

OILFIELD RESEARCH LABORATORIES

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

April 21, 1982

T. I. Energy, Inc.
1302 South Main St.
Suite A
Ottawa, Kansas 66067

Gentlemen:

Enclosed herewith are the results of tests run on the rotary core taken from the Kramer Lease, Well No. 3-A-6, located in Johnson County, Kansas.

The core was sampled and sealed in plastic bags by a representative of the client and was submitted to our laboratory on April 20, 1982.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Sanford A. Michel

SAM/kas

5 c to Ottawa, Kansas

- REGISTERED ENGINEERS -

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

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GENERAL INFORMATION & SUMMARY

Company T. I. Energy, Inc. Lease Kramer Well No. 3-A-6
 Location _____
 Section 17 Twp. 14S Rge. 22E County Johnson State Kansas

Elevation, Feet

Name of Sand

Lower Squirrel

Top of Core

743.5

Bottom of Core

760.8

Top of Sand (Tested)

751.3

Bottom of Sand (Tested)

760.4

Total Feet of Permeable Sand

9.1

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 5	0.5	0.5
38 - 63	6.8	7.3
101 - 134	1.8	9.1

Average Permeability Millidarcys

63.6

Average Percent Porosity

22.2

Average Percent Oil Saturation

51.1

Average Percent Water Saturation

22.1

Average Oil Content, Bbls./A. Ft.

888.

Total Oil Content, Bbls./Acre

8,083.

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LOG

Name T. I. Energy, Inc. Lease Kramer Well No. 3-A-6

<u>Depth Interval, Feet</u>	<u>Description</u>
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LOWER SQUIRREL

743.5 - 751.0	Gray shale.
751.0 - 751.3	Gray and dark brown laminated shale and sandstone.
751.3 - 752.1	Dark brown sandstone.
752.1 - 753.5	Gray and dark brown laminated shale and sandstone.
753.5 - 760.4	Brown sandstone with scattered gray shale partings.
760.4 - 760.8	Gray shaly sandstone.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company T. I. Energy, Inc. Lease Kramer Well No. 3-A-6

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	751.5	19.6	48	12	60	730	101.	0.8	0.8	584	80.80
2	752.5	25.8	67	25	92	1341	60.	1.4	2.2	1877	84.00
3	753.6	21.4	46	18	64	764	56.	0.9	3.1	688	50.40
4	754.5	20.7	40	26	66	642	38.	0.9	4.0	578	34.20
5	755.4	24.1	59	19	78	1103	133.	1.0	5.0	1103	133.00
6	756.4	21.7	50	23	73	842	60.	1.0	6.0	842	60.00
7	757.5	23.4	46	28	74	835	62.	1.0	7.0	835	62.00
8	758.5	22.3	43	27	70	744	43.	1.0	8.0	744	43.00
9	759.5	21.9	52	15	67	884	49.	0.6	8.6	530	29.40
10	760.3	14.7	53	21	74	604	4.5	0.5	9.1	302	2.25

