

CORE ANALYSIS RESULTS

Company EL PASO NATURAL GAS COMPANY Formation DAKOTA File RP-3-1101
 Well SAN JUAN 29-4 # 18-33 Core Type DIAMOND CONV. Date Report 10/29/59
 Field WILDCAT Drilling Fluid WATER BASE MUD Analysts ENGLISH
 County RIO ARriba State N. MEXICO Elev. 7378 DF Location Sec 33 29N 4W

Lithological Abbreviations

SAND - SD SHALE - SH LIME - LM	SOLOMITE - DOL CHERT - 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 - GR VUGGY - VGY	FRACTURED - FRAC LAMINATION - LAM STYLOLITIC - STY	SLIGHTLY - SL/ VERY - V/ WITH - W/
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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	
1	8656-57	<0.01	4.4	0.0	86.4	
2	57-58	<0.01	2.0	10.0	56.0	Vertical Fracture
3	58-59	<0.01	3.0	6.7	76.7	Vertical Fracture
4	59-60	<0.01	2.7	0.0	77.7	Vertical Fracture
5	60-61	<0.01	5.5	0.0	90.8	Vertical Fracture
6	61-62	<0.01	5.5	0.0	94.5	Vertical Fracture
7	62-63	<0.01	5.3	0.0	90.6	Vertical Fracture
8	63-64	<0.01	4.7	0.0	91.5	Vertical Fracture
9	8675-76	<0.01	2.9	0.0	79.3	Vertical Fracture
10	76-77	<0.01	2.3	0.0	65.2	Vertical Fracture

8656-8664 Low porosity (4.1% average) and low permeability (<0.01 md./ft. average) associated with high total water saturations (83.0% average) show this interval to be essentially non-productive . There is evidence of a good fracture system , which can be the reservoir and the means of passage to the well bore for fluids within these fractures . Further testing should be done to evaluate the fractures .

8675-8677 Low porosity (5.2% average) , high total water saturations (72.2% average) and low permeability (<0.01 md./ft. average) show this interval to be essentially non-productive . The saturation of residual oil is 0.0% average . Further testing should be done to evaluate the amount and type of fluid within the fractures .

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

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Company EL PASO NATURAL GAS COMPANY Formation DAKOTA File RP-3-1101
Well SAN JUAN 29-4 # 18-33 Core Type DIAMOND CONV. Date Report 10/31/59
Field Blanco Mesa Verde Dakota Wildcat Drilling Fluid Water Base Mud Analysts ENGLISH
County RIO ARriba State N. MEXICO Elev. 7378 DF Location Sec 33 29N 4W

Lithological Abbreviations

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCS	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS
				OIL	TOTAL WATER	
11	8679-80	<0.01	2.5	0.0	84.0	Vertical Fracture
12	80-81	<0.01	1.6	0.0	37.3	Vertical Fracture
13	81-82	<0.01	3.2	0.0	71.9	Vertical Fracture
14	82-83	0.01	1.3	0.0	30.7	Vertical Fracture
15	83-84	0.01	4.1	0.0	19.5	Vertical Fracture
16	84-85	0.01	7.0	0.0	17.1	Vertical Fracture
17	85-86	0.11	4.2	0.0	64.2	Vertical Fracture
18	86-87	0.09	3.8	0.0	68.4	Vertical Fracture
19	87-88	<0.01	3.9	0.0	84.7	Vertical Fracture
20	88-89	<0.01	5.1	0.0	76.4	Vertical Fracture
21	89-90	*	4.1	0.0	75.8	Vertical Fracture
22	90-91	<0.01	3.2	0.0	71.8	Vertical Fracture
23	91-92	<0.01	1.9	0.0	57.8	Vertical Fracture
24	92-93	<0.01	2.6	0.0	69.3	Vertical Fracture
25	93-94	<0.01	3.1	0.0	51.6	Vertical Fracture
26	94-95	<0.01	3.2	0.0	56.3	Vertical Fracture
27	95-96	0.02	1.6	0.0	56.2	Vertical Fracture
28	96-96.5	<0.01	4.6	0.0	71.7	Vertical Fracture

* Fractured Plug.

