15-1-22E

September 2, 1949

Deep Rock Oil Corporation
Tulsa, Oklahoma

Attention: Mr. T. F. Lavry

Gentlemen:

Enclosed herewith is the report of the partial analysis made on the No. 6 Baker barrel core taken from the Sheehy Lease, Well No. C-23, Miami County, Kansas, and submitted to our laboratory on August 24, 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:dt
c.c. to Mr. Neil Henderson

Sheehy C-23

PRAIRIE ROCK OIL CORPORATION

CORE ANALYSIS REPORT

SHERRY LEASE WELL NO. C-23

MIAMI COUNTY, KANSAS

OIL FIELD RESEARCH LABORATORIES

CHANUTE, KANSAS

SEPTEMBER 2, 1949

Oil Field Research Laboratories

GENERAL INFORMATION & SUMMARY

Company Deep Rock Oil Corporation Lease Sheehy Well No. C-23

Location

Section 15 Twp. 17S Rge. 22E County Miami State Kansas

Name of Sand	Peru
Top of Core	372.00
Bottom of Core	398.60
Top of pay Sand	387.27
Bottom of Sand	397.60
Total Feet of Permeable Sand	6.27

Distribution of Permeable Sand:

Permeable Range Millidarcys	Feet	Cum. Ft.

Average effective Permeability, Millidarcys	4.24
Average Percent Porosity	19.39
Average Percent Oil Saturation	41.28
Average Percent Water Saturation	-
Average Oil Content, Bbls./A. Ft.	631.
Total Oil Content, Bbls./Acre	5,435.
Average Percent Oil Recovery by Laboratory Flooding Tests	14.93
Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft.	241.
Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre	1,513.
Total Calculated Oil Recovery, Bbls./Acre	950.
Packer Setting, Feet	388.5
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.

OIL FIELD RESEARCH LABORATORIES

LOG

Company Deep Rock Oil Corporation Lease Sheehy Well No. C-23

Depth Interval, Feet	Description
372.00 - 373.50	Soft light brown fine grained micaceous shaley sandstone
373.50 - 374.37	Soft gray shale.
374.37 - 374.80	Gray sandy shale.
374.80 - 380.60	Hard light brown fine grained micaceous calcareous sandstone.
380.60 - 380.90	Sandy limestone.
380.90 - 381.15	Hard light brown fine grained micaceous calcareous sandstone.
381.15 - 381.90	Limestone.
381.90 - 382.05	Sandy limestone.
382.05 - 384.70	Light brown fine grained micaceous calcareous slightly shaley sandstone.
384.70 - 387.00	Light brown fine grained micaceous calcareous shaley sandstone.
387.00 - 387.27	Brown fine grained micaceous calcareous slightly shaley sandstone.
387.27 - 390.92	Brown fine grained micaceous calcareous sandstone.
390.92 - 391.30	Limestone.
391.30 - 396.20	Brown fine grained micaceous calcareous sandstone.
396.20 - 397.60	Brown fine grained slightly laminated micaceous calcareous sandstone.
397.60 - 397.80	Gray shale.
397.80 - 398.60	Limestone.

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SHOT RECOMMENDATION

Company Deep Rock Oil Corporation Lease Sheehy Well No. C-23

Depth Interval, Feet	Feet of Sand	Size of Shell Inches	Qts./Ft.	Total Quarts
393.5 - 396.0	2½	4½	3.1	7.75

