

# OILFIELD RESEARCH LABORATORIES

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

June 29, 1979

Compton Industries  
P.O. Box 437  
Moran, Kansas 66755

Gentlemen:

Enclosed herewith are the results of tests run on the rotary cores taken from the Stewart Lease, Well No. 1-C, Bourbon County, Kansas, and submitted to our laboratory on June 20, 1979.

The cores were sampled by a representative of Oilfield Research Laboratories after being received in the laboratory.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

  
Benjamin R. Pearman

SAM:km  
5 c to Moran, Kansas

# Oilfield Research Laboratories

## GENERAL INFORMATION & SUMMARY

Company Compton Industries Lease Stewart Well No. 1-C

Location NW SW

Section 27 Twp. 23S Rge. 23E County Bourbon State Kansas

Name of Sand - - - - - 22E - - - - - Burbank

Top of Core - - - - - 452.0

Bottom of Core - - - - - 474.0

Top of Sand - - - - - 452.0

Bottom of Sand - - - - - (Tested) 472.0

Total Feet of Permeable Sand - - - - - 20.0

Total Feet of Floodable Sand - - - - -

**Distribution of Permeable Sand:**  
Permeability Range  
Millidarcys

	Feet	Cum. Ft.
0 - 100	1.6	1.6
100 - 300	8.6	10.2
300 - 600	3.0	13.2
600 - 900	3.8	17.0
900 - 1200	3.0	20.0

Average Permeability Millidarcys - - - - - 462.0

Average Percent Porosity - - - - - 20.9

Average Percent Oil Saturation - - - - - 23.6

Average Percent Water Saturation - - - - - 63.2

Average Oil Content, Bbls./A. Ft. - - - - - 376.

Total Oil Content, Bbls./Acre - - - - - 7,521.

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 Compton Industries Lease Stewart Well No. 1-C

Location NW SW

Section 27 Twp 23S Rge. 23E County Bourbon State Kansas

Name of Sand - - - - - Bartlesville

Top of Core - - - - - 544.0

Bottom of Core - - - - - 555.0

Top of Sand - - - - - 544.0

Bottom of Sand - - - - - (Tested) 553.0

Total Feet of Permeable Sand - - - - - 7.7

Total Feet of Floodable Sand - - - - -

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 10	3.0	3.0
10 - 20	3.7	6.7
20 - 30	1.0	7.7

Average Permeability Millidarcys - - - - - 13.3

Average Percent Porosity - - - - - 16.5

Average Percent Oil Saturation - - - - -

Average Percent Water Saturation - - - - -

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

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

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 Compton Industries Lease Stewart Well No. 1-C

BURBANK SAND

<u>Depth Interval, Feet</u>	<u>Description</u>
452.0 - 452.6	Light brown slightly calcareous sandstone.
452.6 - 461.8	Light brown sandstone.
461.8 - 474.0	Dark brown sandstone.

BARTLESVILLE SAND

<u>Depth Interval, Feet</u>	<u>Description</u>
544.0 - 551.7	Light barren sandstone with fine shale laminations.
551.7 - 555.0	Gray very finely laminated sandstone and shale.

