

15-003-71963

April 4, 1947

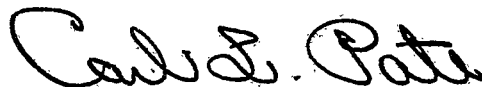
Mr. M. C. Colt  
Iola, Kansas

Gentlemen:

Enclosed herewith is the report of the partial analysis of the No. 6 Baker barrel core taken from your Cochran Lease, Well No. 39A, Anderson County, Kansas and submitted to our laboratory on March 29, 1947.

Very truly yours,

OIL FIELD RESEARCH LABORATORIES



Carl L. Pate

CLP:dt

M. C. COLT, PRODUCER

CORE ANALYSIS REPORT

COCHRAN LEASE                      WELL NO. 39A

ANDERSON COUNTY, KANSAS

OIL FIELD RESEARCH LABORATORIES

CHANUTE, KANSAS

APRIL 4, 1947

M. C. COLT, PRODUCER

CORE ANALYSIS REPORT

GENERAL INFORMATION & SUMMARY

Company: M. C. Colt, Producer  
Lease & Well No: Cochran Well No. 39A  
Location: 20 feet north of south line and 175 feet west of  
38A in the NE $\frac{1}{4}$ , Section 9, T22S, R21E, Anderson  
County, Kansas.

Name of Sand - - - - -	Bartlesville
Top of Core - - - - -	719.08
Top of Sand (according to driller's records) - - - - -	717.08
Bottom of Sand - - - - -	733.18
Bottom of Core - - - - -	735.50
Total feet of Permeable Sand - - - - -	13.78

Distribution of Permeable Sand:

<u>Permeability Range</u> <u>Millidarcys</u>	<u>Feet</u>	<u>Cum. Ft.</u>
0 - 40	1.13	1.13
40 - 60	4.65	5.78
60 - 100	3.08	8.86
100 - 150	2.60	11.46
150 - 200	1.17	12.63
200 & above	1.15	13.78

Average Permeability, Millidarcys - - - - -	91.13
Average Percent Porosity - - - - -	24.08
Average Percent Oil Saturation - - - - -	59.73
Average Oil Content, Bbls./A. Ft. - - - - -	1,108.
Total Oil Content, Bbls./Acre - - - - -	15,274.
Average Percent Oil Recovery by Laboratory Flooding tests-	27.86
Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft. - - - - -	519.

Total Oil Recovery by Laboratory Flooding Tests,  
Bbls./Acre - - - - - 7,148.  
Total Calculated Oil Recovery, Bbls./Acre - - - - - 5,350.  
Recommended Packer Setting, Feet - - - - - 719.00

Note: It was recommended that the hole be plugged back to  
732.50 feet.

FORMATION CORED

The detailed log of the formation cored is as follows:

<u>Depth Interval, Feet</u>	<u>Description</u>
719.08 - 726.05	- Dark fine to medium grained micaceous sandstone.
726.05 - 726.37	- Dark gray laminated micaceous carbonaceous sandstone (some oil).
726.37 - 732.00	- Dark fine to medium grained micaceous sandstone.
732.00 - 733.18	- Dark gray micaceous carbonaceous sandstone.
733.18 - 734.45	- Gray shale.
734.45 - 735.50	- Shale (discarded at well).

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CORE ANALYSIS REPORT

COCHRAN LEASE

WELL NO. 39A

TABLE I

RESULTS OF PERMEABILITY TESTS

<u>Sample No.</u>	<u>Depth, Feet</u>	<u>Permeability, Millidarcys</u>	<u>Feet of Core</u>		<u>Capacity Ft. x Md.</u>
			<u>Ft.</u>	<u>Cum. Ft.</u>	
1	719.33	167.	0.47	0.47	78.49
2	719.86	113.	0.45	0.92	50.85
3	720.25	34.	0.40	1.32	13.60
4	720.58	52.	0.50	1.82	26.00
5	721.20	78.	0.50	2.32	39.00
6	721.65	112.	0.45	2.77	50.40
7	722.13	116.	0.45	3.22	52.20
8	722.60	76.	0.45	3.67	34.20
9	722.93	44.	0.45	4.12	19.80
10	723.35	172.	0.30	4.42	51.60
11	723.71	61.-	0.50	4.92	30.50
12	724.20	165.	0.40	5.32	66.00
13	724.62	61.	0.45	5.77	27.45
14	725.05	261.	0.45	6.22	117.45
15	725.55	212.	0.40	6.62	84.80
16	725.94	57.	0.35	6.97	19.95
17	726.45	35.	0.33	7.30	11.55
18	726.85	46.	0.40	7.70	18.40
19	727.25	70.	0.30	8.00	21.00
20	727.62	99.	0.40	8.40	39.60
21	728.05	50.	0.50	8.90	25.00
22	728.51	44.	0.45	9.35	19.80
23	729.09	43.	0.55	9.90	23.65
24	729.58	149.	0.50	10.40	74.50
25	730.03	42.	0.45	10.85	18.90
26	730.42	105.	0.35	11.20	36.75
27	730.78	202.	0.30	11.50	60.60
28	731.05	17.	0.40	11.90	6.80
29	731.50	122.	0.40	12.30	48.80
30	731.95	59.	0.30	12.60	17.70
31	732.38	54.	0.70	13.30	37.80
32	732.90	68.	0.48	13.78	32.64

