

CRA, INCORPORATED

SPECIAL PERMEABILITY TESTS

WOODWARD LEASE

Bourbon

ALLEN COUNTY, KANSAS

T. J. S. RSC-126 SEC. 12

OILFIELD RESEARCH LABORATORIES
536 N. HIGHLAND CHANUTE, KANSAS



OILFIELD RESEARCH LABORATORIES

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

April 8, 1966

CRA, Inc.
Box 445
Wellington, Kansas



Gentlemen:

Enclosed herewith are two tables giving the results of some special tests we ran on some core samples from your Woodward Lease, located in Allen Bourbon County, Kansas.

The vertical permeability tests indicate that there is very little vertical permeability in the samples analyzed. The effective permeability tests show that the average permeability to the Mississippi lime water was considerable higher than that to city water. Of course, part of this could be due to the fact that the samples used in the Mississippi lime water tests were exposed to air for two months prior to testing. More comparative tests could be determined by running both tests on the same samples.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Carl L. Pate

CLP:rf

Encl.



CRA, INC.

Woodward Lease Well No. 18

Bourbon
Allen County, Kansas

TABLE 1

Results of Effective Permeability Tests Using Two Different Waters

<u>Sample No.</u>	<u>Depth, Feet</u>	<u>Effective Permeability, Mds. City Water</u>	<u>Miss. Lime Water</u>
10	663.1	5.40	
10A	663.4		10.70
11	664.1	1.30	
11A	664.4		1.80
12	665.1	Imp.	
12A	665.4		Imp.
13	666.1	0.60	
13A	666.4		Imp.
14	667.1	0.40	
14A	667.4		0.90
15	668.1	3.40	
14A	668.4		13.50
16	669.1	2.50	
16A	669.4		2.10
17	670.1	4.20	
17A	670.4		8.70
18	671.1	2.60	
18A	671.4		13.75
19	672.1	0.56	
19A	672.4		1.30
20	673.1	2.60	
20A	673.4		9.30
21	674.1	Imp.	
21A	674.4		3.55

Average permeability using city water, mds. = 2.29

Average permeability using Miss. lime water, mds. = 6.89

Note: The samples, used for the Mississippi lime water tests, were exposed to air for the period extending from February 5th to April 5th.

CRA INC.

Woodward Lease

Bourbon
Allen County, Kansas

TABLE 2

VERTICAL PERMEABILITY TESTS

<u>Sample No.</u>	<u>Depth, Feet</u>	Vertical Permeability, Mds.	
		<u>To Air</u>	<u>To Water</u>
Woodward Well No. 13			
1	641.8	0.29	Imp.
2	642.8	0.63	Imp.
3	643.8	0.13	0.34
4	644.5	10.	8.60
Woodward Well No. 16			
1	644.5	1.2	Imp.
2	645.5	0.33	Imp.
3	648.6	0.96	Imp.
Woodward Well No. 21			
1	629.5	0.16	Imp.
2	632.5	0.24	Imp.

Note: The samples were exposed to air for approximately two months before the above tests were made.