July 11, 1947

Mr. M. C. Colt
Iola, Kansas

Dear Sir:

Enclosed herewith is the report of the partial analysis of the No. 6 Baker barrel core taken from your Monroe Lease, Well No. 6A, Anderson County, Kansas and submitted to our laboratory on July 3, 1947.

Very truly yours,

OIL FIELD RESEARCH LABORATORIES

Carl L. Pate

Carl L. Pate

CLP:dt

M. C. COLT, PRODUCER

CORE ANALYSIS REPORT

MONROE LEASE WELL NO. 6A

ANDERSON COUNTY, KANSAS

OIL FIELD RESEARCH LABORATORIES

CHANUTE, KANSAS

JULY 11, 1947

Oil Field Research Laboratories

GENERAL INFORMATION & SUMMARY

Company M. C. Colt, Producer Lease Monroe Well No. 6A

Location E½ of the SE¼

Section 9 Twp. 22S Rge. 21E County Anderson State Kansas

Name of Sand	Bartlesville
Top of Core	694.00
Bottom of Core	733.40
Top of Sand	707.25
Bottom of Sand	728.11
Total Feet of Permeable Sand	19.91

Distribution of Permeable Sand:

Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 25	1.42	1.42
25 - 50	4.08	5.50
50 - 75	4.30	9.80
75 - 100	1.53	11.33
100 - 150	4.76	16.09
150 - 200	2.25	18.34
200 & above	1.57	19.91

Average Permeability, Millidarcys	106.88
Average Percent Porosity	24.13
Average Percent Oil Saturation	43.40
Average Percent Water Saturation	
Average Oil Content, Bbls./A. Ft.	816.
Total Oil Content, Bbls./Acre	15,573.
Average Percent Oil Recovery by Laboratory Flooding Tests	16.90
Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft.	325.
Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre	5,761.
Total Calculated Oil Recovery, Bbls./Acre	3,800.
Packer Setting, Feet	708.5
Viscosity, Centipoises @	
A. P. I. Gravity, degrees @ 60 °F	

Note: It was recommended that the hole be plugged back to 727.5 ft.

FORMATION CORED

The detailed log of the formation cored is as follows:

Depth Interval, Feet	Description
694.00 - 694.48	Finely laminated sandstone and shale.
694.48 - 694.95	Dark fine grained micaceous sandstone (oil).
694.95 - 696.40	Gray shale.
696.40 - 696.86	Dark fine grained micaceous shaley sandstone (oil).
696.86 - 698.60	Gray shale.
698.60 - 699.20	Dark fine grained laminated micaceous sandstone (oil).
699.20 - 700.22	Soft gray shale.
700.22 - 706.81	Gray shale.
706.81 - 707.25	Light brown micaceous shaley sandstone (low oil saturation).
707.25 - 714.61	Brown fine grained micaceous sandstone.
714.61 - 714.74	Gray laminated micaceous carbonaceous sandstone.
714.74 - 724.08	Dark fine grained micaceous sandstone.
724.08 - 725.10	Dark fine grained micaceous carbonaceous sandstone.
725.10 - 726.35	Gray finely laminated micaceous carbonaceous sandstone.
726.35 - 727.72	Dark brown micaceous carbonaceous sandstone.
727.72 - 728.11	Gray micaceous carbonaceous sandstone.
728.11 - 728.92	Gray shale.
728.92 - 733.40	Shale - discarded at well..

