

June 11, 1949

Deep Rock Oil Corporation
Tulsa, Oklahoma

Attention: Mr. T. F. Lawry

Gentlemen:

Enclosed herewith is the report of the partial analysis of the No. 6 Baker barrel core taken from the Miller Lease, Well No. H-2, Franklin County, Kansas, and submitted to our laboratory on May 18, 1949.

In calculating the recovery for the sand within the vicinity of this well, no allowance was made for oil lost during coring. Inasmuch as this well was located approximately 70 feet from an old hole and that the flood pot recovery is very low, we are of the opinion that the sand is partially watered out.

Very truly yours,

OIL FIELD RESEARCH LABORATORIES

Carl L. Pate

CLP:bb
c.c. to Mr. Neil Henderson

DEEP ROCK OIL CORPORATION

CORE ANALYSIS REPORT

MILLER LEASE

WELL NO. H-2

FRANKLIN COUNTY, KANSAS

OIL FIELD RESEARCH LABORATORIES

CHANUTE, KANSAS

JUNE 11, 1949

Oil Field Research Laboratories

GENERAL INFORMATION & SUMMARY

Company Deep Rock Oil Corporation Lease Miller Well No. H-2

Location 330' South of North Line, NE1,

Section 36 Twp. 16S Rge. 21E County Franklin State Kansas

Name of Sand	Squirrel
Top of Core	562.00
Bottom of Core	580.30
Top of Sand	564.08
Bottom of Sand ^{Pay}	572.50
Total Feet of Permeable Sand	7.30

Distribution of Permeable Sand:

Permeable Range Millidarcys	Feet	Cum. Ft.
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Average Permeability ^{Effective} , Millidarcys	14.39
Average Percent Porosity	20.40
Average Percent Oil Saturation	25.21
Average Percent Water Saturation	-
Average Oil Content, Bbls./A. Ft.	402.
Total Oil Content, Bbls./Acre	4,371.
Average Percent Oil Recovery by Laboratory Flooding Tests	4.84
Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft.	84.
Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre	614.
Total Calculated Oil Recovery, Bbls./Acre	550.

Packer Setting, Feet 564.5

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 Miller Well No. H-2

<u>Depth Interval,</u> <u>Feet</u>	<u>Description</u>
562.00 - 562.80	- Loss.
562.80 - 564.08	- Gray sandy shale.
564.08 - 571.20	- Brown fine grained micaceous sandstone.
571.20 - 571.40	- Brown fine grained slightly laminated micaceous sandstone.
571.40 - 571.60	- Brown fine grained laminated micaceous sandstone.
571.60 - 572.50	- Brown fine grained slightly laminated micaceous sandstone.
572.50 - 574.43	- Brown fine grained laminated micaceous sandstone.
574.43 - 575.00	- Laminated shale and sandstone.
575.00 - 575.55	- Brown fine grained laminated micaceous sandstone.
575.55 - 576.00	- Gray sandy shale.
576.00 - 576.20	- Brown fine grained laminated micaceous sandstone.
576.20 - 576.90	- Gray sandy shale.
576.90 - 577.10	- Brown fine grained laminated micaceous sandstone.
577.10 - 577.30	- Laminated sandstone and shale.
577.30 - 578.11	- Brown fine grained finely laminated micaceous sandstone.
578.11 - 578.40	- Gray sandy shale.
578.40 - 578.60	- Brown fine grained laminated micaceous slightly shaley sandstone.
578.60 - 580.30	- Sandy shale.

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SHOT RECOMMENDATION

Company Deep Rock Oil Corporation Lease Miller Well No. H-2

<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>
569.5 - 576.5	7.0	4.0	2.5	17.5

Recommended Packer Setting - 564.5 feet.

