

# OILFIELD RESEARCH LABORATORIES

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

September 17, 1981

DFW Petroleum, Inc.  
1506 Park  
Harvey Center  
Oklahoma City, Oklahoma 73102

Gentlemen:

Enclosed herewith are the results of tests run on the rotary core taken from the E. Hiesler Lease, Well No. F-14 (9), located in Allen County, Kansas.

The core was sampled and sealed in plastic bags by a representative of the client and was submitted to our laboratory on September 10, 1981.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Sanford A. Michel

SAM/kas

4 c to Oklahoma City, Oklahoma  
1 c to Elsmore, Kansas

- REGISTERED ENGINEERS -

CORE ANALYSIS - WATER ANALYSIS - REPRESSURING ENGINEERING - SURVEYING & MAPPING - PROPERTY EVALUATION & OPERATION

**Oilfield Research Laboratories**  
**GENERAL INFORMATION & SUMMARY**

Company DFW Petroleum, Inc. Lease E. Hiesler Well No. F-14 (9)

Location \_\_\_\_\_

Section \_\_\_\_\_ Twp. \_\_\_\_\_ Rge. \_\_\_\_\_ County Allen State Kansas

Elevation, Feet .....

Name of Sand..... Bartlesville

Top of Core ..... 738.0

Bottom of Core ..... 800.0

Top of Sand ..... 738.0

Bottom of Sand ..... 800.0

Total Feet of Permeable Sand ..... 26.7

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 3	6.1	6.1
10 - 30	3.4	9.5
75 - 150	5.4	14.9
150 - 300	5.0	19.9
300 - 400	4.0	23.9
500 - 680	2.8	26.7

Average Permeability Millidarcys ..... 185.9

Average Percent Porosity ..... 16.6

Average Percent Oil Saturation ..... 26.2

Average Percent Water Saturation..... 44.6

Average Oil Content, Bbls./A. Ft. .... 374.

Total Oil Content, Bbls./Acre..... 12,956.

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LOGName DFW Petroleum, Inc. Lease E. Hiesler Well No. F-14(9)

<u>Depth Interval, Feet</u>	<u>Description</u>
738.0 - 739.0	Brown sandstone with shale partings.
739.0 - 740.0	Dark brown sandstone.
740.0 - 741.0	Grayish brown shaly sandstone.
741.0 - 744.0	No core.
744.0 - 745.4	Grayish brown shaly sandstone.
745.4 - 747.0	No core.
747.0 - 749.0	Grayish light brown shaly sandstone.
749.0 - 753.0	No core.
753.0 - 758.0	Grayish light brown very shaly sandstone containing a vertical fracture.
758.0 - 760.0	Brown sandstone with some shale partings.
760.0 - 761.0	Gray and brown laminated shale and sandstone.
761.0 - 761.4	Light brown sandstone.
761.4 - 763.0	Grayish light brown shaly sandstone.
763.0 - 780.0	No core.
780.0 - 790.0	Light brown sandstone.
790.0 - 791.9	Brown slightly carbonaceous sandstone.
791.9 - 792.2	Gray shaly sandstone.
792.2 - 792.6	Brown sandstone.
792.6 - 796.1	Grayish light brown shaly sandstone.
796.1 - 797.0	Brown slightly carbonaceous sandstone.
797.0 - 800.0	Brown sandstone.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company DFW Petroleum, Inc. Lease E. Hiesler Well No. F-14 (9)