Oil Field Research Laboratories

RESULTS OF PERMEABILITY TESTS

TABLE I

Company M. C. Colt, Producer Lease Monroe Well No. 6A

Sample No.	Depth, Feet	Permeability Millidarcys	Feet of Core		Permeability Capacity, Ft. x Md.
			Ft.	Cum. Ft.	
1	706.95	112.	0.44	0.44	49.28
2	707.45	176.	0.25	0.69	44.00
3	707.55	295.	0.40	1.09	118.00
4	708.10	150.	0.40	1.49	60.00
5	708.55	61.	0.40	1.89	24.40
6	708.95	73.	0.50	2.39	36.50
7	709.38	35.	0.40	2.79	14.00
8	709.70	146.	0.30	3.09	43.80
9	710.10	149.	0.40	3.49	59.60
10	710.50	16.	0.40	3.89	6.40
11	710.92	29.	0.50	4.39	14.50
12	711.40	91.	0.40	4.79	36.40
13	711.85	34.	0.30	5.09	10.20
14	712.24	57.	0.50	5.59	28.50
15	712.65	36.	0.40	5.99	14.40
16	713.01	63.	0.40	6.39	25.20
17	713.42	32.	0.50	6.89	16.00
18	713.95	59.	0.40	7.29	23.60
19	714.32	359.	0.51	7.80	183.09
20	714.82	283.	0.26	8.06	73.58
21	715.20	135.	0.40	8.46	54.00
22	715.68	196.	0.40	8.86	78.40
23	716.02	139.	0.45	9.31	62.55
24	716.42	161.	0.45	9.76	72.45
25	716.92	65.	0.40	10.16	26.00
26	717.28	163.	0.40	10.56	65.20
27	717.70	132.	0.45	11.01	59.40
28	718.20	160.	0.45	11.46	72.00
29	718.55	425.	0.40	11.86	170.00
30	718.94	193.	0.30	12.16	57.90
31	719.28	94.	0.40	12.56	37.60
32	719.70	110.	0.40	12.96	44.00
33	720.12	120.	0.40	13.36	48.00
34	720.50	114.	0.40	13.76	45.60
35	720.93	108.	0.50	14.26	54.00
36	721.45	67.	0.45	14.71	30.15
37	721.85	82.	0.35	15.06	28.70
38	722.12	68.	0.35	15.41	23.80
39	722.55	64.	0.45	15.86	28.80
40	723.05	44.	0.50	16.36	22.00

Oil Field Research Laboratories

RESULTS OF PERMEABILITY TESTS

TABLE I

Company M. C. Colt, Producer Lease Monroe Well No. 6A

Sample No.	Depth, Feet	Permeability Millidarcys	Feet of Core		Permeability Capacity, Ft. x Md.
			Ft.	Cum. Ft.	
41	723.55	64.	0.45	16.81	28.80
42	724.00	47.	0.33	17.14	15.51
43	724.57	18.	0.62	17.76	11.16
44	724.85	15.	0.40	18.16	6.00
45	726.50	39.	0.35	18.51	13.65
46	726.90	27.	0.40	18.91	10.80
47	727.36	35.	0.40	19.31	14.00
48	727.67	126.	0.22	19.53	27.72
49	728.02	90.	0.38	19.91	34.20

OIL FIELD RESEARCH LABORATORIES

SUMMARY OF PERMEABILITY TESTS

TABLE II

Company M. C. COLT, PRODUCER Lease MONROE Well No. 6A

Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity, Ft. x Md.
707.25 - 714.61	7.36	103.07	758.59
714.74 - 727.72	11.73	109.27	1,281.77
707.25 - 727.72	19.09	106.88	2,040.36

Oil Field Research Laboratories

RESULTS OF SATURATION TESTS

TABLE III

Company M. C. Colt, Producer Lease Monroe Well No. 6A

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.	
3	707.85	27.4	28.9	-	-	615	0.85	0.85	523
4	709.10	21.8	36.5	-	-	618	1.60	2.45	990
5	710.35	19.5	37.3	-	-	564	1.30	3.75	733
6	711.60	19.7	40.0	-	-	612	0.90	4.65	551
7	712.85	21.3	45.3	-	-	749	1.60	6.25	1,198
8	714.10	27.1	26.6	-	-	559	1.11	7.36	621
9	715.35	26.5	57.4	-	-	1,181	1.26	8.62	1,488
10	716.60	26.4	49.2	-	-	1,009	1.20	9.82	1,211
11	717.85	26.9	53.7	-	-	1,121	1.30	11.12	1,457
12	719.10	23.7	41.4	-	-	760	1.20	12.32	912
13	720.35	25.2	57.0	-	-	1,113	1.30	13.62	1,448
14	721.60	23.2	58.5	-	-	1,052	1.20	14.82	1,262
15	722.85	24.8	36.5	-	-	704	1.88	16.70	1,323
16	724.18	25.4	48.4	-	-	953	1.02	17.72	972
18	726.67	24.6	33.8	-	-	646	1.37	19.09	884
							Total	- - - -	15,573

