

# OILFIELD RESEARCH LABORATORIES

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- REGISTERED ENGINEERS -

Chanute, Kansas

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January 2, 1962

Union Texas Natural Gas Corporation  
& Layton Oil Company  
P.O. Box 263  
Independence, Kansas

Gentlemen:

Enclosed herewith are the results of tests run on the Rotary core samples taken from the Wiggins "B" Lease, Well No. 18E-10, Allen County, Kansas, and submitted to our laboratory on December 23, 1961.

These samples were sealed in plastic bags and brought in by a representative of the client.

Because of the soft nature of portions of the sand, it was not possible to obtain permeability samples for the entire core.

The description of the core was furnished by a representative of the client.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

  
Benjamin R. Pearman

BRP:rf

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# Oilfield Research Laboratories

## GENERAL INFORMATION & SUMMARY

Union Texas Natural Gas Corp.  
 Company & Layton Oil Co. Lease Wiggins "B" Well No. 18E-10

Location 1330' South of North line & 165' West of East line

Section 10 Twp. 24S Rge. 18E County Allen State Kansas

Name of Sand	-	Bartlesville
Top of Core	-	860.0
Bottom of Core	-	(Received) 899.3
Top of Sand	-	(Tested) 860.0
Bottom of Sand	-	(Tested) 899.3
Total Feet of Permeable Sand	-	(Tested) 14.9
Total Feet of Floodable Sand	-	-

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 100	1.8	1.8
100 - 500	2.1	3.9
500 - 2000	7.5	11.4
2000 - 2500	2.5	13.9
2500 & above	1.0	14.9
Average Permeability Millidarcys	-	1326.0
Average Percent Porosity	-	23.3
Average Percent Oil Saturation	-	48.5
Average Percent Water Saturation	-	27.6
Average Oil Content, Bbls./A. Ft.	-	905.
Total Oil Content, Bbls./Acre	-	19,801.
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	-	-

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LOG

Union Texas Natural Gas Corp.  
Company & Layton Oil Co. Lease Wiggins "B" Well No. 18E-10

<u>Depth Interval,</u> <u>Feet</u>	<u>Description</u>
860.0 - 861.0	- Shaley sandstone.
861.0 - 862.3	- Laminated shale and sandstone.
862.3 - 862.8	- Shale.
862.8 - 866.2	- Brown sandstone.
866.2 - 866.4	- Shale.
866.4 - 866.8	- Brown sandstone.
866.8 - 867.0	- Shale.
867.0 - 868.8	- Brown calcareous sandstone.
868.8 - 869.2	- Shale.
869.2 - 869.8	- Brown sandstone.
869.8 - 869.9	- Shale.
869.9 - 871.7	- Brown sandstone.
871.7 - 875.0	- Loss.
875.0 - 876.5	- Brown sandstone.
876.5 - 879.0	- Gray sandy limestone.
879.0 - 898.0	- Soft brown sandstone.
898.0 - 899.3	- Brown slightly calcareous sandstone.
899.3 - 903.0	- Broken core.

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**RESULTS OF SATURATION & PERMEABILITY TESTS**

TABLE 1-B

Union Texas Natural Gas Corp.  
 & Layton Oil Co.

Lease Wiggins "B"

Well No. 18E-10

Company

Sample No.	Depth, Feet	Effective Porosity Percent	Percent Saturation		Oil Content Bbbls. / A Ft.	Perm., Mill.	Feet of Sand		Total Oil Content	Perm. Capacity Ft. X md.
			Oil	Water			Ft.	Cum. Ft.		
1	860.5	14.5	14	52	158	57.	1.0	1.0	158	57.00
2	863.5	24.5	55	17	1,045	1270.	1.7	2.7	1,778	2159.00
3	865.2	24.3	53	13	1,000	1005.	1.7	4.4	1,700	1709.50
4	867.4	3.4	52	44	137	Imp.	1.0	5.4	137	0.00
5	868.5	6.0	50	41	233	0.49	0.8	6.2	186	0.39
6	869.5	34.2	58	18	1,540	317.	0.6	6.8	924	190.20
7	870.5	29.9	51	18	1,180	2960.	1.0	7.8	1,180	2960.00
8	871.6	21.0	59	26	960	1845.	0.8	8.6	1,768	1476.00
9	875.8	16.4	60	35	764	170.	1.5	10.1	1,145	255.00
10	877.8	5.3	16	47	66	Imp.	1.0	11.1	66	0.00
11	879.1	25.1	50	35	974	2440.	0.5	11.6	487	1220.00
12	881.2	30.4	59	20	1,390	2010.	1.0	12.6	1,390	2010.00
13	883.5	27.9	65	23	1,410	2410.	1.0	13.6	1,410	2410.00
14	889.5	29.0	59	20	1,325	1910.	1.0	14.6	1,325	1910.00
15	892.5	26.8	50	18	1,040	1205.	1.0	15.6	1,040	1205.00
16	893.5	27.2	48	23	1,015	-	1.5	17.1	1,521	-
17	895.5	30.2	40	31	938	-	1.5	18.6	1,409	-
18	896.6	28.6	45	32	1,000	-	2.0	20.6	2,000	-
19	898.5	30.1	44	22	1,030	1505.	0.8	21.4	2,824	1204.00
20	899.1	26.8	34	29	706	1920.	0.5	21.9	353	960.00
							Total		19,801	

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## SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Union Texas Natural Gas Corp.  
& Layton Oil Co.

Company \_\_\_\_\_ Lease Wiggins "B" Well No. 18E-10

Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.
860.0 - 878.5	9.1	969.0	8,807.09
879.0 - 899.3	5.8	1885.0	10,919.00
860.0 - 899.3	14.9	1326.0	19,726.09

  

Depth Interval, Feet	Feet of Core Analyzed	Average Percent Oil Porosity	Average Percent Water Saturation	Average Oil Content Bbl./A. Ft.	Total Oil Content Bbls./Acre
860.0 - 878.5	11.1	18.3	47.5	724	8,042
879.0 - 899.3	10.8	28.4	49.3	1,089	11,759
860.0 - 899.3	21.9	23.3	48.5	905	19,801