

OILFIELD RESEARCH LABORATORIES

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

April 2, 1980

D. Wilson & Associates
1271 Woodall
163 Lower Level
Topeka, Kansas 66604

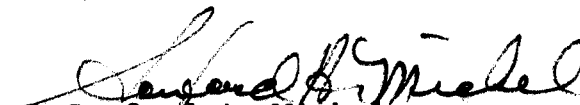
Gentlemen:

Enclosed herewith is the report of the analysis of the rotary core taken from the Miller Lease, Well No. 2, Miami County, Kansas, and submitted to our laboratory on March 7, 1980.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES


Sanford A. Michel

SAM/tem
5 c to Topeka, Kansas

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company D. Wilson & Associates Lease Miller Well No. 2
 Location NW SE NW NW
 Section 21 Twp. 17S Rge. 25E County Miami State Kansas

Elevation, Feet - - - - -
 Name of Sand - - - - - Peru
 Top of Core - - - - - 413.0
 Bottom of Core - - - - - 428.5
 Top of Sand - - - - - 414.6
 Bottom of Sand - - - - - 428.5
 Total Feet of Permeable Sand - - - - - 11.5
 Total Feet of Floodable Sand - - - - - 0.0

Distribution of Permeable Sand:
 Permeability Range
 Millidarcys

Feet

Cum. Ft.

0 - 100	2.9	2.9
100 - 200	3.1	6.0
200 - 300	4.8	10.8
300 - 400	0.7	11.5

Average Permeability Millidarcys - - - - - 160.7
 Average Percent Porosity - - - - - 17.3
 Average Percent Oil Saturation - - - - - 14.5
 Average Percent Water Saturation - - - - - 58.5
 Average Oil Content, Bbls./A. Ft. - - - - - 178.
 Total Oil Content, Bbls./Acre - - - - - 2,166.
 Average Percent Oil Recovery by Laboratory Flooding Tests - - - - - 0
 Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft. - - - - - 0
 Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre - - - - - 0
 Total Calculated Oil Recovery, Bbls./Acre - - - - - 0

-2-

The core was sampled and the samples sealed in plastic bags by a representative of the client. The core was reported to be from a non-virgin area.

Since the core did not respond to floodpot testing, no calculated recovery is given.

FORMATION CORED

The detailed log of the formation cored is as follows:

<u>Depth Interval, Feet</u>	<u>Description</u>
413.0 - 414.6	Gray and brown laminated shale and sandstone.
414.6 - 418.4	Very light brown sandstone.
418.4 - 419.3	Gray limestone.
419.3 - 421.3	Light brown calcareous sandstone.
421.3 - 423.3	Gray very hard very calcareous sandstone.
423.3 - 424.0	Light brown calcareous sandstone.
424.0 - 424.6	Gray limestone.
424.6 - 425.8	Light brown calcareous sandstone.
425.8 - 426.9	Brown and gray laminated calcareous sandstone and shale.
426.9 - 428.5	Brown sandstone.

RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company D. Wilson & Associates Lease Miller Well No. 2

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	415.5	23.6	5	83	88	92	169.	1.4	1.4	129	236.60
2	416.5	22.4	7	76	83	122	163.	1.0	2.4	122	163.00
3	417.5	18.5	3	33	36	43	266.	1.4	3.8	60	372.40
4	418.5	5.0	10	70	80	39	203.	0.9	4.7	35	182.70
5	419.5	21.6	11	83	94	186	346.	0.7	5.4	130	242.20
6	420.5	21.6	10	78	88	168	203.	1.3	6.7	218	263.90
7	421.5	20.0	13	62	75	202	Imp.	0.7	7.4	141	0.00
8	422.5	6.0	14	71	85	65	0.26	1.3	8.7	85	0.34
9	423.5	17.4	23	67	90	311	231.	0.7	9.4	218	161.70
10	424.7	20.5	15	57	72	239	203.	0.5	9.9	120	101.50
11	425.5	21.4	15	81	94	216	118.	0.7	10.6	151	82.60
12	427.8	14.5	42	53	95	473	26.	1.6	12.2	757	41.60

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company	D. Wilson & Associates	Lease	Miller	Well No.	2
Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.		
414.6 - 428.5	11.5	160.7	1,848.54		
Depth Interval, Feet	Feet of Core Analyzed	Average Percent Porosity	Average Percent Oil Saturation	Average Percent Water Saturation	Total Oil Content Bbl./Acre
414.6 - 428.5	12.2	17.3	14.5	58.5	2,166

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RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

Company D. Wilson & Associates

Lease

Miller

Well No.

2

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.
			%	Bbls./A. Ft.	%	Bbls./A. Ft.	% Oil	% Water	Bbls./A. Ft.			
1	415.5	23.3	5	90	0	0	5	80	90	104	38.98	10
2	416.5	22.3	7	121	0	0	7	79	121	165	61.48	10
3	417.5	19.0	3	44	0	0	3	75	44	338	31.86	10
4	418.5	5.0	10	39	0	0	10	72	39	0	Imp.	-
5	419.5	21.4	11	183	0	0	11	77	183	131	48.73	10
6	420.5	22.0	9	154	0	0	9	80	154	176	65.97	10
7	421.5	19.6	12	182	0	0	12	68	182	0	Imp.	-
8	422.5	5.7	15	66	0	0	15	74	66	0	Imp.	-
9	423.5	17.1	23	305	0	0	23	73	305	239	13.24	10
10	424.7	20.4	15	237	0	0	15	72	237	261	26.24	10
11	425.5	21.4	15	249	0	0	15	80	249	268	24.37	10
12	427.8	15.0	40	465	0	0	40	55	465	0	Imp.	-

Notes: cc—cubic centimeter.

