

Ewing S-29 13-21-20E

August 16, 1949



Deep Rock Oil Corporation  
Tulsa, Oklahoma

Attention: Mr. T. F. Lawry

Gentlemen:

Enclosed herewith is the report of the partial analysis made on the Keystone barrel core taken from the Ewing Lease, Well No. 9-29, Anderson County, Kansas, and submitted to our laboratory on August 5, 1949.

In calculating the recovery for the sand within the vicinity of this well, no allowance was made for oil lost during coring; and, of course, it is assumed that the sand is not pressured up.

Very truly yours,

OIL FIELD RESEARCH LABORATORIES

Carl L. Pate

CLP:dc  
c.c. to Mr. Neil Henderson  
Mr. Jack McQueeney

DEEP ROSE OIL CORPORATION

CORE ANALYSIS REPORT

EWING LEASE

WELL NO. 8-29

ANDERSON COUNTY, KANSAS

OIL FIELD RESEARCH LABORATORIES

CHANUTE, KANSAS

AUGUST 16, 1949

# Oil Field Research Laboratories

## GENERAL INFORMATION & SUMMARY

Company Deep Rock Oil Corporation Lease Ewing Well No. 6-29

Location 320' N. of S. line, 1230' E. of W. line,

Section 13 Twp. 21 Rge. 20 County Anderson State Kansas

Name of Sand		Squirrel
Top of Core		673.00
Bottom of Core		715.70
Top of Sand	<b>Broken</b>	693.80
Bottom of Sand		713.65
Total Feet of Permeable Sand		7.05
Distribution of Permeable Sand:		
Permeable Range Millidarcys	Feet	Cum. Ft.

Average <b>Effective</b> Permeability, Millidarcys		0.407
Average Percent Porosity		16.00
Average Percent Oil Saturation		30.55
Average Percent Water Saturation		-
Average Oil Content, Bbls./A. Ft.		392.
Total Oil Content, Bbls./Acre		6,742.
Average Percent Oil Recovery by Laboratory Flooding Tests		23.45
Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft.		384.
Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre		2,281.
Total Calculated Oil Recovery, Bbls./Acre		1,450.
Packer Setting, Feet	<p><b>Note:</b> The above averages are for that part of the sand section extending from the packer setting to the top of the cement plug.</p>	694.50
Viscosity, Centipoises @		
A. P. I. Gravity, degrees @ 60 °F		

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LOG

Company Deep Rock Oil Corporation Lease Ewing Well No. 5-29

<u>Depth Interval,</u> <u>Feet</u>	<u>Description</u>
673.00 - 673.80	- Gray shale.
673.80 - 675.80	- Laminated sandy shale.
675.80 - 676.80	- Laminated shale and sandstone.
676.20 - 677.60	- Gray sandy shale.
677.60 - 678.35	- Gray shale.
678.35 - 681.62	- Laminated sandy shale.
681.62 - 682.15	- Laminated shale and sandstone.
682.15 - 682.55	- Brown fine grained laminated micaceous sandstone.
682.55 - 683.58	- Laminated sandstone and shale.
683.58 - 684.00	- Gray shale.
684.00 - 684.40	- Gray sandy shale.
684.40 - 685.96	- Gray shale.
685.96 - 686.80	- Laminated sandstone and shale.
686.80 - 687.40	- Soft gray shale.
687.40 - 687.90	- Laminated sandstone and shale.
687.90 - 688.98	- Brown fine grained laminated micaceous shaley sandstone.
688.98 - 689.90	- Gray sandy shale.
689.90 - 691.95	- Gray shale.
691.95 - 693.80	- Gray sandy shale.
693.80 - 694.40	- Finely laminated shaley sandstone.
694.57 - 694.75	- Brown fine grained laminated micaceous sandstone.

694.75 - 695.25 - Gray sandy shale.  
695.25 - 695.49 - Brown fine grained laminated micaceous sandstone.  
695.49 - 695.59 - Gray shale.  
695.59 - 696.10 - Brown fine grained slightly laminated micaceous shaley sandstone.  
696.10 - 696.40 - Finely laminated shale and sandstone.  
696.40 - 696.60 - Gray sandy shale.  
696.60 - 698.50 - Finely laminated sandstone and shale.  
698.50 - 699.60 - Brown fine grained laminated micaceous sandstone.  
699.60 - 708.50 - Laminated sandstone and shale.  
708.50 - 710.40 - Brown fine grained laminated micaceous sandstone.  
710.40 - 710.60 - Laminated sandstone and shale.  
710.60 - 713.65 - Brown fine grained micaceous sandstone.  
713.65 - 714.00 - Gray shale.  
714.00 - 715.70 - Discarded at well.

