

OILFIELD RESEARCH LABORATORIES

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

August 17, 1981

Exploration Services, Inc.
7 East Bijou
Suite 201
Colorado Springs, Colorado 80903

Gentlemen:

Enclosed herewith are the results of tests run on the rotary core taken from the Krienke Lease, Well No. 1, located in Montgomery County, Kansas.

The core was sampled and parts of the core were sealed in plastic bags by a representative of the client and submitted to our laboratory on August 12, 1981.

The client reported that the core had been out of the hole for 24 hours before being sampled. Samples 1 through 5 and samples 18 and 19 were received in the laboratory unbagged.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Sanford A. Michel
by B. L.
Sanford A. Michel

SAM/kas

5 c to Colorado Springs, Colorado

Oilfield Research Laboratories
GENERAL INFORMATION & SUMMARY

Company Exploration Services, Inc. Lease Krienke Well No. 1
 Location 180' FEL & 500' FSL, E $\frac{1}{2}$, SE $\frac{1}{2}$, S $\frac{1}{2}$
 Section 9 Twp. 31S Rge. 17E County Montgomery State Kansas

Elevation, Feet	
Name of Sand	Bartlesville
Top of Core	806.0
Bottom of Core	826.0
Top of Sand	806.0
Bottom of Sand	826.0
Total Feet of Permeable Sand	15.5

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 8	3.9	3.9
24 - 50	2.0	5.9
50 - 80	8.6	14.5
140 - 146	1.0	15.5

Average Permeability Millidarcys	51.0
Average Percent Porosity	16.0
Average Percent Oil Saturation	26.4
Average Percent Water Saturation	44.5
Average Oil Content, Bbls./A. Ft.	343.
Total Oil Content, Bbls./Acre	6,349.

OILFIELD RESEARCH LABORATORIES

LOG

Name Exploration Services, Inc. Lease Krienke Well No. 1

<u>Depth Interval,</u> <u>Feet</u>	<u>Description</u>
806.0 - 810.7	Gray and light brown laminated shale and sandstone.
810.7 - 822.3	Light brown sandstone.
822.3 - 823.0	Gray shale.
823.0 - 823.7	Grayish light brown shaly sandstone.
823.7 - 824.5	Gray shale.
824.5 - 826.0	Grayish light brown shaly sandstone.

Oilfield Research Laboratories
RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Exploration Services, Inc. Lease Krienke Well No. 1

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			Ft.	Cum. Ft.		
1	806.5	10.3	7	44	56	Imp.	1.0	1.0	56	0.00
2	807.4	7.2	8	67	45	Imp.	1.0	2.0	45	0.00
3	808.5	9.3	32	40	231	Imp.	1.0	3.0	231	0.00
4	809.5	13.7	21	21	223	2.1	1.0	4.0	223	2.10
5	810.4	15.8	31	18	380	7.5	0.7	4.7	266	5.25
6	811.5	19.9	50	29	772	62.	1.6	6.3	1235	99.20
7	812.5	18.7	37	32	537	71.	1.0	7.3	537	71.00
8	813.4	17.8	37	42	511	69.	1.0	8.3	511	69.00
9	814.6	16.6	31	46	399	24.	1.0	9.3	399	24.00
10	815.6	18.7	24	49	348	69.	1.0	10.3	348	69.00
11	816.5	17.0	22	53	290	53.	1.0	11.3	290	53.00
12	817.5	18.3	33	44	469	68.	1.0	12.3	469	68.00
13	818.4	18.5	22	48	316	79.	1.0	13.3	316	79.00
14	819.6	20.2	19	67	298	145.	1.0	14.3	298	145.00
15	820.6	19.5	24	50	363	76.	1.0	15.3	363	76.00
16	821.5	17.1	16	60	212	24.	1.0	16.3	212	24.00
17	823.4	13.6	20	50	211	2.6	0.7	17.0	148	1.82
18	824.7	13.5	36	41	377	2.5	0.7	17.7	264	1.75
19	825.6	13.1	17	46	173	3.4	0.8	18.5	138	2.72

