

OILFIELD RESEARCH LABORATORIES

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

January 18, 1968

17-25-16E
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. 1-B, Woodson County, Kansas, and submitted to our laboratory on January 14, 1968.

These cores are from a virgin territory and were sampled and the samples sealed in tin cans by a representative of Oilfield Research Laboratories.

The cuttings show that 1 foot of oil sand was drilled before coring was started on the Lower Sand.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Carl L. Pate

CLP:bjc

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

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company G. M. Smith Lease E. Light Well No. 1-B

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

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

Name of Sand - - - - - Upper Squirrel

Top of Core - - - - - 870.0

Bottom of Core - - - - - 885.0

Top of Sand - (Cored) - - - - - 870.0

Bottom of Sand - - - - - 879.6

Total Feet of Permeable Sand - - - - - 8.3

Total Feet of Floodable Sand - - - - -

Distribution of Permeable Sand:

Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 1	3.3	3.3
1 & above	5.0	8.3

Average Permeability Millidarcys - - - - - 1.1

Average Percent Porosity - - - - - 15.1

Average Percent Oil Saturation - - - - - 44.2

Average Percent Water Saturation - - - - - 39.4

Average Oil Content, Bbls./A. Ft. - - - - - 521.

Total Oil Content, Bbls./Acre - - - - - 4,898.

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. 1-B

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

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

Name of Sand - - - - - Lower Squirrel

Top of Core - - - - - 913.0

Bottom of Core - - - - - 928.0

Top of Sand - - (Cored) - - - - - 913.0

Bottom of Sand - - - - - 920.8

Total Feet of Permeable Sand - - - - - 7.8

Total Feet of Floodable Sand - - - - -

Distribution of Permeable Sand:
Permeability Range
Millidarcys

Feet

Cum. Ft.

0 - 10	2.0	2.0
10 - 100	4.8	6.8
100 & above	1.0	7.8

Average Permeability Millidarcys - - - - - 39.8

Average Percent Porosity - - - - - 20.2

Average Percent Oil Saturation - - - - - 63.9

Average Percent Water Saturation - - - - - 18.4

Average Oil Content, Bbls./A. Ft. - - - - - 1,002.

Total Oil Content, Bbls./Acre - - - - - 7,813.

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. 1-B

Depth Interval, <u>Feet</u>	Description
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UPPER SQUIRREL SAND

870.0 - 870.9	- Brown sandstone.
870.9 - 871.1	- Sandy shale.
871.1 - 879.6	- Brown shaly sandstone.
879.6 - 879.8	- Calcareous sandy shale.
879.8 - 885.0	- Sandy shale.

LOWER SQUIRREL SAND

913.0 - 919.2	- Dark brown sandstone containing very few shale laminations.
919.2 - 920.8	- Laminated shaly sandstone.
920.8 - 928.0	- Sandy shale.

Oilfield Research Laboratories
RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company G. M. Smith Lease E. Light Well No. 1-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	Total			Ft.	Cum. Ft.		
						UPPER SAND					
1	870.1	15.6	49	29	78	594	1.6	0.9	0.9	535	1.44
2	871.2	15.4	46	40	86	550	1.6	0.6	1.5	330	0.96
3	872.1	16.2	48	35	83	604	1.4	1.0	2.5	604	1.40
4	873.2	15.5	46	32	78	553	1.7	1.0	3.5	553	1.70
5	874.1	14.6	34	33	67	385	Imp.	1.1	4.6	423	0.00
6	875.5	15.3	51	46	97	606	1.2	1.5	6.1	909	1.80
7	877.1	13.2	37	58	95	379	0.35	1.3	7.4	493	0.45
8	878.1	15.6	43	39	82	521	0.42	1.1	8.5	573	0.46
9	879.4	15.2	45	33	78	531	0.76	0.9	9.4	478	0.68
						LOWER SAND					
10	913.1	17.7	60	16	76	824	55.	0.6	10.0	494	33.00
11	914.1	22.0	54	13	67	922	126.	1.0	11.0	922	126.00
12	915.1	21.4	62	17	79	1028	8.2	1.0	12.0	1028	8.20
13	916.1	21.2	71	14	85	1167	50.	1.0	13.0	1167	50.00
14	917.1	21.1	67	12	79	1096	62.	1.0	14.0	1096	62.00
15	918.1	19.0	60	20	80	884	6.9	1.0	15.0	884	6.90
16	919.1	17.0	60	35	95	791	11.	0.6	15.6	475	6.60
17	920.1	20.1	70	23	93	1092	11.	1.6	17.2	1747	17.60