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**RESULTS OF SATURATION & PERMEABILITY TESTS**

**TABLE 1-B**

Company Compton Industries Lease Stewart Well No. 1-C

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.		
					<u>BURBANK SAND</u>					
1	452.5	14.6	15	80	170	19.	0.6	0.6	102	11.40
2	453.5	22.8	7	82	124	296.	1.4	2.0	174	414.40
3	454.5	14.6	19	73	215	259.	1.0	3.0	215	259.00
4	455.5	21.7	8	86	135	269.	1.0	4.0	135	269.00
5	456.5	14.3	16	73	178	703.	1.0	5.0	178	703.00
6	457.5	24.8	8	86	154	719.	1.0	6.0	154	719.00
7	458.5	24.3	4	88	75	703.	1.0	7.0	75	703.00
8	459.5	25.7	10	79	199	912.	1.0	8.0	199	912.00
9	460.5	25.5	15	80	297	1199.	1.0	9.0	297	1199.00
10	461.5	22.8	13	81	230	886.	0.8	9.8	184	708.80
11	462.5	16.1	21	73	262	277.	1.2	11.0	314	332.40
12	463.5	16.3	44	49	556	1002.	1.0	12.0	556	1002.00
13	464.5	19.5	37	53	560	322.	1.0	13.0	560	322.00
14	465.5	18.4	34	59	486	173.	1.0	14.0	486	173.00
15	466.5	18.1	24	51	337	146.	1.0	15.0	337	146.00
16	467.5	23.0	34	41	607	138.	1.0	16.0	607	138.00
17	468.5	22.7	36	37	634	263.	1.0	17.0	634	263.00
18	469.5	24.1	46	25	86	346.	1.0	18.0	860	346.00
19	470.5	19.0	42	34	619	63.	1.0	19.0	619	63.00
20	471.5	26.9	40	35	835	556.	1.0	20.0	835	556.00
					<u>BARTLESVILLE SAND</u>					
1	544.5	13.4				8.2	1.0	1.0		8.20
2	545.5	19.6				7.7	1.0	2.0		7.70
3	546.5	18.4				11.	1.0	3.0		11.00
4	547.5	18.8				13.	1.0	4.0		13.00
5	548.5	17.8				8.9	1.0	5.0		8.90
6	549.5	18.9				20.	1.0	6.0		20.00

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**RESULTS OF SATURATION & PERMEABILITY TESTS**

**TABLE 1-B**

Company Compton Industries Lease Stewart Well No. 1-C

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.		
7	550.5	19.8						1.0	7.0		25.00
8	551.5	15.3					25.	0.7	7.7		8.40
9	552.5	8.3					Imp.	1.3	9.0		0.00
						BARTLESVILLE SAND (continued)					



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**Results of Chloride Tests**