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**SHOT RECOMMENDATION**

Company Deep Rock Oil Corporation Lease Living Well No. 3-29

<u>Depth Interval, Feet</u>	<u>Feet of Sand</u>	<u>Size of Shell Inches</u>	<u>Qts./Ft.</u>	<u>Total Quarts</u>
<b>699.5 - 712.5</b>	<b>13.0</b>	<b>3/4</b>	<b>2.0</b>	<b>26.0</b>

**Recommended Packer Setting @ 694.5 feet.  
Note: Plug hole back to - 713.5 feet.**

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RESULTS OF SATURATION TESTS

TABLE III

Company Deep Rock Oil Corporation Lease Twing Well No. 2-29

Sat. No.	Depth, Feet	Effective Porosity Percent	Percent Saturation			Oil Content, Bbls./A. Ft.	Feet of Core		Total Oil Content Bbls./Acre
			Oil	Water	Total		Ft.	Cum. Ft.	
F-3	676.00	14.2	17.0	-	-	187	0.40	0.40	75
F-9	682.95	17.0	21.2	-	-	280	0.53	0.93	148
F-10	683.00	14.3	14.0	-	-	155	1.03	1.96	160
F-12	686.62	14.8	11.3	-	-	130	0.84	2.80	109
F-13	688.10	16.3	28.2	-	-	356	0.50	3.30	178
F-14	688.70	14.9	21.2	-	-	265	0.53	3.83	190
F-21	695.90	13.6	24.3	-	-	256	0.51	4.34	171
F-22	696.80	17.2	24.2	-	-	323	0.50	4.84	161
F-23	697.44	14.6	17.3	-	-	196	0.75	5.59	147
F-24	698.30	17.7	39.6	-	-	543	0.65	6.24	353
F-25	699.12	16.0	45.2	-	-	560	1.10	7.34	616
F-26	700.20	14.5	16.5	-	-	186	1.00	8.34	186
F-27	701.00	18.3	20.0	-	-	284	0.90	9.24	255
F-28	702.00	14.6	22.3	-	-	253	0.80	10.04	202
F-29	702.70	15.2	23.2	-	-	274	0.95	10.99	260
F-30	703.80	14.1	23.3	-	-	255	0.85	11.84	217
F-31	704.40	15.7	24.4	-	-	297	0.70	12.54	208
F-32	705.20	13.9	15.9	-	-	172	0.90	13.44	155
F-33	706.20	14.4	21.4	-	-	239	0.85	14.29	203
F-34	706.90	14.9	14.5	-	-	168	0.65	14.94	109
F-35	707.50	14.4	19.2	-	-	214	0.70	15.64	150

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**RESULTS OF SATURATION TESTS**

**TABLE III**

Company Deep Rock Oil Corporation Lease 4442 Well No. 3-29

Sat. No.	Depth, Feet	Effective Porosity Percent	Percent Saturation			Oil Content, Bbls./A. Ft.	Feet of Core		Total Oil Content Bbls./Acre
			Oil	Water	Total		Ft.	Cum. Ft.	
36	708.30	14.0	13.6	76.7	90.3	148	0.60	16.24	89
F-37	708.70	17.4	35.0	-	-	473	0.80	17.04	378
F-38	710.00	16.9	42.3	-	-	555	1.10	18.14	610
F-39	711.00	19.4	56.8	-	-	855	0.90	19.04	770
F-40	712.00	18.7	55.1	-	-	800	0.80	19.84	640
41	712.70	17.1	65.6	31.2	96.8	870	0.65	20.49	565
F-42	713.26	16.1	47.2	-	-	602	0.70	21.19	422
<b>Total - - - - -</b>									<b>7,627</b>

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**SUMMARY OF SATURATION TESTS**

**TABLE IV**

Company Deep Rock Oil Corporation Lease Evine Well No. 3-29

Depth Interval, Feet	Feet of Core Analyzed	Average Percent Porosity	Average Percent Oil Saturation	Average Percent Water Saturation	Average Oil Content Bbls./A. Ft.	Total Oil Content Bbls./Acre
675.80-696.10	4.34	14.93	18.34	-	215	931
696.60-713.65	16.85	15.96	30.90	-	398	6,696
694.50-713.50	17.21	16.00	30.55	-	392	6,737

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RESULTS OF LABORATORY FLOODING TESTS

