

CORE ANALYSIS RESULTS

Company **EL PASO NATURAL GAS COMPANY** Formation **DAKOTA** File **RP-3-1663**
 Well **SAN JUAN UNIT 32-7 # 37** Core Type **DIAMOND CONV.** Date Report **8/14/62**
 Field **BASIN DAKOTA** Drilling Fluid **WATER BASE MUD** Analysts **DEPPE**
 County **SAN JUAN** State **NEW MEX.** Elev. **6350 KB** Location **SEC 9 T32N R7W**

Lithological Abbreviations

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYs	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS
				OIL	TOTAL WATER	
1	7763-64	0.06	6.1	3.3	11.5	SANDSTONE VERTICAL FRACTURE
2	7764-65	0.13	10.3	0.0	18.5	SANDSTONE VERTICAL FRACTURE
3	7765-66	0.16	11.3	1.8	23.9	SANDSTONE VERTICAL FRACTURE
4	7766-67	0.14	8.9	2.3	28.1	SANDSTONE VERTICAL FRACTURE
5	7767-68	0.09	9.9	2.0	19.2	SANDSTONE VERTICAL FRACTURE
6	7768-69	0.05	5.7	3.5	24.6	SANDSTONE VERTICAL FRACTURE
7	7769-70	0.05	6.5	0.0	24.6	SANDSTONE VERTICAL FRACTURE
8	7770-71	0.17	3.8	0.0	21.1	SANDSTONE VERTICAL FRACTURE
9	7771-72	0.10	9.0	2.2	11.1	SANDSTONE
10	7772-73	0.03	7.7	0.0	18.2	SANDSTONE
11	7773-74	0.01	5.0	0.0	28.0	SANDSTONE
12	7774-75	0.02	4.9	0.0	40.8	SANDSTONE
13	7775-76	0.01	2.6	0.0	69.1	SANDSTONE VERTICAL FRACTURE
14	7776-77	0.03	5.1	0.0	35.2	SANDSTONE
15	7777-78	0.03	7.2	0.0	33.3	SANDSTONE
16	7778-79	0.02	5.9	0.0	33.9	SANDSTONE
17	7779-80	0.01	1.3	0.0	92.2	SANDSTONE VERTICAL FRACTURE
18	7780-81	<0.01	2.0	0.0	85.0	SANDSTONE
19	7781-82	<0.01	2.2	0.0	59.0	SANDSTONE VERTICAL FRACTURE
20	7782-83	<0.01	1.8	0.0	72.2	SANDSTONE VERTICAL FRACTURE
21	7783-84	<0.01	3.5	5.7	88.4	SANDSTONE VERTICAL FRACTURE
22	7784-85	0.02	2.5	8.0	83.9	SANDSTONE VERTICAL FRACTURE
23	7785-86	<0.01	2.0	10.0	85.0	SANDSTONE VERTICAL FRACTURE
24	7813-14	<0.01	1.6	0.0	93.6	SANDSTONE VERTICAL FRACTURE
25	7814-15	<0.01	1.8	0.0	94.5	SANDSTONE VERTICAL FRACTURE
26	7815-16	0.01	1.4	0.0	92.7	SANDSTONE VERTICAL FRACTURE
27	7816-17	<0.01	2.8	0.0	71.4	SANDSTONE VERTICAL FRACTURE
28	7817-18	<0.01	2.1	0.0	95.1	SANDSTONE VERTICAL FRACTURE
29	7818-19	<0.01	1.1	0.0	91.0	SANDSTONE VERTICAL FRACTURE

7763-7779 This interval is within the limits normally associated with gas production. The characteristics of this interval are: Porosity(6.9% average) , Residual Oil Saturation(0.9% average) , Total Water Saturation(27.6% average) and Permeability(0.07 md/ft average).

7779-7786 This interval is essentially non-productive.

7813-7819 This interval is essentially non-productive.

