

OILFIELD RESEARCH LABORATORIES

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

May 22, 1980

Timoco-Timroth Enterprises
Box 41
Yates Center, Kansas 66783

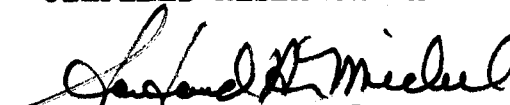
Gentlemen:

Enclosed herewith is the report of the analysis of the rotary core taken from the Allison Lease, Well No. 2, Woodson County, Kansas and submitted to our laboratory on April 23, 1980.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES


Sanford A. Michel

SAM/kas
5 c to Yates Center, Kansas

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company Timoco-Timroth Enterprises Lease Allison Well No. 2

Location 990' WEL & 330' SNL - SE $\frac{1}{4}$

Section 27 Twp. 25S Rge. 15E County Woodson State Kansas

Elevation, Feet - - - - -

Name of Sand - - - - - Squirrel

Top of Core - - - - - 1070.0

Bottom of Core - - - - - 1121.0

Top of Sand - - - - - 1070.0

Bottom of Sand - - - - - (Tested) 1120.0

Total Feet of Permeable Sand - - - - - (Tested) 8.6

Total Feet of Floodable Sand - - - - - (Tested) 0.0

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
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0 - 1	2.0	2.0
1 - 5	5.4	7.4
5 - 10	1.2	8.6

Average Permeability Millidarcys - - - - - 2.8

Average Percent Porosity - - - - - 14.9

Average Percent Oil Saturation - - - - - 35.4

Average Percent Water Saturation - - - - - 47.7

Average Oil Content, Bbls./A. Ft. - - - - - 422.

Total Oil Content, Bbls./Acre - - - - - 4,011.

Average Percent Oil Recovery by Laboratory Flooding Tests - - - - - 0.0

Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft. - - - - - 0.0

Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre - - - - - 0.0

Total Calculated Oil Recovery, Bbls./Acre - - - - - 0.0

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The core was sampled and the samples sealed in plastic bags by a representative of the client. Fresh water mud was used as a drilling fluid. The core was reported to be from a 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>
1070.0 - 1070.9	Grayish brown very shaly sandstone.
1070.9 - 1074.2	Brown shaly sandstone.
1074.2 - 1074.9	Gray shale.
1074.9 - 1076.9	Brown and gray laminated sandstone and shale.
1076.9 - 1080.0	Gray shale.
1109.0 - 1115.0	Gray shale.
1115.0 - 1118.3	Gray and brown slightly calcareous laminated shale and sandstone.
1118.3 - 1121.0	Grayish brown shaly sandstone.

RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Timoco - Timroth Enterprises Lease Allison

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	1070.2	14.5	11	80	91	124	Imp.	0.9	0.9	112	0.00
2	1071.1	16.8	26	61	87	339	3.3	1.1	2.0	373	3.63
3	1072.1	11.0	53	39	92	452	0.41	0.5	2.5	226	0.21
4	1072.9	18.1	67	27	94	941	1.7	0.5	3.0	471	0.85
5	1073.9	15.2	31	55	86	366	6.3	1.2	4.2	439	7.56
6	1075.2	16.5	51	37	88	653	2.0	1.1	5.3	718	2.20
7	1076.1	17.0	44	41	85	580	0.56	0.5	5.8	290	0.28
8	1076.8	15.8	24	53	77	294	1.7	0.4	6.2	118	0.69
9	1115.5	13.1	16	56	72	163	3.7	1.0	7.2	163	3.70
10	1117.3	15.8	50	37	87	613	0.98	1.0	8.2	613	0.98
11	1118.1	15.0	53	28	81	617	2.3	0.3	8.5	185	0.69
12	1119.5	12.6	31	31	62	303	3.1	1.0	9.5	303	3.10

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company	Lease	Well No.	Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.
Timoco-Timroth Enterprises	Allison	2	1070.0 - 1076.9	5.3	2.9	15.43
			1115.0 - 1120.0	3.3	2.6	8.47
			1070.0 - 1120.0	8.6	2.8	23.89

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 Bbbl./Acre
1070.0 - 1076.9	6.2	15.4	36.0	51.7	443.	2,747
1115.0 - 1120.0	3.3	13.9	34.2	40.1	383.	1,264
1070.0 - 1120.0	9.5	14.9	35.4	47.7	422.	4,011

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RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

Company Timoco-Timroth Enterprises Lease Allison 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	1070.2	15.0	10	116	0	0	10	82	116	0	Imp.	-
2	1071.1	16.6	26	335	0	0	26	63	335	0	Imp.	-
3	1072.1	11.0	53	452	0	0	53	39	452	0	Imp.	-
4	1072.9	17.7	68	934	0	0	68	28	934	0	Imp.	-
5	1073.9	15.4	31	370	0	0	31	55	370	0	Imp.	-
6	1075.2	16.4	51	649	0	0	50	39	649	0	Imp.	-
7	1076.1	16.8	43	560	0	0	43	44	560	0	Imp.	-
8	1076.8	16.0	24	298	0	0	24	54	298	0	Imp.	-
9	1115.5	13.5	15	157	0	0	15	59	157	0	Imp.	-
10	1117.3	15.3	51	605	0	0	51	39	605	0	Imp.	-
11	1118.1	15.3	52	617	0	0	52	30	617	0	Imp.	-
12	1119.5	13.0	30	303	0	0	30	34	303	0	Imp.	-

Notes: cc—cubic centimeter.

