

# OILFIELD RESEARCH LABORATORIES

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

February 15, 1980

KLI Petroleum Corporation  
808 Southeast Sixth  
Evansville, Indiana 74048

Gentlemen:

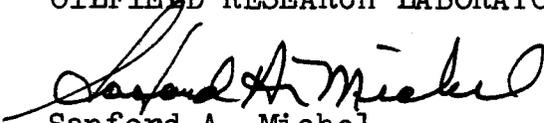
Enclosed herewith are the results of tests run on the rotary core taken from the Nelson Lease, Well No. K-45, Allen County, Kansas, and submitted to our laboratory on February 12, 1980.

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

  
Sanford A. Michel

SAM/kas  
5 c to Evansville, Indiana

- REGISTERED ENGINEERS -

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

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

Company  KLI Petroleum Corporation  Lease  Nelson  Well No.  K-45

Location  -

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

Elevation, Feet . . . . .	
Name of Sand . . . . .	Bartlesville
Top of Core . . . . .	640.0
Bottom of Core . . . . .	673.0
Top of Sand . . . . .	640.0
Bottom of Sand . . . . .	668.8
Total Feet of Permeable Sand . . . . .	27.2

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 4	4.7	4.7
4 - 8	4.9	9.6
8 - 30	4.5	14.1
30 - 50	3.0	17.1
50 - 80	8.0	25.1
80 & Above	2.1	27.2

Average Permeability Millidarcys . . . . .	36.4
Average Percent Porosity . . . . .	17.5
Average Percent Oil Saturation . . . . .	42.1
Average Percent Water Saturation . . . . .	38.3
Average Oil Content, Bbls./A. Ft. . . . .	586.
Total Oil Content, Bbls./Acre . . . . .	16,534.

## OILFIELD RESEARCH LABORATORIES

LOGName  KLI Petroleum Corporation  Lease  Nelson  Well No.  K-45 

<u>Depth Interval, Feet</u>	<u>Description</u>
640.0 - 644.8	Brown shaly sandstone.
644.8 - 648.1	Brown sandstone.
648.1 - 648.7	Brown shaly sandstone.
648.7 - 649.3	Dark brown sandstone.
649.3 - 650.8	Brown shaly sandstone.
650.8 - 652.0	Brown slightly shaly sandstone.
652.0 - 657.0	Dark brown sandstone.
657.0 - 658.1	Brown shaly sandstone.
658.1 - 659.1	Dark brown sandstone.
659.1 - 659.6	Brown shaly sandstone.
659.6 - 666.7	Dark brown sandstone.
666.7 - 668.8	Grayish brown slightly carbonaceous conglomeratic shaly sandstone.
668.8 - 673.0	Gray sandy shale.

**Oilfield Research Laboratories**

**RESULTS OF SATURATION & PERMEABILITY TESTS**

**TABLE 1-B**

Company KLI Petroleum Corporation Lease Nelson Well No. K-45

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	640.5	9.5	30	68	98	221	0.32	1.0	1.0	221	0.32
2	641.5	17.4	34	43	77	459	1.2	1.0	2.0	459	1.20
3	642.5	7.9	24	73	97	147	4.7	1.0	3.0	147	4.70
4	643.5	14.5	35	53	88	394	Imp.	1.0	4.0	394	0.00
5	644.5	13.8	29	54	83	311	3.4	0.8	4.8	249	2.72
6	645.5	15.1	29	46	75	340	21.	1.0	5.8	340	21.00
7	646.5	16.1	40	47	87	500	58.	1.0	6.8	500	58.00
8	647.5	18.6	50	30	80	722	29.	1.3	8.1	939	37.70
9	648.5	21.2	52	26	78	855	5.9	0.6	8.7	513	3.54
10	649.5	16.5	47	38	85	602	6.0	0.7	9.4	421	4.20
11	650.5	15.9	49	36	85	604	3.4	0.8	10.2	483	2.72
12	651.5	17.1	46	36	82	610	13.	1.2	11.4	732	15.60
13	652.5	16.2	40	39	79	503	62.	1.0	12.4	503	62.00
14	653.5	25.6	40	21	61	794	52.	1.0	13.4	794	52.00
15	654.7	18.1	50	35	85	702	61.	1.0	14.4	702	61.00
16	655.5	17.7	58	30	88	796	60.	1.0	15.4	796	60.00
17	656.5	21.0	56	23	79	912	58.	1.0	16.4	912	58.00
18	657.5	20.8	38	27	65	613	5.7	1.1	17.5	674	6.27
19	658.5	19.7	55	28	83	841	31.	1.0	18.5	841	31.00
20	659.5	15.9	46	35	81	567	4.2	0.5	19.0	284	2.10
21	660.5	19.0	50	31	81	737	86.	1.4	20.4	1,032	120.40
22	661.5	18.8	53	29	82	773	42.	1.0	21.4	773	42.00
23	662.5	18.8	46	43	89	671	43.	1.0	22.4	671	43.00
24	663.5	21.4	51	24	75	847	62.	1.0	23.4	847	62.00
25	664.5	21.3	42	32	74	694	20.	1.0	24.4	694	20.00
26	665.5	18.2	40	36	76	565	72.	1.0	25.4	565	72.00
27	666.5	18.8	34	40	74	496	195.	0.7	26.1	347	136.50
28	667.5	19.3	23	32	55	344	1.8	1.1	27.2	378	1.98
29	668.5	11.9	35	61	96	323	6.9	1.0	28.2	323	6.90

