

OILFIELD RESEARCH LABORATORIES

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

March 17, 1980

F. C. Oil Company
P.O. Box 24
Ottawa, Kansas 66067

Gentlemen:

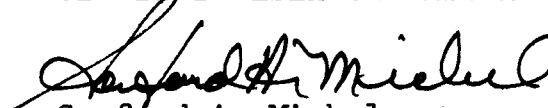
Enclosed herewith are the results of tests run on the rotary cores taken from the A. Caylor Lease, Well No. 4, Miami County, Kansas and submitted to our laboratory on February 28, 1980.

The cores were sampled and sealed in plastic bags by a representative of the client.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES


Sanford A. Michel

SAM/kas
5 c to Ottawa, Kansas

T175, R22E, Sec 31

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company F. C. Oil Company Lease A. Caylor Well No. 4

Location _____

Section - Twp. - Rge. - County Miami State Kansas

Elevation, Feet		
Name of Sand	Peru	Squirrel
Top of Core	316.0	476.0
Bottom of Core	335.0	496.0
Top of Sand	316.0	476.0
Bottom of Sand	330.8	485.8
Total Feet of Permeable Sand	13.2	7.8

Distribution of Permeable Sand:
Permeability Range
Millidarcys

Feet

Cum. Ft.

PERU SAND

0 - 10	7.4	7.4
20 - 30	1.9	9.3
50 & Above	3.9	13.2

SQUIRREL SAND

0 - 2	2.3	2.3
2 - 4	1.7	4.0
4 - 6	2.8	6.8
6 & Above	1.0	7.8

Average Permeability Millidarcys	26.3	3.7
Average Percent Porosity	18.0	18.1
Average Percent Oil Saturation	33.7	34.1
Average Percent Water Saturation	45.2	35.6
Average Oil Content, Bbls./A. Ft.	455.	474.
Total Oil Content, Bbls./Acre	6,555.	3,697.

LOGName F. C. Oil Company Lease A. Caylor Well No. 4

<u>Depth Interval, Feet</u>	<u>Description</u>
	<u>PERU SAND</u>
316.0 - 316.4	Grayish brown shaly calcareous sandstone.
316.4 - 319.3	Brown calcareous sandstone.
319.3 - 319.9	Grayish brown shaly calcareous sandstone.
319.9 - 321.0	Brown calcareous sandstone.
321.0 - 322.2	Hard grayish brown very calcareous shaly sandstone.
322.2 - 322.8	Grayish brown shaly calcareous sandstone.
322.8 - 324.2	Brown shaly calcareous sandstone.
324.2 - 326.0	Brown calcareous sandstone.
326.0 - 330.8	Brown shaly calcareous sandstone.
330.8 - 331.2	Gray sandy shale.
331.2 - 335.0	Hard gray limestone.
	<u>SQUIRREL SAND</u>
476.0 - 479.3	Grayish brown shaly sandstone.
479.3 - 481.0	Brown shaly sandstone.
481.0 - 481.8	Gray sandy shale.
481.8 - 482.6	Brown shaly sandstone.
482.6 - 485.8	Grayish brown very shaly sandstone.
485.8 - 496.0	Gray sandy shale.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE I-B

Company F. C. C. Oil Company

Lease A. Caylor

Well No. 4

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.		
						<u>PERU SAND</u>					
1	316.5	21.3	20	53	73	331	52.	1.0	331	52.00	
2	317.5	19.2	37	32	69	551	24.	1.0	551	24.00	
3	318.5	14.6	49	35	84	555	27.	0.9	500	24.30	
4	319.5	19.3	26	60	66	389	0.89	0.6	233	0.53	
5	320.5	20.8	41	38	79	662	92.	4.6	728	101.20	
6	321.5	7.1	49	48	97	270	Imp.	1.2	324	0.00	
7	322.5	19.6	33	44	77	502	0.24	0.6	301	0.14	
8	323.5	18.9	34	50	84	499	9.9	1.4	699	13.86	
9	324.5	17.6	40	22	62	546	56.	0.8	437	44.80	
10	325.5	19.0	18	57	75	265	62.	1.0	265	62.00	
11	326.5	18.9	38	35	73	557	0.34	1.0	557	0.34	
12	327.5	20.8	28	51	79	452	5.8	1.0	452	5.80	
13	328.5	20.9	36	38	74	584	9.9	1.0	584	9.90	
14	329.5	18.9	27	49	76	396	3.8	1.0	396	3.80	
15	330.5	14.4	22	68	90	246	5.2	0.8	197	4.16	
						<u>SQUIRREL SAND</u>					
1	476.3	16.7	36	34	70	466	8.0	1.0	466	8.00	
2	477.3	17.5	40	31	71	543	3.1	1.0	543	3.10	
3	478.5	19.4	38	26	64	572	0.17	1.3	744	0.22	
4	479.8	19.6	34	27	61	517	3.9	0.7	362	2.73	
5	480.9	15.6	42	44	86	508	5.8	1.0	508	5.80	
6	482.0	20.1	20	47	67	312	4.3	0.8	250	3.44	
7	484.5	18.6	27	39	66	390	4.5	1.0	390	4.50	
8	485.5	17.5	32	39	71	434	1.4	1.0	434	1.40	