Recommended Packer Setting - 388.5 feet

Note: Plug hole back to 397.5 feet

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RESULTS OF SATURATION TESTS

TABLE III

Company Deep Rock Oil Corporation Lease Sheehy Well No. C-23

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	372.50	18.5	17.6	-	-	253	0.90	0.90	228
F-3	382.53	20.8	20.4	-	-	329	1.45	2.35	477
F-5	387.10	22.8	31.8	-	-	562	0.27	2.62	152
F-6	387.80	23.0	41.2	-	-	718	1.13	3.75	810
F-7	389.20	21.7	39.4	-	-	664	1.40	5.15	930
F-8	390.50	22.6	49.5	-	-	868	1.12	6.27	972
F-9	392.20	20.9	51.3	-	-	833	1.35	7.62	1,123
F10	393.20	17.3	28.6	-	-	384	1.05	8.67	403
F11	394.20	19.6	42.8	-	-	651	1.05	9.72	685
F12	395.30	18.1	40.2	-	-	565	1.45	11.17	820
F13	396.35	16.3	36.5	-	-	462	0.40	11.57	185
F14	396.85	15.5	35.4	-	-	426	1.00	12.57	426
							Total - - - - -		7,211

Oil Field Research Laboratories

SUMMARY OF SATURATION TESTS

TABLE IV

Company Deep Rock Oil Corporation Lease Sheehy Well No. C-23

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
372.00-383.50	2.35	19.91	19.32	-	300	705
387.00-397.60	10.22	19.87	40.94	-	637	6,506
386.50-397.50	8.62	19.39	41.28	-	631	5,435

Oil Field Research Laboratories

RESULTS OF LABORATORY FLOODING TESTS

TABLE V

Company Deep Rock Oil Corporation Lease Neely Well No. C-23

Sample No.	Depth, Feet	Effective Porosity Percent	Original Oil Saturation		Oil Recovery		Residual Saturation			Volume of Water Recovered cc*	Permeability, Millidarcys		Initial Fluid Production Pressure Lbs./Sq. In.
			Percent	Bbls./A. Ft.	Percent	Bbls./A. Ft.	% Oil	% Water	Bbls./A. Ft.		Dry	Wet **Effective	
1	372.60	18.6	17.6	258	0	0	17.6	77.2	253	0		Imp.	50 +
2	382.53	20.6	20.4	329	0.9	15	19.5	79.7	314	161		14.3	5
3	387.10	22.8	31.8	562	1.8	28	30.2	66.9	534	166		11.8	5
4	387.80	23.0	41.2	718	9.6	172	30.6	63.7	546	70		10.3	5
5	389.20	21.7	39.4	664	9.7	164	29.7	66.9	500	182		6.35	10
6	390.50	22.6	49.5	868	17.9	314	31.6	64.0	554	86		12.4	10
7	392.20	20.9	51.3	833	25.1	408	26.2	64.4	435	40		1.77	15
8	393.20	17.3	26.6	384	0	9	28.6	70.3	384	0		Imp.	50 +
9	394.20	19.6	45.8	651	11.7	178	31.1	67.8	473	12		0.224	25
10	396.80	18.1	40.2	565	10.8	145	29.9	64.9	420	42		1.23	30
11	396.35	16.3	36.5	462	0	0	36.5	58.2	462	1		0.116	50
12	396.85	15.5	35.4	426	0	0	35.4	61.2	426	0		Imp.	50 +

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 Deep Rock Oil Corporation Lease Sheehy Well No. C-23

Depth Interval, Feet	382.05 - 396.20	388.50 - 397.50
Feet of Core Analyzed	9.22	6.27
Average Percent Porosity	20.94	20.49
Average Percent Original Oil Saturation	39.75	44.50
Average Percent Oil Recovery	11.62	14.93
Average Percent Residual Oil Saturation	28.13	29.57
Average Percent Residual Water Saturation	67.56	65.50
Average Percent Total Residual Fluid Saturation	95.69	95.07
Average Original Oil Content, Bbls./A. Ft.	647.	711.
Average Oil Recovery, Bbls./A. Ft.	190.	241.
Average Residual Oil Content, Bbls./A. Ft.	457.	470.
Total Original Oil Content, Bbls./Acre	5,970.	4,463.
Total Oil Recovery, Bbls./Acre	1,754.	1,513.
Total Residual Oil Content, Bbls./Acre	4,216.	2,950.
Average Effective Permeability, Millidarcys	6.82	4.24
Average Initial Fluid Production Pressure, p.s.i.	11.9	16.0

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