28-27-19E

April 29, 1952

Berry & Wells
Newton, Kansas

Gentlemen:

Enclosed herewith is the report of the partial analysis made on the Cable Tool core taken from the Locke Lease, Well No. 9-B, Neosho County, Kansas, and submitted to our laboratory on April 16, 1952.

In calculating the recovery for the area represented by this core, an allowance was made for oil lost during coring, and it was assumed that the primary production and the true water saturation of the sand are 5 and 38 percent respectively.

Very truly yours,

OIL FIELD RESEARCH LABORATORIES

Carl L. Pate

CLP:bl
c.c. to Mr. L. C. McLaughlin

Locke 9-B

BERRY & EELLS

CORE ANALYSIS REPORT

LOCKE LEASE WELL NO. 9-B

NEOSHO COUNTY, KANSAS

OILFIELD RESEARCH LABORATORIES

CHANUTE, KANSAS

APRIL 29, 1952

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company Berry & Wells Lease Looke Well No. 9-B

Location

Section 28 Twp. 27S Rge. 19E County Neosho State Kansas

Name of Sand	Bartlesville
Top of Core	683.00
Bottom of Core	700.25
Top of Pay Sand	686.00
Bottom of Pay Sand	697.37
Total Feet of Permeable Sand	9.57
Total Feet of Floodable Sand	9.57

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

Average Effective Permeability Millidarcys	9.50
Average Percent Porosity	21.80
Average Percent Oil Saturation	34.72
Average Percent Water Saturation	-
Average Oil Content, Bbls./A. Ft.	590.
Total Oil Content, Bbls./Acre	6,192.
Average Percent Oil Recovery by Laboratory Flooding Tests	6.88
Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft.	155.
Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre	1,499.
Total Calculated Oil Recovery, Bbls./Acre	4,100.
Packer Setting, Feet	686.5
Viscosity, Centipoises @	
A. P. I. Gravity, degrees @ 60 °F	
Elevation, Feet	

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
CHANUTE, KANSAS

LOG

Company Berry & Eells Lease Locke Well No. 9-B

Depth Interval, Feet	Description
683.00 - 684.50	Cuttings, mostly shale.
684.50 - 685.05	Light brown fine grained micaceous shaley sandstone.
685.05 - 686.00	Light brown fine grained micaceous sandstone.
686.00 - 692.10	Brown fine grained micaceous sandstone.
692.10 - 692.55	Cuttings, mostly shale.
692.55 - 693.60	Brown fine grained micaceous sandstone containing a shale break.
693.60 - 695.55	Dark brown fine grained micaceous sandstone.
695.55 - 695.85	Brown fine grained micaceous shaley sandstone.
695.85 - 696.35	Cuttings, mostly shale.
696.35 - 697.37	Dark brown fine grained micaceous sandstone.
697.37 - 698.70	Dark fine grained micaceous carbonaceous sandstone.
698.70 - 699.45	Gray shale.
699.45 - 699.90	Laminated shale and sandstone.
699.90 - 700.25	Gray shale.

Oil Field Research Laboratories

SHOT RECOMMENDATION

Company Berry & Eells Lease Locke Well No. 9-B

Depth Interval, Feet	Feet of Sand	Size of Shell Inches	Qts./Ft.	Total Quarts
691.5 - 697.0	5.5	3½	2.0	11.0

Recommended Packer Setting 686.5 feet.

Note: Plug hole back to 698.0 feet.

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RESULTS OF SATURATION TESTS

TABLE III

Company Berry & Eells Lease Locke Well No. 9-B

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	684.65	15.0	16.1	-	-	187	0.55	0.55	103
2	685.66	19.7	14.2	-	-	217	0.95	1.50	206
3	686.65	20.7	30.2	-	-	485	1.15	2.65	558
4	687.65	22.7	30.5	-	-	537	1.00	3.65	537
5	688.66	23.2	32.2	-	-	590	1.00	4.65	590
6	689.65	21.8	32.9	-	-	557	0.95	5.60	529
7	690.63	22.9	32.0	-	-	570	1.00	6.60	570
8	691.65	21.8	36.1	-	-	611	1.00	7.60	611
9	692.76	16.0	32.2	-	-	400	1.00	8.60	400
10	693.75	24.9	43.0	-	-	831	0.60	9.20	499
11	694.76	24.9	30.9	-	-	598	1.35	10.55	807
12	695.70	15.0	23.9	-	-	278	0.30	10.85	83
13	696.70	21.8	41.5	-	-	702	1.02	11.87	716
14	697.70	20.4	53.7	-	-	850	1.33	13.20	1,131
							Total	- - - -	- 7,340