**TABLE VI**

BURBANK SAND

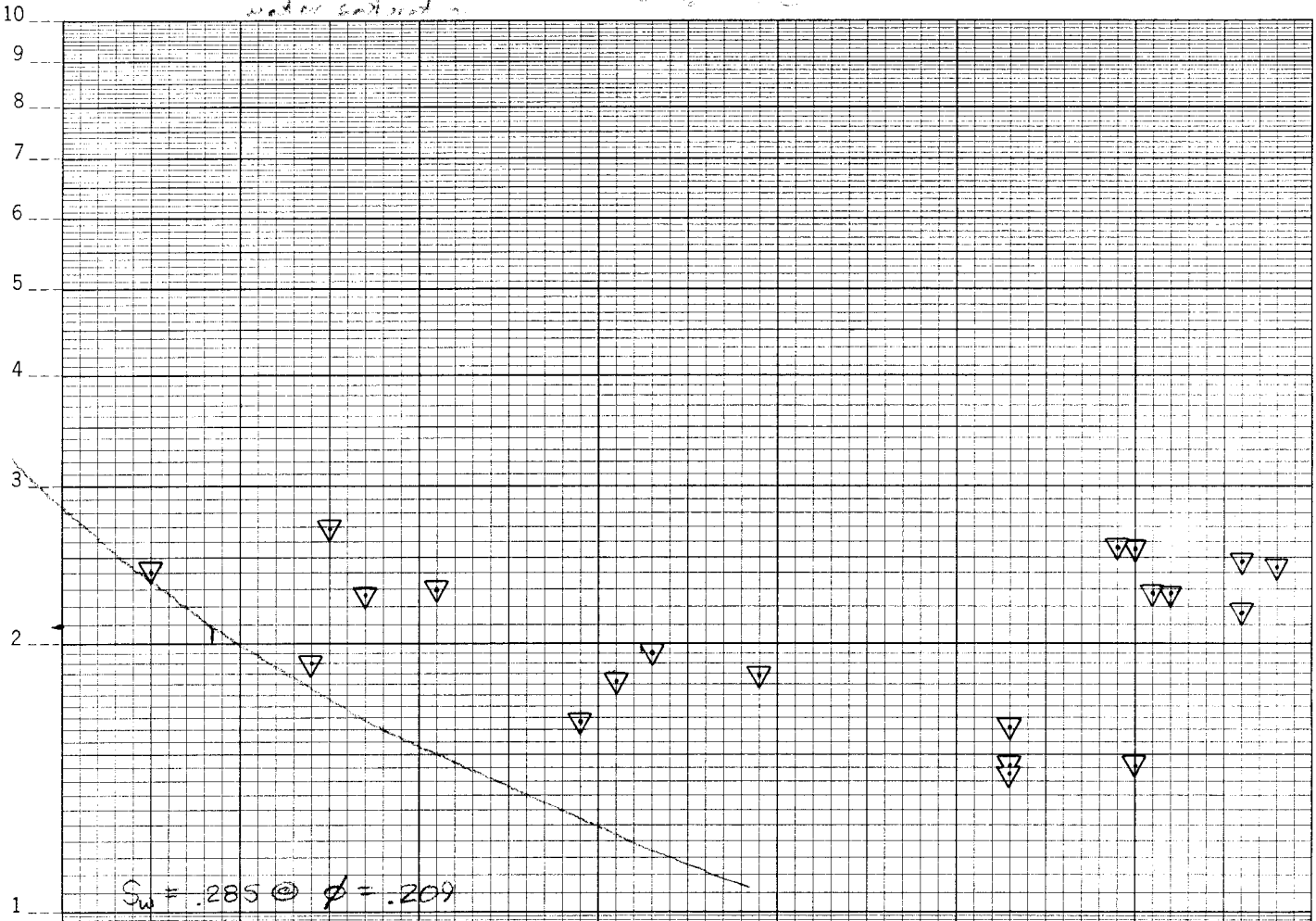
Company Compton Industries Lease Stewart Well No. 1-C

Sample No.	Depth, Feet	Chloride Content of Brine in Sand ppm	Percent Water Saturation	
			Connate	Drilling & Foreign Total
1	452.5	15,103		
2	453.5	7,848		
3	454.5	18,686		
4	455.5	9,538		
5	456.5	15,900		
6	457.5	9,952		
7	458.5	9,410		
8	459.5	13,262		
9	460.5	8,846		
10	461.5	10,257		
11	462.5	13,257		
12	463.5	30,639		
13	464.5	30,339		
14	465.5	31,864		
15	466.5	18,555		
16	467.5	23,280		
17	468.5	26,158		
18	469.5	34,138		
19	470.5	33,190		
20	471.5	19,146		
		<p>Note: Water Sample Contained 4,752 Mg/L Chlorides  (Mg/L = ppm)</p>		

