

GEORGE A. HOFFMAN

CORE ANALYSIS REPORT

NELSON LEASE

WELL NO. 28

ALLEN COUNTY, KANSAS

OILFIELD RESEARCH LABORATORIES

536 N. HIGHLAND

CHANUTE, KANSAS



OILFIELD RESEARCH LABORATORIES

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

September 11, 1979

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

Dear Sir:

Enclosed herewith are the results of tests run on the rotary core taken from the Nelson Lease, Well No. 28, Allen County, Kansas, and submitted to our laboratory on September 9, 1979.

This core was sampled by a representative of the client in plastic bags. The core was out of the core barrel approximately four days before being submitted to the laboratory.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES


Benjamin R. Pearman

BRP:bl

4 c. to Henderson, Kentucky
1 c. to Erie, Kansas



Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company George A. Hoffman Lease Nelson Well No. 28

Location _____

Section 28 Twp. 26S Rge. 21E County Allen State Kansas

Name of Sand	Bartlesville
Top of Core	662.0
Bottom of Core	699.0
Top of Sand	662.0
Bottom of Sand	699.0
Total Feet of Permeable Sand	33.6
Total Feet of Floodable Sand	

Distribution of Permeable Sand:
Permeability Range
Millidarcys

	Feet	Cum. Ft.
0 - 4	11.8	11.8
4 - 8	2.7	14.5
8 - 24	5.5	20.0
24 - 48	6.5	26.5
48 - 96	4.7	31.2
96 & Above	2.4	33.6

Average Permeability Millidarcys	26.3
Average Percent Porosity	18.1
Average Percent Oil Saturation	33.0
Average Percent Water Saturation	39.0
Average Oil Content, Bbls./A. Ft.	475.
Total Oil Content, Bbls./Acre	16,565.
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	

-LOG-

Company George A. Hoffman Lease Nelson Well No. 28

Depth Interval, <u>Feet</u>	<u>Description</u>
--------------------------------	--------------------

662.0 - 668.4	- Brown slightly shaly sandstone.
---------------	-----------------------------------

668.4 - 669.4	- Light brown shaly sandstone.
---------------	--------------------------------

669.4 - 670.3	- Brown slightly shaly sandstone.
---------------	-----------------------------------

670.3 - 678.3	- Light brown shaly sandstone.
---------------	--------------------------------

678.3 - 685.0	- Brown shaly sandstone.
---------------	--------------------------

685.0 - 687.3	- Light brown shaly sandstone.
---------------	--------------------------------

687.3 - 689.8	- Brown sandstone.
---------------	--------------------

689.8 - 694.1	- Light brown shaly sandstone.
---------------	--------------------------------

694.1 - 696.2	- Gray sandy shale.
---------------	---------------------

696.2 - 699.0	- Gray sandy conglomerate.
---------------	----------------------------

RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company George A. HoffmanLease NelsonWell No. 28

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	662.5	21.7	39	27	66	657	72.	1.0	1.0	657	72.00
2	663.5	20.5	39	27	66	620	62.	1.0	2.0	620	62.00
3	664.5	20.7	38	31	69	610	63.	1.0	3.0	610	63.00
4	665.5	19.3	40	39	79	599	62.	1.0	4.0	599	62.00
5	666.5	20.2	42	37	79	658	97.	1.0	5.0	658	97.00
6	667.5	21.9	41	33	74	679	127.	1.4	6.4	950	177.80
7	668.5	16.4	31	54	85	394	2.6	1.0	7.4	394	2.60
8	669.5	20.4	38	40	78	601	41.	0.9	8.3	541	36.90
9	670.5	15.4	26	63	89	311	6.3	0.7	9.0	218	4.41
10	671.5	16.7	27	53	80	350	11.	1.0	10.0	350	11.00
11	672.5	16.1	27	65	92	337	2.2	1.0	11.0	337	2.20
12	673.5	15.8	25	60	85	306	8.9	1.0	12.0	306	8.90
13	674.5	15.0	38	58	96	442	4.5	1.0	13.0	442	4.50
14	675.5	13.5	21	71	92	220	2.5	1.0	14.0	220	2.50
15	676.5	17.3	26	53	79	349	6.8	1.0	15.0	349	6.80
16	677.5	18.5	33	7	40	474	11.	1.3	16.3	616	14.30
17	678.5	18.3	35	8	43	497	32.	0.7	17.0	348	22.40
18	679.5	18.4	33	10	43	471	31.	1.0	18.0	471	31.00
19	680.5	22.3	42	26	68	727	3.9	1.0	19.0	727	3.90
20	681.5	19.5	43	32	75	651	0.69	1.0	20.0	651	0.69
21	682.5	19.9	46	30	76	710	1.3	1.0	21.0	710	1.30
22	683.5	22.0	43	20	63	734	3.5	1.0	22.0	734	3.50
23	684.5	19.3	34	10	44	509	26.	1.0	23.0	509	26.00
24	685.5	17.8	35	8	43	483	15.	1.0	24.0	483	15.00
25	686.5	14.5	23	23	46	259	Imp.	1.3	25.3	337	0.00
26	687.5	22.3	40	28	68	692	52.	0.7	26.0	485	36.40
27	688.5	18.5	38	40	78	545	35.	1.0	27.0	545	35.00
28	689.5	20.7	34	18	52	546	34.	0.8	27.8	437	27.20

RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company George A. Hoffman Lease Nelson Well No. 28

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.		
29	690.5	15.7	24	62	86	292	10.	1.2	29.0	350	12.00
30	691.5	14.8	27	65	92	310	2.0	1.0	30.0	310	2.00
31	692.5	16.1	19	66	85	237	2.6	1.0	31.0	237	2.60
32	693.5	19.2	35	8	43	521	32.	1.1	32.1	574	35.20
33	696.5	14.6	16	80	96	181	0.30	0.8	32.9	145	0.24
34	697.5	16.5	19	70	89	243	0.57	1.0	33.9	243	0.57
35	698.5	14.0	37	56	93	402	0.39	1.0	34.9	402	0.39

Oilfield Research Laboratories

SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company George A. Hoffman Lease Nelson Well No. 28

Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.
662.0 - 678.3	16.3	38.5	627.91
678.3 - 699.0	17.3	14.8	255.39
662.0 - 699.0	33.6	26.3	883.30

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
662.0 - 678.3	16.3	18.2	33.5	43.6	483	7,867
678.3 - 699.0	18.6	18.0	32.6	34.9	467	8,698
662.0 - 699.0	34.9	18.1	33.0	39.0	475	16,565