TABLE V

Company Deep Rock Oil Corporation Lease Ewing Well No. 2-29

Sample No.	Depth, Feet	Effective Porosity Percent	Original Oil Saturation		Oil Recovery		Residual Saturation			Volume of Water Recovered cc*	Effective Permeability, Millidarcys	Initial Fluid Production Pressure Lbs./Sq. In.
			Percent	Bbls./A. Ft.	Percent	Bbls./A. Ft.	% Oil	% Water	Bbls./A. Ft.			
8	676.00	14.2	17.0	187	0.0	0	17.0	73.5	187	0	Imp.	50+
9	681.95	17.0	21.2	280	0.0	0	21.2	73.1	280	0	Imp.	50+
10	683.00	14.3	14.0	155	0.0	0	14.0	76.7	155	0	Imp.	50+
12	686.62	14.8	11.3	130	0.0	0	11.3	80.6	130	0	Imp.	50+
13	688.10	16.3	28.2	356	0.0	0	28.2	55.2	356	0	Imp.	50+
14	688.70	14.9	21.2	245	0.0	0	21.2	73.5	245	0	Imp.	50+
21	696.90	13.6	24.3	256	0.0	0	24.3	70.4	256	0	Imp.	50+
22	696.80	17.2	24.2	323	3.8	51	20.4	74.5	272	0	0.031	50
23	697.44	14.6	17.3	196	0.0	0	17.3	72.9	196	0	Imp.	50+
24	698.30	17.7	39.6	543	10.8	148	28.8	68.1	395	2	0.147	45
25	699.12	16.0	45.2	560	18.4	228	26.8	72.0	332	1.5	0.241	35
26	700.20	14.5	16.5	186	0.0	0	16.5	77.5	186	0	Imp.	50+
27	701.00	18.3	20.0	284	0.0	0	20.0	62.8	284	0	Imp.	50+
28	702.00	14.6	22.3	253	0.0	0	22.3	71.6	253	0	Imp.	50+
29	702.70	15.2	23.2	274	0.0	0	23.2	72.3	274	0	Imp.	50+
30	703.80	14.1	23.3	255	0.0	0	23.3	72.0	255	0	Imp.	50+
31	704.40	15.7	24.4	297	0.0	0	24.4	65.5	297	0	Imp.	50+
32	705.20	13.9	15.9	172	0.0	0	15.9	79.4	172	0	Imp.	50+
33	706.20	14.4	21.4	239	0.0	0	21.4	75.7	239	0	Imp.	50+
34	706.90	14.9	14.5	168	0.0	0	14.5	82.4	168	0	Imp.	50+
35	707.50	14.4	19.2	214	0.0	0	19.2	80.8	214	0	Imp.	50+
37	708.70	17.4	35.0	473	16.7	226	18.3	78.2	247	5	0.199	20
38	710.00	16.9	42.3	555	23.1	303	19.2	78.0	252	3	0.080	20
39	711.00	19.4	56.8	655	36.0	542	20.8	78.0	313	57	1.57	15
40	712.00	18.7	55.1	800	33.5	465	21.5	76.0	314	13.5	0.504	15
41	712.70	18.3	37.9	522	37.3	529	20.6	75.0	293	13	0.536	15
42	713.26	16.1	47.2	602	25.4	317	22.8	72.0	265	4	0.158	20

Notes: -cc- cubic centimeter

\*Volume of water recovered at the time of maximum oil recovery.

\*\*Determined by passing water through sample which still contains residual oil.

## Oil Field Research Laboratories

### SUMMARY OF LABORATORY FLOODING TESTS

TABLE VI

Company <u>Deep Rock Oil Corporation</u>	Lease <u>Swing</u>	Well No. <u>2-29</u>
Depth Interval, Feet	694.50 - 713.50	
Feet of Core Analyzed	7.05	
Average Percent Porosity	17.55	
Average Percent Original Oil Saturation	45.58	
Average Percent Oil Recovery	23.45	
Average Percent Residual Oil Saturation	22.13	
Average Percent Residual Water Saturation	76.96	
Average Percent Total Residual Fluid Saturation	97.09	
Average Original Oil Content, Bbls./A. Ft.	924.	
Average Oil Recovery, Bbls./A. Ft.	324.	
Average Residual Oil Content, Bbls./A. Ft.	300.	
Total Original Oil Content, Bbls./Acre	4,394.	
Total Oil Recovery, Bbls./Acre	2,281.	
Total Residual Oil Content, Bbls./Acre	2,113.	
Average Effective Permeability, Millidarcys	0.407	
Average Initial Fluid Production Pressure, p.s.i.	26.1	

**Note: Only those samples that recovered oil were used in calculating the above averages.**