

# OILFIELD RESEARCH LABORATORIES

536 NORTH HIGHLAND - CHANUTE, KANSAS 66720 - PHONE (316) 431-2650

December 7, 1982

John Fogarty  
10015 West 92nd Place  
Overland Park, Kansas 66212

Attn: Joan Middleton

Gentlemen:

Enclosed herewith are the results of tests run on the rotary core taken from the Fogarty Lease, Well No. 2, located in Johnson County, Kansas.

The core was sampled and sealed in plastic by a representative of the client and was submitted to our laboratory on December 4, 1982.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Sanford A. Michel

SAM/rmc

5 c to Meadowlark Drilling, Inc.  
Box 16, Industrial Airport, Kansas

**Oilfield Research Laboratories**  
**GENERAL INFORMATION & SUMMARY**

Company John Fogarty Lease Fogarty Well No. 2  
 Location 385' FNL & 165' FEL  
 Section 14 Twp. 13S Rge. 23E County Johnson State Kansas

Elevation, Feet .....

Name of Sand..... Upper Squirrel

Top of Core ..... 643.0

Bottom of Core ..... 663.9

Top of Sand ..... 643.0

Bottom of Sand ..... 663.9

Total Feet of Permeable Sand ..... 20.9

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 5	6.2	6.2
5 - 10	4.0	10.2
10 - 16	3.4	13.6
25 - 45	3.6	17.2
58 - 73	3.7	20.9

Average Permeability Millidarcys ..... 21.3

Average Percent Porosity ..... 19.6

Average Percent Oil Saturation ..... 34.9

Average Percent Water Saturation..... 49.3

Average Oil Content, Bbls./A. Ft. .... 540.

Total Oil Content, Bbls./Acre..... 11,286.

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LOG

Company John Fogarty Lease Fogarty Well No. 2

<u>Depth Interval,</u> <u>Feet</u>	<u>Description</u>
643.0 - 646.6	Brown sandstone.
646.6 - 648.0	Brown slightly shaly sandstone with gray shale and mica partings.
648.0 - 653.2	Grayish brown shaly sandstone with scattered fine gray shale and mica partings.
653.2 - 654.0	Brown sandstone with scattered fine gray shale partings.
654.0 - 656.0	Brown shaly sandstone.
656.0 - 657.0	Brown slightly shaly sandstone.
657.0 - 659.2	Brown sandstone.
659.2 - 659.6	Brown slightly calcareous sandstone with gray shale inclusions.
659.6 - 661.1	Brown sandstone.
661.1 - 661.7	Brown slightly shaly sandstone.
661.7 - 662.5	Brown sandstone.
662.5 - 663.0	Grayish brown micaceous sandstone.
663.0 - 663.9	Brown sandstone.

**Oilfield Research Laboratories**  
**RESULTS OF SATURATION & PERMEABILITY TESTS**

**TABLE 1-B**

Company John Fogarty Lease Fogarty Well No. 2

Sample No.	Depth, Feet	Effective Porosity Percent	Percent Saturation			Oil Content Bbbs. / A Ft.	Perm., Mill.	Feet of Sand		Total Oil Content	Perm. Capacity Ft. X md.
			Oil	Water	Total			Ft.	Cum. Ft.		
1	643.5	22.4	42	35	77	730	44.	1.0	1.0	730	44.00
2	644.5	19.9	48	44	92	741	25.	1.0	2.0	741	25.00
3	645.6	19.7	54	35	89	825	13.	1.0	3.0	825	13.00
4	646.5	23.1	55	39	94	986	13.	0.6	3.6	592	7.80
5	647.6	19.0	34	59	93	501	6.3	1.4	5.0	701	8.82
6	648.5	18.3	33	61	94	469	3.7	1.0	6.0	469	3.70
7	649.5	18.8	15	62	77	219	4.5	1.0	7.0	219	4.50
8	650.7	16.7	6	77	83	78	4.3	1.0	8.0	78	4.30
9	651.6	18.9	23	56	79	337	2.0	1.0	9.0	337	2.00
10	652.6	15.8	29	57	86	356	3.9	1.2	10.2	427	4.68
11	653.5	18.8	29	56	85	423	15.	0.8	11.0	338	12.00
12	654.6	19.6	37	50	87	563	5.0	1.0	12.0	563	5.00
13	655.6	19.5	31	52	83	469	4.9	1.0	13.0	469	4.90
14	656.5	18.6	30	58	88	433	6.3	1.0	14.0	433	6.30
15	657.4	17.7	34	44	78	467	10.	1.0	15.0	467	10.00
16	658.6	22.2	43	35	78	741	28.	1.2	16.2	889	33.60
17	659.5	18.1	56	32	88	786	39.	0.4	16.6	314	15.60
18	660.5	22.0	37	45	82	632	58.	1.5	18.1	948	87.00
19	661.6	18.0	36	49	85	503	6.0	0.6	18.7	302	3.60
20	662.4	18.0	39	49	88	545	60.	0.8	19.5	436	48.00
21	663.4	23.2	40	33	73	720	72.	1.4	20.9	1008	100.80

