

26-17-222

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June 25, 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 No. 6 Baker barrel core taken from the Dunaway Lease, Well No. Y-3, Miami County, Kansas, and submitted to our laboratory on June 10, 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.

In running the packer, the gravel bridged and, as a result, the packer was set at a depth of 339.50 feet instead of the recommended 342.50 feet. We do not believe that any difficulty will be encountered by setting the packer at 339.50 feet.

Very truly yours,

OIL FIELD RESEARCH LABORATORIES

Carl L. Pate

CLP:cc

c.c. to Mr. Neil Henderson

Dunaway
Y-3

DEEP ROCK OIL CORPORATION

CORE ANALYSIS REPORT

DUNAWAY LEASE

WELL NO. Y-3

MIAMI COUNTY, KANSAS

OIL FIELD RESEARCH LABORATORIES

CHANUTE, KANSAS

JUNE 25, 1949

Oil Field Research Laboratories

GENERAL INFORMATION & SUMMARY

Company Deep Rock Oil Corporation Lease Dunaway Well No. Y-3
 Location 440 feet north of south line and 50 feet east of west line, SW 1/4
 Section 26 Twp. 17N Rge. 22E County Miami State Kansas

Name of Sand	Peru
Top of Core	329.70
Bottom of Core	354.60
Top of Sand	342.00
Bottom of Sand	354.33
Total Feet of Permeable Sand	9.05

Distribution of Permeable Sand:		
Permeable Range	Feet	Cum. Ft.
Millidarcys		

effective Average Permeability, Millidarcys	10.44
Average Percent Porosity	21.57
Average Percent Oil Saturation	46.22
Average Percent Water Saturation	
Average Oil Content, Bbls./A. Ft.	777.
Total Oil Content, Bbls./Acre	8,969.
Average Percent Oil Recovery by Laboratory Flooding Tests	28.63
Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft.	489.
Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre	4,426.
Total Calculated Oil Recovery, Bbls./Acre	3,450.
Packer Setting, Feet	339.5

Viscosity, Centipoises @

A. P. I. Gravity, degrees @ 60 °F

Note: The above averages are for that part of the sand section extending from the packer setting to the top of the cement plug.

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LOG

Company Deep Rock Oil Corporation Lease Punaway Well No. Y-3

<u>Depth Interval, Feet</u>	<u>Description</u>
329.70 - 330.95	- Soft laminated sandstone and shale.
330.95 - 332.20	- Light brown fine grained micaceous calcareous slightly shaley sandstone.
332.20 - 332.90	- Light brown fine grained laminated micaceous slightly calcareous sandstone.
332.90 - 334.55	- Light brown fine grained micaceous calcareous slightly shaley sandstone.
334.55 - 335.50	- Gray limestone.
335.50 - 336.00	- Sandy shale.
336.00 - 336.80	- Laminated slightly calcareous sandstone and shale.
336.80 - 337.22	- Light brown fine grained slightly laminated calcareous sandstone.
337.22 - 337.43	- Light brown fine grained micaceous slightly calcareous sandstone.
337.43 - 338.47	- Laminated slightly calcareous shaley sandstone.
338.47 - 338.80	- Light brown fine grained micaceous slightly calcareous sandstone.
338.80 - 339.50	- Sandy shale.
339.50 - 340.05	- Light brown fine grained slightly laminated micaceous calcareous sandstone.
340.05 - 341.30	- Light brown fine grained micaceous slightly calcareous sandstone.
341.30 - 342.00	- Light brown fine grained laminated micaceous slightly calcareous sandstone.
342.00 - 343.30	- Brown fine grained micaceous slightly calcareous sandstone.
343.30 - 344.30	- Loss.

344.30 - 344.45 - Brown fine grained micaceous slightly calcareous sandstone.

344.45 - 345.20 - Sandy limestone.

345.20 - 346.15 - Brown fine grained micaceous sandstone.

346.15 - 346.60 - Laminated shale and sandstone.

346.60 - 347.23 - Sandy limestone.

347.23 - 347.50 - Dark brown fine grained micaceous sandstone.

347.50 - 349.00 - Medium hard dark brown fine grained micaceous sandstone.

349.00 - 350.30 - Dark brown fine grained micaceous sandstone.

350.30 - 350.60 - Dark brown fine grained laminated micaceous sandstone.

350.60 - 354.33 - Medium hard dark brown fine grained micaceous sandstone.

354.33 - 354.60 - Limestone.