Oil Field Research Laboratories

SUMMARY OF SATURATION TESTS

TABLE IV

Company M. C. Colt, Producer Lease Monroe Well No. 6A

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
707.25 - 714.61	7.36	22.48	36.62		627	4,616
714.74 - 727.72	11.73	25.17	47.66		934	10,957
707.25 - 727.72	19.09	24.13	43.40		816	15,573

Oil Field Research Laboratories

RESULTS OF LABORATORY FLOODING TESTS

TABLE V

Company M. C. Colt, Producer Lease Monroe Well No. 6A

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	Wet	
3	707.85	27.4	28.9	615	8.9	190	20.0	55.0	425	168	152.	25.02	6
4	709.10	21.8	36.5	618	8.9	151	27.6	63.7	467	426	26.	2.37	14
5	710.35	19.5	37.3	564	6.9	104	30.4	58.4	460	35	19.	0.37	30
6	711.60	19.7	40.0	612	9.8	150	30.2	63.0	462	141	71.	6.56	10
7	712.85	21.3	45.3	749	10.7	177	34.6	55.8	572	126	24.	1.32	22
8	714.10	27.1	26.6	559	6.7	141	19.9	46.7	418	148	-	14.67	6
9	715.35	26.5	57.4	1,181	10.4	214	47.0	39.5	967	146	-	-	8
10	716.60	26.4	49.2	1,009	29.6	607	19.6	57.4	402	336	46.	3.44	10
11	717.85	26.9	53.7	1,121	36.4	760	17.3	60.2	361	171	157.	13.45	6
12	719.10	23.7	41.4	760	20.6	378	20.8	57.3	382	126	15.	0.80	18
13	720.35	25.2	57.0	1,113	37.8	738	19.2	58.2	375	193	81.	7.92	8
14	721.60	23.2	58.5	1,052	25.2	453	33.3	58.3	599	438	-	3.27	10
15	722.85	24.8	36.5	704	14.5	279	22.0	61.2	425	571	104.	4.12	10
16	724.18	25.4	48.4	953	9.0	177	39.4	37.4	776	7	-	0.16	38
18	726.67	24.6	33.8	646	0.0	0	33.8	41.6	646	4	34.	0.052	38

Notes: cc - cubic centimeter
*Volume of water recovered at the time of maximum oil recovery.
Sample No. 9 contained a small crack and this probably accounts for the low recovery.