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

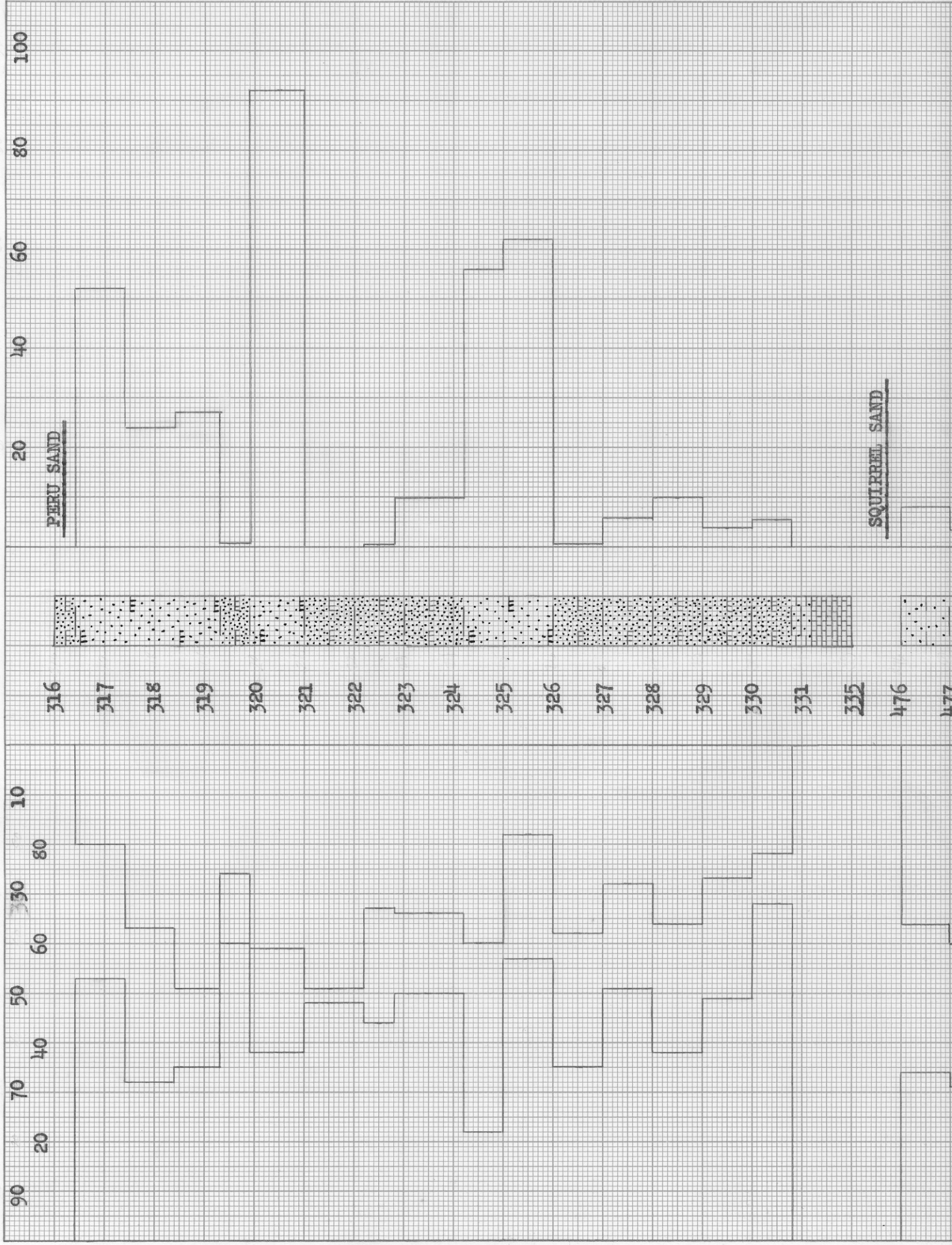
Company F. C. Oil Company Lease A. Caylor Well No. 4

Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.	Depth Interval, Feet	Feet of Core Analyzed	Average Percent Porosity	Average Percent Oil Saturation	Average Percent Water Saturation	Average Oil Content Bbl./A. Ft.	Total Oil Content Bbls./Acre
316.4 - 330.8	13.2	26.3	346.83	<u>PERU SAND</u>						
476.0 - 485.8	7.8	3.7	29.19	<u>SQUIRREL SAND</u>						
316.4 - 330.8	14.4					18.0	33.7	45.2	455	6,555
476.0 - 485.8	7.8					18.1	34.1	35.6	474	3,697

WATER SAT.,
PERCENT

OIL SAT.,
PERCENT

PERMEABILITY, IN MILLIDARCS

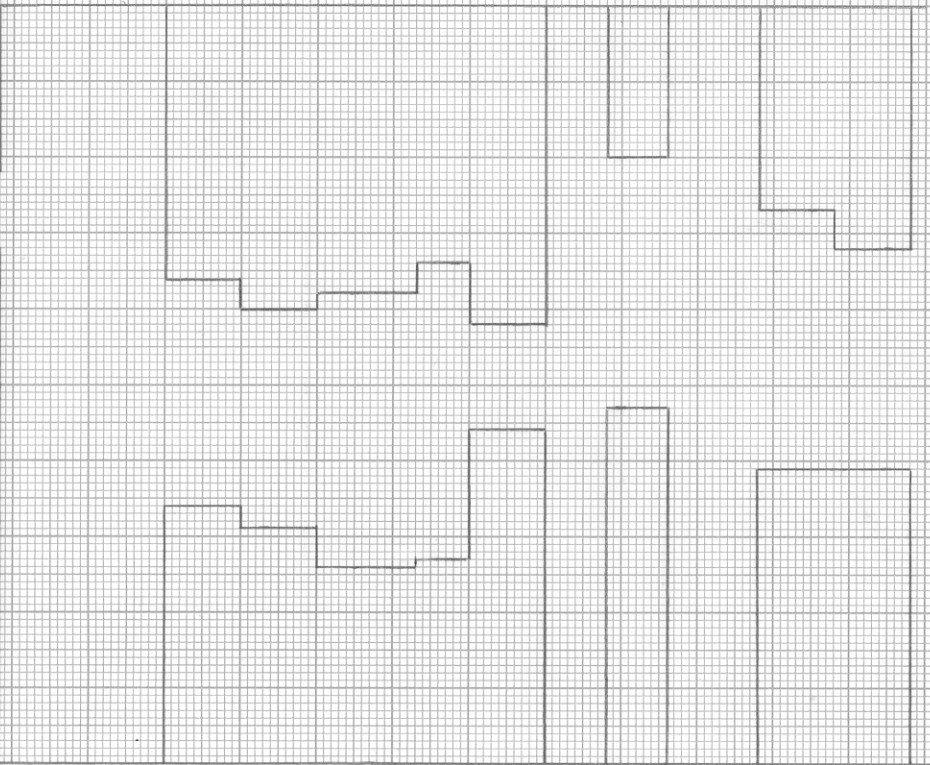


F.C. OIL COMPANY




A. CAYLOR LEASE
MIAMI COUNTY, KANSAS
WELL NO. 4



SQUIRREL SAND

331
335
476
477
478
479
480
481
482
483
484
485
496



KEY:

-  SHALY SANDSTONE
-  CALCAREOUS SANDSTONE
-  LIMESTONE

-  CALCAREOUS SHALY SANDSTONE
-  SANDY SHALE

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE POROSITY PERCENT	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVERAGE PERMEABILITY, MILLIDARCS
316.4 - 330.8	14.4	18.0	33.7	45.2	26.3

PERU SAND

CALCAREOUS SANDSTONE

SANDY SHALE

LIMESTONE

F.C. OIL COMPANY

A. CAYLOR LEASE

WELL NO. 4

MIAMI COUNTY, KANSAS

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE PERCENT POROSITY	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVERAGE PERMEABILITY, MILLIDARCS
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PERU SAND

316.4 - 330.8	14.4	18.0	33.7	45.2	26.3
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SQUIRREL SAND

476.0 - 485.8	7.8	18.1	34.1	35.6	3.7
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OILFIELD RESEARCH LABORATORIES
 CHANUTE, KANSAS
 MARCH, 1980. HMR