May 24, 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. I-3, Franklin County, Kansas, and submitted to our laboratory on May 3, 1949.

Inasmuch as 3.80 feet of sand was lost during coring, we are not including a calculated recovery value for the sand within the vicinity of this well as such a value, under the circumstances, would be very unreliable.

Very truly yours,

OIL FIELD RESEARCH LABORATORIES

Carl C. Pate

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

DEEP ROCK OIL CORPORATION

CORE ANALYSIS REPORT

MILLER LEASE WELL NO. I-3

FRANKLIN COUNTY, KANSAS

OIL FIELD RESEARCH LABORATORIES

CHANUTE, KANSAS

MAY 27, 1949

Oil Field Research Laboratories

GENERAL INFORMATION & SUMMARY

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

Location 1760' West of East Line and 440' South of North Line, NE¼,

Section 34 Twp. 16S Rge. 21E County Franklin State Kansas

Name of Sand	Squirrel
Top of Core	559.40
Bottom of Core	578.55
Top of Sand	560.80
Bottom of Sand	570.92
Total Feet of Permeable Sand Analyzed	3.18

Distribution of Permeable Sand:

Permeability Range Millidarcys	Feet	Cum. Ft.

Average Effective Permeability, Millidarcys	5.48
Average Percent Porosity	20.24
Average Percent Oil Saturation	33.33
Average Percent Water Saturation	-
Average Oil Content, Bbls./A. Ft.	529.
Total Oil Content, Bbls./Acre	2,204.
Average Percent Oil Recovery by Laboratory Flooding Tests	7.58
Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft.	123.
Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre	390.
Total Calculated Oil Recovery, Bbls./Acre	-
Packer Setting, Feet	560.0
Viscosity, Centipoises @	
A. P. I. Gravity, degrees @ 60 °F	

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

OIL FIELD RESEARCH LABORATORIES

LOG

Company Deep Rock Oil Corporation Lease Miller Well No. 1-S

Depth Interval, feet	Description
559.40 - 559.60	Laminated sandstone and shale.
559.60 - 560.80	Shaley limestone.
560.80 - 561.50	Brown fine grained micaceous sandstone.
561.50 - 565.30	Loss.
565.30 - 565.49	Brown fine grained laminated micaceous sandstone.
565.49 - 566.85	Brown fine grained slightly laminated micaceous sandstone.
566.85 - 566.99	Laminated sandstone and shale.
566.99 - 567.45	Dark brown fine grained micaceous sandstone.
567.45 - 567.70	Gray sandy shale.
567.70 - 567.81	Dark brown fine grained micaceous sandstone.
567.81 - 568.06	Brown fine grained laminated micaceous sandstone.
568.06 - 568.25	Gray sandy shale.
568.25 - 568.65	Brown fine grained micaceous sandstone.
568.65 - 569.35	Brown fine grained laminated micaceous sandstone.
569.35 - 569.60	Laminated calcareous sandstone and shale.
569.60 - 569.95	Gray sandy shale.
569.95 - 570.92	Brown fine grained micaceous shaley sandstone.
570.92 - 571.21	Sandy limestone.
571.21 - 571.95	Laminated shale and sandstone.
571.95 - 572.45	Brown fine grained laminated micaceous sandstone.
572.45 - 572.64	Gray sandy shale.
572.64 - 573.55	Laminated sandstone and shale.

573.55 - 574.00 - Gray sandy shale.

574.00 - 574.60 - Laminated sandstone and shale.

574.60 - 575.85 - Gray sandy shale.

575.85 - 578.55 - Gray shale (discarded at well).