8679-8683 Low porosity (2.1% average) and low permeability (<0.01 md./ft. average) associated with high total water saturations (57.5% average) show this interval to be essentially non-productive . The saturation of residual oil is 0.0% average .

8683-8686 This interval has low porosity (5.1% average) and low permeability (0.04 md./ft. average) . The saturations (residual oil 0.0% average and total water 33.9% average) show the interval to be low-capacity gas productive . The vertical fracture system should increase the effective permeability .

8686-8696.5 This interval has low porosity (3.4% average) and low permeability (0.02 md./ft. average) . The saturations (residual oil 0.0% average and total water 67.2% average) show the interval to be essentially non-productive .

CORE ANALYSIS RESULTS

Company EL PASO NATURAL GAS COMPANY Formation DAKOTA File RP-3-1101
 Well SAN JUAN 29-4 # 18-33 Core Type DIAMOND CONV. Date Report 11/1/59
 Field BLANCO MESA VERDE DAKOTA WILDCAT Drilling Fluid WATER BASE MUD Analysts ENGLISH
 County RIO ARriba State N. MEXICO Elev. 7378 DF Location Sec 33 29N 4W

Lithological Abbreviations

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYs	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS
				OIL	TOTAL WATER	
29	8619-20	<0.01	2.1	9.4	71.5	Vertical Fracture
30	20-21	0.01	1.6	12.5	74.8	Vertical Fracture
31	21-22	0.21	3.3	15.2	30.3	Vertical Fracture
32	22-23	0.02	3.6	19.5	22.2	Vertical Fracture
33	23-24	0.01	3.8	13.1	21.1	Vertical Fracture
34	24-25	<0.01	3.5	14.3	22.8	Vertical Fracture
35	25-26	0.02	3.4	0.0	17.6	Vertical Fracture
36	26-27	0.02	3.1	16.1	12.9	Vertical Fracture
37	27-28	<0.01	1.4	0.0	57.2	Vertical Fracture
38	28-29	0.02	4.5	11.1	13.3	Vertical Fracture
39	29-30	0.02	4.3	16.3	18.6	Vertical Fracture
40	30-31	0.03	4.8	0.0	8.3	Vertical Fracture
41	31-32	0.02	4.4	0.0	9.1	Vertical Fracture
42	32-33	<0.01	2.2	9.1	27.2	Vertical Fracture
43	33-34	<0.01	2.8	17.8	28.6	Vertical Fracture

8619-8621 Low porosity (1.8% average) and high total water saturations (73.1% average) associated with low permeability (0.01 md./ft. average) show this interval to be essentially non-productive . The saturation of residual oil is 10.9% average .

8621-8634 This interval has low porosity (3.5% average) and low permeability (0.03 md./ft. average) . The saturations (total water 22.2% average and residual oil 10.2% average) show this interval to be low-capacity gas-productive . The gas produced should be very rich with condensate .



CORE LABORATORIES, INC.



Petroleum Reservoir Engineering

COMPANY EL PASO NATURAL GAS COMPANY FIELD WILDCAT FILE RP-3-1101
 WELL SA JUAN 26-4 # 13-30 COUNTY RIO ARriba DATE 10/28/59
 LOCATION Sec33 T29N R4W STATE NEW MEXICO ELEV. 7078 DF

CORE-GAMMA CORRELATION

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VERTICAL SCALE: 5" = 100'

CORE-GAMMA SURFACE LOG (PATENT APPLIED FOR)

