



OILFIELD RESEARCH LABORATORIES

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

August 8, 1966

Dr. W. E. Walsh
c/o E. R. Henderson
Downtowner Motel
Ft. Scott, Kansas

Dear Sir:

Enclosed herewith are the results of tests run on the Rotary core taken from the E. F. Wratford Lease, Well No. 1, Bourbon County, Kansas, and submitted to our laboratory on August 3, 1966.

This core was sampled and the samples sealed in cans by a representative of Oilfield Research Laboratories. The well was drilled in virgin territory.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Carl L. Pate

CLP:rf

7 c. - Ft. Scott, Kansas

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GENERAL INFORMATION & SUMMARY

Company	Dr. W. E. Walsh	Lease	E. F. Wratford	Well No.	1
Location	SE SW				
Section	16	Twp	24S	Rge.	25E
County	Bourbon			State	Kansas
Name of Sand	-				Stray
Top of Core	-				295.0
Bottom of Core	-				315.0
Top of Sand	(Cored)				295.0
Bottom of Sand	-				295.7
Total Feet of Permeable Sand	-				0.7
Total Feet of Floodable Sand	-				
Distribution of Permeable Sand:					
Permeability Range	Feet		Cum. Ft.		
Millidarcys					
Average Permeability Millidarcys	-				0.45
Average Percent Porosity	-				15.5
Average Percent Oil Saturation	-				20.0
Average Percent Water Saturation	-				69.6
Average Oil Content, Bbls./A. Ft.	-				243.
Total Oil Content, Bbls./Acre	-				876.
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	-				

GENERAL INFORMATION & SUMMARY

Total Feet of Floodable Sand - - - - -

Cum. Ft.

28.8

Elevation, Feet - - - - -

-LOG-Company Dr. W. E. Walsh Lease E.F. Wratchford Well No. 1Depth Interval, Description
Feet-STRAY SAND-

295.0 - 295.7 - Brown, laminated, shaly sandstone.
295.7 - 299.3 - Gray, finely laminated, sandy shale.
299.3 - 300.0 - Soft gray shale.
300.0 - 315.0 - Shale (discarded at well).

-TUCKER SAND-

327.7 - 339.2 - Brownish gray, slightly shaly sandstone.
339.2 - 347.0 - Brown, fine grained, slightly shaly sandstone.
347.0 - 347.7 - Light brown, shaly sandstone.
347.7 - 347.8 - Shale.
347.8 - 357.5 - Light brown, fine grained, slightly shaly sandstone.
357.5 - 358.8 - Light brown, carbonaceous, shaly sandstone.
358.8 - 359.4 - Coal.
359.4 - 360.2 - Gray shale.
360.2 - 362.0 - Shale (discarded at well).

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Dr. W. E. Walsh Lease E. J. Wratchford 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.		
1	295.1	22.5	22	37	59	-STRAY SAND-	-	0.7	0.7	269	-
2	296.1	13.7	24	73	97		-	0.9	1.6	230	-
3	297.1	13.4	18	78	96		Imp.	1.0	2.6	187	0.00
4	298.1	14.4	17	81	98		0.45	1.0	3.6	190	0.45
1	328.1	17.6	10	43	53	-TUCKER SAND-	9.7	0.9	4.5	122	8.73
2	329.1	16.8	11	55	66		19.	1.0	5.5	143	19.00
3	330.1	15.9	9	53	62		30.	1.0	6.5	111	30.00
4	331.1	12.8	14	82	96		62.	1.0	7.5	139	62.00
5	332.1	19.7	6	81	87		27.	1.0	8.5	92	22.00
6	333.1	18.3	11	80	91		23.	1.0	9.5	156	23.00
7	334.1	19.1	9	69	78		10.	1.0	10.5	133	10.00
8	335.1	17.7	6	77	83		42.	1.0	11.5	82	42.00
9	336.1	19.2	7	86	93		98.	1.0	12.5	104	98.00
10	337.1	18.8	4	83	87		32.	1.0	13.5	58	32.00
11	338.1	18.8	4	86	90		62.	1.0	14.5	58	62.00
12	339.1	19.2	5	75	80		39.	0.6	15.1	44	23.40
13	340.1	19.4	23	46	69		52.	1.4	16.5	484	72.80
14	341.1	19.6	23	52	75		78.	1.0	17.5	350	78.00
15	342.1	19.6	20	56	76		14.	1.0	18.5	304	14.00
16	343.1	19.2	23	54	77		37.	1.0	19.5	342	37.00

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Dr. W. E. Walsh Lease E. F. Wratchford 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.		
17	344.1	20.4	25	39	64	395	19.	1.0	20.5	395	19.00
18	345.1	20.1	29	43	72	451	21.	1.0	21.5	451	21.00
19	346.1	20.7	39	35	74	626	62.	1.0	22.5	626	62.00
20	347.1	20.5	19	51	70	302	21.	1.1	23.6	332	23.10
21	348.1	20.7	25	47	72	401	62.	0.8	24.4	321	50.40
22	349.1	18.8	23	51	74	335	39.	1.0	25.4	335	39.00
23	350.1	19.8	15	54	69	230	42.	1.0	26.4	230	42.00
24	351.1	19.8	15	57	72	230	25.	1.0	27.4	230	25.00
25	352.1	19.9	10	63	73	154	26.	1.0	28.4	154	26.00
26	353.1	20.4	19	53	72	300	15.	1.0	29.4	300	15.00
27	354.1	18.5	26	53	79	373	72.	1.0	30.4	323	72.00
28	355.1	18.7	23	51	74	334	102.	1.0	31.4	334	102.00
29	356.1	18.9	25	46	71	366	23.	1.0	32.4	366	23.00

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company	Dr. W. E. Walsh	Lessee	E. F. Wratchford	Well No.	1		
	Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.			
			<u>--STRAY FORMATION--</u>				
	296.6 - 298.6	1.0	0.45	0.45			
			<u>--TUCKER FORMATION--</u>				
	327.7 - 339.2	11.5	37.6	432.13			
	339.2 - 356.6	17.3	41.7	721.30			
	327.7 - 356.6	28.8	40.1	1,153.43			
	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
			<u>--STRAY FORMATION--</u>				
	295.0 - 298.6	3.6	15.5	20.0	69.6	243	876
			<u>--TUCKER FORMATION--</u>				
	327.7 - 339.2	11.5	17.8	8.1	72.6	108	1,242
	339.2 - 356.6	17.3	19.7	22.4	50.0	340	5,877
	327.7 - 356.6	28.8	18.9	16.7	59.1	247	7,119