

13-26-18E

March 4, 1950

**Hauser Oil & Gas Company
Humboldt, Kansas**

Att: Mr. H. L. Hauser

Gentlemen:

Enclosed herewith is the report of the partial analysis of the Keystone barrel core taken from the Hauser Lease, Well No. 9, Allen County, Kansas, and submitted to our laboratory on February 25, 1950.

In calculating the recovery for the sand within the vicinity of this well, an allowance was made for oil lost during coring and it was assumed that the true water saturation of the sand is 35 percent.

Very truly yours,

OIL FIELD RESEARCH LABORATORIES

Carl L. Pate

CLP:bb

c.c.

Hauser 9

HAUSER OIL & GAS COMPANY

CORE ANALYSIS REPORT

HAUSER LEASE

WELL NO. 9

ALLEN COUNTY, KANSAS

OIL FIELD RESEARCH LABORATORIES

CHANDLER, KANSAS

MARCH 4, 1950

Oil Field Research Laboratories

GENERAL INFORMATION & SUMMARY

Company Hausser Oil & Gas Company Lease Hausser Well No. 9

Location _____

Section 13 Twp. 26S Rge. 18E County Allen State Kansas

Name of Sand Bartlesville

Top of Core 810.50

Bottom of Core 837.10

Top of ~~Pay~~ Sand 816.50

Bottom of Sand 834.95

Total Feet of Permeable Sand 15.32

Distribution of Permeable Sand:

Permeability Range Millidarcys	Feet	Cum. Ft.
-----------------------------------	------	----------

Average ~~Effective~~ Permeability, Millidarcys 5.60

Average Percent Porosity 19.45

Average Percent Oil Saturation 35.16

Average Percent Water Saturation -

Average Oil Content, Bbls./A. Ft. 530.

Total Oil Content, Bbls./Acre 7,907.

Average Percent Oil Recovery by Laboratory Flooding Tests 11.24

Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft. 167.

Aotal Oil Recovery by Laboratory Flooding Tests, Bbls./Acre 2,471.

Total Calculated Oil Recovery, Bbls./Acre 4,000.

Primary Production, Bbls./Acre 500.
Packer Setting, Feet 817.0

Viscosity, Centipoises @

A. P. I. Gravity, degrees @ 60 °F

OIL FIELD RESEARCH LABORATORIES

LOG

Company Hauser Oil & Gas Company Lease Hauser Well No. 9

Depth Interval, Description
Feet

810.50 - 810.79 - Gray fine grained laminated micaceous sandstone.
810.79 - 813.50 - Gray fine grained micaceous shaley sandstone.
813.50 - 815.65 - Gray fine grained micaceous slightly shaley sandstone.
815.65 - 816.22 - Gray fine grained micaceous sandstone.
816.22 - 816.35 - Gray shale.
816.35 - 816.50 - Gray fine grained micaceous sandstone.
816.50 - 816.75 - Brown fine grained micaceous sandstone.
816.75 - 817.25 - Laminated sandy shale.
817.25 - 817.65 - Brown fine grained micaceous sandstone.
817.65 - 817.75 - Gray sandy shale.
817.75 - 819.45 - Brown fine grained micaceous sandstone.
819.45 - 821.40 - Dark brown fine grained micaceous sandstone.
821.40 - 821.95 - Brown fine grained micaceous sandstone.
821.95 - 822.10 - Gray sandy shale.
822.10 - 823.60 - Light brown fine grained micaceous slightly shaley sandstone.
823.60 - 826.50 - Dark brown fine grained micaceous sandstone.
826.50 - 826.90 - Gray sandy shale.
826.90 - 827.07 - Brown fine grained micaceous sandstone.
827.07 - 827.20 - Gray sandy shale.
827.20 - 827.35 - Brown fine grained laminated micaceous sandstone.
827.35 - 827.80 - Gray sandy shale.
827.80 - 828.60 - Dark brown fine grained micaceous sandstone.

828.60 - 828.75 - Gray sandy shale.
828.75 - 830.05 - Dark brown fine grained micaceous sandstone.
830.05 - 831.30 - Dark brown fine grained slightly laminated micaceous sandstone.
831.30 - 832.57 - Dark brown fine grained micaceous sandstone.
832.57 - 832.82 - Gray shale.
832.82 - 833.97 - Brown fine grained micaceous sandstone.
833.97 - 834.65 - Gray shale.
834.65 - 834.95 - Brown fine grained micaceous sandstone.
834.95 - 835.85 - Coal.
835.85 - 836.25 - Brown fine grained micaceous sandstone.
836.25 - 837.10 - Gray shale.

