

OILFIELD RESEARCH LABORATORIES

November 26, 1932

Franco Central Oil Company
512 Fourth National Bank Building
Wichita, Kansas

Gentlemen:

Enclosed herewith are the results of tests made on the $3\frac{1}{2}$ " Rotary core taken from the Kelley Lease, Well No. 2, Saline County, Kansas, and submitted to our laboratory on November 16, 1932.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Carl L. Pate

CLP:eda

c.c.

2-16-4 W

Kelley 2

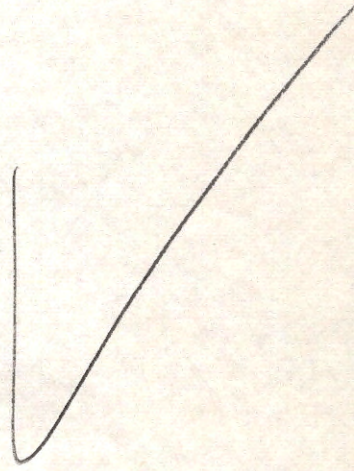
FRANCO CENTRAL OIL COMPANY

CORE ANALYSIS REPORT

KELLEY LEASE

WELL NO. 2

SALINE COUNTY, KANSAS



Received by
J. D. Cotton
November 26, 1932

OILFIELD RESEARCH LABORATORIES

CHANDLER, KANSAS

NOVEMBER 26, 1932

Oil Field Research Laboratories

GENERAL INFORMATION & SUMMARY

Company Franco Central Oil Company Lease Kelly Well No. 2

Location SW1, NE1, SW1

Section 2 Twp. 16 S Rge. 4 W County Saline State Kansas

Name of Sand

Maquoketa
Dolomite

Top of Core

3482.00

Bottom of Core

3481.00

Top of Sand

3453.25

Bottom of Sand

3465.15

Total Feet of Permeable Sand

12.00

Total Feet of Floodable Sand

-

Distribution of Permeable Sand:
Permeability Range
Millidarcys

Feet

Cum. Ft.

0 - 2
2 - 4
4 - 50
50 - 200
200 & above

5.30
0.85
3.05
1.90
0.90

5.30
6.15
9.20
11.10
12.00

Average Permeability Millidarcys

59.74

Average Percent Porosity

14.27

Average Percent Oil Saturation

18.32

Average Percent Water Saturation

68.71

Average Oil Content, Bbls./A. Ft.

213.

Total Oil Content, Bbls./Acre

6,291.

Average Percent Oil Recovery by Laboratory Flooding Tests

Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft.

Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre

Total Calculated Oil Recovery, Bbls./Acre

Packer Setting, Feet

Viscosity, Centipoises @

A. P. I. Gravity, degrees @ 60 °F

Elevation, Feet

LOGCompany Franks Central Oil Company Lease Kelley Well No. 2

Depth Interval, <u>Feet</u>	Description <u></u>
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3442.00 - 3451.00 - Shale (Discarded at well).

3451.00 - 3452.00 - Hard gray shale.

3452.00 - 3453.00 - Carbonaceous conglomeratic dolomite.

3453.00 - 3464.50 - Gray dolomite containing brown honeycombed limestone inclusions.

3464.50 - 3471.30 - Gray dolomite.

3471.30 - 3471.70 - Gray dolomite containing brown limestone inclusions.

3471.70 - 3473.35 - Gray dolomite.

3473.35 - 3475.00 - Gray dolomite containing brown limestone inclusions.

3475.00 - 3476.60 - Gray dolomite containing flint.

3476.60 - 3477.70 - Gray dolomite containing a few brown limestone inclusions.

3477.70 - 3481.00 - Gray dolomite.