Sample No.	Depth, Feet	Effective Porosity Percent	Percent Saturation			Oil Content Bbbs. / A Ft.	Perm., Mill.	Feet of Sand		Total Oil Content	Perm. Capacity Ft. X md.
			Oil	Water	Total			Ft.	Cum. Ft.		
1	738.6	15.0	32	31	63	372	26.	1.0	1.0	372	26.00
2	739.5	14.3	35	40	75	388	79.	1.0	2.0	388	79.00
3	740.4	9.9	4	67	71	31	Imp.	1.0	3.0	31	0.00
4	744.6	9.7	38	47	85	286	Imp.	1.4	4.4	400	0.00
5	747.4	12.6	18	57	75	176	Imp.	1.0	5.4	176	0.00
6	748.5	11.6	10	68	78	90	Imp.	1.0	6.4	90	0.00
7	753.6	13.1	6	64	70	61	0.74	1.5	7.9	92	1.11
8	755.3	12.9	21	35	56	210	0.32	1.0	8.9	210	0.32
9	756.3	13.4	21	55	76	218	2.0	1.0	9.9	218	2.00
10	758.4	17.1	23	41	64	305	24.	1.0	10.9	305	24.00
11	759.5	14.9	26	31	57	301	13.	1.0	11.9	301	13.00
12	760.4	12.8	27	36	63	268	0.69	1.0	12.9	268	0.69
13	761.3	15.1	20	27	47	234	23.	0.4	13.3	94	9.20
14	762.6	13.3	16	46	62	165	0.65	1.6	14.9	264	1.04
15	780.5	22.5	34	38	72	593	399.	1.0	15.9	593	399.00
16	781.4	22.2	33	34	67	568	509.	1.0	16.9	568	509.00
17	782.5	21.6	27	35	62	452	357.	1.0	17.9	452	357.00
18	783.4	19.4	26	39	65	391	119.	1.0	18.9	391	119.00
19	784.5	21.1	29	34	63	475	314.	1.0	19.9	475	314.00
20	785.6	22.5	23	41	64	401	148.	1.0	20.9	401	148.00
21	786.5	21.1	31	27	58	508	324.	1.0	21.9	508	324.00
22	787.5	20.2	37	18	55	580	280.	1.0	22.9	580	280.00
23	788.4	21.5	31	37	68	517	185.	1.0	23.9	517	185.00
24	789.6	22.6	30	40	70	526	273.	1.0	24.9	526	273.00

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RESULTS OF SATURATION & PERMEABILITY TESTS

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TABLE 1-B

Company DFW Petroleum, Inc. Lease E. Hiesler Well No. F-14 (9)

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.		
25	790.5	24.4	51	26	77	965	195.	1.0	25.9	965	195.00
26	791.5	23.1	30	48	78	538	637.	0.9	26.8	484	573.30
27	792.5	13.8	37	26	63	396	115.	0.4	27.2	158	46.00
28	793.6	4.8	10	85	95	37	Imp.	1.1	28.3	41	0.00
29	794.3	5.4	7	87	94	29	Imp.	1.0	29.3	29	0.00
30	795.5	12.2	5	89	94	47	Imp.	1.4	30.7	66	0.00
31	796.4	24.4	54	22	76	1022	679.	0.9	31.6	920	611.10
32	797.5	22.2	56	23	79	965	107.	1.0	32.6	965	107.00
33	798.4	22.8	31	35	66	548	259.	1.0	33.6	548	259.00
34	799.4	19.0	38	30	68	560	109.	1.0	34.6	560	109.00