GAMMA RAY
RADIATION INCREASE →

COREGRAPH

TOTAL WATER

PERCENT TOTAL WATER

80 60 40 20 0

PERMEABILITY

3 MILLIDARCYs 1 0 15 10 PERCENT 5 0

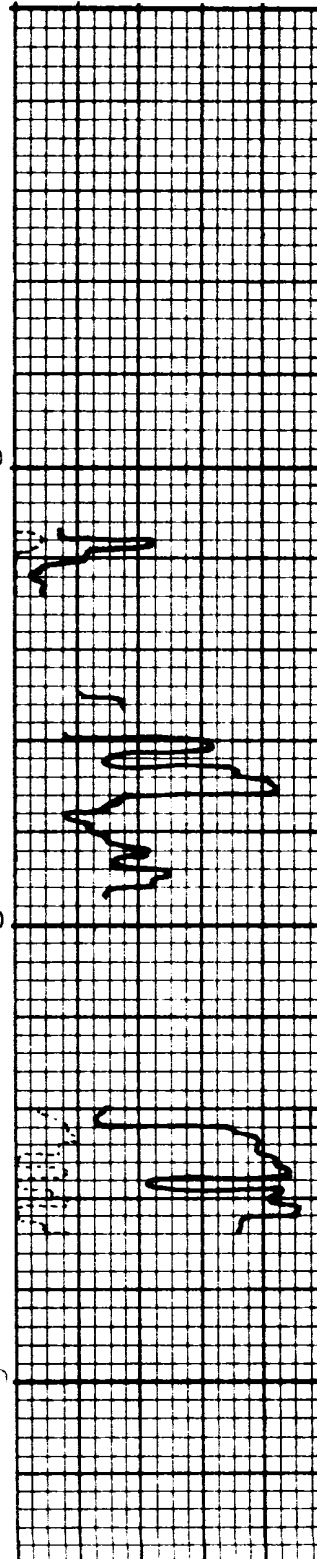
