

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company Jackson Bros. Lease G. K. Jackson Heirs Well No. 12

Location NW NW NW

Section 23 Twp 25S Rge. 8E County Greenwood State Kansas

Name of Sand - - - - - Bartlesville

Top of Core - - - - - 2376.0

Bottom of Core - - - - - 2379.0

Top of Sand - (Cored) - - - - - 2376.0

Bottom of Sand - - - - - 2378.5

Total Feet of Permeable Sand - - - - - 2.5

Total Feet of Floodable Sand - - - - - 1.6

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
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0 - 5	0.9	0.9
5 & above	1.6	2.5

Average Permeability Millidarcys - - - - - 4.3

Average Percent Porosity - - - - - 15.3

Average Percent Oil Saturation - - - - - 32.3

Average Percent Water Saturation - - - - - 45.1

Average Oil Content, Bbls./A. Ft. - - - - - 412.

Total Oil Content, Bbls./Acre - - - - - 1,029.

Average Percent Oil Recovery by Laboratory Flooding Tests - - - - - 5.0

Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft. - - - - - 58.

Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre - - - - - 92.

Total Calculated Oil Recovery, Bbls./Acre - (Primary) - - - - - 190.

Packer Setting, Feet - - - - -

Viscosity, Centipoises @ - - - - -

A. P. I. Gravity, degrees @ 60 'F - - - - -

Elevation, Feet - - - - -

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Company Jackson Bros. Lease G.K. Jackson Heirs Well No. 12

Depth Interval, Description
Feet

2376.0 - 2378.5 - Brown, slightly shaly sandstone.

2378.5 - 2379.0 - Shale.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE I-B

Company Jackson Bros. Lease G.K. Jackson Heirs Well No. 11

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	2450.1	15.3	18	44	62	214	3.0	0.6	0.6	128	1.80
2	2451.1	16.3	32	47	79	406	12.0	1.0	1.6	406	12.00
3	2452.1	17.2	41	40	81	546	1.7	1.2	2.8	655	2.04
4	2453.7	13.9	32	41	73	344	Imp.	0.5	3.3	172	0.00
5	2458.1	12.1	37	45	82	348	1.7	1.0	4.3	348	1.70
6	2459.1	15.5	23	56	79	276	Imp.	1.0	5.3	276	0.00
7	2460.1	16.3	38	47	85	481	1.3	1.0	6.3	481	1.30
8	2461.1	18.3	23	52	75	326	6.3	1.0	7.3	326	6.30
9	2462.1	15.5	38	50	88	456	2.0	1.0	8.3	456	2.00
10	2463.1	14.9	23	56	79	266	6.2	1.0	9.3	266	6.20
11	2464.1	15.3	28	52	80	332	2.2	1.0	10.3	332	2.20
12	2465.1	17.0	37	50	87	487	5.8	1.0	11.3	487	5.80
13	2466.1	15.1	19	50	69	222	14.	1.0	12.3	222	14.00
14	2467.1	14.6	25	45	70	283	7.6	1.0	13.3	283	7.60
15	2468.1	17.5	33	47	80	448	7.5	1.0	14.3	448	7.50
16	2469.1	20.9	26	45	71	421	141.	1.0	15.3	421	141.00
17	2470.1	18.6	27	45	72	389	23.	1.0	16.3	389	23.00
18	2471.1	17.5	32	54	86	434	15.	1.0	17.3	434	15.00
19	2472.1	16.7	15	48	63	194	21.	1.0	18.3	194	21.00
20	2473.1	18.9	23	51	74	337	35.	1.4	19.7	471	39.00
								Total-----		7,195	

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Jackson Bros. Lease G.K. Jackson Heirs Well No. 12

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	2376.1	14.7	40	47	87	456	5.9	0.6	0.6	273	3.54
2	2377.1	16.7	30	44	74	389	5.7	1.0	1.6	389	5.70
3	2378.1	16.4	32	45	77	408	1.7	0.9	2.5	367	1.53
								Total	-----	1,029	

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RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

Company Jackson Bros. Lease G.K. Jackson Heirs Well No. 12

Sample No.	Depth, Feet	Porosity Percent	Original Oil Saturation		Oil Recovery		Residual Saturation			Volume of Water Recovered cc*	Effective Permeability Millidarcys**	Initial Fluid Production Pressure (Lbs./Sq./In.)
			%	Ebbl./A. Ft.	%	Ebbl./A. Ft.	% Oil	% Water	Ebbl./A. Ft.			
1	2376.1	14.5	40	450	10	112	30	57	338	13	0.30	40
2	2377.1	16.2	30	377	2	25	28	55	352	10	0.20	50
3	2378.1	16.0	30	372	0	0	30	50	372	0	Imp.	-

Note: 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.

