

OILFIELD RESEARCH LABORATORIES

813 EAST SIXTH
OKMULGEE, OKLAHOMA
PHONE: 1488

- REGISTERED ENGINEERS -

Chanute, Kansas

536 N. HIGHLAND
CHANUTE, KANSAS
PHONE: 728

June 6, 1959

G & M Well Service
115 North Maple
Cherryvale, Kansas

Gentlemen:

Enclosed herewith are the results of tests run on the Cable Tool core taken from the Terwilliger Lease, Well No. 2, Labette County, Kansas, and submitted to our laboratory by Mr. Rupert Gaddy on May 29, 1959.

It is recommended that the pipe be perforated from a depth of 674.0 to 676.0 feet and from 682.5 to 683.5 feet.

This core was sampled and the samples were sealed in jars by a representative of the client.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES



Carl L. Pate

CLP:cs

3 c.

26-32-17E

Terwilliger 2

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company G & M Well Service Lease Terwilleger Well No. 2

Location _____

Section 26 Twp. 32S Rge. 17E County Labette State Kansas

Name of Sand	Bartlesville
Top of Core	672.0
Bottom of Core	692.0
Top of Sand (Received)	672.0
Bottom of Sand (Received)	692.0
Total Feet of Permeable Sand	12.7
Total Feet of Floodable Sand	-

Distribution of Permeable Sand:
Permeability Range
Millidarcys

	Feet	Cum. Ft.
0 - 10	3.0	3.0
10 - 25	2.0	5.0
25 - 50	5.1	10.1
50 & over	2.6	12.7

Average Permeability Millidarcys	34.2
Average Percent Porosity	19.0
Average Percent Oil Saturation	46.5
Average Percent Water Saturation	29.6
Average Oil Content, Bbls./A. Ft.	686.
Total Oil Content, Bbls./Acre	10,980.
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 Well Service Lease Terwilleger Well No. 2

Depth Interval, Description
Feet

672.0 - 673.0 - Dark carbonaceous sandstone.

673.0 - 676.6 - Hard brown fine grained micaceous sandstone.

676.6 - 679.0 - Dark carbonaceous sandstone.

679.0 - 680.6 - Dark brown fine grained micaceous carbonaceous slightly shaley sandstone.

680.6 - 684.0 - Gray and light brown fine grained micaceous carbonaceous slightly shaley sandstone.

684.0 - 687.0 - Dark carbonaceous sandstone.

687.0 - 688.0 - Light brown fine grained laminated micaceous carbonaceous sandstone.

688.0 - 692.0 - Dark carbonaceous sandstone.

Oilfield Research Laboratories

RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company G & M Well Service

Lease Terwilliger

Well No. 2

Sample No.	Depth, Feet	Effective Porosity Percent	Percent Saturation			Oil Content Bbbls. / A Ft.	Perm., Mill.	Feet of Sand		Total Oil Content	Perm. Capacity Ft. X md.
			Oil	Water	Total			Ft.	Cum. Ft.		
1	672.5	15.0	56	14	70	652	8.2	1.0	1.0	652	8.20
2	675.8	17.5	38	30	68	516	44.	1.6	2.6	826	70.40
3	677.0	18.9	41	28	69	601	31.	0.9	3.5	541	27.90
4	678.0	22.8	53	33	86	938	93.	1.5	5.0	1,407	139.50
5	679.6	20.5	55	25	80	875	28.	1.6	6.6	1,400	44.80
6	681.3	17.1	32	41	73	425	-	1.3	7.9	552	=
7	682.5	22.0	40	29	69	683	56.	1.1	9.0	751	61.60
8	683.5	21.9	35	39	74	594	-	1.0	10.0	594	=
9	685.5	20.8	55	32	87	887	41.	1.0	11.0	887	41.00
10	687.5	17.8	46	41	87	636	17.	1.0	12.0	636	17.00
11	688.5	21.6	48	28	76	804	-	1.0	13.0	804	=
12	689.5	17.4	59	24	83	796	17.	1.0	14.0	796	17.00
13	690.5	13.4	46	20	66	478	4.7	1.0	15.0	478	4.70
14	691.5	17.6	48	28	76	656	2.6	1.0	16.0	656	2.60
								Total-	- - -	-10,980	

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III - B

Company	Lease	Terwillegger	Well No.
G & M Well Service			2
Depth Interval, Feet	672.0 - 692.0	Feet of Core Analyzed	12.7
		Average Permeability, Millidarcys	34.2
		Permeability Capacity Ft. x Md.	434.70
Depth Interval, Feet	672.0 - 692.0	Feet of Core Analyzed	16.0
		Average Porosity	19.0
		Average Percent Oil Saturation	46.5
		Average Percent Water Saturation	29.6
		Average Oil Content Bbl./A. Ft.	686
		Total Oil Content Bbls./Acre	10,980

OIL CONTENT,
BBLs./A. FT.