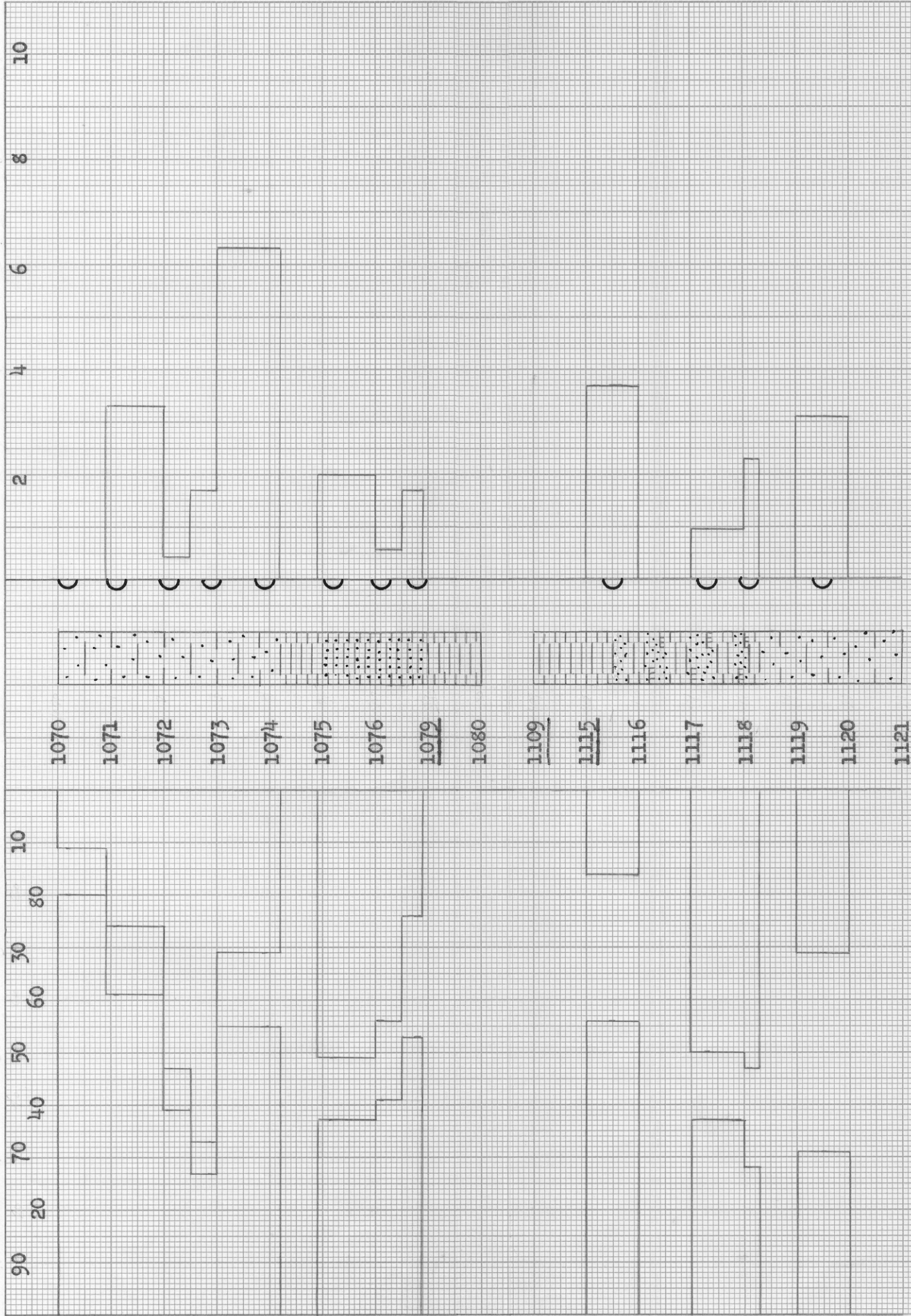
*—Volume of water recovered at the time of maximum oil recovery.

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



WATER SAT., PERCENT \leftarrow


PERMEABILITY, IN MILLIDARCYS \leftarrow


OIL SAT., PERCENT \leftarrow




KEY:

 LAMINATED SANDSTONE AND SHALE
 IMPERMEABLE TO WATER

 SHALY SANDSTONE

 SANDY SHALE

 LAMINATED CALCAREOUS SANDSTONE AND SHALE

TIMOCO - TIMROTH ENTERPRISES

WELL NO. 2

ALLISON LEASE

WOODSON COUNTY, KANSAS

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE POROSITY PERCENT	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVERAGE PERMEABILITY, MILLIDARCS	CALCULATED OIL RECOVERY BBL./ACRE
1070.0 - 1076.9	6.2	15.4	36.0	51.7	2.9	
1115.0 - 1120.0	3.3	13.9	34.2	40.1	2.6	
1070.0 - 1120.0	9.5	14.9	35.4	47.7	2.8	--

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