SUMMARY OF PERMEABILITY & SATURATION TESTS

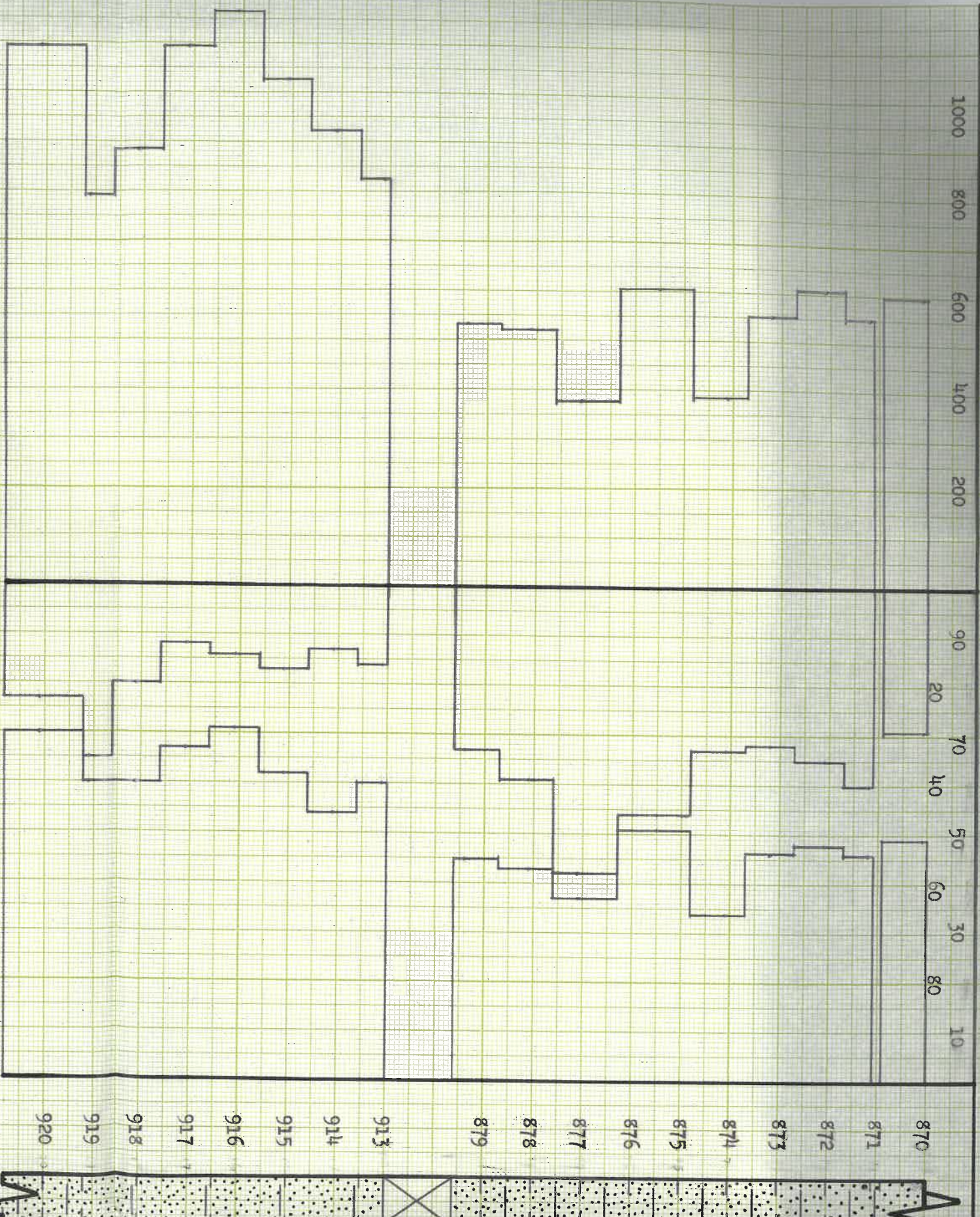
Well No. 1-B

Company	G. M. Smith	Lease	E. Light	Well No.	1-B	
Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.			
		<u>UPPER SAND</u>				
870.0 - 879.6	8.3	1.1	8.89			
		<u>LOWER SAND</u>				
913.0 - 920.8	7.8	39.8	310.30			
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
		<u>UPPER SAND</u>				
870.0 - 879.6	9.4	15.1	44.2	39.4	521.	4,898.
		<u>LOWER SAND</u>				
913.0 - 920.8	7.8	20.2	63.9	18.4	1,002.	7,812.

OIL CONTENT
BHLS./A. FT.