WATER SAT.,
PERCENT

OIL SAT.,
PERCENT

1,000

800

600

400

200

90

20

70

40

50

60

30

80

10

672

673

674

675

676

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678

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680

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682

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684

685

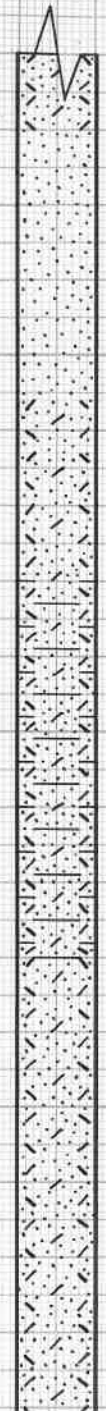
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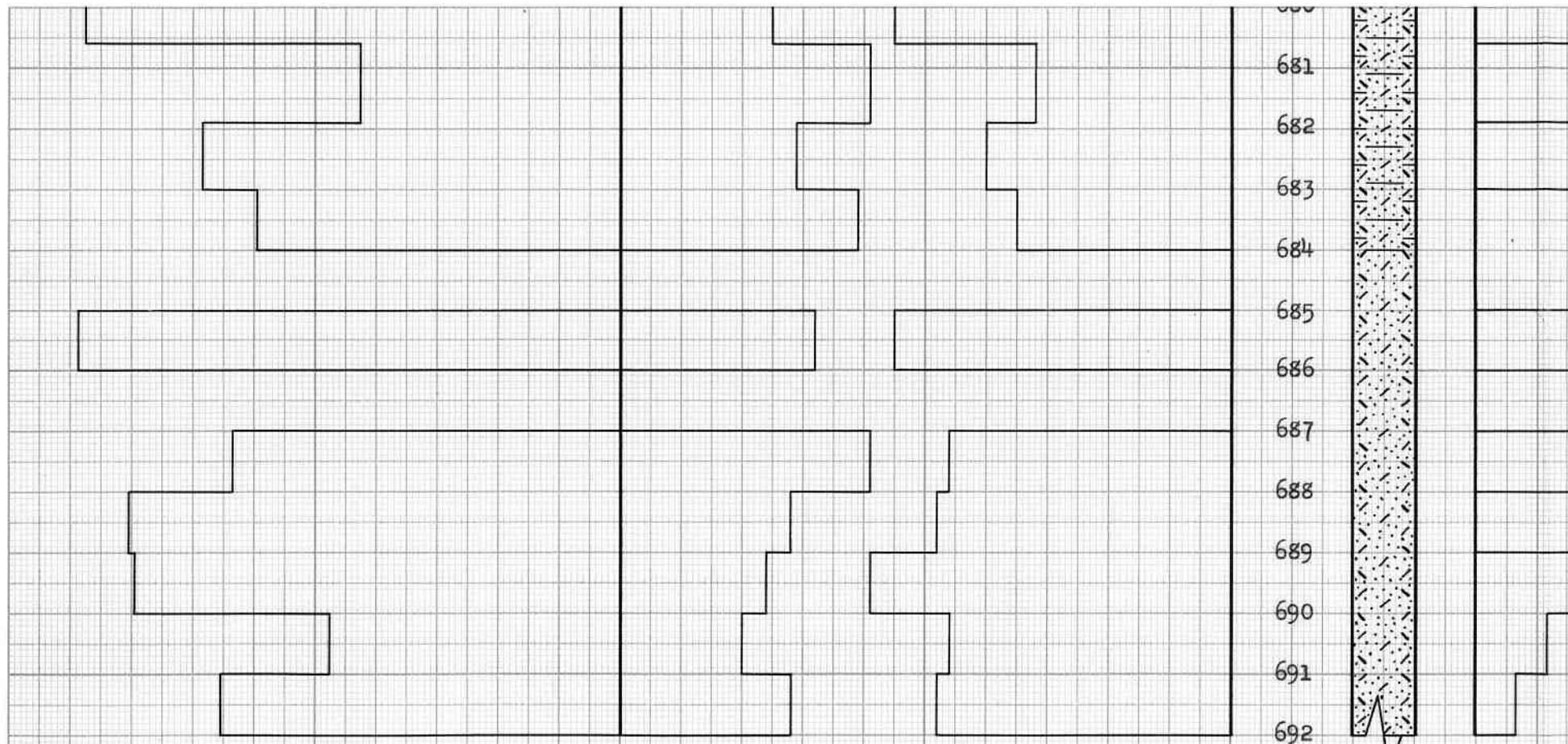
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
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
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KEY:

 SANDSTONE

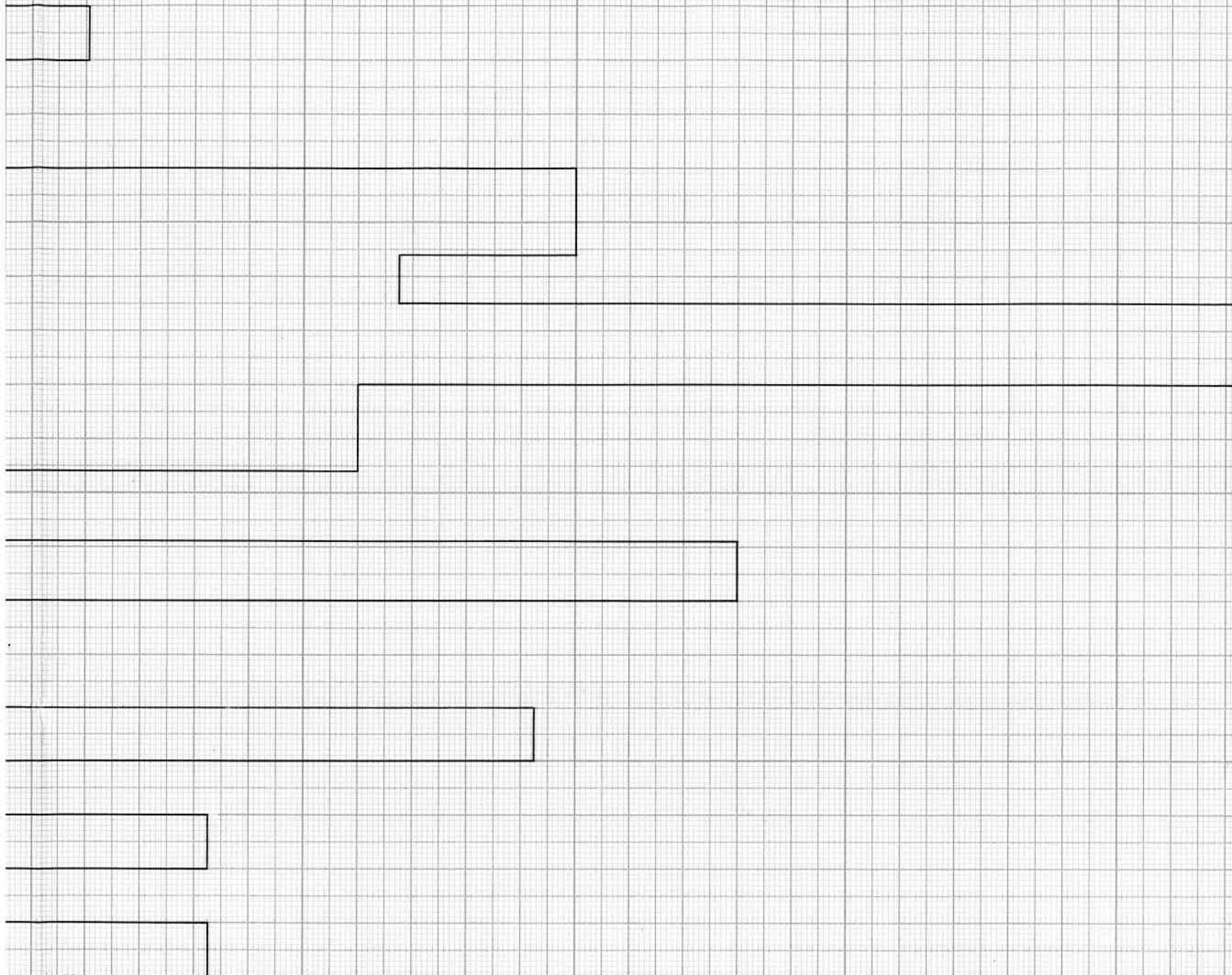
 CARBONACEOUS SANDSTONE

G & M WELL
 TERWILLEGGER LEASE
 LABETTE COUNTY

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE POROSITY, PERCENT	AVG. OIL SATURATION PERCENT
672.0 - 692.0	16.0	19.0	46.5