Oilfield Research Laboratories
RESULTS OF PERMEABILITY TESTS
TABLE I

Company Franco Central Oil Company Lease Kelley Well No. 2

Sample No.	Depth, Feet	Permeability Millidarcys	Feet of Core		Permeability Capacity Ft. x Md.
			Ft.	Cum. Ft.	
1	3451.90	Broken	0.50	0.50	-
2	3452.40	Imp.	0.60	1.10	0.00
3	3452.85	Imp.	0.55	1.65	0.00
4	3453.40	Imp.	0.65	2.30	0.00
5	3454.04	Imp.	0.45	2.75	0.00
6	3454.50	177.	0.45	3.20	79.65
7	3454.90	178.	0.50	3.70	89.00
8	3455.45	27.	0.60	4.30	16.20
9	3456.03	113.	0.50	4.80	56.50
10	3456.60	Imp.	0.50	5.30	0.00
11	3457.00	Imp.	0.50	5.80	0.00
12	3457.55	302.	0.40	6.20	120.80
13	3457.85	2.6	0.40	6.60	1.04
14	3458.37	0.60	0.50	7.10	0.30
15	3458.85	Imp.	0.40	7.50	0.00
16	3459.30	10.	0.50	8.00	5.00
17	3459.74	453.	0.50	8.50	226.50
18	3460.35	1.2	0.60	9.10	0.72
19	3460.88	33.	0.50	9.60	16.50
20	3461.35	5.5	0.50	10.10	2.75
21	3461.84	177.	0.45	10.55	79.65
22	3462.24	0.89	0.45	11.00	0.40
23	3462.85	15.	0.60	11.60	9.00
24	3463.44	0.97	0.55	12.15	0.53
25	3463.86	1.9	0.50	12.65	0.95
26	3464.40	20.	0.35	13.00	7.00
27	3464.86	1.4	0.65	13.65	0.91
28	3465.45	Imp.	0.50	14.15	0.00
29	3465.85	Imp.	0.45	14.60	0.00
30	3466.33	Imp.	0.40	15.00	0.00
31	3466.64	Imp.	0.50	15.50	0.00
32	3467.45	Imp.	0.60	16.10	0.00
33	3467.74	Imp.	0.40	16.50	0.00
34	3468.22	Imp.	0.50	17.00	0.00
35	3468.75	Imp.	0.50	17.50	0.00
36	3469.24	Imp.	0.50	18.00	0.00
37	3469.85	Imp.	0.60	18.60	0.00
38	3470.46	Imp.	0.55	19.15	0.00
39	3470.83	Imp.	0.65	19.80	0.00
40	3471.40	Imp.	0.40	20.20	0.00

Oilfield Research Laboratories
RESULTS OF PERMEABILITY TESTS
TABLE I

Company Franco Central Oil Company Lease Kelley Well No. 2

Sample No.	Depth, Feet	Permeability Millidarcys	Feet of Core		Permeability Capacity Ft. x Md.
			Ft.	Cum. Ft.	
41	3471.84	Imp.	0.50	20.70	0.00
42	3472.44	Imp.	0.55	21.25	0.00
43	3473.00	Imp.	0.50	21.85	0.00
44	3473.45	Imp.	0.35	22.20	0.00
45	3474.00	Imp.	0.60	22.80	0.00
46	3474.50	Imp.	0.70	23.50	0.00
47	3475.14	Imp.	0.35	23.85	0.00
48	3475.65	Imp.	0.60	24.45	0.00
49	3476.15	1.3	0.65	25.10	0.84
50	3476.64	0.98	0.50	25.60	0.49
51	3477.50	1.0	0.60	26.20	0.60
52	3478.00	Imp.	0.60	26.80	0.00
53	3478.55	Imp.	0.50	27.30	0.00
54	3479.10	Imp.	0.50	27.80	0.00
55	3479.55	2.7	0.45	28.25	1.22
56	3479.94	Imp.	0.55	28.80	0.00
57	3480.50	Imp.	0.40	29.20	0.00
58	3480.90	0.94	0.30	29.50	0.28

Oil Field Research Laboratories

SUMMARY OF PERMEABILITY TESTS

TABLE II

Company Franco Central Oil Company Lease Kelley Well No. 2

Depth Interval Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity, Ft. x Md.
3454.25-3455.70	1.45	125.62	182.15
3455.70-3465.15	8.05	65.99	531.25
3475.85-3481.00	2.50	1.37	3.43
3454.25-3481.00	12.00	59.74	716.83