Oil Field Research Laboratories

SUMMARY OF SATURATION TESTS

TABLE IV

Company Berry & Eells Lease Locke Well No. 9-B

Depth Interval, Feet	Feet of Core Analyzed	Average Percent Porosity	Average Percent Oil Saturation	Average Percent Water Saturation	Average Oil Content Bbl./A. Ft.	Total Oil Content Bbls./Acre
684.50-692.10	7.60	21.33	28.84	-	487	3,704
692.55-698.70	5.60	21.14	39.39	-	649	3,636
686.50-698.00	10.50	21.80	34.72	-	590	6,192

Oil Field Research Laboratories

RESULTS OF LABORATORY FLOODING TESTS

TABLE V

Company Berry & Eells Lease Locke Well No. 9-B

Sample No.	Depth, Feet	Effective Porosity Percent	Original Oil Saturation		Oil Recovery		Residual Saturation			Volume of Water Recovered cc*	Effective Permeability, Millidarcys **	Initial Fluid Production Pressure Lbs./Sq. In.
			Percent	Bbls./A. Ft.	Percent	Bbls./A. Ft.	% Oil	% Water	Bbls./A. Ft.			
1	684.65	15.0	16.1	187	0.0	0	16.1	63.0	187	0	Imp.	50+
2	685.66	19.7	14.2	217	0.0	0	14.2	72.0	217	111	16.30	5
3	686.65	20.7	30.2	485	4.5	72	25.7	71.7	413	101	26.60	10
4	687.65	22.7	30.5	537	4.2	74	26.3	67.9	463	198	22.37	10
5	688.66	23.2	32.2	590	9.7	175	22.5	70.0	415	322	20.95	10
6	689.65	21.8	32.9	557	5.9	100	27.0	68.7	457	115	11.74	10
7	690.63	22.9	32.0	570	7.8	139	24.2	69.0	431	307	13.93	10
8	691.65	21.8	36.1	611	10.1	171	26.0	68.9	440	225	28.69	10
9	692.76	16.0	32.2	400	5.8	72	26.4	62.7	328	210	5.85	15
10	693.75	24.9	43.0	831	17.1	330	25.9	68.6	501	85	11.60	10
11	694.76	24.9	30.9	598	9.1	176	21.8	66.8	422	339	39.20	5
12	695.70	15.0	23.9	278	0.0	0	23.9	66.8	278	0	Imp.	50+
13	696.70	21.8	41.5	702	16.8	284	24.7	66.7	418	290	27.25	5
14	697.70	20.4	53.7	850	0.0	0	53.7	21.1	850	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.

Oilfield Research Laboratories

SUMMARY OF LABORATORY FLOODING TESTS

TABLE VI

Company Berry & Eells Lease Locke Well No. 9-B

Depth Interval, Feet	686.00-692.10	692.55-697.37	686.50-698.00
Feet of Core Analyzed	6.20	3.97	9.67
Average Percent Porosity	21.79	21.84	21.87
Average Percent Original Oil Saturation	31.74	35.80	33.47
Average Percent Oil Recovery	6.87	11.49	8.88
Average Percent Residual Oil Saturation	24.87	24.31	24.59
Average Percent Residual Water Saturation	68.31	65.99	67.18
Average Percent Total Residual Fluid Saturation	93.18	90.30	91.77
Average Original Oil Content, Bbls./A. Ft.	548.	611.	577.
Average Oil Recovery, Bbls./A. Ft.	119.	201.	155.
Average Residual Oil Content, Bbls./A. Ft.	429.	410.	422.
Total Original Oil Content, Bbls./Acre	3,495.	2,424.	5,576.
Total Oil Recovery, Bbls./Acre	737.	798.	1,499.
Total Residual Oil Content, Bbls./Acre	2,658.	1,626.	4,077.
Average Effective Permeability, Millidarcys	20.60	11.56	16.50
Average Initial Fluid Production Pressure, p.s.i.	10.0	8.8	9.5

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