Oil Field Research Laboratories

SUMMARY OF LABORATORY FLOODING TESTS

TABLE VI

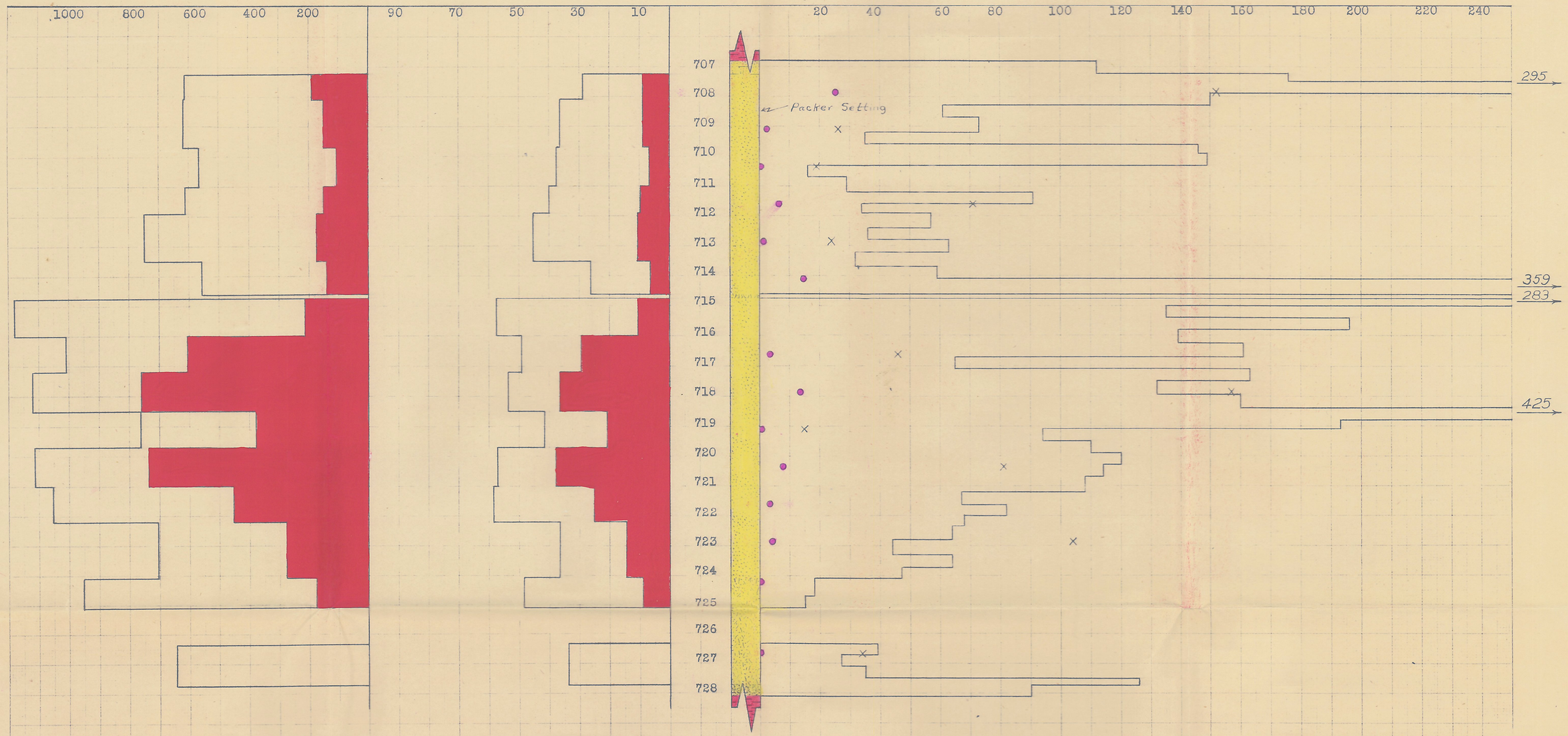
Company M. C. Colt, Producer Lease Monroe Well No. 6A

Depth Interval, Feet	707.25-714.61	714.74-725.10	707.25-725.10
Feet of Core Analyzed	7.36	10.36	17.72
Average Percent Porosity	22.48	25.25	24.10
Average Percent Original Oil Saturation	36.56	49.52	44.10
Average Percent Oil Recovery	8.71	22.81	16.90
Average Percent Residual Oil Saturation	27.85	26.71	27.20
Average Percent Total Residual Fluid Saturation	85.24	81.19	82.88
Average Original Oil Content, Bbls./A. Ft.	626.	971.	828.
Average Oil Recovery, Bbls./A. Ft.	151.	448.	325.
Average Residual Oil Content, Bbls./A. Ft.	475.	523.	503.
Total Original Oil Content, Bbls./Acre	4,614.	10,069.	14,683.
Total Oil Recovery, Bbls./Acre	1,113.	4,648.	5,761.
Total Residual Oil Content, Bbls./Acre	3,501.	5,421.	8,922.
Average Dry Permeability, Millidarcys	47.66	73.15	61.96
Average Wet Permeability, Millidarcys	6.76	4.91	5.74
Average Initial Fluid Production Pressure, p.s.i.	14.7	13.5	14.0

OIL CONTENT,
BBLS./A. FT.

OIL SAT.,
PERCENT

●, WET PERMEABILITY, IN MILLIDARCYS
DRY PERMEABILITY, IN MILLIDARCYS



KEY:
SANDSTONE
CARBONACEOUS SANDSTONE
SHALEY SANDSTONE

SHALE
FLOOD POT RECOVERY
X FLOOD POT PERMEABILITY

M. C. COLT, PRODUCER

MONROE LEASE WELL NO. 6A
ANDERSON COUNTY, KANSAS

DEPTH, IN FEET	FEET OF CORE ANALYZED	AVG. OIL SATURATION PERCENT	AVG. OIL CONTENT BBLS./A. FT.	TOTAL OIL CONTENT BBLS./ACRE	AVG. PERMEABILITY MILLIDARCYS
707.25 - 714.61	7.36	36.62	627	4,616	103.07
714.74 - 727.72	11.73	47.66	934	10,957	109.27
707.25 - 727.72	19.09	43.40	816	15,573	106.88

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CHANUTE, KANSAS
JULY 10, 1947