

OILFIELD RESEARCH LABORATORIES

536 NORTH HIGHLAND - CHANUTE, KANSAS - PHONE HE1-2650

January 31, 1968

G. M. Smith
260 N. Terrace Drive
Wichita, Kansas 67200

Gentlemen:

Enclosed herewith are the results of tests run on the Rotary cores taken from the E. Light Lease, Well No. 2-B, Woodson County, Kansas, and submitted to our laboratory on January 24, 1968.

These cores were sampled and the samples were sealed in plastic bags by a representative of Oilfield Research Laboratories.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Carl L. Pate

4 c. - Wichita, Kansas
1 c. - Yates Center, Kansas

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company G. M. Smith Lease E. Light Well No. 2-B

Location 660' NSL & 220' WEL, NE/4

Section 17 Twp. 25S Rge. 16E County Woodson State Kansas

Name of Sand - - - - - Upper Squirrel

Top of Core - - - - - 875.5

Bottom of Core - - - - - 889.5

Top of Sand - (Cored) - - - - - 875.5

Bottom of Sand - - - - - 885.5

Total Feet of Permeable Sand - - - - - 9.6

Total Feet of Floodable Sand - - - - - -

Distribution of Permeable Sand:
Permeability Range
Millidarcys

Feet

Cum. Ft.

0 - 1	1.8	1.8
1 - 2	3.4	5.2
2 - 3	2.0	7.2
3 & above	2.4	9.6

Average Permeability Millidarcys - - - - - 2.0

Average Percent Porosity - - - - - 17.0

Average Percent Oil Saturation - - - - - 53.3

Average Percent Water Saturation - - - - - 35.1

Average Oil Content, Bbls./A. Ft. - - - - - 694.

Total Oil Content, Bbls./Acre - - - - - 6,659.

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 - - - - -

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company G. M. Smith Lease E. Light Well No. 2-B

Location 660' NSL & 220' WEL, NE/4

Section 17 Twp. 25S Rge. 16E County Woodson State Kansas

Name of Sand - - - - - Lower Squirrel

Top of Core - - - - - 921.5

Bottom of Core - - - - - 936.5

Top of Sand - - (Cored) - - - - - 921.5

Bottom of Sand - - - - - 928.5

Total Feet of Permeable Sand - - - - - 7.0

Total Feet of Floodable Sand - - - - - -

Distribution of Permeable Sand:
Permeability Range
Millidarcys

Feet

Cum. Ft.

0 - 25	2.9	2.9
25 - 50	2.1	5.0
50 & above	2.0	7.0

Average Permeability Millidarcys - - - - - 36.4

Average Percent Porosity - - - - - 18.6

Average Percent Oil Saturation - - - - - 62.7

Average Percent Water Saturation - - - - - 19.4

Average Oil Content, Bbls./A. Ft. - - - - - 867.

Total Oil Content, Bbls./Acre - - - - - 6,068.

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 - - - - -

OILFIELD RESEARCH LABORATORIES

- LOG -

Company G. M. Smith Lease E. Light Well NO. 2-B

Depth Interval, Description
Feet

UPPER SQUIRREL SAND

875.0 - 880.7 - Brown laminated shaly sandstone.
880.7 - 881.1 - Alternate thin layers of sandstone and shale.
881.1 - 882.9 - Brown finely laminated sandstone and shale.
882.9 - 885.5 - Brown laminated shaly sandstone.
885.5 - 886.1 - Gray sandy shale.
886.1 - 889.5 - Sandy shale (discarded at well).

LOWER SQUIRREL SAND

921.5 - 927.2 - Dark brown sandstone.
927.2 - 928.5 - Dark brown shaly sandstone.
928.5 - 930.3 - Gray sandy shale.
930.3 - 936.5 - Sandy shale (discarded at well).

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company G. M. Smith Lease E. Light Well No. 2-B

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			Ft.	Cum. Ft.		
1	875.6	17.3	46	24	70	1.8	0.6	0.6	432	1.26
2	876.6	18.1	61	25	86	3.0	1.0	1.6	857	3.00
3	877.6	18.1	53	29	82	2.7	1.0	2.6	745	2.70
4	878.6	17.0	56	31	87	2.5	1.0	3.6	739	2.50
5	879.6	15.0	53	44	97	1.3	1.0	4.6	617	1.30
6	880.6	14.6	53	41	94	1.3	0.6	5.2	421	0.78
7	881.6	14.9	33	52	85	0.93	1.0	6.2	382	0.93
8	882.6	18.2	52	33	85	0.86	0.8	7.0	587	0.69
9	883.6	16.3	59	37	96	1.5	1.2	8.2	895	1.80
10	884.6	17.1	53	28	81	3.4	1.4	9.6	984	4.76
UPPER SAND										
11	921.6	17.0	61	17	78	10.	0.6	0.6	563	6.00
12	922.6	19.9	66	16	82	47.	1.0	1.6	926	47.00
13	923.6	18.8	68	16	84	59.	1.0	2.6	991	59.00
14	924.6	17.9	55	22	77	21.	1.0	3.6	764	21.00
15	925.6	19.1	56	23	79	78.	1.0	4.6	830	78.00
16	926.8	19.0	60	18	78	30.	1.1	5.7	972	33.00
17	928.3	16.9	66	21	87	7.9	1.3	7.0	1022	10.27
LOWER SAND										
11	921.6	17.0	61	17	78	10.	0.6	0.6	563	6.00
12	922.6	19.9	66	16	82	47.	1.0	1.6	926	47.00
13	923.6	18.8	68	16	84	59.	1.0	2.6	991	59.00
14	924.6	17.9	55	22	77	21.	1.0	3.6	764	21.00
15	925.6	19.1	56	23	79	78.	1.0	4.6	830	78.00
16	926.8	19.0	60	18	78	30.	1.1	5.7	972	33.00
17	928.3	16.9	66	21	87	7.9	1.3	7.0	1022	10.27

