



OILFIELD RESEARCH LABORATORIES

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

September 29, 1978

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

Gentlemen:

Enclosed herewith are the results of tests run on the rotary core samples taken from the Nelson Lease, Well No. H-22, Allen County, Kansas, and submitted to our laboratory on September 23, 1978.

These core samples were sampled and the samples were sealed in bags by a representative of the client.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Benjamin R. Pearman
Benjamin R. Pearman

BRP:km
4 c to Henderson, Kentucky
1 c to Erie, Kansas

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company George A. Hoffman Lease Nelson Well No. H-22

Location 600' FNL & 50' FEL SW $\frac{1}{4}$

Section 21 Twp. 26S Rge. 21E County Allen State Kansas

Name of Sand	Bartlesville
Top of Core	658.0
Bottom of Core	704.0
Top of Sand	658.0
Bottom of Sand	704.0
Total Feet of Permeable Sand	37.0
Total Feet of Floodable Sand	

Distribution of Permeable Sand:
Permeability Range
Millidarcys

Permeability Range Millidarcys	Feet	Cum. Ft.	
0 - 2	12.0	12.0	
2 - 6	6.0	18.0	
6 - 16	9.0	27.0	
16 - 32	6.0	33.0	
32 - 60	3.0	36.0	
60 & Above	1.0	37.0	
Average Permeability Millidarcys			12.0
Average Percent Porosity			17.6
Average Percent Oil Saturation			40.1
Average Percent Water Saturation			40.0
Average Oil Content, Bbls./A. Ft.			554.
Total Oil Content, Bbls./Acre			22,700.
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 George A. Hoffman Lease Nelson Well No. H-22

<u>Depth Interval, Feet</u>	<u>Description</u>
658.0 - 659.0	Dark brown sandstone.
659.0 - 670.0	Brown carbonaceous shaly sandstone.
670.0 - 675.0	Light brown finely laminated shaly sandstone.
675.0 - 677.0	Light brown shaly sandstone.
681.0 - 682.0	Light brown shaly sandstone.
682.0 - 683.0	Dark brown sandstone.
684.0 - 697.0	Brown slightly carbonaceous slightly shaly sandstone.
697.0 - 704.0	Brown carbonaceous slightly shaly sandstone.

Oilfield Research Laboratories

RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company George A. Hoffman Lease Nelson Well No. H-22

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 mil.
			Oil	Water	Total			Ft.	Cum. Ft.		
1	658.5	21.2	39	37	76	641	55.	1.0	1.0	641	55.00
2	659.5	19.4	50	22	72	753	3.8	1.0	2.0	753	3.80
3	660.5	18.1	49	27	76	688	1.2	1.0	3.0	688	1.20
4	661.5	19.3	48	28	76	719	0.65	1.0	4.0	719	0.65
5	662.5	18.3	56	28	84	795	2.4	1.0	5.0	795	2.40
6	663.5	20.7	50	21	71	803	4.0	1.0	6.0	803	4.00
7	664.5	19.5	47	25	72	711	1.3	1.0	7.0	711	1.30
8	665.5	18.1	57	26	83	800	0.48	1.0	8.0	800	0.48
9	666.5	17.1	44	39	83	584	0.78	1.0	9.0	584	0.78
10	667.5	16.5	47	38	85	602	0.22	1.0	10.0	602	0.22
11	668.5	16.9	30	52	82	393	1.2	1.0	11.0	393	1.20
12	669.5	17.3	23	68	91	309	1.5	1.0	12.0	309	1.50
13	670.5	14.2	20	61	81	220	0.43	1.0	13.0	220	0.43
14	671.5	15.4	19	60	79	227	Imp.	1.0	14.0	227	0.00
15	672.5	17.1	11	55	66	146	Imp.	1.0	15.0	146	0.00
16	673.5	14.9	13	64	77	150	Imp.	1.0	16.0	150	0.00
17	674.5	14.5	19	59	78	214	Imp.	1.0	17.0	214	0.00
18	675.5	18.2	26	67	93	368	1.0	1.0	18.0	368	1.00
19	676.5	15.7	39	51	90	475	0.43	1.0	19.0	475	0.43
20	681.5	16.0	27	55	82	335	4.5	1.0	20.0	335	4.50
21	682.5	20.8	52	22	74	839	117.	1.0	21.0	839	117.00
22	684.5	12.1	50	43	93	469	17.	1.0	22.0	469	17.00
23	685.5	18.5	48	30	78	689	16.	1.0	23.0	689	16.00
24	686.5	17.2	47	34	81	627	8.3	1.0	24.0	627	8.30
25	687.5	16.8	42	38	80	547	6.3	1.0	25.0	547	6.30
26	688.5	18.0	49	33	82	684	9.4	1.0	26.0	684	9.40
27	689.5	17.3	45	31	76	604	0.27	1.0	27.0	604	0.27
28	690.5	16.8	45	35	80	587	9.8	1.0	28.0	587	9.80
29	691.5	18.8	49	30	79	715	10.	1.0	29.0	715	10.00

Oilfield Research Laboratories

RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company George A. Hoffman Lease Nelson Well No. H-22

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.		
30	692.5	14.7	46	36	82	525	2.9	1.0	30.0	525	2.90
31	693.5	18.6	45	30	75	649	19.	1.0	31.0	649	19.00
32	694.5	17.2	42	37	79	560	10.	1.0	32.0	560	10.00
33	695.5	16.8	36	44	80	469	3.4	1.0	33.0	469	3.40
34	696.5	18.6	44	38	82	635	10.	1.0	34.0	635	10.00
35	697.5	18.2	37	39	76	522	11.	1.0	35.0	522	11.00
36	698.5	18.5	41	37	78	588	41.	1.0	36.0	588	41.00
37	699.5	18.8	46	36	82	671	42.	1.0	37.0	671	42.00
38	700.5	18.9	38	43	81	557	16.	1.0	38.0	557	16.00
39	701.5	19.5	41	38	79	620	26.	1.0	39.0	620	26.00
40	702.5	19.3	38	41	79	569	23.	1.0	40.0	569	23.00
41	703.5	17.2	48	40	88	641	13.	1.0	41.0	641	13.00

Oilfield Research Laboratories

SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company George A. Hoffman Lease Nelson Well No. H-22

Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.
658.0 - 677.0	15.0	5.0	74.39
681.0 - 704.0	22.0	18.9	415.87
658.0 - 704.0	37.0	12.0	490.26

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
658.0 - 677.0	19.0	17.5	36.2	43.6	505	9,598
681.0 - 704.0	22.0	17.7	43.5	36.8	596	13,102
658.0 - 704.0	41.0	17.6	40.1	40.0	554	22,700