

OILFIELD RESEARCH LABORATORIES

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

April 27, 1982

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

Gentlemen:

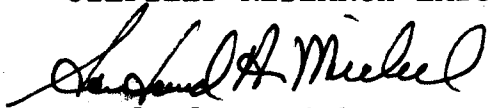
Enclosed herewith is a supplemental report of the results of tests run on the rotary core taken from the Kramer Lease, Well No. 3-A-6 in Johnson County, Kansas.

Core sample numbers one through four were sealed in plastic bags when received. Sample numbers five through eleven were not bagged. The core was received in our laboratory on April 23, 1982.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES


Sanford A. Michel

SAM/tem

5 c to Ottawa, KS

- REGISTERED ENGINEERS -

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

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GENERAL INFORMATION & SUMMARY

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

Location -

Section 17 Twp. 14S Rge. 22E County Johnson State Kansas

Elevation, Feet

Name of Sand.....

Bartlesville

Top of Core

886.0

Bottom of Core

903.0

Top of Formation (Tested)

888.3

Bottom of Sand

900.8

Total Feet of Permeable Sand

8.8

Distribution of Permeable Sand:
Permeability Range
Millidarcys

Feet

Cum. Ft.

0 - 25

1.6

1.6

65 - 70

1.6

3.2

250 - 255

2.8

6.0

509 - 1200

2.8

8.8

Average Permeability Millidarcys

327.5

Average Percent Porosity

23.8

Average Percent Oil Saturation

56.5

Average Percent Water Saturation

11.3

Average Oil Content, Bbls./A. Ft.

1,043.

Total Oil Content, Bbls./Acre

10,953.

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LOG

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

<u>Depth Interval, Feet</u>	<u>Description</u>
886.0 - 887.9	Gray shale.
887.9 - 888.3	Gray calcareous shaly sandstone.
888.3 - 891.3	Gray sandy limestone.
891.3 - 891.6	Brown slightly shaly sandstone.
891.6 - 893.4	Very dark brown sandstone.
893.4 - 894.0	Brown sandstone.
894.0 - 897.8	Very dark brown sandstone.
897.8 - 899.4	Brown sandstone.
899.4 - 900.8	Very dark brown sandstone.
900.8 - 903.0	Gray shale.

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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	888.5	13.4	50	39	89	520	6.3	1.0	1.0	520	6.30
* 2	891.5	23.6	31	23	54	568	**	0.3	1.3	170	-
* 3	892.3	21.4	60	24	84	996	253.	1.8	3.1	1793	455.40
* 4	893.5	24.8	70	9	79	1347	22.	0.6	3.7	808	13.20
5	894.5	25.3	77	3	80	1511	253.	1.0	4.7	1511	253.00
6	895.4	25.7	59	3	62	1176	509.	1.0	5.7	1176	509.00
7	896.5	26.0	67	7	74	1351	577.	1.0	6.7	1351	577.00
8	897.4	23.9	51	3	54	946	1199.	0.8	7.5	757	959.20
9	898.5	24.2	51	4	55	958	68.	1.6	9.1	1533	108.80
10	899.5	29.6	42	2	44	964	**	0.7	9.8	675	-
11	900.3	29.6	41	2	43	942	**	0.7	10.5	659	-

Notes: * Samples were sealed in plastic bags.
 ** No permeability sample available.