M. C. COLT, PRODUCER

CORE ANALYSIS REPORT

COCHRAN LEASE

WELL NO. 39A

TABLE II

SUMMARY OF PERMEABILITY TESTS

<u>Depth Interval, Feet</u>	<u>Feet of Core Analyzed</u>	<u>Average Permeability, Millidarcys</u>	<u>Permeability Capacity, Ft. x Md.</u>
719.08 - 726.05	6.97	109.37	762.29
726.37 - 733.18	6.81	72.46	493.49
719.08 - 733.18	13.78	91.13	1,255.78

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CORE ANALYSIS REPORT

COCHRAN LEASE

WELL NO. 39A

TABLE III

RESULTS OF SATURATION TESTS

<u>Sat. No.</u>	<u>Depth, Feet</u>	<u>Effective Porosity Percent</u>	<u>Percent Oil Saturation</u>	<u>Oil Content, Bbls./A. Ft.</u>	<u>Feet of Core Ft.</u>	<u>Cum. Ft.</u>	<u>Total Oil Content Bbls./Acre</u>
1	719.18	24.6	58.5	1,120	0.72	0.72	805
2	720.42	24.0	71.9	1,341	1.30	2.02	1,730
3	721.85	23.6	68.3	1,254	1.40	3.42	1,758
4	723.10	24.3	69.8	1,320	1.20	4.62	1,582
5	724.35	25.7	43.0	862	1.30	5.92	1,120
6	725.75	25.0	50.9	990	1.05	6.97	1,004
7	726.65	22.7	54.8	967	0.83	7.80	*804
8	727.80	24.2	76.0	1,423	1.20	9.00	1,708
9	728.95	22.4	59.2	1,031	1.10	10.10	1,132
10	730.18	24.5	46.8	893	1.20	11.30	1,007
11	731.18	23.3	62.6	1,134	1.30	12.60	1,473
12	732.52	24.7	50.8	977	1.18	13.78	1,151
Total -----							15,274

M. C. COLT, PRODUCER

CORE ANALYSIS REPORT

COCHRAN LEASE

WELL NO. 39A

TABLE IV

SUMMARY OF SATURATION TESTS

<u>Depth Interval, Feet</u>	<u>Feet of Core Analyzed</u>	<u>Average Percent Porosity</u>	<u>Average Percent Oil Saturation</u>	<u>Average Oil Content, Bbls./A. Ft.</u>	<u>Total Oil Content Bbls./Acre</u>
719.08 - 726.05	6.97	24.49	60.82	1,149	7,999
726.37 - 733.18	6.81	23.67	58.93	1,068	7,275
719.08 - 733.18	13.78	24.08	59.73	1,108	15,274

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CORE ANALYSIS REPORT

COCHRAN LEASE

WELL NO. 39A

TABLE V

RESULTS OF LABORATORY FLOODING TESTS

Sample No.	Depth, Feet	Effective Porosity Percent	Original Oil Saturation Percent	Oil Saturation Bbls./A. Ft.	Oil Recovery		Residual Saturation			Vol. of Water Recovered, cc	Permeability Millidarcys		Initial Fluid Production Pressure Lbs./Sq. In.
					Percent	Bbls./A. Ft.	%Oil	%Water	Bbls./A. Ft.		Dry	Wet	
1	719.18	24.6	58.5	1,120	31.7	607	26.8	53.5	513	326	-	4.14	6
2	720.42	24.0	71.9	1,341	34.7	646	37.2	48.3	695	395	61.	4.38	4
3	721.85	23.6	68.3	1,254	38.1	700	30.2	60.0	554	510	89.	5.55	4
4	723.10	24.3	69.8	1,320	32.6	616	37.2	50.0	704	176	78.	5.77	4
5	724.35	25.7	43.0	862	18.4	368	24.6	55.2	494	84	158.	22.19	4
6	725.75	25.0	50.9	990	25.7	500	25.2	50.4	490	486	94.	6.36	6
7	726.65	22.7	54.8	967	30.4	536	24.4	58.8	431	293	49.	2.64	6
8	727.80	24.2	76.0	1,427	38.2	717	37.8	51.2	710	174	200.	18.31	4
9	728.95	22.4	59.2	1,031	28.0	487	31.2	55.2	544	73	35.	0.88	10
10	730.18	24.5	46.8	893	15.2	290	31.6	48.5	603	233	170.	15.38	6
11	731.18	23.3	62.6	1,132	31.3	566	31.3	57.5	566	344	79.	3.44	10
12	732.52	24.7	50.8	977	10.1	194	40.7	40.1	783	67	32.	0.54	16

Notes: cc - cubic centimeter

\*Volume of water recovered at the time of maximum oil recovery.

