CA-20

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

CORE ANALYSIS RESULTS

Company EL PASO NATURAL GAS COMPANY | Formation GRANEROS | File KP-3-1434
Well RINCON UNIT # 159 | Core Type DIAMOND CONV. | Date Report 5/10/61
Field BASIN DAKOTA | Drilling Fluid OIL EMULSION MUD | Analysts McCOMAS
County RIO ARRIBA State NEW MEX. Elev. 6618 GR Location SEC 18 T27N R6W

Lithological Abbreviations

SAND-SD, SHALE-SH, LIME-LM, DOLOMITE-DO, 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/

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYS	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE OIL	RESIDUAL SATURATION PER CENT PORE TOTAL WATER	SAMPLE DESCRIPTION AND REMARKS
1	7444-45	<0.01	1.8	0.0	83.2	
2	45-46	0.72	3.5	14.2	82.9	
3	46-47	0.21	4.4	11.3	79.6	
4	47-48	0.03	3.4	5.9	85.3	
5	48-49	<0.01	4.1	4.9	90.5	
6	49-50	0.06	5.6	3.6	85.6	
7	50-51	0.09	4.5	4.5	82.5	
8	51-52	0.08	3.3	15.1	76.0	
9	52-53	<0.01	4.1	12.2	80.5	
10	53-54	<0.01	4.2	4.8	90.5	VERTICAL FRACTURE
11	54-55	0.01	4.9	14.3	71.6	" "
12	55-56	<0.01	3.9	17.9	51.2	
13	56-57	0.01	4.6	15.2	52.2	
14	57-58	<0.01	5.0	18.0	44.0	
15	58-59	0.01	5.1	17.6	47.0	
16	59-60	<0.01	5.4	16.6	35.2	
17	60-61	<0.01	5.2	17.3	44.2	
18	61-62	0.01	5.0	14.0	50.0	
19	62-63	0.02	3.5	20.0	68.6	
20	63-64	<0.01	3.6	19.4	75.0	VERTICAL FRACTURE
21	64-65	<0.01	3.2	6.3	75.0	" "
22	65-66	<0.01	3.6	13.9	66.7	
23	66-67	0.01	2.7	25.9	59.4	VERTICAL FRACTURE
24	67-68	<0.01	6.8	13.2	11.7	" "
25	68-69	0.01	5.0	14.0	42.0	" "
26	69-70	0.02	5.4	12.9	22.2	" "
27	70-71	<0.01	4.4	15.9	40.9	

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County RIO ARRIBA State NEW MEX. Elev. 6618 GR Location SEC 18 T27N R6W

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 | MEDIUM MED DARK DK | CRYSTALLINE XLN GRAIN GRN GRANULAR GRN | BROWN BRN GRAY GY BUGGY BGY | FRACTURED FRAC LAMINATION LAM STYLOLITIC STYL | SLIGHTLY SL VERY V WITH W/

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYS	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE OIL	RESIDUAL SATURATION PER CENT PORE TOTAL WATER	SAMPLE DESCRIPTION AND REMARKS
40	7484-85	0.02	1.7	29.4	59.0	VERTICAL FRACTURE
41	85-86	<0.01	2.8	25.0	64.5	" "
42	86-87	<0.01	2.9	24.1	73.6	
43	87-88	<0.01	3.1	16.1	81.6	
44	88-89	0.07	3.3	19.1	80.9	
45	89-90	<0.01	2.6	7.7	88.6	
46	90-91	<0.01	2.4	14.7	79.5	
47	91-92	<0.01	2.9	17.3	72.5	
48	92-93	0.06	3.0	23.2	70.0	VERTICAL FRACTURE
49	93-94	0.01	3.5	25.8	60.0	
50	94-95	<0.01	3.3	21.3	63.6	VERTICAL FRACTURE
51	95-96	<0.01	2.8	17.9	82.6	
52	96-97	<0.01	2.4	0.0	96.0	
53	97-98	<0.01	2.8	0.0	96.5	
54	98-99	<0.01	2.4	0.0	96.2	VERTICAL FRACTURE
55	99-7500	<0.01	2.4	0.0	96.2	
56	7500-01	<0.01	1.8	0.0	94.6	
57	01-02	<0.01	3.1	0.0	96.8	VERTICAL FRACTURE
58	02-03	<0.01	3.2	6.0	87.3	
59	03-04	<0.01	3.2	6.0	90.6	VERTICAL FRACTURE
60	04-05	<0.01	2.2	0.0	95.6	" "
61	05-06	0.01	3.0	0.0	93.6	" "
62	06-07	<0.01	2.9	0.0	96.6	
63	07-08	<0.01	2.6	0.0	96.2	
64	08-09	<0.01	3.1	0.0	90.5	
65	09-10	<0.01	3.3	6.0	88.4	VERTICAL FRACTURE
66	10-11	0.01	4.2	11.9	78.5	
67	11-12	<0.01	3.4	0.0	97.1	

7484-7512 This interval is essentially non-productive.

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Field BASIN DAKOTA Drilling Fluid OIL EMULSION MUD Analyst McCOMAS
County RIO ARRIBA State NEW MEX. Elev. 6618 GR Location SEC 18 T27N R6W

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SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCYS	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE OIL	RESIDUAL SATURATION PER CENT PORE TOTAL WATER	SAMPLE DESCRIPTION AND REMARKS
68	7540-41	0.01	4.2	7.8	83.5	
69	7542-43	0.07	2.9	0.0	86.3	
70	7544-45	<0.01	3.5	0.0	88.5	
71	7546-47	0.01	4.4	0.0	91.0	
72	7550-51	<0.01	2.2	0.0	95.5	
73	7553-54	<0.01	3.0	6.7	90.0	
74	7555-56	0.01	3.2	6.3	90.6	VERTICAL FRACTURE
75	56-57	0.01	3.0	0.0	90.0	" "
76	57-58	<0.01	2.8	0.0	96.5	" "
77	58-59	<0.01	1.8	0.0	94.5	" "
78	59-60	<0.01	2.7	0.0	96.3	" "
79	60-61	<0.01	3.3	6.1	91.0	
80	7572-73	<0.01	3.7	0.0	59.4	
81	73-74	0.07	10.0	0.0	19.0	
82	74-75	0.27	10.3	0.0	22.3	
83	75-76	0.07	11.1	0.0	23.4	
84	76-77	0.05	9.5	0.0	24.2	
85	77-78	0.06	8.7	0.0	28.8	
86	78-79	0.04	10.9	0.0	23.0	
87	79-80	0.32	9.2	0.0	31.5	
88	80-81	0.05	8.3	0.0	35.0	
89	81-82	<0.01	5.7	0.0	50.9	
90	82-83	<0.01	5.3	0.0	51.0	
91	83-84	<0.01	5.8	0.0	46.6	
92	84-85	0.01	4.6	0.0	58.7	
93	85-86	<0.01	5.0	0.0	66.0	
94	86-87	0.01	4.5	0.0	71.1	
95	87-88	<0.01	4.5	0.0	69.0	