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

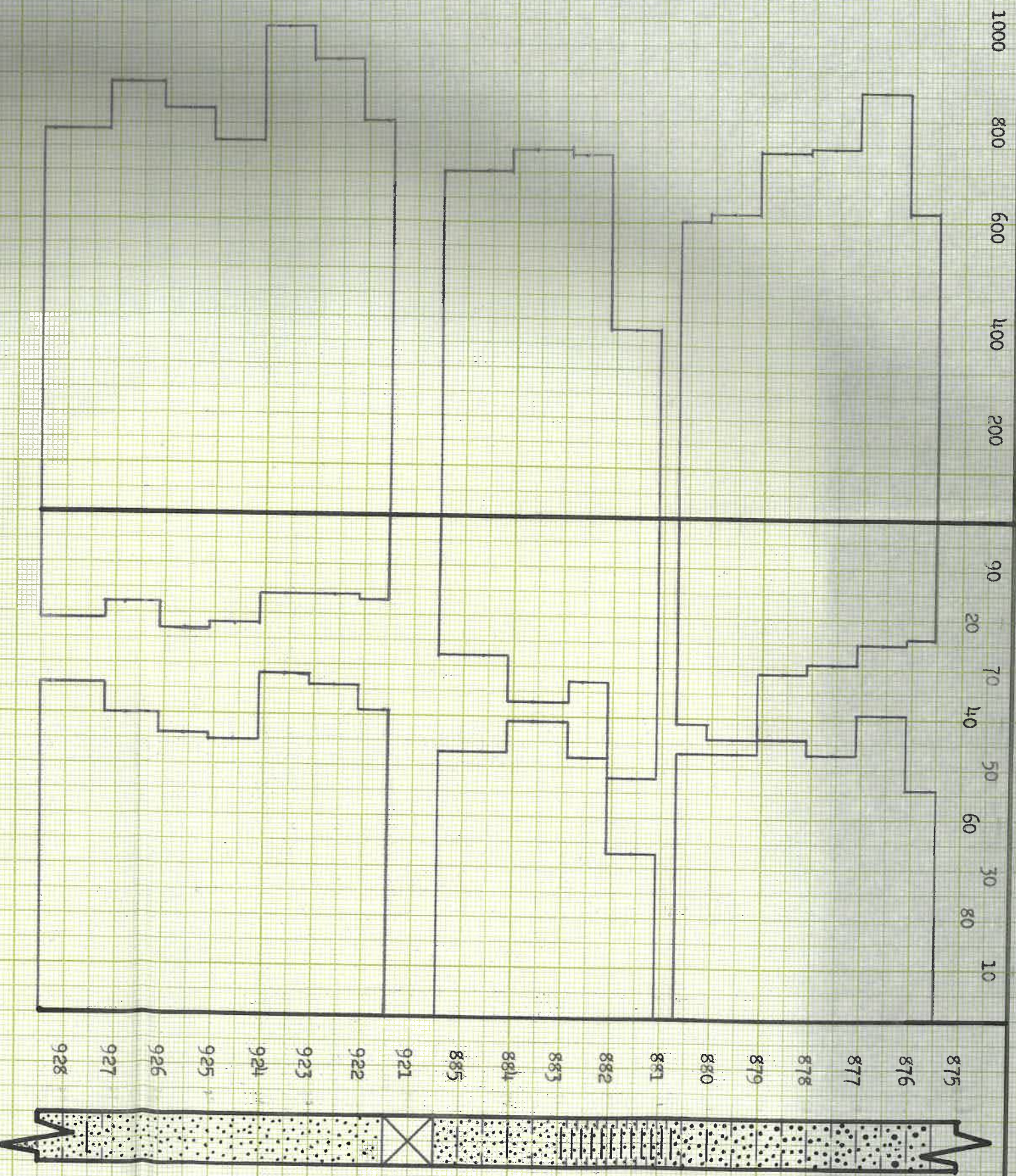
Company	G. M. Smith	Lease	E. Light	Well No.	2-B
Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.		
UPPER SAND					
875.5 - 885.5	9.6	2.0	19.72		
LOWER SAND					
921.5 - 928.5	7.0	36.4	254.27		

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
UPPER SAND						
875.5 - 885.5	9.6	17.0	53.3	35.1	694.	6,659.
LOWER SAND						
921.5 - 928.5	7.0	18.6	62.7	19.4	867.	6,068.

OIL CONTENT
BBLs./A. FT.

WATER SAT.,
PERCENT

OIL SAT.,
PERCENT



KEY:
SANDSTONE
SHALY SANDSTONE
BREAK

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE POROSITY PERCENT	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT
875.5 - 885.5	9.6	17.0	53.3	35.1
921.5 - 928.5	7.0	18.6	62.7	19.4

UPPER SAND

LOWER SAND

G. M.
EIGHT LEAS
WOODSON CO

AIR PERMEABILITY, MILLIDARCS



ALTERNATE LAYERS OF SANDSTONE & SHALE
LAMINATED SANDSTONE & SHALE
SANDY SHALE

G. M. SMITH

WELL NO. 2-B
WOODSON COUNTY, KANSAS

L. AVG. WATER ON SATURATION PERCENT	AVG. OIL CONTENT BBL./A.FT.	TOTAL OIL CONTENT BBL./ACRE	AVG. AIR PERMEABILITY MILLIDARCS
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ER SAND

35.1

694

6,659

2.0

ER SAND

19.4

867

6,068

36.4

OILFIELD RESEARCH LABORATORIES
CHANUTE, KANSAS
JANUARY, 1968