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TABLE VI

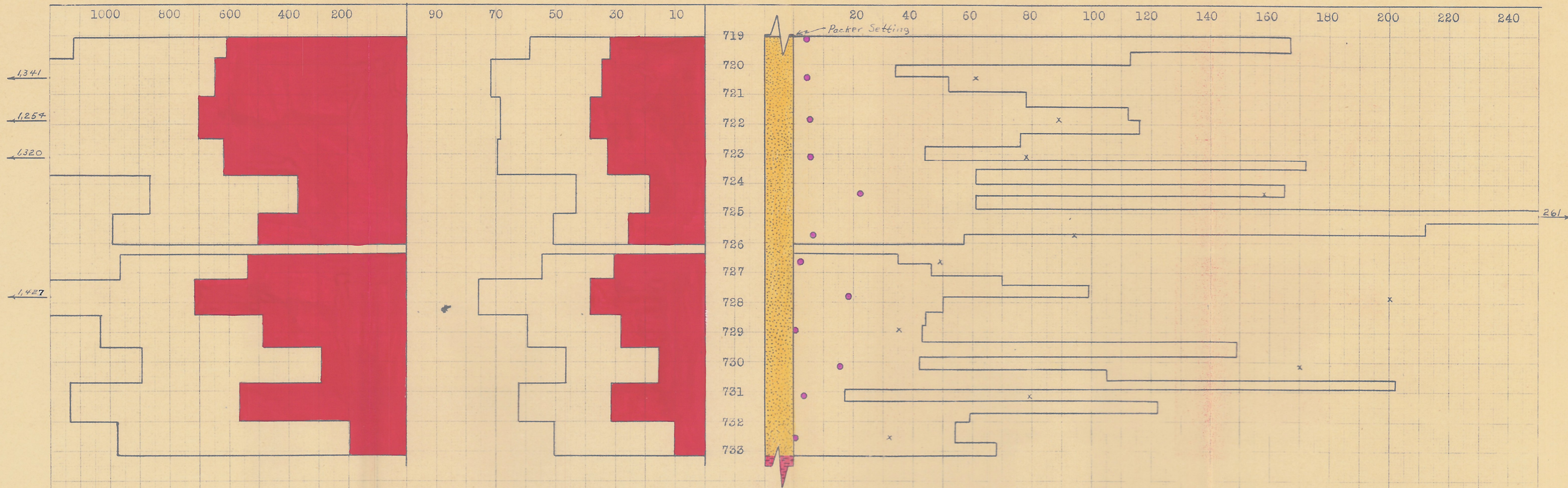
SUMMARY OF LABORATORY FLOODING TESTS

	<u>719.08-726.05</u>	<u>726.37-733.18</u>	<u>719.08-733.18</u>
Depth Interval, Feet			
Feet of Core Analyzed	6.97	6.81	13.78
Average Percent Porosity	24.49	23.67	24.08
Average Percent Original Oil Saturation	60.86	58.59	59.74
Average Percent Oil Recovery	30.32	25.34	27.86
Average Percent Residual Oil Saturation	30.54	33.25	31.88
Average Percent Residual Water Saturation	53.08	51.53	52.31
Average Percent Total Residual Fluid Saturation	83.62	84.78	84.19
Average Original Oil Content, Bbls./A. Ft.	1,154.	1,078.	1,116.
Average Oil Recovery, Bbls./A. Ft.	573.	463.	519.
Average Residual Oil Content, Bbls./A. Ft.	581.	615.	597.
Total Original Oil Content, Bbls./Acre	8,047.	7,342.	15,389.
Total Oil Recovery, Bbls./Acre	3,997.	3,151.	7,148.
Total Residual Oil Content, Bbls./Acre	4,050.	4,191.	8,241.
Average Dry Permeability, Millidarcys	96.21	97.47	96.87
Average Wet Permeability, Millidarcys	8.18	7.18	7.68
Average Initial Fluid Production Pressure, p.s.i.	4.7	8.6	6.7

OIL CONTENT,  
BBLS./A.FT.

OIL SAT.,  
PERCENT

● WET PERMEABILITY, IN MILLIDARCY  
x DRY PERMEABILITY, IN MILLIDARCY



- KEY:
- SANDSTONE
  - CARBONACEOUS SANDSTONE
  - SHALE
  - FLOOD POT RECOVERY
  - x FLOOD POT PERMEABILITY

M. C. COLT, PRODUCER  
COCHRAN LEASE WELL NO. 394  
ANDERSON COUNTY, KANSAS

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE PERCENT OIL SATURATION	AVERAGE OIL CONTENT BBLS./A.FT.	TOTAL OIL CONTENT BBLS./ACRE	AVG. PERMEABILITY, MILLIDARCY
719.08 - 726.05	6.97	60.82	1,149	7,999	109.37
726.37 - 733.18	6.81	58.93	1,068	7,275	72.46
719.08 - 733.18	13.78	59.73	1,108	15,274	91.13

OIL FIELD RESEARCH LABORATORIES  
CHARUTE, KANSAS  
APRIL 3, 1947