AIR PERMEABILITY, IN MILLIDARCYS

10 20 30 40 50 60 70 80 90 100



SANDSTONE



CARBONACEOUS SHALEY SANDSTONE

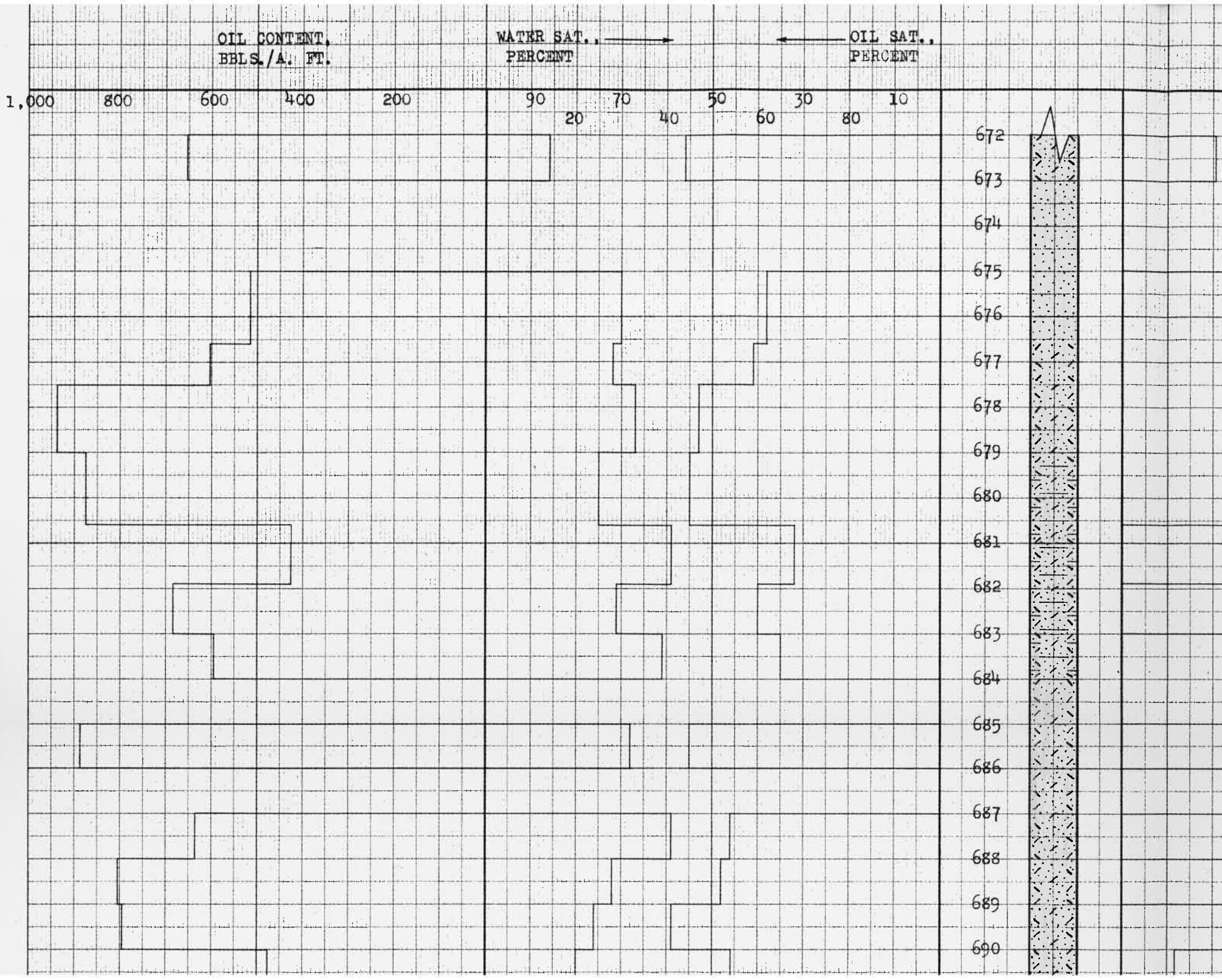
WELL SERVICE

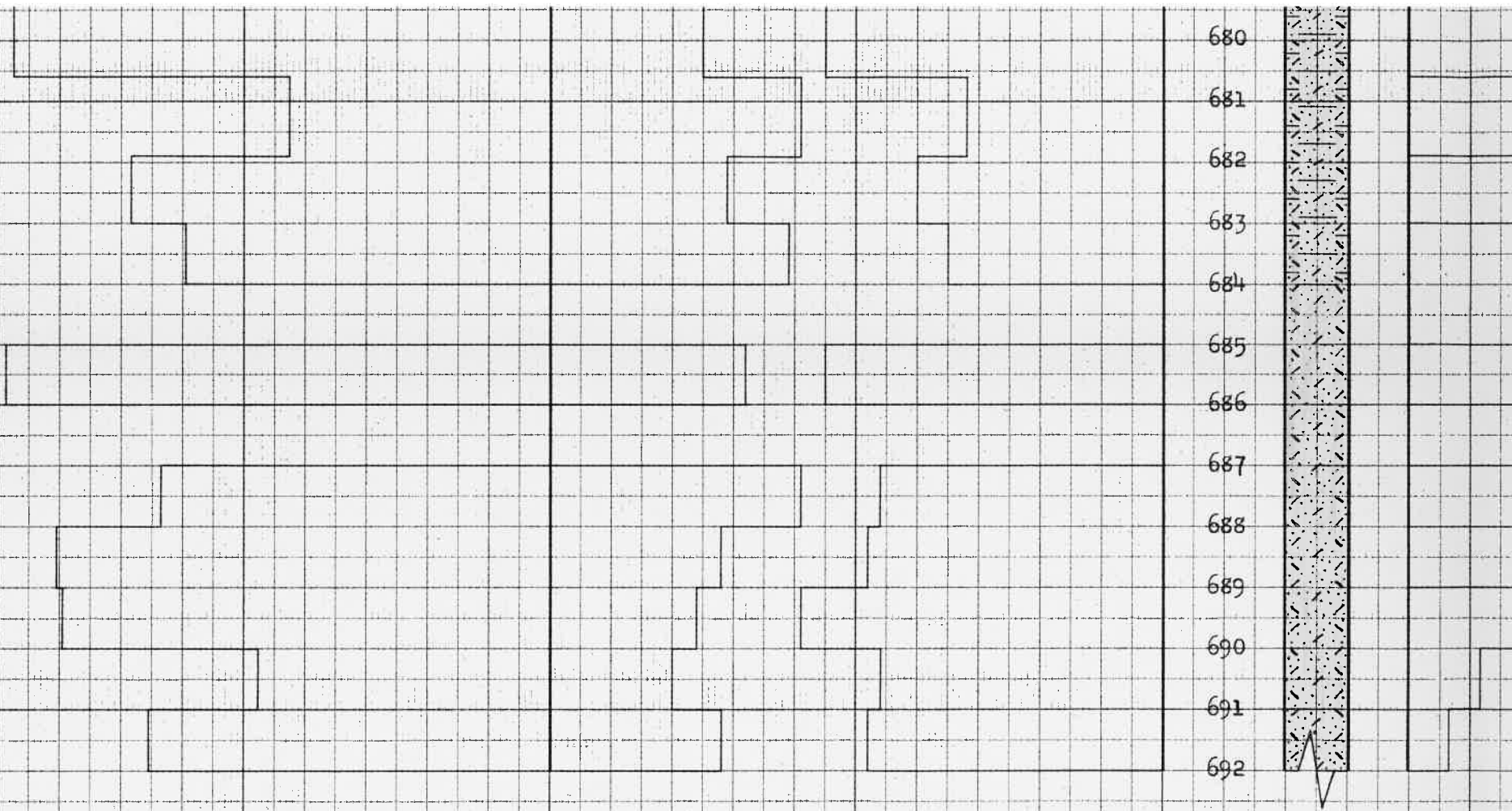
WELL NO. 2

COUNTY, KANSAS

WELL	AVG. WATER SATURATION PERCENT	AVG. OIL CONTENT BBLs./A.FT.	TOTAL OIL CONTENT BBLs./ACRE	AVG. AIR PERMEABILITY, MILLIDARCYs
2	29.6	686	10,980	34.2

OILFIELD RESEARCH LABORATORIES
CHANUTE, KANSAS
JUNE, 1959






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KEY:

