

OILFIELD RESEARCH LABORATORIES

813 EAST SIXTH
OKMULGEE, OKLAHOMA
PHONE: 4444

- REGISTERED ENGINEERS -

Chanute, Kansas

586 N. HIGHLAND
CHANUTE, KANSAS
PHONE: 728

January 25, 1961

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

Gentlemen:

Enclosed herewith are the results of permeability and porosity tests run on the 3" Rotary core taken from the Earl Gray Lease, Well No. F-14-30, Woodson County, Kansas, and submitted to our laboratory on January 18, 1961.

This core was submitted to our laboratory by a representative of the client.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES


Fred O. Stenger

FOS:db

5 c.

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company Union Texas Natural Gas Corp.
& Layton Oil Company Lease Earl Gray Well No. F-14-30

Location NE $\frac{1}{4}$

Section 30 Twp. 26S Rge. 17E County Woodson State Kansas

Name of Sand - - - - - Squirrel

Top of Core - - - - - 841.0

Bottom of Core - - - - - 869.0

Pay

Top of/Sand - - - - - 847.0

Pay

Bottom of/Sand - - - - - 861.0

Total Feet of Permeable Sand - - - - - 12.6

Total Feet of Floodable Sand - - - - - -

Distribution of Permeable Sand:
 Permeability Range
 Millidarcys

Feet

Cum. Ft.

0 - 20	7.6	7.6
20 - 50	3.6	11.2
50 & above	1.4	12.6

Average Permeability Millidarcys - - - - - 22.77

Average Percent Porosity - - - - - 16.1

Average Percent Oil Saturation - - - - -

Average Percent Water Saturation - - - - -

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

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

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 - - - - -

LOG

Union Texas Natural Gas Corp.
Company & Layton Oil Company Lease Earl Gray Well No. F-14-30

Depth Interval, Description
Feet

841.0 - 841.2 - Shale.
841.2 - 842.0 - Gray limestone.
842.0 - 842.4 - Brown sandy limestone.
842.4 - 844.5 - Sandy shale.
844.5 - 847.0 - Laminated sandstone and shale.
847.0 - 848.0 - Brown laminated shaley sandstone.
848.0 - 850.6 - Brown slightly shaley sandstone.
850.6 - 851.4 - Sandy shale.
851.4 - 852.0 - Brown shaley sandstone.
852.0 - 852.8 - Sandy shale.
852.8 - 853.6 - Brown laminated shaley sandstone.
853.6 - 854.4 - Laminated sandy shale.
854.4 - 855.0 - Brown sandstone.
855.0 - 857.0 - Brown to dark carbonaceous shaley sandstone.
857.0 - 858.0 - Dark brown shaley sandstone.
858.0 - 861.0 - Dark carbonaceous shaley sandstone.
861.0 - 867.0 - Laminated sandstone and shale.
867.0 - 869.0 - Gray shaley sandstone.

Oilfield Research Laboratories
RESULTS OF PERMEABILITY AND POROSITY TESTS

TABLE I A

Union Texas Natural Gas Corp.
 & Layton Oil Company

Company _____ Lease Earl Gray Well No. F-14-30

Sample No.	Depth, Feet	Permeability Millidarcys	Feet of Core		Permeability Capacity Ft. x Md.	Percent Porosity
			Fl.	Cum. Ft.		
1	842.2	Imp.	0.4	0.4	0.00	-
2	847.4	1.1	1.0	1.4	1.10	12.0
3	848.5	7.8	1.0	2.4	7.80	19.0
4	849.5	4.2	1.0	3.4	42.00	20.7
5	850.5	4.8	0.6	4.0	28.80	21.6
6	851.5	0.84	0.6	4.6	0.50	14.0
7	852.5	Imp.	0.8	5.4	0.00	-
8	853.5	99.	0.8	6.2	79.20	19.9
9	854.5	87.	0.6	6.8	52.20	21.8
10	855.5	Imp.	1.0	7.8	0.00	-
11	856.5	11.2	1.0	8.8	1.20	13.7
12	857.5	6.1	1.0	9.8	6.10	16.0
13	858.5	21.	1.0	10.8	22.00	17.8
14	859.5	17.	1.0	11.8	37.00	17.0
15	860.5	7.1	1.0	12.8	7.10	11.9
16	861.5	Imp.	1.0	13.8	0.00	-
17	862.5	0.95	1.0	14.8	0.95	11.5
18	863.5	Imp.	1.0	15.8	0.00	-
19	864.5	1.0	1.0	16.8	1.00	13.3
20	865.5	Imp.	1.0	17.8	0.00	-
21	866.5	Imp.	1.0	18.8	0.00	-

Oilfield Research Laboratories

SUMMARY OF PERMEABILITY & POROSITY TESTS

TABLE H A

Union Texas Natural Gas Corp.
& Layton Oil Company

Leas

Well No. F-14-30

Depth Interval, Feet	Feet of Core Analyzed	Average Air Permeability, millidarcys	Average Effective Permeability, millidarcys	Permeability Capacity, ft. x Md.	Average Porosity Porosity
847.0 - 861.0	10.6	26.89	-	285.00	16.8
862.0 - 865.0	2.0	0.98	-	1.95	12.4
847.0 - 865.0	12.6	22.77	-	286.95	16.1