# Oilfield Research Laboratories

## SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company KLI Petroleum Corporation Lease Nelson Well No. K-45

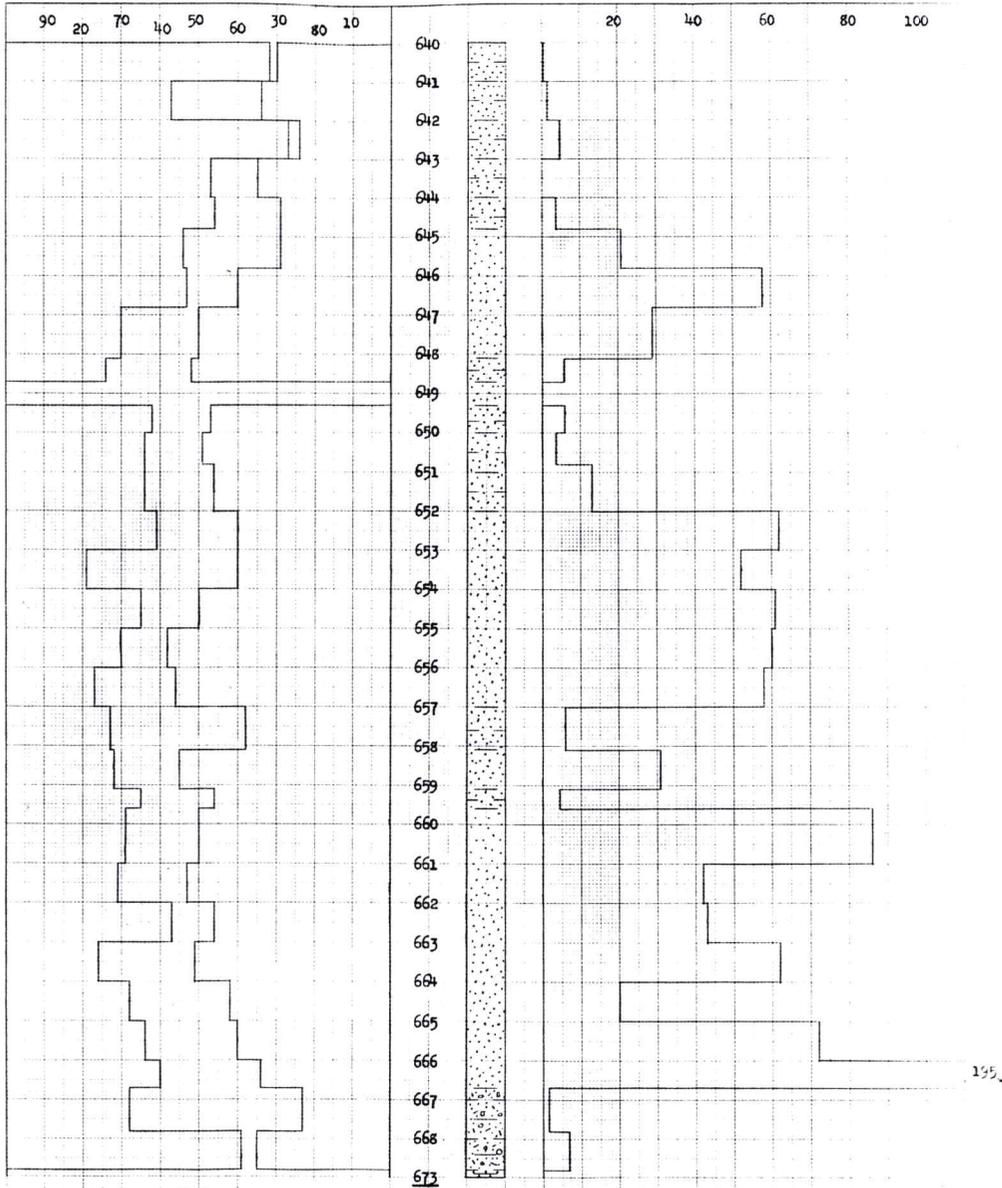
Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.
640.0 - 644.8	3.8	2.4	8.94
644.8 - 668.8	23.4	41.9	979.91
640.0 - 668.8	27.2	36.4	988.85

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
640.0 - 644.8	4.8	12.6	30.5	58.4	306	1,470
644.8 - 668.8	23.4	18.5	44.5	34.2	644	15,064
640.0 - 668.8	28.2	17.5	42.1	38.3	586	16,534

WATER SAT.  
PERCENT

OIL SAT.  
PERCENT

PERMEABILITY, IN MILLIDARCY



KEY:

SANDSTONE

SHALY SANDSTONE

CARBONACEOUS CONGLOMERATIC SHALY SANDSTONE

SANDY SHALE

## KLI PETROLEUM CORPORATION

NELSON LEASE

WELL NO. K - 45

ALLEN COUNTY, KANSAS

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE PERCENT POROSITY	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVERAGE PERMEABILITY, MILLIDARCY
640.0 - 644.8	4.8	12.6	30.5	58.4	2.4
644.8 - 668.8	23.4	18.5	44.5	34.2	41.9
640.0 - 668.8	28.2	17.5	42.1	38.3	36.4

OILFIELD RESEARCH LABORATORIES  
CHANUTE, KANSAS  
FEBRUARY, 1980.

HR