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## SUMMARY OF PERMEABILITY & SATURATION TESTS

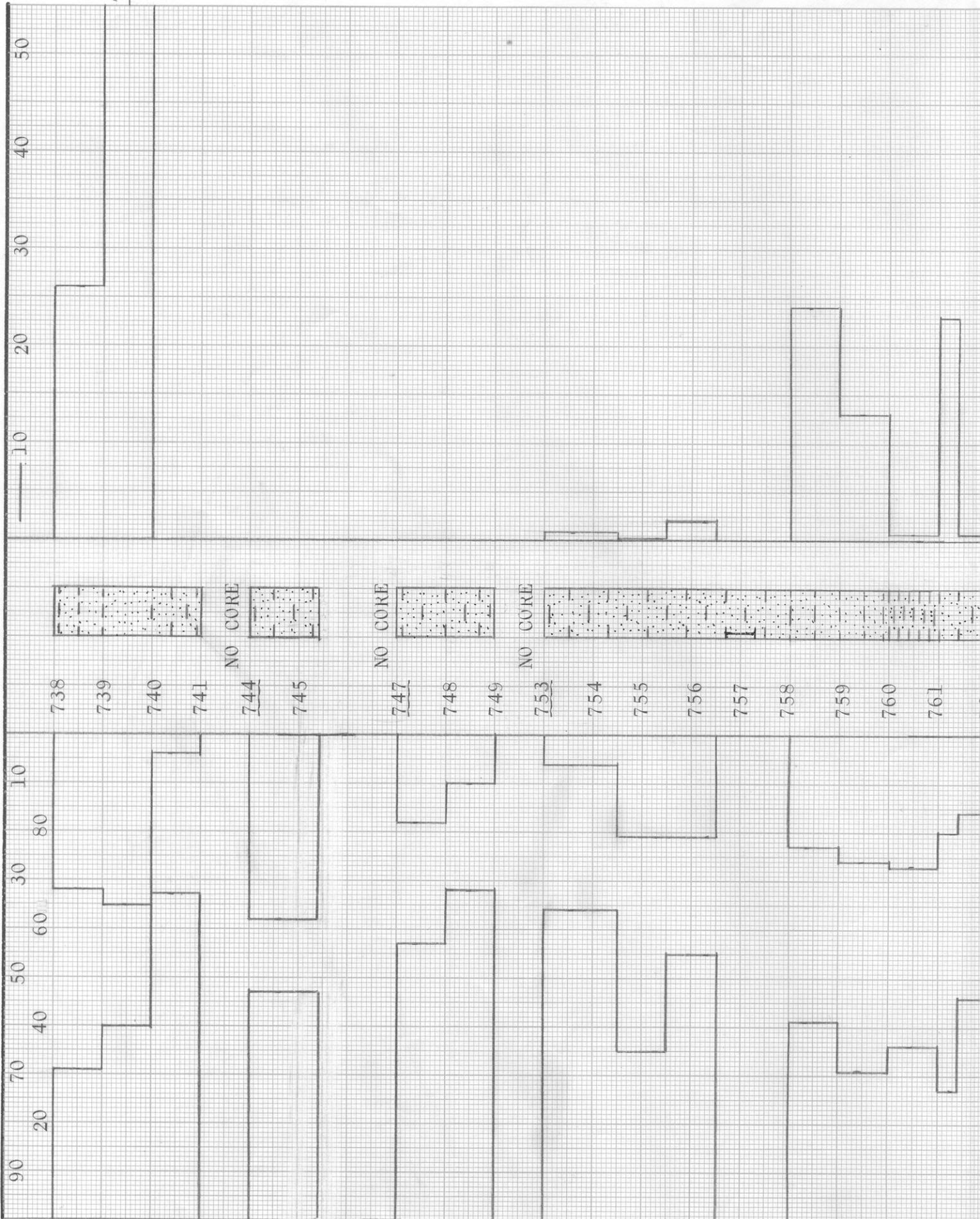
TABLE III

Company	Lease	Well No.																		
DFW Petroleum, Inc.	E. Hiesler	F-14 (9)																		
Depth Interval, Feet	Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.	Average Porosity	Average Percent Oil Saturation	Average Percent Water Saturation	Average Oil Content Bbl./A. Ft.	Total Oil Content Bbls./Acre											
738.0 - 763.0	738.0 - 763.0	10.5	14.9	156.36	13.1	21.0	47.5	215	3,209											
780.0 - 792.6	780.0 - 792.6	12.3	302.6	3722.30	21.6	32.0	34.4	538	6,618											
792.6 - 796.1	792.6 - 796.1	0.0	0.0	0.00	7.9	7.1	87.2	39	136											
796.1 - 800.0	796.1 - 800.0	3.9	278.5	1086.10	22.1	44.5	27.6	767	2,993											
738.0 - 800.0	738.0 - 800.0	26.7	185.9	4964.76	16.6	26.2	44.6	374	12,956											

