	SLIGHTLY-SL/
SHALE-SH	CHERT-CH	CONGLOMERATE-CONG	SHALY-SHY	MEDIUM-MED	GRA-N-GRN	GRAY-GY	LAMINATION-LAM	VERY-V/
LIME-LM	GYPSUM-GYP	FOSSILIFEROUS-FOSS	LIMY-LMY	COARSE-CSE	GRANULAR-GRNL	VUGGY-VGY	STYLOLITIC-STY	WITH-W/

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCY'S	POROSITY PER CENT	RESIDUAL SATURATION PER CENT. PORE		SAMPLE DESCRIPTION AND REMARKS
				OIL	TOTAL WATER	
1	7634-35	<0.01	0.9	22.3	44.5	
2	35-36	0.01	1.9	0.0	31.6	
3	36-37	0.01	2.5	0.0	56.1	
4	37-38	0.05	3.2	0.0	56.3	
5	38-39	0.07	3.3	0.0	54.6	
6	39-40	0.01	2.5	0.0	84.1	
7	40-41	0.10	2.9	0.0	79.3	
8	41-42	<0.01	2.6	0.0	77.0	Vertical Fracture
9	42-43	<0.01	2.1	0.0	90.6	Vertical Fracture
10	43-44	0.01	1.8	0.0	94.4	
11	44-45	<0.01	2.0	0.0	95.1	
12	45-46	0.01	1.9	0.0	89.5	Vertical Fracture
13	46-47	<0.01	2.2	0.0	95.4	Vertical Fracture
14	7647-48	<0.01	1.8	0.0	94.6	

7634-7648 Low porosity ( 2.2% average ) and low permeability ( 0.23 md./ft. average ) show this interval to have no commercial value . Other properties are : saturation of residual oil 1.6% average and saturation of total water 74.5% average .

## CORE ANALYSIS RESULTS

Company El Paso Natural Gas Company Formation Dakota File RP-3-997  
 Well San Juan 30-6 No. 31 Core Type Diamond Conv. Date Report 6/6/59  
 Field Wildcat Drilling Fluid Oil Emulsion Mud Analysts English  
 County Rio Arriba State N.Mexico Elev. 6364 DF Location Sec33 30N 6W

### Lithological Abbreviations

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

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCY	RESIDUAL SATURATION PER CENT PORE			SAMPLE DESCRIPTION AND REMARKS
			PER CENT	OIL	TOTAL WATER	
15	7716-17	0.13	1.5	13.3	40.0	
16	17-18	0.04	5.3	0.0	11.3	
17	18-19	0.01	2.3	0.0	26.5	
18	19-20	0.9	1.6	12.5	37.5	
19	20-21	<0.01	0.6	0.0	33.3	
20	21-22	<0.01	2.0	10.0	85.0	
21	22-23	<0.01	1.7	0.0	94.0	
22	23-24	<0.01	2.1	9.1	71.5	
23	24-25	<0.01	1.2	0.0	83.4	
24	7725-26	<0.01	2.2	0.0	95.5	

7716-7726 Low porosity ( 4.5% average ) and high total water saturations ( 57.8% average ) show this interval to have no commercial value . Other properties are : permeability 0.11 md./ft. average and saturation of residual oil 4.5% average .

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Page No. 1

## CORE ANALYSIS RESULTS

Company	El Paso Natural Gas Company	Formation	Dakota	File	RP-3-997
Well	San Juan 30-6 No. 31	Core Type	Diamond Conv.	Date Report	6/8/59
Field	Wildcat	Drilling Fluid	Oil Emulsion Mud	Analysts	English
County	Rio Arriba State N.Mexico	Elev 6364 LF	Location Sec 33 30N 6W		

### Lithological Abbreviations

SAND - SF	DOLOMITE - DO	ANHYDRITE - ANHY	SAND - SF	FINE - FN	CRYSTALLINE - CRY	BROWN - BRN	FRACTURED - FRA	SLIGHTLY SIL /
SHALE - SH	CHERT - CH	CONGLOMERATE - CONG	SHALE - SH	MEDIUM - MED	CHAIN - GRN	GRAY - GY	LAMINATION - LAM	VERY - V.
LIME - LM	GYPSUM - GYP	FOSSIL - FOS	TINY - TIN	COARSE - COA	GRANULAR - GRNL	BUGGY - VGT	STYLOLITIC - STY	WITH - W.

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCY'S	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		TOTAL WATER	SAMPLE DESCRIPTION AND REMARKS
				oil	water		
25	7740-41	0.04	1.9	10.5	52.7		
26	46-47	0.04	1.6	31.3	50.0		
27	51-52	0.01	2.4	8.3	66.7		
28	52-53	0.06	7.9	0.0	30.4		
29	53-54	1.9	10.2	5.0	16.8		
30	54-55	0.27	7.8	6.4	15.4		
31	55-56	0.01	1.6	0.0	50.0		
32	56-57	0.03	4.2	4.8	23.9		
33	57-58	0.17	4.8	0.0	4.2		
34	58-59	0.05	0.7	0.0	28.4		
35	59-60	0.9	0.6	0.0	33.3		
36	7760-61	1.0	1.2	0.0	16.7		

7740-7753 Low porosity ( 3.4% average ) shows this interval to have no commercial value . Other properties are : permeability 0.04 md./ft. average ; saturation of total water 49.9% average ; and saturation of residual oil 12.5% average .

7753-7754 This one-foot interval has saturations , which are favorable for the production of a rich gas ( residual oil 5.0% average and total water 16.8% ). The permeability ( 1.9% ) and the porosity ( 10.2% ) are within the range that should respond to a formation treatment . However , the interval is too thin to make a commercially successful well .

7754-7761 Low porosity ( 2.9% average ) show this interval to have no commercial value . Other properties are saturation of residual oil 1.6% average ; permeability 0.34 md./ft. average ; and saturation of total water 24.5% average .