

# OILFIELD RESEARCH LABORATORIES

- REGISTERED ENGINEERS -

Chanute, Kansas

December 17, 1962

700 NORTH MISSION  
OKMULGEE, OKLAHOMA  
PHONE: SK 6-4444

536 N. HIGHLAND  
CHANUTE, KANSAS  
PHONE: HE 1-2650

Schermerhorn Oil Corporation  
P.O. Box 287  
Tulsa, Oklahoma

Gentlemen:

Enclosed herewith is the report of the analysis of the Rotary core taken from the Wiggans Lease, Well No. D-24, Wilson County, Kansas, and submitted to our laboratory on December 11, 1962.

In order to keep the expense down on this small number of samples, we are not including a write-up in this analysis. The calculated recovery is 188 barrels per acre from the half a foot of floodable sand analyzed in this core.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

  
Benjamin R. Pearman

BRP:rf

1 c. - Earlton, Kansas

# Oilfield Research Laboratories

## GENERAL INFORMATION & SUMMARY

Company Schermerhorn Oil Corp. Lease Wiggans "D" Well No. D-24  
 Location 825' West of East line & 330' South of North line, SW  
 Section 17 Twp. 28S Rge. 17E County Wilson State Kansas

Name of Sand	Bartlesville
Top of Core	968.0
Bottom of Core	984.0
Top of Sand	975.0
Bottom of Sand	984.2
Total Feet of Permeable Sand	3.7
Total Feet of Floodable Sand	0.5

**Distribution of Permeable Sand:**  
Permeability Range  
Millidarcys

	Feet	Cum. Ft.
0 - 10	2.6	2.6
20 - 85	1.1	3.7

Average Permeability Millidarcys	17.2
Average Percent Porosity	16.7
Average Percent Oil Saturation	41.8
Average Percent Water Saturation	40.4
Average Oil Content, Bbls./A. Ft.	546.
Total Oil Content, Bbls./Acre	2,022.
Average Percent Oil Recovery by Laboratory Flooding Tests	21.0
Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft.	321.
Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre	161.
Total Calculated Oil Recovery, Bbls./Acre	188.
Packer Setting, Feet	
Viscosity, Centipoises @	
A. P. I. Gravity, degrees @ 60 °F	
Elevation, Feet	

## OILFIELD RESEARCH LABORATORIES

-LOG-

Company Schermerhorn Oil Corp. Lease Wiggans Well No. D-24

<u>Depth Interval,</u>	<u>Description</u>
<u>Feet</u>	

968.0 - 972.0	- Sandy shale.
---------------	----------------

972.0 - 974.0	- Laminated sandy shale.
---------------	--------------------------

974.0 - 974.5	- Laminated shaly sandstone.
---------------	------------------------------

974.5 - 975.0	- Laminated sandy shale.
---------------	--------------------------

975.0 - 975.5	- Brown, laminated shaly sandstone.
---------------	-------------------------------------

975.5 - 979.8	- Laminated sandy shale.
---------------	--------------------------

979.8 - 980.3	- Laminated sandstone and shale.
---------------	----------------------------------

980.3 - 981.3	- Dark brown, slightly shaly sandstone.
---------------	---

981.3 - 982.0	- Laminated sandstone and shale.
---------------	----------------------------------

982.0 - 984.2	- Light brown shaly sandstone.
---------------	--------------------------------

984.2 - 984.6	- Dark carbonaceous shaly sandstone.
---------------	--------------------------------------

Oilfield Research Laboratories

RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Schermerhorn Oil Corp.

Lease Wiggans

Well No. D-24

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	975.1	15.7	46	35	81	560	0.34	0.5	0.5	280	0.17
2	980.4	19.0	43	34	77	633	3.0	0.5	1.0	317	1.50
3	981.1	19.5	55	23	78	830	84.	0.5	1.5	415	42.00
4	982.4	15.6	38	45	83	459	1.2	0.8	2.3	367	0.96
5	983.1	15.4	32	57	89	382	5.9	0.8	3.1	306	4.72
6	984.1	16.5	44	36	80	562	24.	0.6	3.7	337	14.40
Total										2,022	

# Oilfield Research Laboratories

## SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company	Lease	Well No.						
Schermerhorn Oil Corp.	Wiggans	D-24						
			Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.		
			975.0 - 984.2	3.7	17.2	63.75		
			Depth Interval, Feet	Feet of Core Analyzed	Average Percent Oil Saturation	Average Percent Water Saturation	Average Oil Content Bbl./A. Ft.	Total Oil Content Bbls./Acre
			975.0 - 984.2	3.7	41.8	40.4	546	2,022

Offfield Research Laboratories

RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

Company Schermerhorn Oil Corp. Lease Wiggins Well No. D-24

Sample No.	Depth, Feet	Effective Porosity Percent	Original Oil Saturation		Oil Recovery		Residual Saturation		Volume of Water Recovered cc <sup>a</sup>	Effective Permeability mDarcy <sup>b,c</sup>	Initial Fluid Production Pressure Lbs./Sq./In.
			%	Bbls./A. Ft.	%	Bbls./A. Ft.	% Oil	% Water			
1	975.1	15.4	48	572	0	0	48	34	0	Imp.	-
2	980.4	18.9	43	630	0	0	43	36	0	Imp.	-
3	981.1	19.7	55	840	21	321	34	60	33	1.01	40
4	982.4	15.6	35	423	0	0	35	49	0	Imp.	-
5	983.1	15.7	33	401	0	0	33	59	0	Imp.	-
6	984.1	16.8	43	560	0	0	43	49	19	0.500	40

Notes: cc—cubic centimeter.

<sup>a</sup>—Volume of water recovered at the time of maximum oil recovery.

<sup>b,c</sup>—Determined by passing water through sample which still contains residual oil.

# Oilfield Research Laboratories

## SUMMARY OF LABORATORY FLOODING TESTS

TABLE V

Company	Schermerhorn Oil Corp.	Lease	Wiggans	Well No.	D-24
Depth Interval, Feet	975.0 - 984.2				
Feet of Core Analyzed	0.5				
Average Percent Porosity	19.7				
Average Percent Original Oil Saturation	55.0				
Average Percent Oil Recovery	21.0				
Average Percent Residual Oil Saturation	34.0				
Average Percent Residual Water Saturation	60.0				
Average Percent Total Residual Fluid Saturation	94.0				
Average Original Oil Content, Bbls./A. Ft.	84.0				
Average Oil Recovery, Bbls./A. Ft.	321.				
Average Residual Oil Content, Bbls./A. Ft.	519.				
Total Original Oil Content, Bbls./Acre	420.				
Total Oil Recovery, Bbls./Acre	160.				
Total Residual Oil Content, Bbls./Acre	260.				
Average Effective Permeability, Millidarcys	1.01				
Average Initial Fluid Production Pressure, p.s.i.	40.				

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