WATER SAT.,
PERCENT

OIL SAT.,
PERCENT

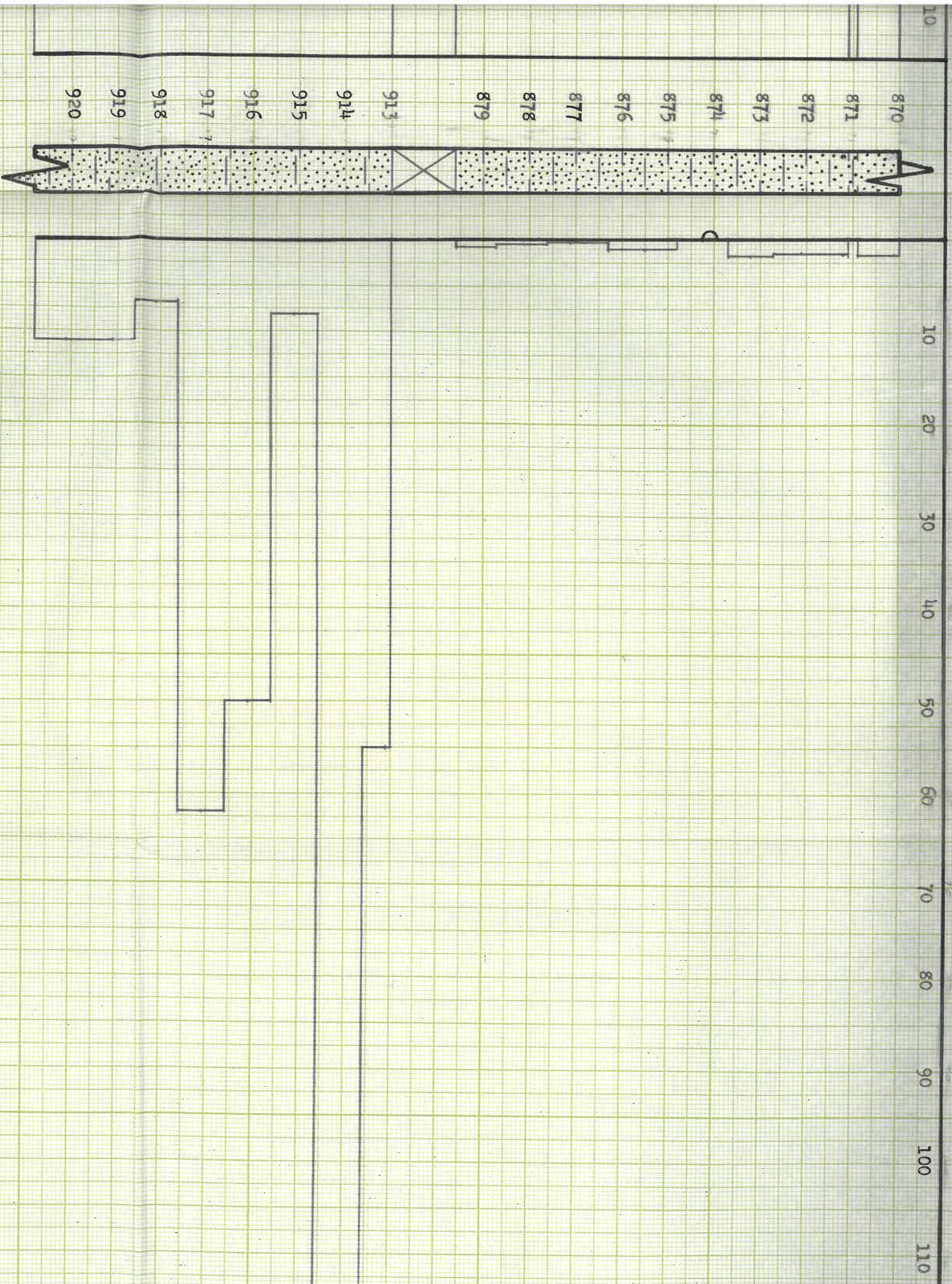


KEY:
SANDSTONE
SHALY SANDSTONE
SANDSTONE CONTAINING SHALE LAMINATIONS

DEPTH INTERVAL FEET	FEET OF CORE ANALYZED	AVERAGE POROSITY PERCENT	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT
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870.0 - 879.6	9.4	15.1	44.2	39.4
913.0 - 920.8	7.8	20.2	63.9	18.4

AIR PERMEABILITY, MILLIDARCS



SANDY SHALE

SPRINK

○ IMPERMEABLE TO AIR

G. M. SMITH

E. LIGHT LASE WELL NO. 1-B
WOODSON COUNTY, KANSAS

OIL SATURATION PERCENT	AVG. WATER CONTENT BBL./A. FT.	TOTAL OIL CONTENT BBL./ACRE	AVG. AIR PERMEABILITY MILLIDARCS	CALCULATED
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UPPER SAND

4.2 39.4

521

4,898

LOWER SAND

3.9 18.4

1,002

7,613

OILFIELD RESEARCH LABORATORIES
CHANDLER, KANSAS
JANUARY, 1968