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SUMMARY OF PERMEABILITY & SATURATION TESTS

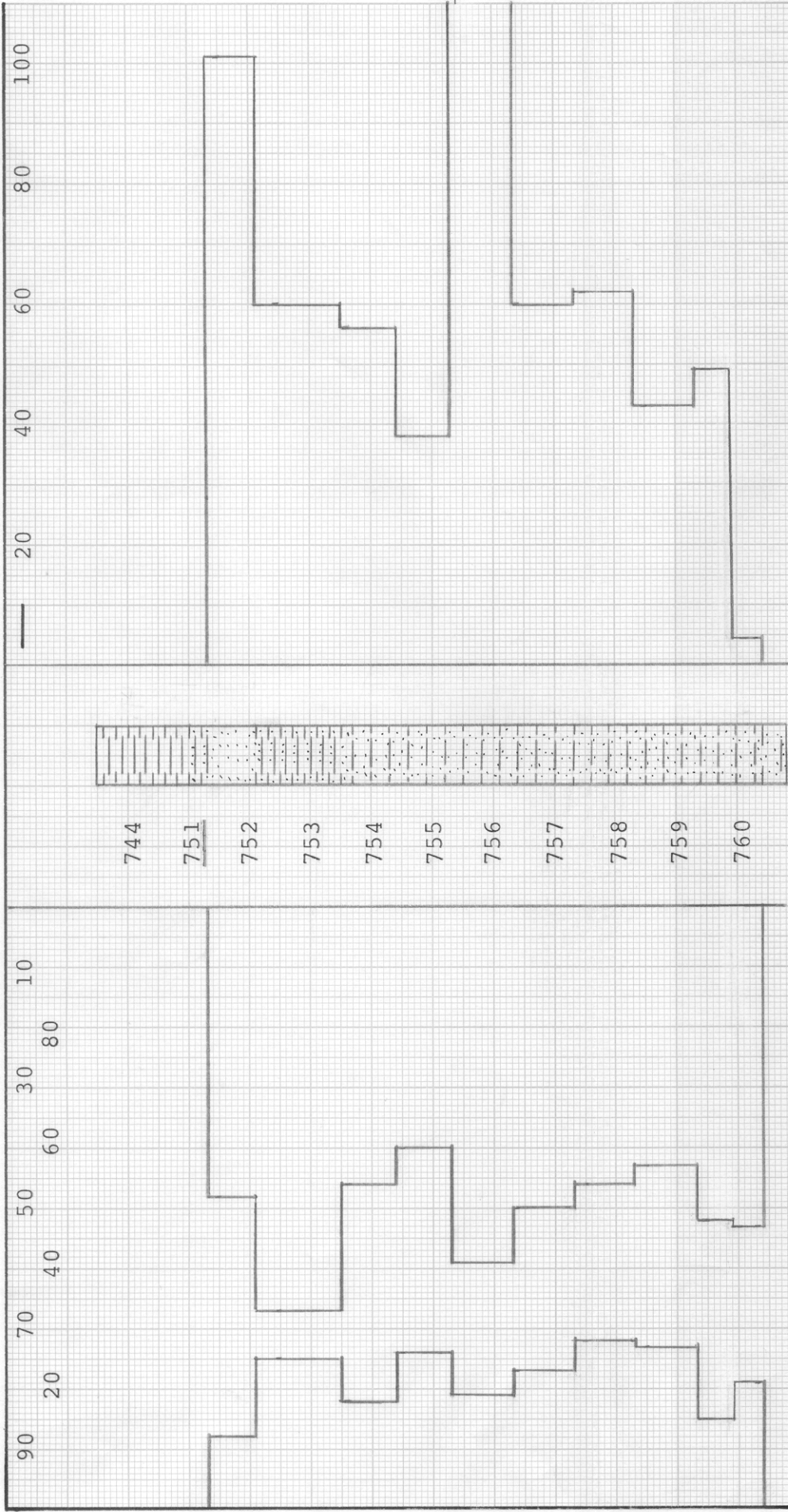
TABLE III

Company		T. I. Energy, Inc.		Lease	Kramer	Well No.		3-A-6
Depth Interval, Feet	Feet of Core Analyzed	Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.			
751.3 - 760.4	9.1	751.3 - 760.4	9.1	63.6	579.05			
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		
751.3 - 760.4	9.1	22.2	51.1	22.1	888	8,083		

WATER SAT., PERCENT ←

PERMEABILITY, IN MILLIDARCIES

→



T. I. ENERGY, INC.

KRAMER LEASE

JOHNSON COUNTY, KANSAS

WELL NO. 3-A-6

T. I. ENERGY, INC.

KRAMER LEASE

WELL NO. 3-A-6

JOHNSON COUNTY, KANSAS

DEPTH INTERVAL,
FEET

FEET OF CORE
ANALYZED

AVERAGE
PERCENT
POROSITY

AVG. OIL
SATURATION
PERCENT

AVG. WATER
SATURATION
PERCENT

AVERAGE
PERMEABILITY,
MILLIDARCS

751.3 - 760.4

9.1

22.2

51.1

22.1

63.6

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CHANUTE, KANSAS
APRIL, 1982
PDC