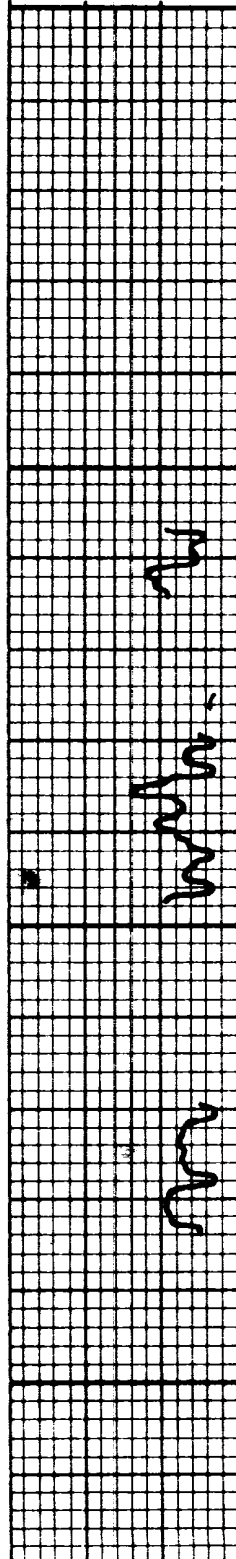
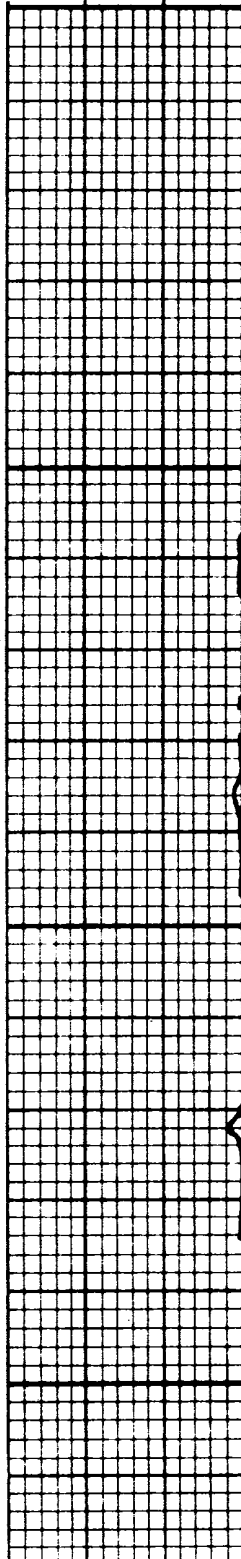
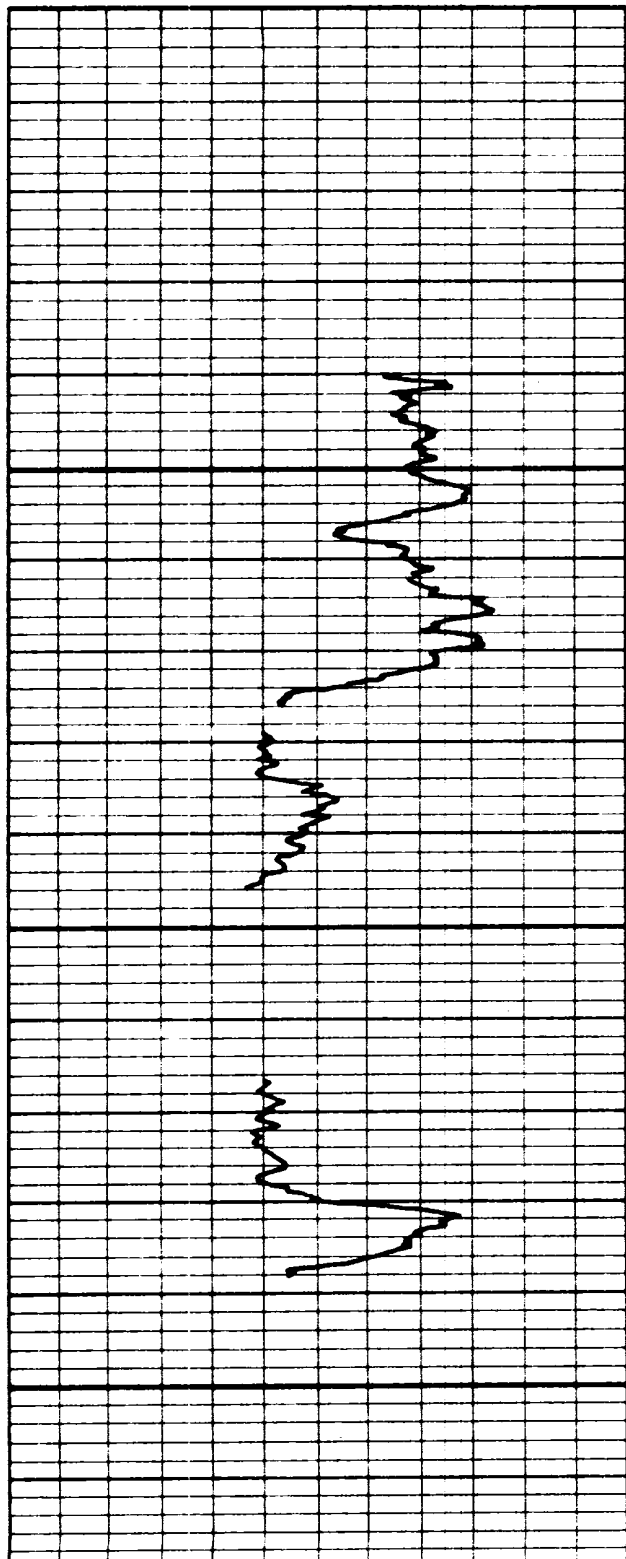
POROSITY

PERCENT

OIL SATURATION

PERCENT PORE SPACE

0 20 40 60 80



8650

8700

8750