



# OILFIELD RESEARCH LABORATORIES

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

H-17 ✓

June 22, 1978

George A. Hoffman  
P.O. Box 537  
Henderson, Kentucky 42420

Gentlemen:

Enclosed herewith are the results of tests run on the rotary core taken from the Nelson Lease, Well No. H-17, Allen County, Kansas, and submitted to our laboratory on June 16, 1978.

This core was sampled by a representative of Oilfield Research Laboratories after it was received in the laboratory.

This core was exposed to air for approximately 36 hours before being sampled.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Carl L. Pate

CLP:cb  
4 c to Henderson, Kentucky  
1 c to Erie, Kansas



## OILFIELD RESEARCH LABORATORIES

- LOG -

Company George A. Hoffman Lease Nelson Well No. H-17

<u>Depth Interval, Feet</u>	<u>Description</u>
653.0 - 653.7	Gray sandy shale.
653.7 - 655.3	Brown fine grained sandstone.
655.3 - 656.3	Grayish brown very shaly sandstone.
656.3 - 662.2	Dark brown sandstone.
662.2 - 662.8	Light brown shaly sandstone containing a streak of shale.
662.8 - 665.0	Gray sandy shale.
665.0 - 666.1	Light brown very shaly sandstone.
666.1 - 668.0	Gray sandy shale.
668.0 - 668.8	Alternate thin layers of sandstone and shale.
668.8 - 669.4	Finely laminated sandstone and shale.
669.4 - 671.4	Gray laminated sandy shale.
671.4 - 673.7	Light brown laminated shaly sandstone.
673.7 - 674.5	Finely laminated sandstone and shale.
674.5 - 676.6	Light brown to brown shaly sandstone.
676.6 - 678.5	Gray finely laminated sandy shale.
678.5 - 679.5	Dark brown sandstone.
679.5 - 680.2	Gray sandy shale.
680.2 - 680.7	Brown shaly sandstone.
680.7 - 680.9	Gray sandy shale.
680.9 - 681.5	Dark shaly sandstone.
681.5 - 682.3	Gray sandy shale.

OILFIELD RESEARCH LABORATORIES

- 3 -

682.3 - 691.2	Dark fine grained sandstone.
691.2 - 691.9	Dark slightly conglomeratic sandstone.
691.9 - 699.2	Brown fine grained sandstone.
699.2 - 699.9	Gray slightly calcareous sandy shale.
699.9 - 700.6	Brown shaly sandstone.

} = 0

**Oilfield Research Laboratories**

**RESULTS OF SATURATION & PERMEABILITY TESTS**

**TABLE 1-B**

Company George A. Hoffman Lease Nelson Well No. H-17

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.		
1	653.8	21.2	20	20	40	328	54.	0.5	0.5	164	27.00
2	654.5	22.1	24	18	42	411	67.	1.1	1.6	452	73.70
3	655.5	20.2	36	15	51	564	2.1	1.0	2.6	564	2.10
4	656.5	20.7	26	23	49	417	103.	0.7	3.3	292	72.10
5	657.5	20.5	37	18	55	588	22.	1.0	4.3	588	22.00
6	658.5	20.7	40	13	53	642	139.	1.0	5.3	642	139.00
7	659.5	22.8	42	13	55	742	123.	1.0	6.3	742	123.00
8	660.6	19.8	31	25	56	476	37.	1.0	7.3	476	37.00
9	661.4	20.7	45	17	62	723	2.3	1.2	8.5	868	2.76
10	662.5	17.5	36	19	55	489	4.1	0.5	9.0	244	2.05
11	665.4	17.8	31	29	60	428	6.9	1.1	10.1	471	7.59
12	671.6	16.9	33	30	63	433	3.3	0.6	10.7	260	1.98
13	672.5	14.4	18	53	71	201	0.47	1.0	11.7	201	0.47
14	673.6	15.2	36	33	69	424	1.6	0.7	12.4	297	1.12
15	674.6	13.8	32	41	73	342	18.	0.5	12.9	171	9.00
16	675.5	14.2	37	32	69	407	1.6	1.0	13.9	407	1.60
17	676.5	18.1	28	36	64	393	7.8	0.6	14.5	236	4.68
18	678.6	18.7	38	23	61	551	112.	1.0	15.5	551	112.00
19	681.0	21.6	46	12	58	770	5.4	0.6	16.1	462	3.24
20	682.5	19.8	49	14	63	751	43.	0.7	16.8	526	30.10
21	683.5	19.2	39	15	54	581	36.	1.0	17.8	581	36.00
22	684.5	22.3	45	12	57	778	181.	1.0	18.8	778	181.00
23	685.5	21.2	43	18	61	707	103.	1.0	19.8	707	103.00
24	686.5	20.9	41	18	59	664	37.	1.0	20.8	664	37.00
25	687.5	20.8	44	16	60	710	105.	1.0	21.8	710	105.00
26	688.5	21.0	41	17	58	667	143.	1.0	22.8	667	143.00
27	689.5	16.8	47	16	63	612	12.	1.0	23.8	612	12.00
28	690.5	21.1	44	14	58	719	77.	1.2	25.0	863	92.40
29	691.5	17.4	26	35	61	351	8.8	0.7	25.7	246	6.16
30	692.5	18.1	32	20	52	449	9.1	1.1	26.8	494	10.00

**Gilfield Research Laboratories**

**RESULTS OF SATURATION & PERMEABILITY TESTS**

**TABLE 1-B**

Company George A. Hoffman Lease Nelson Well No. H-17

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 ind.
			Oil	Water	Total			Ft.	Cum. Ft.		
31	693.5	17.8	29	31	60	401	12.	1.0	27.8	401	12.00
32	694.5	18.3	29	29	58	411	14.	1.0	28.8	411	14.00
33	695.5	21.2	35	18	53	575	77.	1.0	29.8	575	77.00
34	696.5	14.9	35	34	69	404	2.3	1.0	30.8	404	2.30
35	697.5	14.9	43	26	69	496	7.5	1.0	31.8	496	7.50
36	698.5	21.9	32	26	58	543	90.	1.2	33.0	652	108.00
37	700.5	20.1	25	31	56	391	44.	0.7	33.7	274	30.80

## Oilfield Research Laboratories

### SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company George A. Hoffman Lease Nelson Well No. H-17

Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.
653.7 - 661.0	7.3	67.9	495.90
661.0 - 681.5	8.8	16.6	146.49
682.3 - 700.6	17.6	57.2	1007.26
653.7 - 700.6	33.7	49.0	1649.65

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
653.7 - 661.0	7.3	21.0	33.0	17.8	537	3,920
661.0 - 681.5	8.8	17.3	34.6	29.6	474	4,168
682.3 - 700.6	17.6	19.4	37.9	21.4	572	10,061
653.7 - 700.6	33.7	19.2	36.0	22.7	539	18,149