CORE ANALYSIS RESULTS

Company EL PASO NATURAL GAS COMPANY Formation DAKOTA File RP-3-1663
 Well SAN JUAN UNIT 32-7 # 37 Core Type DIAMOND CONV. Date Report 8/17/62
 Field BASIN DAKOTA Drilling Fluid WATER BASE MUD Analysts DEPPE
 County SAN JUAN State NEW MEX. Elev. 6350 KB Location SEC 9 T32N R7W

Lithological Abbreviations

SAND - SD SHALE - SH LINE - LM DOLOMITE - DOL CHERT - CH GYPSUM - GYP ANHYDRITE - ANHY CONGLOMERATE - CONG FOSSILIFEROUS - FCSS 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 - SL/ VERY - V/ WITH - W/

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYS	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS
				OIL	TOTAL WATER	
55	7874-75	0.01	2.3	8.5	82.6	SANDSTONE, SHALE
56	7881-82	0.01	1.5	0.0	86.6	SANDSTONE, SHALE
57	7888-89	0.01	3.0	0.0	96.7	SANDSTONE, SHALE
58	7892-93	0.07	1.8	0.0	55.5	SANDSTONE
59	7893-94	0.02	1.5	0.0	66.6	SANDSTONE
60	7896-97	0.03	1.5	0.0	86.7	SANDSTONE
61	7897-98	0.01	1.7	0.0	47.0	SANDSTONE
62	7898-99	0.01	1.7	0.0	88.3	SANDSTONE
63	7899-7900	0.01	0.6	0.0	66.6	SANDSTONE
64	7900-01	0.01	1.2	0.0	66.6	SANDSTONE
65	7901-02	0.01	1.6	0.0	25.0	SANDSTONE
66	7902-02.5	0.01	1.4	0.0	57.0	SANDSTONE

7874-7902.5 Samples analysed from this interval are essentially non-productive.

CORE ANALYSIS RESULTS

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 Well SAN JUAN UNIT # 32-7 # 37 Core Type DIAMOND CONV. Date Report 8/19/62
 Field BASIN DAKOTA Drilling Fluid WATER BASE MUD Analysts DEPPE
 County SAN JUAN State NEW MEX. Elev. 6350 KB Location SEC 9 T32N R7W

Lithological Abbreviations

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

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCS	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS
				OIL	TOTAL WATER	
67	7936-37	0.02	1.1	0.0	36.4	SANDSTONE
68	7937-38	<0.01	2.7	0.0	14.8	SANDSTONE
69	7940.5-41	<0.01	2.3	0.0	34.8	SANDSTONE
70	7941-42	0.03	2.5	0.0	48.0	SANDSTONE
71	7942-43	<0.01	3.4	0.0	52.9	SANDSTONE
72	7943-44	0.02	1.5	0.0	80.0	SANDSTONE
73	7944-45	0.03	5.2	0.0	34.5	SANDSTONE
74	7945-46	0.01	3.2	0.0	37.5	SANDSTONE
75	7946-47	0.07	3.1	0.0	32.5	SANDSTONE
76	7947-48	0.03	2.9	0.0	34.5	SANDSTONE
77	7948-49	0.01	3.5	0.0	54.3	SANDSTONE
78	7949-50	0.02	4.5	0.0	44.4	SANDSTONE
79	7950-51	<0.01	4.5	0.0	84.5	SANDSTONE
80	7951-52	0.10	6.5	0.0	83.1	SANDSTONE
81	7952-53	0.67	6.8	0.0	72.0	SANDSTONE
82	7953-54	0.03	7.5	0.0	69.3	SANDSTONE
83	7954-55	0.07	5.9	0.0	72.9	SANDSTONE
84	7955-56	53	8.9	0.0	73.1	SANDSTONE
85	7956-57	0.72	8.3	0.0	74.6	SANDSTONE
86	7957-58	101	10.7	0.0	68.2	SANDSTONE
87	7958-59	21	4.5	0.0	73.4	SANDSTONE
88	7959-60	<0.01	2.4	0.0	79.4	SANDSTONE
89	7960-61	<0.01	3.2	0.0	71.8	SANDSTONE
90	7961-62	<0.01	2.1	9.5	71.5	SANDSTONE
91	7962-63	<0.01	3.9	0.0	89.7	SANDSTONE

7936-7938 This interval is non-productive.

