

OILFIELD RESEARCH LABORATORIES

- REGISTERED ENGINEERS -

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June 5, 1961

C.F. Jones Oil Company
110 South 8th
Fredonia, Kansas

Gentlemen:

Enclosed herewith is the report of the analysis of the rotary core samples taken from the Marhofer Lease, Well No. 1 located in Section 9, T29S, R15E, Wilson County, Kansas. These samples were submitted to our laboratory by Mr. C.F. Jones on May 25, 1961.

In our experience, we have not heard of a name for this sand and consequently, we would call it a stray sand.

Based on the results of the laboratory tests, it appears that approximately 349 barrels of oil per acre foot could be recovered from the vicinity of this well by efficient water-flooding operations. This recovery value times the number of feet of pay sand in the well, would give you the expected recovery per acre.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Benjamin R. Pearman
Benjamin R. Pearman

BRP:rf
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GENERAL INFORMATION & SUMMARY

Company C. F. Jones Oil Co. Lease Marhofer Well No. 1

Location _____

Section 9 Twp. 29S Rge. 15 E County Wilson State Kansas

Name of Sand	Stray
Top of Core	277.0
Bottom of Core	289.0
Top of Sand	277.0
Bottom of Sand	289.0
Total Feet of Permeable Sand	6.0
Total Feet of Floodable Sand	5.0

Distribution of Permeable Sand:
Permeability Range
Millidarcys

Feet

Cum. Ft.

200 - 300	2.0	2.0
300 - 500	2.0	4.0
500 - 900	2.0	6.0

Average Permeability Millidarcys	439.5
Average Percent Porosity	26.3
Average Percent Oil Saturation	28.3
Average Percent Water Saturation	50.7
Average Oil Content, Bbls./A. Ft.	558.
Total Oil Content, Bbls./Acre	3,347.
Average Percent Oil Recovery by Laboratory Flooding Tests	8.2
Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft.	160.
Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre	802.
Total Calculated Oil Recovery, Bbls./Acre	349.
Packer Setting, Feet	
Viscosity, Centipoises @	
A. P. I. Gravity, degrees @ 60 °F	32.0
Elevation, Feet	

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LOG

Company C. F. Jones Oil Co. Lease Marhofer Well No. 1

Depth Interval, Description
Feet

277.0 - 280.0 - Brown sandstone.

280.0 - 283.0 - Brown sandstone.

283.0 - 286.0 - Brown sandstone.

286.0 - 287.0 - Brown sandstone.

287.0 - 289.0 - Gray sandstone.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company C. F. Jones Oil Company Lease Marhofer 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	277.0	25.6	36	43	79	715	858.	1.0	1.0	715	858.00
2	280.0	25.6	30	44	74	596	554.	1.0	2.0	596	554.00
3	283.0	24.6	35	51	86	668	299.	1.0	3.0	668	299.00
4	286.0	25.8	35	47	82	701	302.	1.0	4.0	701	302.00
5	287.0	24.9	32	51	83	619	395.	1.0	5.0	619	395.00
6	289.0	31.0	2	68	70	48	229.	1.0	6.0	48	229.00

SUMMARY OF PERMEABILITY & SATURATION TESTS

Well No. 1

Company	C. F. Jones Oil Co.	Lease	Marhofer	Well No.	I
	Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.	
	277.0 - 289.0	6.0	439.5	2637.00	
	Depth Interval, Feet	Feet of Core Analyzed	Average Percent Water Saturation	Average Oil Content Bbl./A. Ft.	Total Oil Content Bbla./Acres
	277.0 - 289.0	6.0	26.3	50.7	3,347

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RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

Company			C. F. Jones Oil Co.			Lease			Marhofer			Well No.			1		
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.						
			%	Bbbls./A. Ft.	%	Bbbls./A. Ft.	% Oil	% Water				Bbbls./A. Ft.					
1	277.0	25.4	36	710	7	138	29	67	572	240	23.50	10					
2	280.0	25.4	30	591	2	39	28	68	552	194	21.90	10					
3	283.0	24.9	35	676	16	309	19	78	367	316	13.82	10					
4	286.0	25.6	35	695	11	218	24	72	477	475	16.40	10					
5	287.0	25.2	32	625	5	98	27	69	527	425	8.89	10					
6	289.0	30.7	4	95	0	0	4	92	95	222	64.10	5					

Notes: cc—cubic centimeter.

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

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

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SUMMARY OF LABORATORY FLOODING TESTS

TABLE V

Company	C. F. Jones Oil Co.	Lease	Marhofer	Well No.	1
Depth Interval, Feet	277.0 - 287.0				
Feet of Core Analyzed	5.0				
Average Percent Porosity	25.3				
Average Percent Original Oil Saturation	33.6				
Average Percent Oil Recovery	8.2				
Average Percent Residual Oil Saturation	25.4				
Average Percent Residual Water Saturation	70.8				
Average Percent Total Residual Fluid Saturation	96.2				
Average Original Oil Content, Bbls./A. Ft.	659.				
Average Oil Recovery, Bbls./A. Ft.	160.				
Average Residual Oil Content, Bbls./A. Ft.	499.				
Total Original Oil Content, Bbls./Acre	3,297.				
Total Oil Recovery, Bbls./Acre	802.				
Total Residual Oil Content, Bbls./Acre	2,495.				
Average Effective Permeability, Millidarcys	16.90				
Average Initial Fluid Production Pressure, p.s.i.	10.0				

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