

GEORGE A. HOFFMAN

CORE ANALYSIS REPORT

NELSON LEASE

WELL NO. 31 ²⁶

ALLEN COUNTY, KANSAS

Location in that
of H-26!
+ date of fit.



OILFIELD RESEARCH LABORATORIES

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

September 12, 1979

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

Gentlemen:

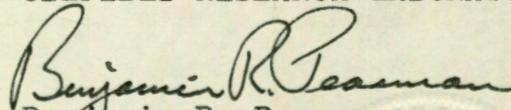
Enclosed herewith are the results of tests run on the rotary core taken from the Nelson Lease, Well No. 31, Allen County, Kansas, and submitted to our laboratory on September 7, 1979.

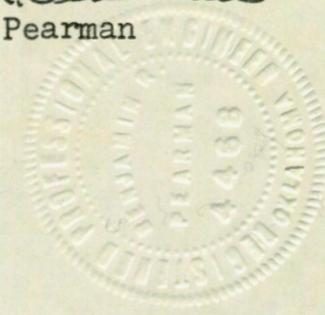
The core was sampled and sealed in plastic bags by a representative of the client.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES


Benjamin R. Pearman



BRP:km
5 c to Henderson, Kentucky

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GENERAL INFORMATION & SUMMARY

Company George A. Hoffman Lease Nelson Well No. 31

Location 400' FNL & 500' FEL NW $\frac{1}{4}$

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

Name of Sand	Bartlesville
Top of Core	672.0
Bottom of Core	700.0
Top of Sand	672.0
Bottom of Sand	699.6
Total Feet of Permeable Sand	27.6
Total Feet of Floodable Sand	

Distribution of Permeable Sand:
Permeability Range
Millidarcys

	Feet	Cum. Ft.
0 - 1	11.3	11.3
1 - 5	9.0	20.3
5 - 10	1.9	22.2
10 - 20	5.4	27.6

Average Permeability Millidarcys	4.2
Average Percent Porosity	18.1
Average Percent Oil Saturation	41.2
Average Percent Water Saturation	34.7
Average Oil Content, Bbls./A. Ft.	578.
Total Oil Content, Bbls./Acre	15,943.
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	

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LOG

Company George A. Hoffman Lease Nelson Well No. 31

<u>Depth Interval, Feet</u>	<u>Description</u>
672.0 - 673.0	Light brown and gray laminated sandstone and shale.
673.0 - 673.9	Light brown shaly sandstone.
673.9 - 691.2	Dark brown carbonaceous sandstone.
691.2 - 693.7	Brown slightly carbonaceous sandstone.
693.7 - 694.6	Brown carbonaceous sandstone.
694.6 - 696.7	Brown slightly carbonaceous sandstone.
696.7 - 698.1	Grayish brown very shaly conglomeratic sandstone.
698.1 - 699.6	Dark brown slightly carbonaceous sandstone.
699.6 - 700.0	Gray sandy shale.

RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE I-B

Company George A. Hoffman Lease Nelson Well No. 31

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	672.5	14.4	25	55	80	279	0.77	1.0	1.0	279	0.77
2	673.5	11.4	31	64	95	274	0.17	0.9	1.9	247	0.15
3	674.5	18.9	37	29	66	543	3.1	1.1	3.0	597	3.41
4	675.5	19.7	49	25	74	749	0.78	1.0	4.0	749	0.78
5	676.5	19.3	57	24	81	854	0.69	1.0	5.0	854	0.69
6	677.5	17.8	53	30	83	732	0.78	1.0	6.0	732	0.78
7	678.5	17.7	51	33	84	700	0.33	1.0	7.0	700	0.33
8	679.5	18.5	47	32	79	675	1.5	1.0	8.0	675	1.50
9	680.5	19.1	55	33	88	815	1.6	1.0	9.0	815	1.60
10	681.5	15.0	54	40	94	628	0.68	1.0	10.0	628	0.68
11	682.5	20.6	53	22	75	847	1.9	1.0	11.0	847	1.90
12	683.5	16.1	42	34	76	525	0.64	1.0	12.0	525	0.64
13	684.5	19.7	34	30	64	520	2.3	1.0	13.0	520	2.30
14	685.5	20.1	45	25	70	702	1.0	1.0	14.0	702	1.00
15	686.5	17.2	29	45	74	387	0.20	1.0	15.0	387	0.20
16	687.5	18.8	37	30	67	540	2.8	1.0	16.0	540	2.80
17	688.5	17.8	51	26	77	704	3.0	1.0	17.0	704	3.00
18	689.5	18.9	34	32	66	499	4.7	1.0	18.0	499	4.70
19	690.5	19.4	42	24	66	632	6.0	1.2	19.2	758	7.20
20	691.5	18.7	37	32	69	537	11.	0.8	20.0	430	8.80
21	692.5	19.9	37	34	71	571	16.	1.0	21.0	571	16.00
22	693.5	19.9	41	27	68	633	8.7	0.7	21.7	443	6.09
23	694.5	19.1	39	34	73	578	4.9	0.9	22.6	520	4.41
24	695.5	20.4	47	32	79	744	11.	1.4	24.0	1042	15.40
25	696.5	21.0	38	28	66	619	12.	0.7	24.7	433	8.40
26	697.5	12.1	9	73	82	85	0.22	1.4	26.1	119	0.31
27	698.5	18.6	43	33	76	621	17.	0.9	27.0	559	15.30
28	699.5	17.2	46	27	73	614	12.	0.6	27.6	368	7.20

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company George A. Hoffman Lease Nelson Well No. 31

Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.
672.0 - 691.2	19.2	1.8	34.43
691.2 - 699.6	8.4	9.8	81.91
672.0 - 699.6	27.6	4.2	116.34

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
672.0 - 691.2	19.2	18.0	43.5	33.0	597	11,458
691.2 - 699.6	8.4	18.2	35.9	38.3	534	4,485
672.0 - 699.6	27.6	18.1	41.2	34.7	578	15,943