



OILFIELD RESEARCH LABORATORIES

536 NORTH HIGHLAND - CHANUTE, KANSAS - PHONE HE1-2650

November 2, 1966

C. L. Carlock
Box 18701 Shartel Station
Oklahoma City, Oklahoma

Dear Sir:

Enclosed herewith are the results of tests run on the Rotary core taken from the Patton Lease, Well No. 1, Chautauqua County, Kansas, and submitted to our laboratory on November 1, 1966.

This core was sampled and the samples sealed in cans by a representative of Oilfield Research Laboratories.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES


Benjamin R. Pearman

BRP:rf

4 c. - Oklahoma City, Oklahoma
1 c. - Leon, Kansas
1 c. - Newton, Kansas

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company C. L. Carlock Lease Patton Well No. 1

Location SE $\frac{1}{4}$

Section 21 Twp. 32S Rge. 10E County Chautauqua State Kansas

Name of Formation - - - - - Oswego Mississippi

Top of Core - - - - - 1660.0 1965.0

Bottom of Core - - - - - 1684.5 1991.0

Top of Pay - - - - - 1664.8 1965.7

Bottom of Pay - - - - - 1671.0 1991.0

Total Feet of Permeable Sand - - - - - 2.6 7.8

Total Feet of Floodable Sand - - - - -

Distribution of Permeable Formation:

Permeability Range
Millidarcys

Feet

Cum. Ft.

Oswego 2 - 4.5 2.6 2.6

Miss. 0 - 1 5.4 5.4

1 & above 2.4 7.8

Average Permeability Millidarcys - - - - - 3.6 17.4

Average Percent Porosity - - - - - 9.1 8.7

Average Percent Oil Saturation - - - - - 22.9 47.2

Average Percent Water Saturation - - - - - 56.4 18.3

Average Oil Content, Bbls./A. Ft. - - - - - 152. 308.

Total Oil Content, Bbls./Acre - - - - - 2,041. 6,394.

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 - - - - -

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-LOG-Company C. L. Carlock Lease Patton Well No. 1

Depth Interval, <u>Feet</u>	<u>Description</u>
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-OSWEGO-

1660.0 - 1664.8 - Grayish brown, barren, crystalline limestone.

1664.8 - 1671.0 - Light brown limestone.

1671.0 - 1677.6 - Grayish light brown limestone.

1677.6 - 1684.5 - Shale.

-MISSISSIPPI-

1965.0 - 1965.7 - Gray shale.

1965.7 - 1979.6 - Brown crystalline limestone.

1979.6 - 1981.8 - Gray limestone.

1981.8 - 1984.6 - Brown crystalline limestone.

1984.6 - 1987.0 - Gray limestone.

1987.0 - 1991.0 - Brown crystalline limestone.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company C. L. Carlock Lease Patton Well No. 1

Sample No.	Depth, Feet	Effective Porosity Percent	Percent Saturation			Oil Content Bbls. / A Ft.	Perm., Mill.	Feet of Sand		Total Oil Content	Perm. Capacity Ft. X md.
			Oil	Water	Total			Ft.	Cum. Ft.		
						-OSWEGO-					
1	1662.8	9.7	36	32	68	271	Imp.	1.0	1.0	271	0.00
2	1663.8	4.5	34	56	90	119	Imp.	1.0	2.0	119	0.00
3	1665.0	11.9	21	37	58	194	Imp.	0.8	2.8	155	0.00
4	1666.1	7.2	20	34	54	112	2.2	1.0	3.8	112	2.20
5	1667.1	11.6	19	73	92	171	4.5	1.0	4.8	171	4.50
6	1668.1	14.1	26	26	52	284	Imp.	1.0	5.8	284	0.00
7	1669.1	3.6	37	54	91	103	Imp.	1.0	6.8	103	0.00
8	1671.1	11.1	18	54	72	155	4.3	0.6	7.4	93	2.58
9	1672.1	12.0	16	39	55	149	Imp.	1.0	8.4	149	0.00
10	1673.1	9.8	12	85	97	91	Imp.	1.0	9.4	91	0.00
11	1674.1	11.0	11	87	98	94	Imp.	1.0	10.4	94	0.00
12	1675.1	7.0	24	70	94	130	Imp.	1.0	11.4	130	0.00
13	1676.1	7.5	21	68	89	122	Imp.	1.0	12.4	122	0.00
14	1677.1	7.9	24	70	94	147	Imp.	1.0	13.4	147	0.00

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Sample No.	Depth, Feet	Effective Porosity Percent	C. L. Carlock			Patton			Well No. 1		
			Lease			Lease			Lease		
			Percent Saturation			Oil Content Bbls. / A Ft.	Perm., Mill.	Feet of Sand		Total Oil Content	Perm. Capacity Ft. X md.
			Oil	Water	Total			Ft.	Cum. Ft.		
						-MISSISSIPPI-					
1	1966.1	5.4	76	11	87	318	Imp.	0.9	0.9	286	0.00
2	1967.1	9.3	41	18	59	296	Imp.	1.0	1.9	296	0.00
3	1968.1	9.7	40	13	53	301	Imp.	1.0	2.9	301	0.00
4	1969.1	10.1	43	14	57	337	Imp.	1.0	3.9	337	0.00
5	1970.1	7.5	55	17	72	320	Imp.	1.0	4.9	320	0.00
6	1971.1	7.4	41	26	67	235	Imp.	1.0	5.9	235	0.00
7	1972.1	7.5	48	18	66	279	Imp.	1.0	6.9	279	0.00
8	1973.1	6.2	52	27	79	250	Imp.	1.0	7.9	250	0.00
9	1974.1	11.2	37	39	76	321	0.35	1.0	8.9	321	0.35
10	1975.1	6.9	69	16	85	369	Imp.	1.0	9.9	369	0.00
11	1976.1	8.2	48	13	61	305	0.84	1.0	10.9	305	0.84
12	1977.1	6.0	53	20	73	246	Imp.	1.0	11.9	246	0.00
13	1978.1	8.6	47	13	60	313	Imp.	1.0	12.9	313	0.00
14	1979.1	6.6	50	7	57	256	Imp.	1.0	13.9	256	0.00
15	1982.1	6.9	44	7	51	235	0.45	0.8	14.7	188	0.36
16	1983.1	7.5	61	8	69	354	0.27	1.0	15.7	354	0.27
17	1984.1	14.8	55	19	74	631	Imp.	1.0	16.7	631	0.00
18	1987.1	8.1	38	27	65	238	0.12	0.6	17.3	143	0.07
19	1988.1	11.3	28	26	54	246	0.31	1.0	18.3	246	0.31
20	1989.1	10.4	35	23	58	282	2.1	1.0	19.3	282	2.10
21	1990.1	11.5	35	21	56	312	94.	1.4	20.7	436	131.60

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company	C. L. Carlock	Lease	Patton	Well No.	1
	Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.	
	1662.3 - 1677.6	2.6	3.6	9.28	
	1965.7 - 1979.6	2.0	0.6	1.19	
	1981.8 - 1991.0	5.8	23.2	134.71	
	1965.7 - 1991.0	7.8	17.4	135.90	
	1662.3 - 1677.6	13.4	56.4	152	2,041
	1965.7 - 1979.6	13.9	18.0	296	4,114
	1981.8 - 1991.0	6.8	18.7	336	2,280
	1965.7 - 1991.0	20.7	18.3	308	6,394