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RESULTS OF LABORATORY FLOoding TESTS

TABLE IV

Company Jackson Bros. Well No. 11 Tester G. K. Jackson Heirs

Sample No.	Depth, Feet	Effective Porosity Percent	Original Oil Saturation		Core Recovery		Residual Saturations			Volume of Water Recovered cc ^a	Effective Permeability Millidarcys ^b	Initial Fluid Production Pressure Lbs./Sq. In.
			S	Thin/A.P.	S	Thin/A.P.	S Oil	S Water	Thin/A.P.			
1	2450.1	15.6	19	230	0	0	19	66	230	17	0.625	40
2	2451.1	16.7	32	414	11	142	21	62	272	19	0.875	40
3	2452.1	17.0	40	527	0	0	40	42	527	0	Imp.	-
4	2453.7	14.3	34	377	0	0	34	41	377	0	Imp.	-
5	2458.1	12.4	37	356	9	87	28	68	269	0	0.504	50
6	2459.1	15.2	24	283	0	0	24	58	283	0	Imp.	-
7	2460.1	16.3	39	492	0	0	39	46	492	0	Imp.	-
8	2461.1	18.7	23	333	3	43	20	69	290	10	0.375	40
9	2462.1	16.0	38	471	6	74	32	58	397	4	0.450	50
10	2463.1	15.3	23	273	0	0	23	66	273	3	0.300	50
11	2464.1	15.1	29	340	0	0	29	53	340	0	Imp.	-
12	2465.1	16.7	37	479	20	259	17	82	220	21	0.875	40
13	2466.1	15.4	19	226	2	24	17	73	202	30	0.700	30
14	2467.1	15.0	25	291	3	35	22	66	256	16	0.500	30
15	2468.1	17.3	33	443	16	214	17	74	229	30	1.17	30
16	2469.1	20.4	26	411	7	111	19	77	300	42	1.50	20
17	2470.1	18.9	27	396	12	176	15	78	220	258	14.00	10
18	2471.1	17.9	32	443	16	222	16	74	221	208	5.70	10
19	2472.1	16.4	16	203	0	0	16	72	203	9	0.375	40
20	2473.1	19.3	23	344	6	90	17	69	254	166	4.60	20

Notes: cc—cubic centimeter.

^a—Volume of water recovered at the time of maximum oil recovery.

^b—Determined by passing water through sample which still contains residual oil.

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SUMMARY OF LABORATORY FLOODING TESTS

TABLE V

<u>Company</u> Jackson Bros.	<u>Lease</u> G.K. Jackson Heirs	<u>Well No.</u> 12
<u>Depth Interval, Feet</u>	2376.0 - 2377.6	
<u>Feet of Core Analyzed</u>	1.6	
<u>Average Percent Porosity</u>	15.6	
<u>Average Percent Original Oil Saturation</u>	33.8	
<u>Average Percent Oil Recovery</u>	5.0	
<u>Average Percent Residual Oil Saturation</u>	28.8	
<u>Average Percent Residual Water Saturation</u>	55.8	
<u>Average Percent Total Residual Fluid Saturation</u>	84.6	
<u>Average Original Oil Content, Bbls./A. Ft.</u>	405.	
<u>Average Oil Recovery, Bbls./A. Ft.</u>	58.	
<u>Average Residual Oil Content, Bbls./A. Ft.</u>	347.	
<u>Total Original Oil Content, Bbls./Acre</u>	647.	
<u>Total Oil Recovery, Bbls./Acre</u>	92.	
<u>Total Residual Oil Content, Bbls./Acre</u>	555.	
<u>Average Effective Permeability, Millidarcys</u>	0.24	
<u>Average Initial Fluid Production Pressure, p.s.i.</u>	46.2	

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

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RESULTS OF WATER DIFFERENTIATION TESTS
TABLE VI

Company Jackson Bros. Lease G.K. Jackson Heirs Well No. 12

Sample No.	Depth, Feet	Chloride Content of Brine in Sand ppm	Percent Water Saturation	
			Connate	Drilling & Foreign
1	2376.1	123,100		
2	2377.1	134,700		
3	2378.1	107,700		

Note: ppm -- parts per million

Oilfield Research Laboratories

SUMMARY OF WATER DIFFERENTIATION TESTS

TABLE VII

Company Jackson Bros. Lease G.K. Jackson Heirs Well No. 12

Depth Interval, Feet	Chloride Content of Brine in Sand, ppm	Average Percent Connate Water	Average Percent Drilling & Foreign Water
2376.0 - 2378.5	122,170		

Note: ppm — parts per million.