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

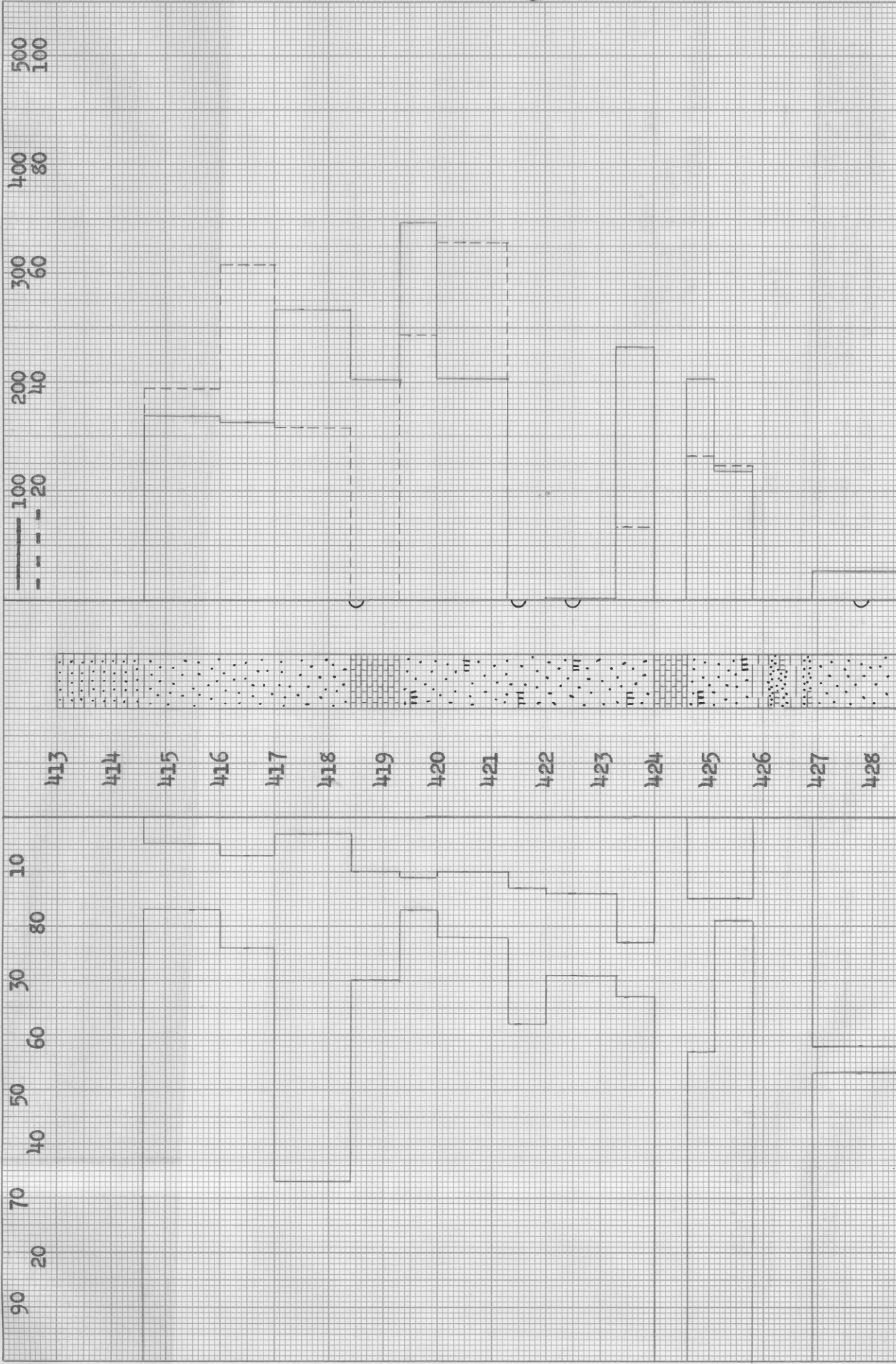
**—Determined by passing water through sample which still contains residual oil.

WATER SAT.,
PERCENT

OIL SAT.,
PERCENT

PERMEABILITY, IN MILLIDARCYS

EFFECTIVE PERMEABILITY TO WATER, IN MILLIDARCYS



KEY:

SANDSTONE

CALCAREOUS SANDSTONE

427

428

KEY:



SANDSTONE



CALCAREOUS SANDSTONE



LAMINATED SANDSTONE AND SHALE



LAMINATED CALCAREOUS SANDSTONE AND SHALE



LIMESTONE



IMPERMEABLE TO WATER

D. WILSON AND ASSOC.

MILLER LEASE

MIAMI COUNTY, KANSAS

WELL NO. 2

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE		AVG. OIL		AVG. WATER		AVERAGE		CALCULATED
		PERCENT	POROSITY	SATURATION	PERCENT	SATURATION	PERCENT	PERMEABILITY,	RECOVERY,	
								MILLIDARCS	BBS./ACRE	

414.6 - 428.5

12.2

17.3

14.5

58.5

160.7

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CHANUTE, KANSAS
APRIL, 1980. HR