OIL FIELD RESEARCH LABORATORIES

SHOT RECOMMENDATION

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

Depth Interval, Feet	Feet of Sand	Size of Shell Inches	Qts./Ft.	Total Qts.
565.0 - 569.5	4.5	4½	3.1	13.95

Recommended Packer Setting - 560.0 feet
Note: Plug hole back to 570.5 feet

Oil Field Research Laboratories

RESULTS OF SATURATION TESTS

TABLE III

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

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-1	561.10	22.7	37.9	-	-	667	0.70	0.70	468
2	565.75	25.3	30.3	58.9	89.2	595	0.61	1.31	363
F-3	566.44	16.9	34.5	-	-	452	0.75	2.06	339
F-4	567.80	25.5	37.7	-	-	745	0.46	2.52	343
F-5	568.43	20.3	33.8	-	-	533	0.40	2.92	213
F-6	569.23	16.0	27.1	-	-	336	0.70	3.62	235
F-7	570.05	16.9	33.4	-	-	438	0.45	4.07	197
F-8	570.75	17.9	33.1	-	-	460	0.52	4.59	239
F-9	571.54	16.5	26.9	-	-	345	0.74	5.33	255
							Total - - - - -		2,652

Oil Field Research Laboratories

SUMMARY OF SATURATION TESTS

TABLE IV

Company Deep Rock Oil Corporation Lease Miller 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
560.80-574.60	5.33	19.53	32.42	-	498	2,652
560.00-570.50	4.17	20.84	33.33	-	529	2,204

Oil Field Res

RESULTS OF LABOR

T

Company Deep Hook Oil Corporation Lease Hil

Sample No.	Depth, Feet	Effective Porosity Percent	Original Oil Saturation		Oil Recovery	
			Percent	Bbls./A. Ft.	Percent	Bbls./A.
1	561.19	22.7	37.9	667	11.6	204
3	566.44	16.9	34.5	452	5.5	72
4	567.20	25.5	37.7	745	8.3	164
5	568.42	20.3	33.8	533	12.9	203
6	569.23	16.0	27.1	356	0.0	0
7	570.05	16.9	33.4	438	4.8	63
8	570.75	17.9	33.1	460	6.6	92
9	571.54	16.5	26.9	345	0.0	0

Note: oc - oubi

*Volume o
of maxim

**Determin
which st

earch Laboratories

:ATORY FLOODING TESTS

ABLE V

ler Well No. I-3

Ft.	Residual Saturation % Oil	% Water	Bbls./A. Ft.	Volume of Water Recovered cc*	** Effective Permeability, Millidarcys	Initial Fluid Production Pressure Lbs./Sq. In.
	26.5	61.4	463	86	8.09	20
	29.0	68.9	380	53	1.00	20
	29.4	61.8	561	66	20.60	20
	20.9	72.7	330	192	3.16	20
	27.1	63.8	356	0	Imp.	50 +
	26.6	66.8	375	9	0.257	30
	26.5	66.1	368	7½	0.353	50
	26.9	68.8	345	0	Imp.	50 +

e centimeter

f water recovered at the time
um oil recovery.

ed by passing water through sample
ill contains residual oil.

Oil Field Research Laboratories

SUMMARY OF LABORATORY FLOODING TESTS

TABLE VI

Company Deep Rock Oil Corporation Lease Miller Well No. I-3

Depth Interval, Feet	560.80 - 570.90	560.00 - 570.50
Feet of Core Analyzed	3.28	3.18
Average Percent Porosity	19.91	18.18
Average Percent Original Oil Saturation	35.24	32.01
Average Percent Oil Recovery	8.17	7.58
Average Percent Residual Oil Saturation	27.07	24.43
Average Percent Residual Water Saturation	66.31	59.40
Average Percent Total Residual Fluid Saturation	93.38	83.83
Average Original Oil Content, Bbls./A. Ft.	548.	505.
Average Oil Recovery, Bbls./A. Ft.	131.	123.
Average Residual Oil Content, Bbls./A. Ft.	417.	382.
Total Original Oil Content, Bbls./Acre	1,798.	1,605.
Total Oil Recovery, Bbls./Acre	429.	390.
Total Residual Oil Content, Bbls./Acre	1,369.	1,215.
Average Effective Permeability, Millidarcys	5.86	5.48
Average Initial Fluid Production Pressure, p.s.i.	23.3	23.3

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