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RESULTS OF SATURATION TESTS

TABLE III

Company **Deep Rock Oil Corporation** Lease **Miller** Well No. **H-2**

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-1	564.80	24.7	25.3	-	-	486	1.02	1.02	496
F-2	565.40	22.3	31.3	-	-	542	0.80	1.82	433
F-3	566.50	22.5	24.0	-	-	419	1.50	3.32	629
F-4	568.23	21.0	30.6	-	-	499	1.05	4.37	524
F-5	568.69	22.8	20.7	60.0	80.7	366	0.70	5.07	256
F-6	569.59	23.2	23.7	-	-	427	0.90	5.97	384
F-7	570.50	23.1	24.1	-	-	432	1.35	7.32	583
F-8	571.50	15.1	25.8	-	-	303	0.20	7.52	61
F-9	572.40	21.0	29.0	-	-	469	0.90	8.42	439
F-10	573.35	15.2	24.3	-	-	286	1.20	9.62	363
F-11	574.14	16.3	20.2	-	-	255	0.73	10.35	186
F-12	575.24	14.6	17.1	-	-	191	0.55	10.90	105
F-13A	577.00	14.3	22.1	-	-	243	0.20	11.10	49
F-14	578.50	13.0	42.9	-	-	433	0.20	11.30	87
							Total-----		4,575

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SUMMARY OF SATURATION TESTS

TABLE IV

Company		Deep Rock Oil Corporation		Lease		Miller		Well No.	
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		
564.00-572.50		8.42	22.42	25.96	-	452	3,505		
572.50-578.60		2.88	15.10	23.02	-	256	770		
564.50-578.60		10.88	20.40	25.21	-	402	4,371		

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Company Deep Rock Oil CorporationLease M11

Sample No.	Depth, Feet	Effective Porosity Percent	Original Oil Saturation		Oil Recovery	
			Percent	Bbls./A. Ft.	Percent	Bbls./A.
1	564.50	24.7	25.3	486	4.1	79
2	565.40	22.3	31.3	542	6.9	120
3	566.50	22.5	24.0	419	4.2	73
4	568.25	21.0	30.6	499	4.4	72
5	569.69	22.7	25.2	444	0.0	0
6	569.59	23.2	23.7	427	3.6	65
7	570.50	23.1	24.1	432	6.3	113
8	581.50	15.1	25.5	303	2.1	25
9	572.40	21.0	29.0	489	4.8	78
10	573.35	15.2	24.3	284	0.0	0
11	574.14	16.3	20.2	255	0.0	0
12	575.24	14.4	17.1	191	0.0	0
13A	577.00	14.3	22.1	243	0.0	0
14	578.50	13.0	42.9	433	0.0	0

Notes: - 00 - 00
 *Volume of max
 **Determ which

Research Laboratories

WATER FLOODING TESTS

TABLE V

Core _____ Well No. **H-2**

Ft.	Residual Saturation			Volume of Water Recovered cc*	***Effective Permeability, Millidarcys	Initial Fluid Production Pressure Lbs./Sq. In.
	% Oil	% Water	Bbls./A. Ft.			
	21.2	63.8	407	93	18.50	5
	24.4	72.7	422	126	15.51	5
	19.8	80.6	346	171	16.20	5
	26.2	63.8	427	143	8.87	10
	25.2	65.1	444	96	9.12	5
	20.1	73.6	362	109	17.70	5
	17.8	76.7	319	131	17.91	5
	23.7	68.2	278	31	0.884	25
	25.2	69.1	411	143	8.48	5
	24.3	70.9	286	0	Imp.	50 +
	20.2	78.2	255	0	Imp.	50 +
	17.1	76.4	191	0	Imp.	50 +
	22.1	68.9	243	0	Imp.	50 +
	42.9	50.0	433	0	Imp.	50 +

big centimeter
of water recovered at the time
maximum oil recovery.

lined by passing water through sample
still contains residual oil.

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SUMMARY OF LABORATORY FLOODING TESTS

TABLE VI

Company	Deep Rock Oil Corporation	Lease	Miller	Well No.	H-2
Depth Interval, Feet				564.50 -	572.50
Feet of Core Analyzed				7.30	
Average Percent Porosity				22.25	
Average Percent Original Oil Saturation				26.59	
Average Percent Oil Recovery				4.84	
Average Percent Residual Oil Saturation				21.75	
Average Percent Residual Water Saturation				70.58	
Average Percent Total Residual Fluid Saturation				92.33	
Average Original Oil Content, Bbls./A. Ft.				458.	
Average Oil Recovery, Bbls./A. Ft.				84.	
Average Residual Oil Content, Bbls./A. Ft.				374.	
Total Original Oil Content, Bbls./Acre				3,347.	
Total Oil Recovery, Bbls./Acre				614.	
Total Residual Oil Content, Bbls./Acre				2,733.	
Average Effective Permeability, Millidarcys				14.39	
Average Initial Fluid Production Pressure, p.s.i.				8.8	