 SANDSTONE

 CARBONACEOUS SANDSTONE

G & M WELL

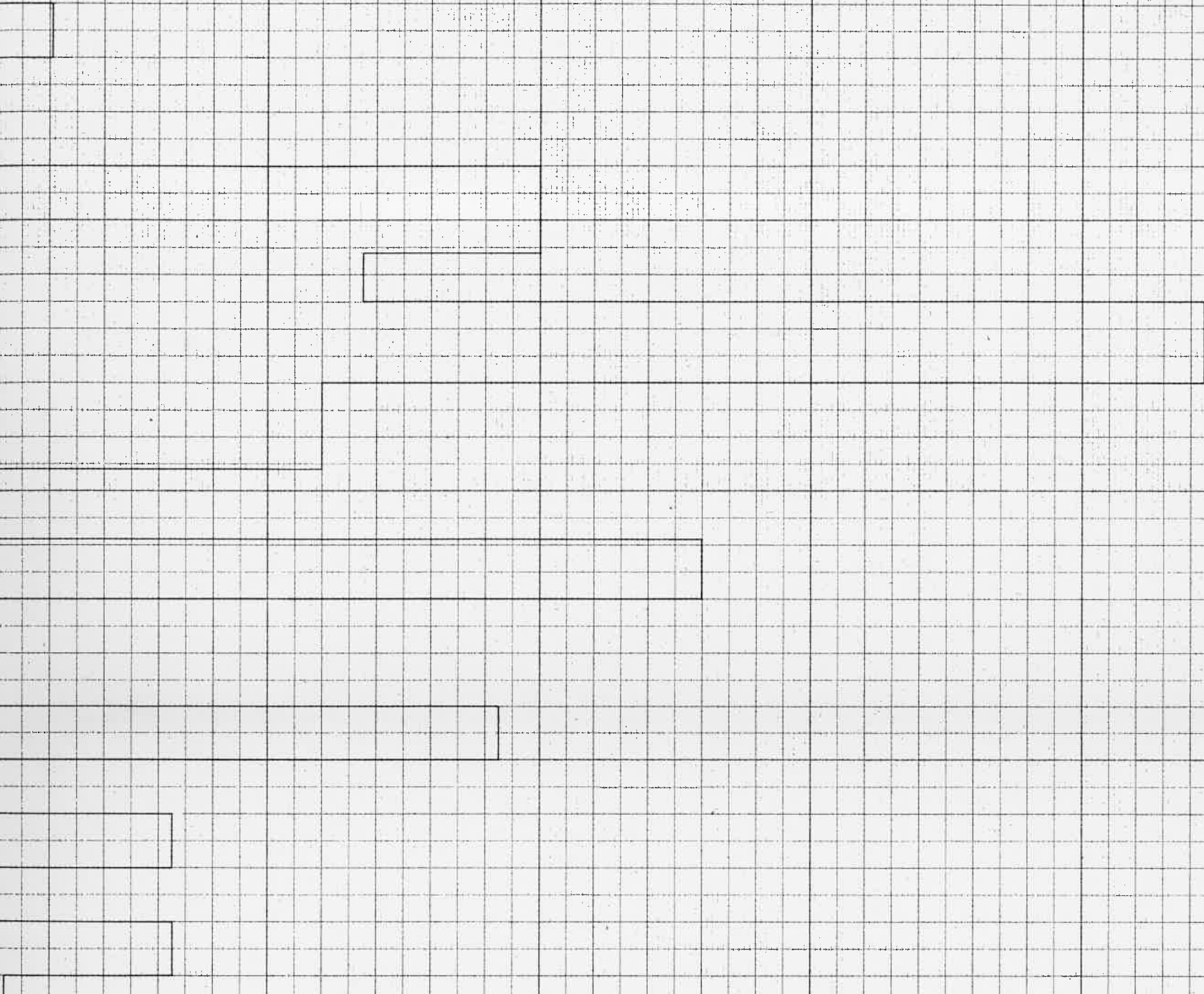
TERWILLEGER LEASE

LABETTE COUNTY,


DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE POROSITY, PERCENT	AVG. OIL SATURATION PERCENT	A S
672.0 - 692.0	16.0	19.0	46.5	

AIR PERMEABILITY, IN MILLIDARCYs

10 20 30 40 50 60 70 80 90 100



SANDSTONE

 CARBONACEOUS SHALEY SANDSTONE

WELL SERVICE

WELL NO. 2

COUNTY, KANSAS

IL ION F	AVG. WATER SATURATION PERCENT	AVG. OIL CONTENT BBLs./A. FT.	TOTAL OIL CONTENT BBLs./ACRE	AVG. AIR PERMEABILITY, MILLIDARCYs
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	29.6	686	10,980	34.2
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OILFIELD RESEARCH LABORATORIES
CHANUTE, KANSAS
JUNE, 1959