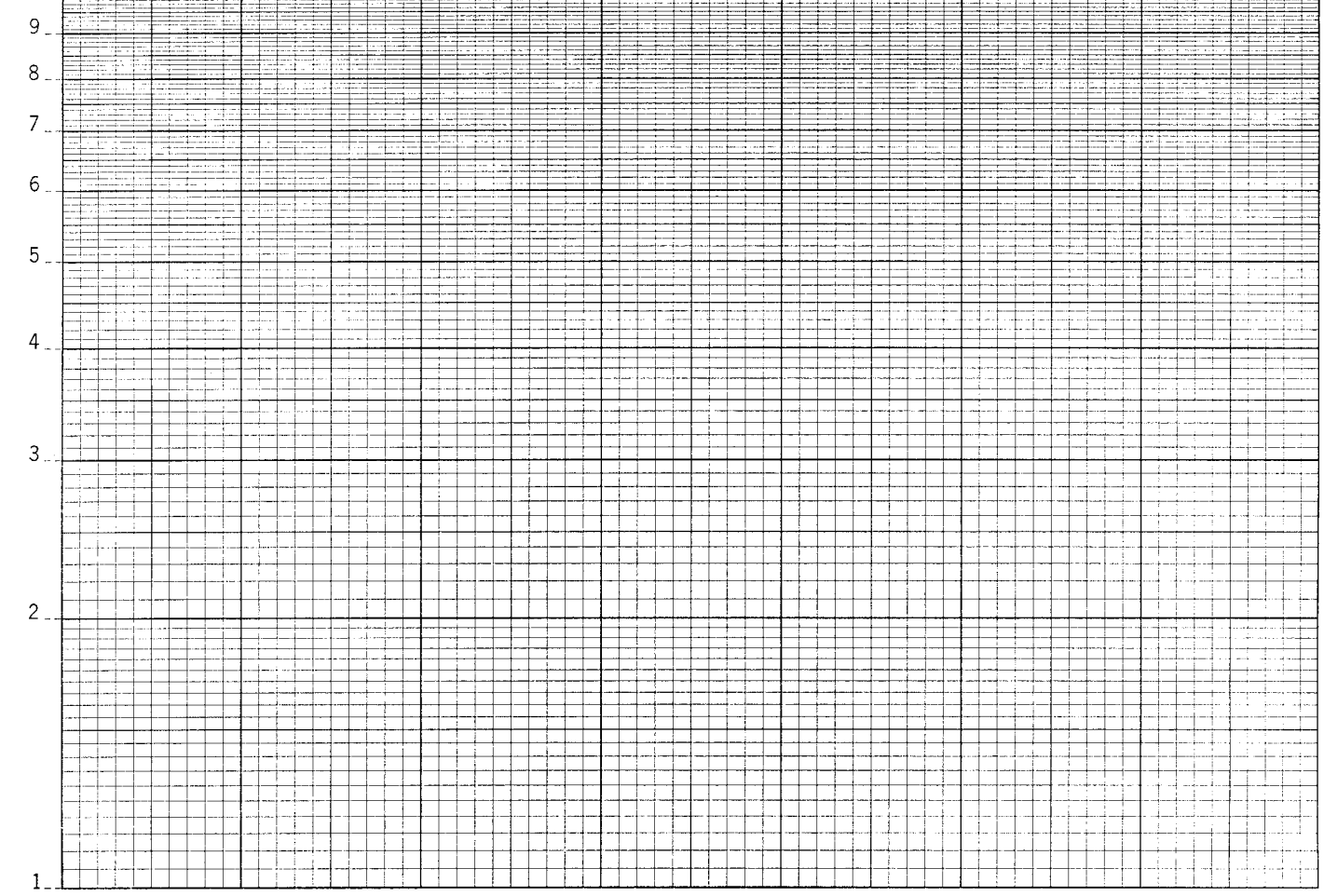
Note: ppm — parts per million

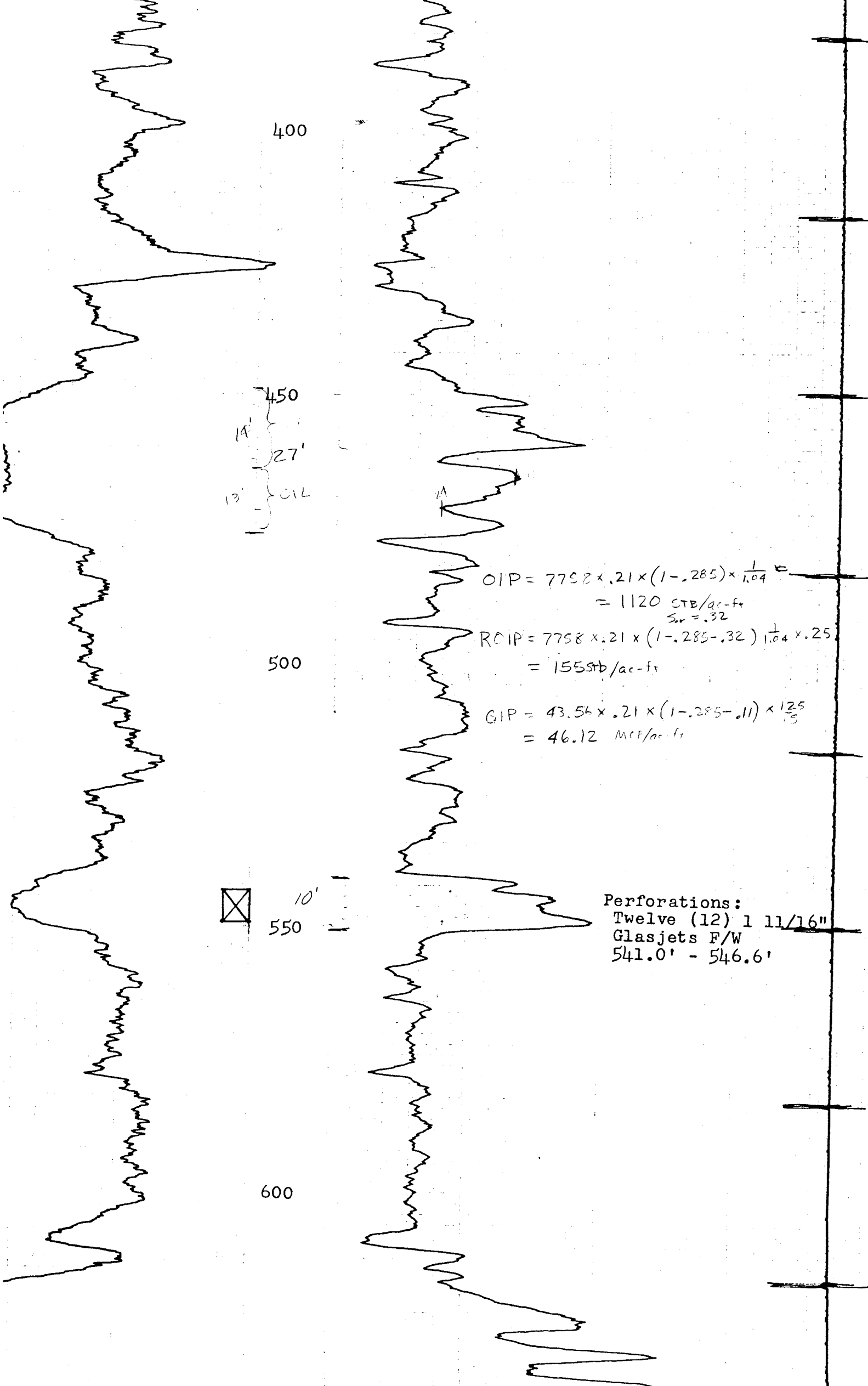
log permeability  
water content

46 4972



SEMI-LOGARITHMIC • 2 CYCLES X 70 DIVISIONS  
KEUFFEL & ESSER CO. MADE IN U.S.A.





400

14'  
27'  
13'

500

⊗ 10'  
550

600

$$\begin{aligned}
 OIP &= 7758 \times .21 \times (1 - .285) \times \frac{1}{1.04} \\
 &= 1120 \text{ STB/ac-ft} \\
 &\quad S_{or} = .32 \\
 RCIP &= 7758 \times .21 \times (1 - .285 - .32) \times \frac{1}{1.04} \times .25 \\
 &= 155 \text{ STB/ac-ft} \\
 GIP &= 43.56 \times .21 \times (1 - .285 - .11) \times \frac{1.25}{1.0} \\
 &= 46.12 \text{ MCF/ac-ft}
 \end{aligned}$$

Perforations:  
Twelve (12) 1 11/16"  
Glasjets F/W  
541.0' - 546.6'