

13/14 - 21-20E
(?)
Ewing W-35

October 28, 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. W-35, Anderson County, Kansas, and submitted to our laboratory on October 16, 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
Mr. Jack McQueensy

DEEP ROCK OIL CORPORATION

CORE ANALYSIS REPORT

EWING LEASE

WELL NO. W-76

ANDERSON COUNTY, KANSAS

OIL FIELD RESEARCH LABORATORIES

CHASUTE, KANSAS

OCTOBER 28, 1949

Oil Field Research Laboratories

GENERAL INFORMATION & SUMMARY

Company Deep Rock Oil Corporation Lease Ewing Well No. W-35

Location _____

Section 13 & 14 Twp. 21 Rge. 20 County Anderson State Kansas

Name of Sand	Squirrel
Top of Core	682.10
Bottom of Core	732.10
Top of Sand	705.40
Bottom of Sand	730.00
Total Feet of Permeable Sand	12.15

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

effective

Average Permeability, Millidarcys	0.73
Average Percent Porosity	15.97
Average Percent Oil Saturation	32.65
Average Percent Water Saturation	-
Average Oil Content, Bbls./A. Ft.	424.
Total Oil Content, Bbls./Acre	7,709.
Average Percent Oil Recovery by Laboratory Flooding Tests	11.06
Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft.	156.
Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre	1,332.
Total Calculated Oil Recovery, Bbls./Acre	850.
Packer Setting, Feet	706.00

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 bottom of the core.

OIL FIELD RESEARCH LABORATORIES

LOG

Company Deep Rock Oil Corporation Lease Ewing Well No. W-35

<u>Depth Interval, Feet</u>	<u>Description</u>
682.10 - 686.60	- Gray sandy shale.
686.60 - 686.90	- Light brown finely laminated sandstone.
686.90 - 688.00	- Gray sandy shale.
688.00 - 688.10	- Light brown fine grained micaceous sandstone.
688.10 - 688.45	- Gray sandy shale.
688.45 - 688.60	- Light brown fine grained sandstone.
688.60 - 688.70	- Gray sandy shale.
688.70 - 688.95	- Light brown fine grained micaceous sandstone.
688.95 - 694.60	- Gray sandy shale.
694.60 - 696.10	- Light brown fine grained finely laminated sandstone.
696.10 - 702.20	- Gray shale.
702.20 - 702.40	- Light brown fine grained laminated sandstone.
702.40 - 703.20	- Gray shale.
703.20 - 703.50	- Light brown fine grained slightly shaley sandstone.
703.50 - 705.40	- Gray sandy shale.
705.40 - 706.00	- Brown fine grained micaceous slightly shaley sandstone.
706.00 - 708.60	- Gray sandy shale.
708.60 - 709.00	- Brown fine grained micaceous slightly shaley sandstone.
709.00 - 710.40	- Finely laminated sandstone and shale.
710.40 - 711.10	- Brown fine grained slightly laminated micaceous sandstone.
711.10 - 711.30	- Gray shale.

- 711.30 - 712.20 - Brown fine grained slightly laminated micaceous shaley sandstone.
- 712.20 - 713.00 - Brown fine grained slightly laminated micaceous sandstone.
- 713.00 - 713.75 - Gray shale.
- 713.75 - 714.50 - Light brown fine grained finely laminated micaceous shaley sandstone.
- 714.50 - 715.40 - Light brown fine grained slightly laminated micaceous sandstone.
- 715.40 - 720.30 - Light brown fine grained finely laminated micaceous shaley sandstone.
- 720.30 - 722.20 - Gray sandy shale.
- 722.20 - 725.00 - Brown fine grained micaceous sandstone.
- 725.00 - 725.70 - Brown fine grained finely laminated micaceous shaley sandstone.
- 725.70 - 726.30 - Brown fine grained finely laminated micaceous sandstone.
- 726.30 - 727.75 - Light brown fine grained laminated micaceous shaley sandstone.
- 727.75 - 730.00 - Brown fine grained micaceous sandstone.
- 730.00 - 732.10 - Gray shale (discarded at well).

Oil Field Research Laboratories

SHOT RECOMMENDATION

Company Deep Rock Oil Corporation Lease Ewing Well No. W-35

<u>Depth Interval, Feet</u>	<u>Feet of Sand</u>	<u>Size of Shell Inches</u>	<u>Qts./Ft.</u>	<u>Total Quarts</u>
711.00 - 729.00	18.0	3/4	2.0	36.0

Recommended Packer Setting - 706.0 feet.