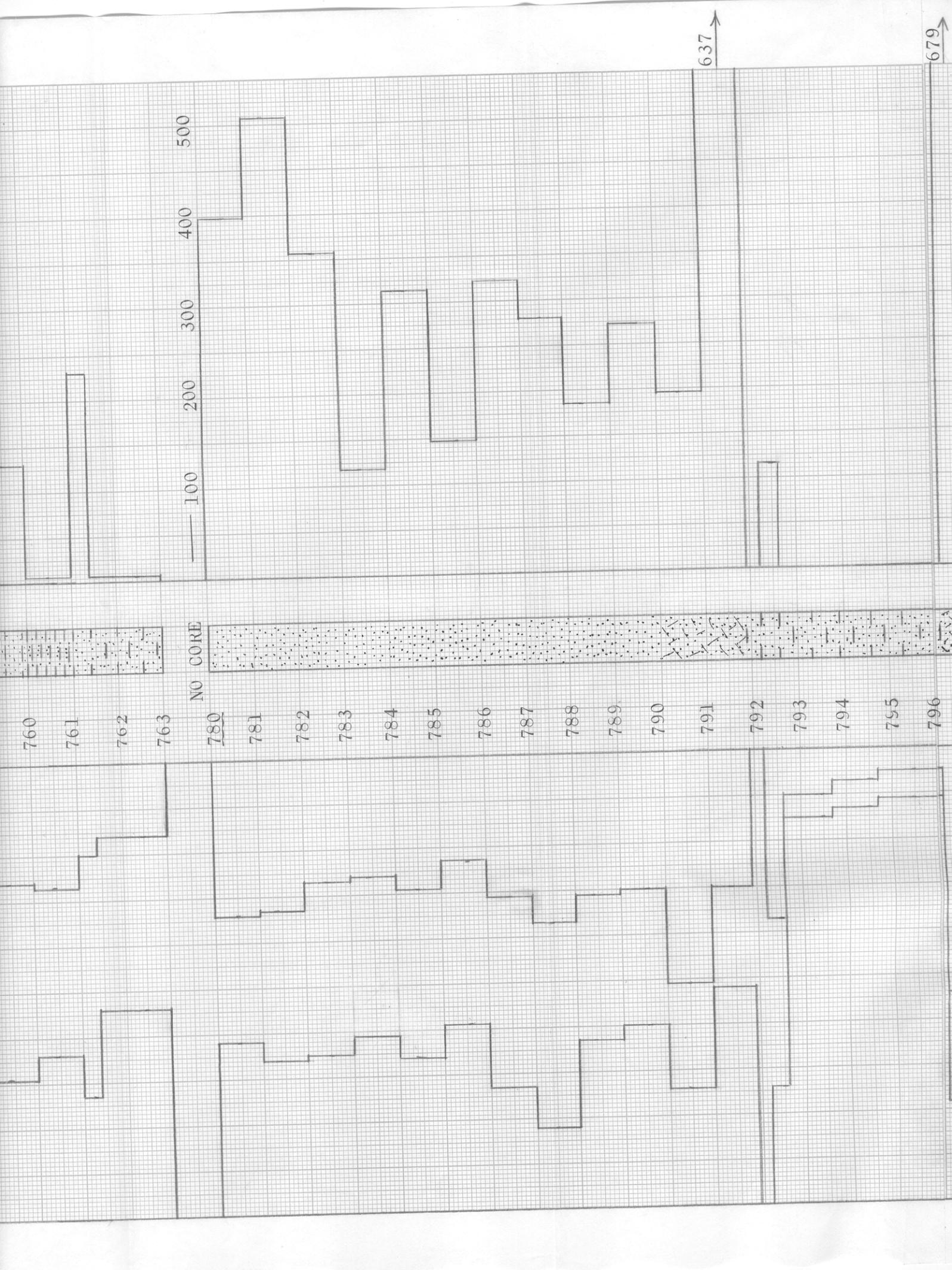
PERMEABILITY, IN MILLIDARCYS

WATER SAT., PERCENT

OIL SAT., PERCENT

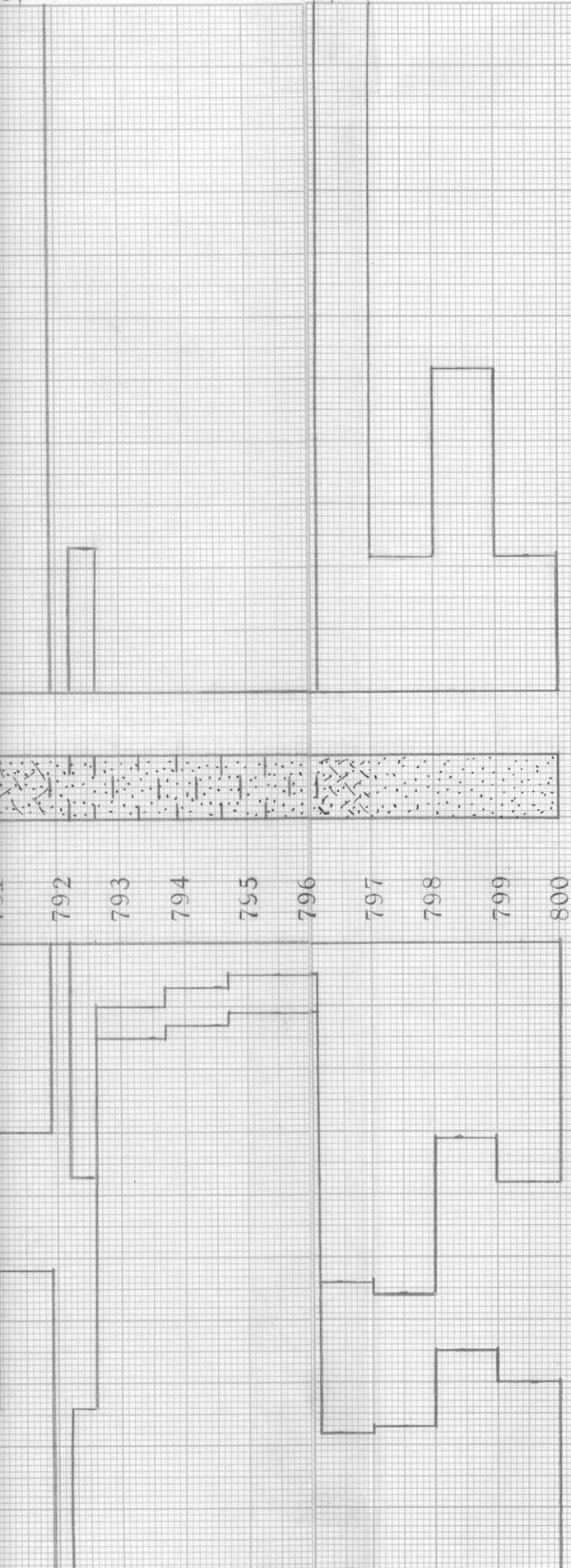


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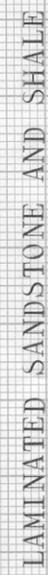
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KEY:

-  SANDSTONE
-  SHALY SANDSTONE
-  CARBONACEOUS SANDSTONE

-  SANDSTONE WITH SHALE PARTINGS
-  LAMINATED SANDSTONE AND SHALE
-  FORMATION CONTAINING A VERTICAL FRACTURE

# DF W PETROLEUM, INC.

E. HIESLER LEASE

WELL NO. F-14 (9)

ALLEN COUNTY, KANSAS

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE PERCENT POROSITY	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVERAGE PERMEABILITY, MILLIDARCYS
738.0 - 763.0	14.9	13.1	21.0	47.5	14.9
780.0 - 792.6	12.3	21.6	32.0	34.4	302.6

# D F W PETROLEUM, INC.

WELL NO. F-14 (9)

E. HIESLER LEASE

ALLEN COUNTY, KANSAS

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE PERCENT POROSITY	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVERAGE PERMEABILITY, MILLIDARCYS
738.0 - 763.0	14.9	13.1	21.0	47.5	14.9
780.0 - 792.6	12.3	21.6	32.0	34.4	302.6
792.6 - 796.1	3.5	7.9	7.1	87.2	0.0
796.1 - 800.0	3.9	22.1	44.5	27.6	278.5
738.0 - 800.0	34.6	16.6	26.2	44.6	185.9

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CHANUTE, KANSAS  
SEPTEMBER, 1981

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