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## SUMMARY OF PERMEABILITY & SATURATION TESTS

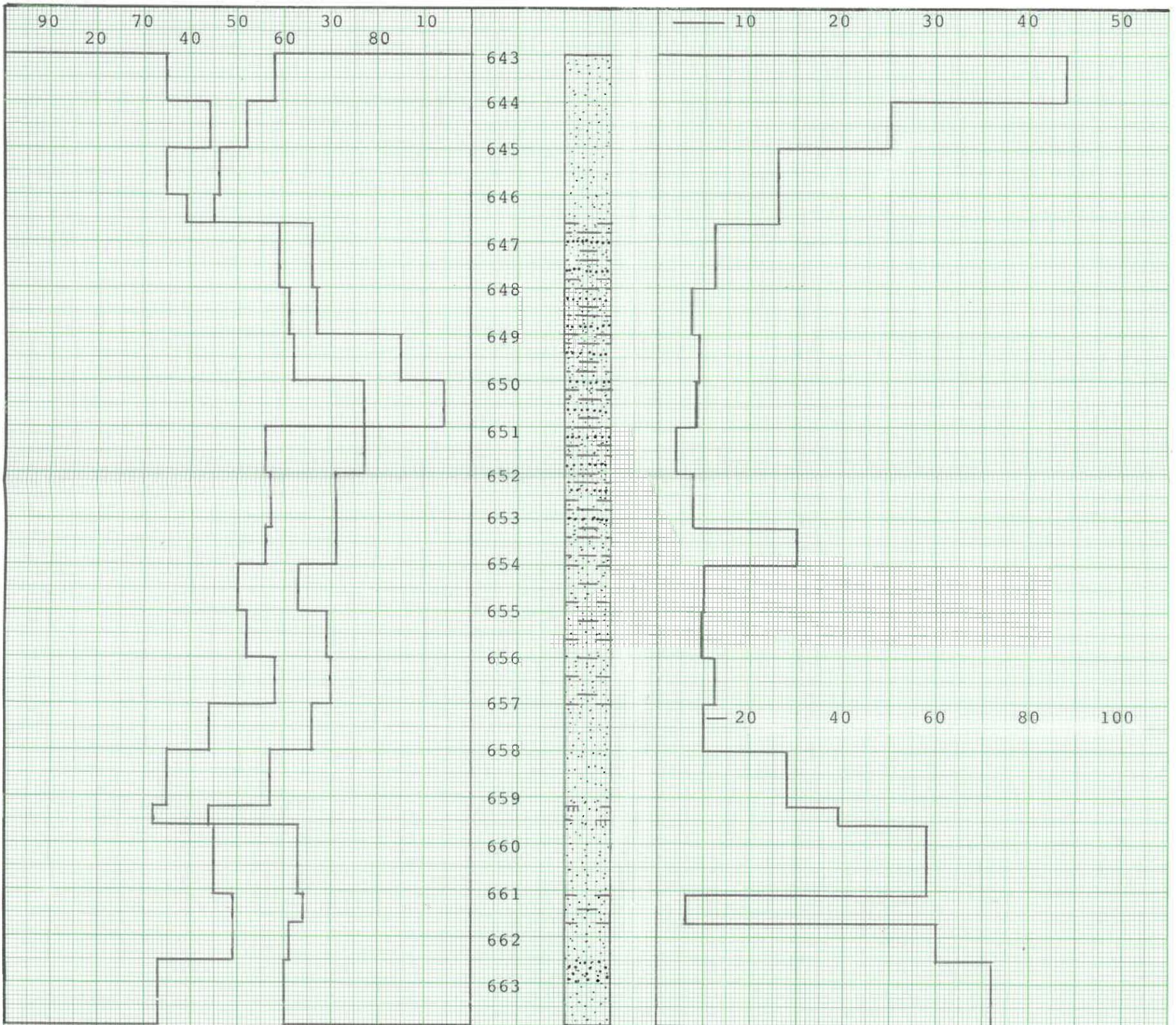
TABLE III

Company	Lease	Well No.			
John Fogarty	Fogarty	2			
Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.		
643.0 - 646.6	3.6	24.9	89.80		
646.6 - 657.0	10.4	5.4	56.20		
657.0 - 663.9	6.9	43.3	298.60		
643.0 - 663.9	20.9	21.3	444.60		
Depth Interval, Feet	Feet of Core Analyzed	Average Percent Porosity	Average Percent Water Saturation	Average Oil Content Bbl./A. Ft.	Total Oil Content Bbls./Acre
643.0 - 646.6	3.6	21.1	38.2	802	2,888
646.6 - 657.0	10.4	18.4	58.8	388	4,034
657.0 - 663.9	6.9	20.6	40.7	632	4,364
643.0 - 663.9	20.9	19.6	49.3	540	11,286

WATER SAT.,  
PERCENT

OIL SAT.,  
PERCENT

PERMEABILITY, IN MILLIDARCYS



KEY:



SANDSTONE



MICACEOUS SANDSTONE



SHALY SANDSTONE



SANDSTONE WITH SHALE PARTINGS



SHALY SANDSTONE WITH SHALE AND MICA PARTINGS



CALCAREOUS SANDSTONE WITH SHALE INCLUSIONS

# JOHN FOGARTY

FOGARTY LEASE

JOHNSON COUNTY, KANSAS

WELL NO. 2

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE PERCENT POROSITY	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVERAGE PERMEABILITY, MILLIDARCYS
643.0 - 646.6	3.6	21.1	49.2	38.2	24.9
646.6 - 657.0	10.4	18.4	27.0	58.8	5.4
657.0 - 663.9	6.9	20.6	39.5	40.7	43.3
643.0 - 663.9	20.9	19.6	34.9	49.3	21.3

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CHANUTE, KANSAS  
DECEMBER, 1982 PDC