Oil Field Research Laboratories

SHOT RECOMMENDATION

Company Hausser Oil & Gas Company Lease Hausser Well No. 9

Depth Interval, Feet	Feet of Sand	Size of Shell Inches	Qts./Ft.	Total Quarts
<u>821.0 - 832.0</u>	<u>11.0</u>	<u>3/4</u>	<u>2.0</u>	<u>22.0</u>

Recommended Packer Setting 817.0 feet.
Note: Plug hole back to 834.0 feet

Oil Field Research Laboratories

RESULTS OF SATURATION TESTS

TABLE III

Company Hauser Oil & Gas Company Lease Hauser Well No. 9

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.	
4	816.57	22.8	32.3	-	-	571	0.25	0.25	143
5	817.83	21.2	33.3	-	-	548	1.05	1.30	576
6	819.07	17.3	39.3	-	-	528	1.05	2.35	555
7	820.03	18.3	39.9	-	-	567	1.25	3.60	708
8	821.32	21.3	28.7	-	-	475	1.25	4.85	593
9	822.57	15.3	27.3	-	-	324	1.50	6.35	466
10	823.96	18.2	36.4	-	-	528	0.95	7.30	502
11	825.13	17.5	40.0	-	-	542	1.15	8.45	623
12	826.22	20.4	32.9	-	-	520	0.80	9.25	416
13	827.26	12.2	30.7	-	-	291	0.15	9.40	44
14	828.43	21.2	34.3	-	-	564	0.80	10.20	452
15	829.46	19.2	42.0	-	-	627	1.30	11.50	815
16	830.72	21.1	37.6	-	-	617	1.25	12.75	771
17	831.96	23.0	33.5	-	-	599	1.27	14.02	761
18	833.53	21.1	32.2	-	-	527	1.15	15.17	605
19	834.83	21.9	34.7	-	-	590	0.30	15.47	177
							Total	- - - -	8,227

Oil Field Research Laboratories

SUMMARY OF SATURATION TESTS

TABLE IV

Company Hauser Oil & Gas Company Lease Hauser Well No. 9

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
816.50-821.95	4.85	19.71	35.09	-	531	2,576
822.10-827.35	4.55	17.23	33.73	-	455	2,071
827.80-834.95	6.07	21.17	36.06	-	590	3,580
817.00-834.00	14.92	19.45	35.16	-	530	7,907

Oil Field Research Laboratories

RESULTS OF LABORATORY FLOODING TESTS

TABLE V

Company Hausser Oil & Gas CompanyLease HausserWell No. 9

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	811.45										Imp.	
2	813.56										0.396	
3	815.27										6.21	
4	816.57	22.8	32.3	571	11.1	196	21.2	65.7	375	106	15.00	10
5	817.83	21.2	33.3	548	14.0	230	19.3	70.0	318	147	6.43	15
6	819.07	17.3	39.3	528	16.0	215	23.3	74.4	313	123	5.55	10
7	820.03	18.3	39.9	567	18.5	263	21.4	74.4	304	129	5.92	15
8	821.32	21.3	28.7	475	8.1	134	20.6	60.2	341	111	8.69	10
9	822.57	15.3	27.3	324	3.3	39	24.0	68.4	285	0	0.024	50
10	823.96	18.2	36.4	528	18.7	264	18.7	70.0	264	10	0.261	20
11	825.13	17.5	40.0	542	17.4	236	22.6	70.2	306	14	0.257	20
12	826.22	20.4	32.9	520	7.6	120	25.3	68.5	400	63	1.82	20
13	827.26	12.2	30.7	291	0.0	0	30.7	62.5	291	0	Imp.	50+
14	828.43	21.2	34.3	564	7.8	128	26.5	64.6	436	150.5	7.72	10
15	829.46	19.2	42.0	627	19.3	288	22.7	67.3	339	98	2.23	10
16	830.72	21.1	37.6	617	8.6	141	29.0	58.1	476	129.5	5.41	15
17	831.96	23.0	33.5	599	4.9	86	28.6	51.7	511	165.5	23.61	5
18	833.53	21.1	32.2	527	3.5	57	28.7	61.2	470	172.5	3.23	10
19	834.83	21.9	34.7	590	3.4	58	31.3	61.1	532	155.0	7.20	10

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.

Oil Field Research Laboratories

SUMMARY OF LABORATORY FLOODING TESTS

TABLE VI

Company	Hauser Oil & Gas Company				Lease	Hauser				Well No.	9					
Depth Interval, Feet	816.50-821.95				822.10-826.50				827.80-834.95				817.00-834.00			
Feet of Core Analyzed	4.85				4.40				6.07				14.77			
Average Percent Porosity	19.71				17.41				21.17				19.53			
Average Percent Original Oil Saturation	35.10				33.84				36.06				35.17			
Average Percent Oil Recovery	13.94				11.11				8.78				11.24			
Average Percent Residual Oil Saturation	21.16				22.73				27.28				23.93			
Average Percent Residual Water Saturation	69.32				68.86				60.33				65.72			
Average Percent Total Residual Fluid Saturation	90.48				91.59				87.61				89.65			
Average Original Oil Content, Bbls./A. Ft.	531.				461.				590.				532.			
Average Oil Recovery, Bbls./A. Ft.	209.				154.				140.				167.			
Average Residual Oil Content, Bbls./A. Ft.	322.				307.				450.				365.			
Total Original Oil Content, Bbls./Acre	2,576.				2,027.				3,580.				7,863.			
Total Oil Recovery, Bbls./Acre	1,013.				677.				847.				2,471.			
Total Residual Oil Content, Bbls./Acre	1,563.				1,350.				2,733.				5,392.			
Average Effective Permeability, Millidarcys	7.13				0.543				8.52				5.60			
Average Initial Fluid Production Pressure, p.s.i.	12.0				27.5				10.0				16.2			

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