Oil Field Research Laboratories

RESULTS OF SATURATION TESTS

TABLE III

Company Franco Central Oil Company Lease Kelley Well No. 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.	
1	3451.15	11.1	19.7	75.0	94.7	170	1.00	1.00	170
2	3452.15	13.8	18.2	66.0	84.2	195	0.70	1.70	137
3	3453.15	11.8	25.4	66.3	91.7	232	1.10	2.80	255
4	3454.25	11.2	21.2	68.2	89.4	184	0.90	3.70	166
5	3455.15	11.3	18.4	62.5	80.9	141	1.00	4.70	141
6	3456.25	15.0	26.7	65.3	92.0	311	1.00	5.70	311
7	3457.15	14.8	42.3	45.5	87.8	487	0.95	6.65	462
8	3458.15	13.8	36.9	51.0	87.9	396	1.00	7.65	396
9	3459.10	22.3	29.8	59.2	89.0	516	0.95	8.60	491
10	3460.10	18.7	30.0	51.3	81.3	436	1.00	9.60	436
11	3461.10	21.0	29.8	54.3	84.1	486	0.95	10.55	462
12	3462.05	13.8	18.7	64.4	83.1	200	1.05	11.60	210
13	3463.15	23.2	16.1	63.2	79.3	290	1.05	12.65	304
14	3464.10	17.8	17.2	70.8	88.0	238	0.85	13.50	202
15	3465.15	13.2	18.6	71.4	90.0	190	1.15	14.65	218
16	3466.10	14.6	10.4	65.3	75.7	118	0.95	15.60	112
17	3467.15	15.3	8.8	80.0	88.8	105	1.00	16.60	105

Oil Field Research Laboratories

RESULTS OF SATURATION TESTS

TABLE III

Company Franco Central Oil Company Lease Kelley Well No. 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.	
18	3468.00	11.5	11.1	76.2	87.3	99	0.90	17.50	89
19	3469.00	9.9	7.4	84.2	91.6	57	1.05	18.55	60
20	3470.15	10.0	8.2	84.2	92.4	64	1.20	19.75	77
21	3471.15	12.3	11.0	77.5	88.5	105	0.55	20.30	58
22	3472.20	15.4	11.3	86.3	97.6	135	1.00	21.30	135
23	3473.20	12.0	5.9	68.2	74.1	55	0.65	21.95	36
24	3474.25	15.3	10.9	67.0	77.9	129	1.65	23.60	213
25	3475.40	8.7	10.3	68.9	79.2	70	0.85	24.45	60
26	3476.35	11.6	7.8	84.7	92.5	70	0.75	25.20	53
27	3477.30	9.6	6.1	80.2	86.3	45	1.10	26.30	50
28	3478.30	12.5	22.3	68.8	91.1	216	1.10	27.40	238
29	3479.30	19.0	17.2	71.8	89.0	254	0.95	28.35	242
30	3480.25	15.5	26.8	66.0	92.8	322	1.25	29.60	402
							Total	- - - - -	6,291

Oil Field Research Laboratories

SUMMARY OF SATURATION TESTS

TABLE IV

Company France Central Oil Company Lease Kelley Well No. 2

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
3451.00-3455.70	4.70	11.74	20.62	67.66	185	869
3455.70-3465.65	9.95	17.29	26.43	59.80	351	3,492
3465.65-3481.00	14.95	13.06	12.13	74.96	129	1,930
3451.00-3481.00	29.60	14.27	18.32	68.71	213	6,291

Oilfield Research Laboratories
RESULTS OF WATER DIFFERENTIATION TESTS
TABLE VII

Company France Central Oil Company Lease Kelley Well No. 2

Sample No.	Depth, Feet	Chloride Content of Brine in Sand ppm	Percent Water Saturation		Total
			Connate	Drilling & Foreign	
1	3451.15	53,500			
2	3452.15	66,500			
3	3453.15	65,900			
4	3454.25	46,000			
5	3455.15	37,600			
6	3456.25	27,800			
7	3457.15	47,100			
8	3458.15	36,400			
9	3459.10	34,400			
10	3460.10	34,600			
11	3461.10	27,000			
12	3462.05	43,700			
13	3463.15	27,400			
14	3464.10	34,000			
15	3465.15	33,000			
16	3466.10	43,000			
17	3467.15	55,900			
18	3468.00	64,500			
19	3469.00	61,800			
20	3470.15	59,800			
21	3471.15	70,500			
22	3472.20	53,900			
23	3473.20	64,500			
24	3474.25	66,200			
25	3475.40	70,700			
26	3476.35	49,900			
27	3477.30	64,900			
28	3478.30	62,600			
29	3479.30	56,400			
30	3480.25	60,000			
			Note: ppm - parts per million.		

Oil Field Research Laboratories

SUMMARY OF WATER DIFFERENTIATION TESTS

TABLE VIII

Company Franco Central Oil Company Lease Kelley Well No. 2

Depth Interval, Feet	Chloride Content of Brine in Sand, ppm	Average Percent Connate Water	Average Percent Drilling & Foreign Water
3451.00-3455.70	53,519		
3455.70-3465.65	34,511		
3465.65-3481.00	60,310		
3451.00-3481.00	50,559		

Note: ppm - parts per million.