RESULTS OF SATURATION TESTS

TABLE III

Company Deep Rock Oil Corporation Lease Tring Well No. 4-35

[illegible]

Oil Field Research Laboratories

SUMMARY OF SATURATION TESTS

TABLE IV

Company Deep Rock Oil Corporation Lease Living Well No. U-35

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
703.20 - 721.30	11.25	15.80	31.64	-	412	4,635
722.20 - 730.00	7.80	16.52	34.91	-	462	3,601
706.00 - 730.00	18.15	15.97	32.65	-	424	7,709

Oil Field Research Laboratories

RESULTS OF LABORATORY FLOODING TESTS

TABLE V

Company Deep Rock Oil Corporation Lease Spring Well No. W-35

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 **	Effective	
5	703.33	15.0	30.3	353	0.0	0	30.3	64.8	353	0		Imp.	50+
6	705.63	20.4	44.3	701	14.9	236	29.4	67.2	465	64		1.62	20
9	709.15	13.6	24.5	259	0.0	0	24.5	74.9	259	4		0.114	45
10	710.60	16.1	29.0	347	5.6	79	33.4	58.7	468	4		0.167	40
11	711.70	19.0	37.7	556	6.9	102	30.6	69.0	454	16		0.378	20
12	712.65	18.7	41.3	600	11.0	160	30.3	65.7	440	5		0.128	30
13	714.15	14.7	35.3	402	0.0	0	35.3	56.9	402	1		0.095	50
14	715.05	17.4	37.5	504	4.6	62	32.7	62.5	442	8		0.100	35
15	716.13	14.5	32.2	358	0.0	0	32.2	63.0	358	0		Imp.	50+
16	716.63	14.8	33.6	386	0.0	0	33.6	60.4	386	0		Imp.	50+
17	717.40	14.0	26.5	288	0.0	0	26.5	55.8	288	0		Imp.	50+
18	718.60	13.7	23.1	246	0.0	0	23.1	72.1	246	0		Imp.	50+
19	719.70	14.6	18.1	340	0.0	0	18.1	72.5	340	0		Imp.	50+
21	723.00	19.5	39.9	604	14.7	222	25.2	70.0	332	106		2.29	10
22	724.13	17.4	34.2	461	7.0	94	27.2	71.5	367	16		0.837	35
23	725.13	11.5	24.0	214	0.0	0	24.0	63.4	214	0		Imp.	50+
24	725.82	17.4	33.8	457	9.0	122	24.8	70.5	335	54		1.40	20
25	726.50	15.0	17.7	206	0.0	0	17.7	63.0	206	3		0.091	45
26	727.95	18.3	43.8	622	15.0	213	28.8	59.6	409	32		0.123	20
27	729.10	17.1	51.4	682	18.2	242	33.2	62.8	440	17		0.432	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	Deep Rock Oil Corporation		Lease	Kwing	Well No.	W-35
Depth Interval, Feet	705.40 - 721.30	722.20 - 730.00	706.00 - 730.00			
Feet of Core Analyzed	3.90	5.25	8.55			
Average Percent Porosity	18.64	17.98	18.12			
Average Percent Original Oil Saturation	39.54	41.98	40.71			
Average Percent Oil Recovery	8.18	13.64	11.06			
Average Percent Residual Oil Saturation	31.36	28.34	29.65			
Average Percent Residual Water Saturation	64.69	66.78	65.80			
Average Percent Total Residual Fluid Saturation	96.05	95.12	95.45			
Average Original Oil Content, Bbls./A. Ft.	574.	585.	572.			
Average Oil Recovery, Bbls./A. Ft.	121.	191.	156.			
Average Residual Oil Content, Bbls./A. Ft.	453.	394.	416.			
Total Original Oil Content, Bbls./Acre	2,238.	3,070.	4,887.			
Total Oil Recovery, Bbls./Acre	473.	1,001.	1,332.			
Total Residual Oil Content, Bbls./Acre	1,765.	2,069.	3,555.			
Average Effective Permeability, Millidarcys	0.45	1.07	0.73			
Average Initial Fluid Production Pressure, p.s.i.	29.0	21.0	25.6			

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