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SHOT RECOMMENDATION

Company Deep Rock Oil Corporation Lease Dunaway Well No. X-3

<u>Depth Interval,</u> <u>Feet</u>	<u>Feet of</u> <u>Sand</u>	<u>Size of Shell</u> <u>Inches</u>	<u>qts./Ft.</u>	<u>Total qts.</u>
347.5 - 353.0	5.5	3½	2.0	11.0

Recommended Packer Setting - 342.5 feet.

Note: Due to the fact that the gravel bridged, the packer was actually set at 339.5 feet.

RESULTS OF SATURATION TESTS

TABLE III

Company Deep Rock Oil Corporation Lease Dunaway Well No. Y-3

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-4	339.65	19.7	19.5	-	-	298	0.55	0.55	164
F-5	341.15	22.8	15.5	-	-	274	1.95	2.50	535
F-6	342.15	18.7	40.2	-	-	584	1.30	3.80	759
8	345.90	25.5	45.8	50.3	96.7	907	0.95	4.75	860
F-9	347.40	18.8	59.4	-	-	867	0.27	5.02	234
F-10	348.15	21.4	47.2	-	-	785	1.20	6.22	940
F-11	349.14	24.7	68.0	-	-	1,305	1.60	7.82	2,088
F-12	350.70	22.5	60.7	-	-	1,059	0.50	8.32	529
F-13	351.50	20.8	68.3	-	-	1,103	0.80	9.12	882
F-14	352.32	22.5	56.9	-	-	992	1.00	10.12	992
F-14A	353.40	17.7	46.0	-	-	632	0.80	10.92	506
F-15A	354.00	16.7	58.9	-	-	763	0.63	11.55	<u>480</u>
								Total - -	8,969

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SUMMARY OF SATURATION TESTS

TABLE IV

Company Deep Rock Oil Corporation Lease Dunaway Well No. 1-3

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
339.50-343.30	3.80	20.95	24.30	-	354	1,458
345.20-354.33	7.75	21.67	56.86	-	969	7,511
339.50-354.33	11.55	21.57	46.22	-	777	8,969

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RESULTS OF LABORATORY FLOODING TESTS

TABLE V

Company Deep Rock Oil Corporation

Lease Duhany

Well No. 7-3

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.			
4	339.65	19.7	19.5	298	0.0	0	19.5	76.0	298	65	1.66	15
5	341.15	22.8	15.5	274	0.0	0	15.5	77.8	274	173	6.16	5
6	342.15	18.7	40.2	584	18.1	249	23.1	59.2	335	228	4.66	10
8	345.90	25.5	45.8	907	19.8	392	26.0	69.3	515	50	0.979	20
9	347.40	18.8	59.4	867	36.4	532	23.0	70.8	335	110	16.10	5
10	348.15	21.4	47.2	785	19.1	318	28.1	64.7	467	19	1.84	5
11	349.14	24.7	68.0	1,305	45.3	670	22.7	70.3	435	136	24.70	5
12	350.70	22.5	60.7	1,059	34.9	609	25.8	69.2	450	133	6.10	5
13	351.50	20.8	68.3	1,103	44.3	716	24.0	70.9	387	114	12.20	5
14	352.32	22.5	56.9	992	38.2	579	23.7	67.7	413	117	9.60	5
14A	353.40	17.7	46.0	632	16.0	220	30.0	61.6	412	158	17.10	15
15	354.00	16.7	58.9	763	22.4	290	36.5	62.5	473	182	9.44	15

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.

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SUMMARY OF LABORATORY FLOODING TESTS

TABLE VI

Company	Deep Rock Oil Corporation	Lease	Dunaway	Well No.	X-3
Depth Interval, Feet	339.50 - 354.33				
Feet of Core Analyzed	9.05				
Average Percent Porosity	21.43				
Average Percent Original Oil Saturation	54.46				
Average Percent Oil Recovery	28.63				
Average Percent Residual Oil Saturation	25.83				
Average Percent Residual Water Saturation	66.27				
Average Percent Total Residual Fluid Saturation	92.10				
Average Original Oil Content, Bbls./A. Ft.	916.				
Average Oil Recovery, Bbls./A. Ft.	489.				
Average Residual Oil Content, Bbls./A. Ft.	425.				
Total Original Oil Content, Bbls./Acre	8,274.				
Total Oil Recovery, Bbls./Acre	4,426.				
Total Residual Oil Content, Bbls./Acre	3,848.				
Average Effective Permeability, Millidarcys	10.44				
Average Initial Fluid Production Pressure, p.s.i.	9.0				

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