Oilfield Research Laboratories
SUMMARY OF PERMEABILITY & SATURATION TESTS

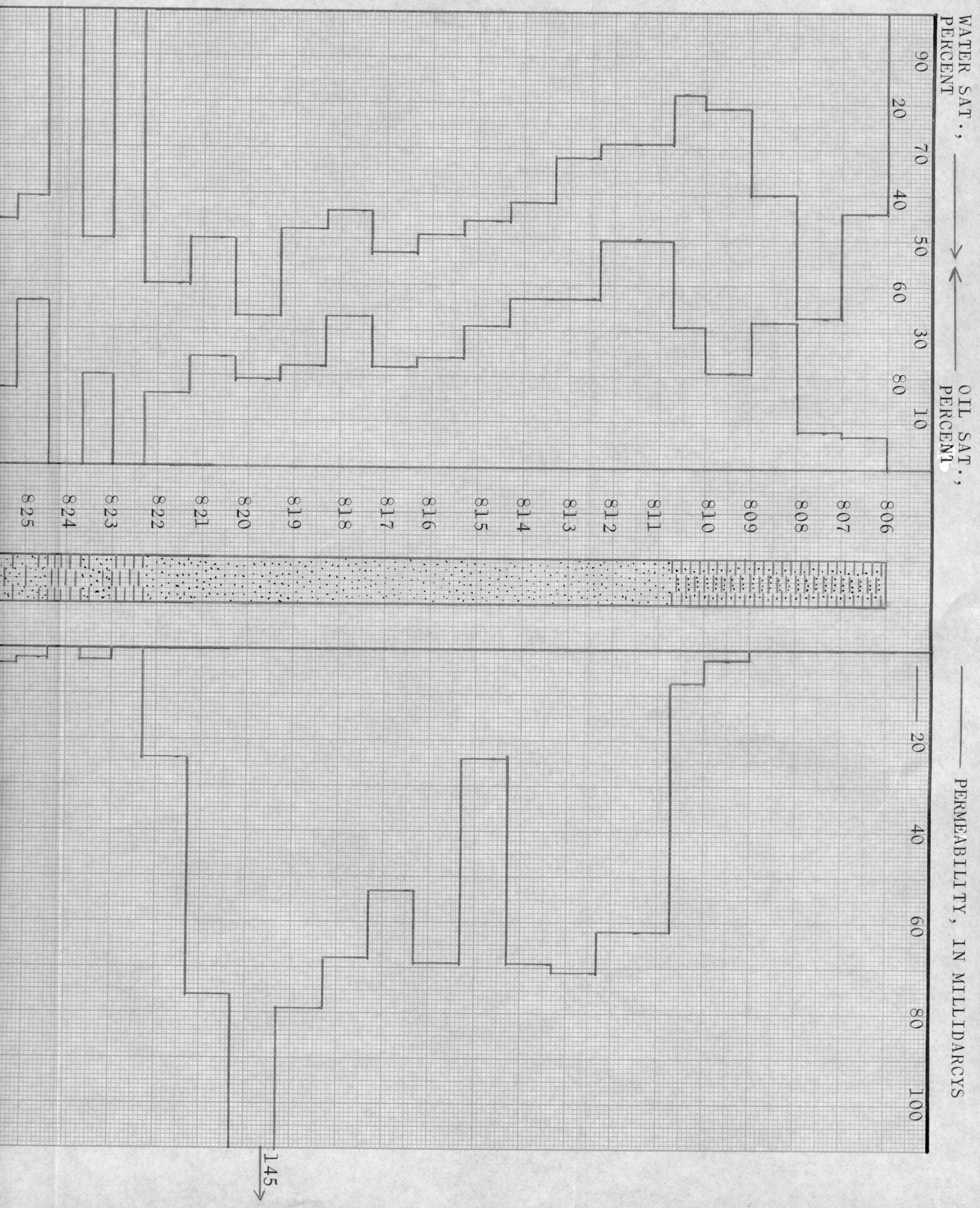
TABLE III

Company	Lease	Well No.								
Exploration Services, Inc.	Krienke	1								
Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.	Depth Interval, Feet	Feet of Core Analyzed	Average Porosity	Average Percent Oil Saturation	Average Percent Water Saturation	Average Oil Content Bbl./A. Ft.	Total Oil Content Bbls./Acre
806.0 - 810.7	1.7	4.3	7.35	806.0 - 810.7	4.7	11.0	19.1	39.3	175	821
810.7 - 822.3	11.6	67.0	777.20	810.7 - 822.3	11.6	18.5	29.7	46.3	429	4,978
823.0 - 826.0	2.2	2.9	6.29	823.0 - 826.0	2.2	13.4	24.0	45.7	250	550
806.0 - 826.0	15.5	51.0	790.84	806.0 - 826.0	18.5	16.0	26.4	44.5	343	6,349

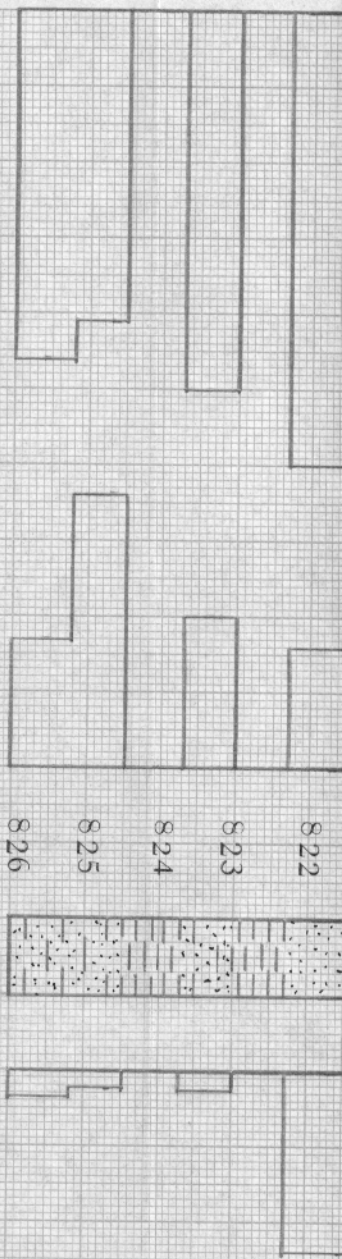
WATER SAT., PERCENT

OIL SAT., PERCENT





PERMEABILITY, IN MILLIDARCYS



145



KEY:

-  SANDSTONE
-  SHALY SANDSTONE
-  LAMINATED SANDSTONE AND SHALE
-  SHALE

EXPLORATION SERVICES, INC.

KRIENKE LEASE

MONTGOMERY COUNTY, KANSAS

WELL NO. 1

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE PERCENT POROSITY	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVERAGE PERMEABILITY, MILLIDARCY
806.0 - 810.7	4.7	11.0	19.1	39.3	4.3
810.7 - 822.3	11.6	18.5	29.7	46.3	67.0
823.0 - 826.0	2.2	13.4	24.0	45.7	2.9
806.0 - 826.0	18.5	16.0	26.4	44.5	51.0

OILFIELD RESEARCH LABORATORIES
CHANUTE, KANSAS
AUGUST, 1981

PDC