7940.5-7950 This interval is essentially non-productive, however it is possible a small amount of gas could be produced after successful formation treatment but a rapid decline could be expected because of the very low permeability and porosity present.

7950-7959 This interval is water productive where permeable.

7959-7963 This interval is non-productive.

CORE LABORATORIES, INC.
 Petroleum Reservoir Engineering
 DALLAS, TEXAS

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 Well SAN JUAN UNIT 32-7 # 37 Core Type DIAMOND CONV. Date Report 8-15-62
 Field BASIN DAKOTA Drilling Fluid WATER BASE MUD Analysts DEPPE
 County SAN JUAN State NEW MEX. Elev. 6350 KB Location SEC 9 T32N R7W

Lithological Abbreviations

SAND - SD SHALE - SH LIME - LM	DOLOMITE - 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 - GY VUGGY - VGY	FRACTURED - FRAC LAMINATION - LAM STYLOLITIC - STY	SLIGHTLY - SL/ VERY - V/ WITH - W/
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SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCS	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS
				OIL	TOTAL WATER	
30	7819-20	<0.01	1.7	11.8	82.6	SANDSTONE
31	7820-21	<0.01	0.5	0.0	80.0	SANDSTONE
32	7821-22	<0.01	1.8	0.0	94.5	SANDSTONE
33	7822-23	<0.01	1.8	0.0	94.5	SANDSTONE
34	7823-24	0.03	4.2	0.0	42.8	SANDSTONE
35	7824-25	0.01	2.4	0.0	33.3	SANDSTONE
36	7825-26	0.02	4.0	0.0	35.0	SANDSTONE
37	7826-27	0.01	2.4	0.0	50.0	SANDSTONE
38	7827-28	4.4	3.2	0.0	50.0	SANDSTONE VERTICAL FRACTURE
39	7828-29	<0.01	2.0	0.0	85.0	SANDSTONE, SHALEY
40	7829-30	<0.01	1.4	0.0	85.7	SANDSTONE, SHALEY
41	7830-31	<0.01	2.0	0.0	85.0	SANDSTONE, SHALEY
42	7836-37	<0.01	3.4	0.0	85.2	SANDSTONE, SHALEY
43	7837-38	<0.01	4.4	0.0	68.2	SANDSTONE, SHALEY
44	7840-41	0.01	2.5	0.0	96.0	SANDSTONE, SHALEY
45	7841-42	<0.01	4.5	0.0	80.0	SANDSTONE, SHALEY
46	7842-43	0.01	2.5	0.0	96.0	SANDSTONE, SHALEY
47	7843-44	0.01	1.7	0.0	94.2	SANDSTONE, SHALEY
48	7844-45	<0.01	0.9	0.0	88.9	SANDSTONE, SHALEY
49	7845-46	<0.01	2.4	0.0	75.0	SANDSTONE, SHALEY
50	7846-47	<0.01	2.5	0.0	76.0	SANDSTONE, SHALEY
51	7859-60	<0.01	2.2	0.0	95.4	SANDSTONE, SHALEY VERTICAL FRACTURE
52	7860-61	<0.01	2.7	18.5	78.0	SANDSTONE, SHALEY VERTICAL FRACTURE
53	7861-62	0.01	3.3	0.0	64.6	SANDSTONE, SHALEY VERTICAL FRACTURE
54	7862-63	<0.01	2.0	0.0	95.0	SANDSTONE, SHALEY

7819-7863 Samples analysed within this interval are essentially non-productive.