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SUMMARY OF PERMEABILITY & SATURATION TESTS

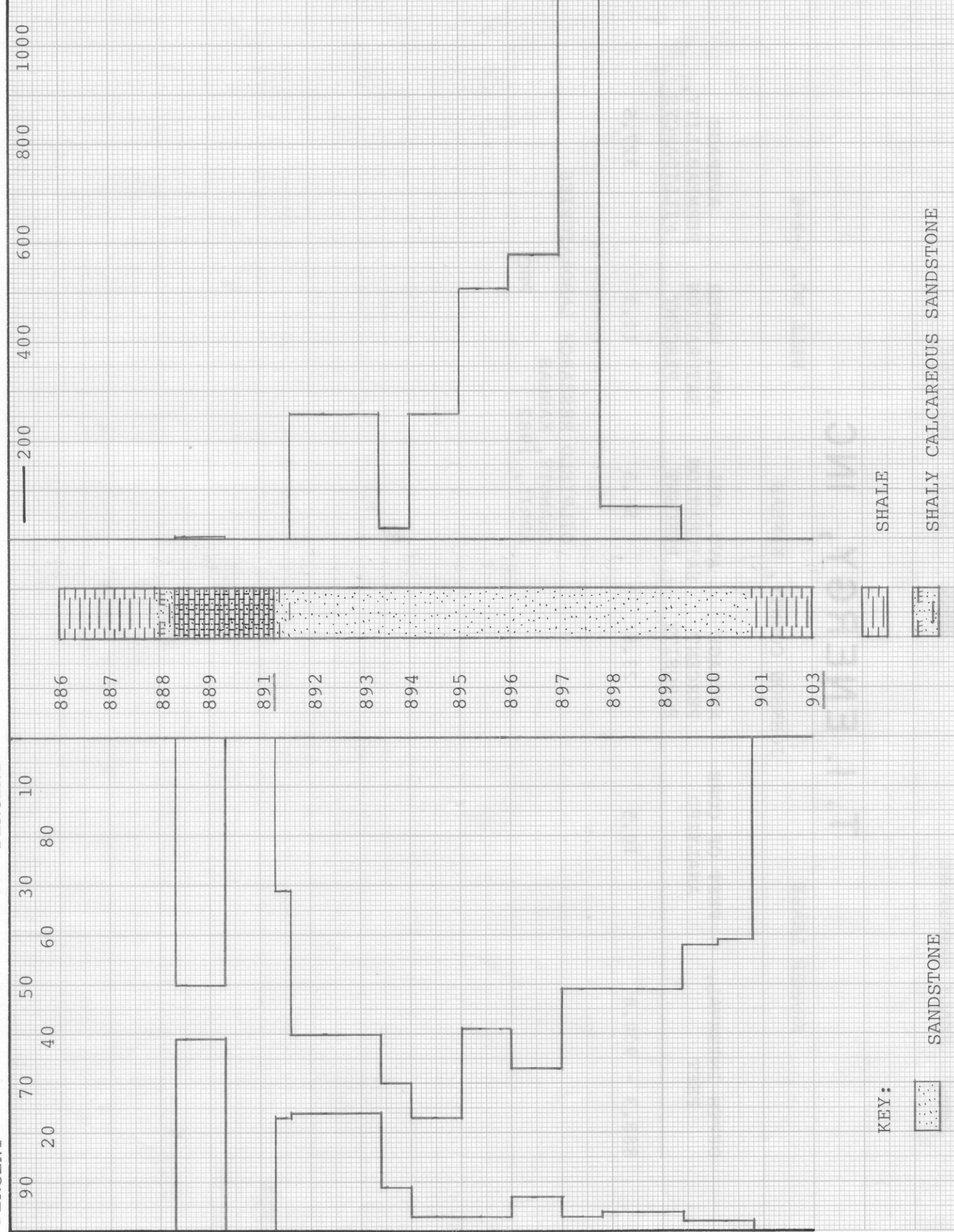
TABLE III

Company <u>T. I. Energy, Incorporated</u>		Lease <u>Kramer</u>		Well No. <u>3-A-6</u>	
Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.		
888.3 - 900.8	8.8	327.5	2881.90		
Depth Interval, Feet	Feet of Core Analyzed	Average Percent Oil Saturation	Average Percent Water Saturation	Average Oil Content Bbl./A. Ft.	Total Oil Content Bbls./Acre
888.3 - 900.8	10.5	23.8	56.5	11.3	1,043
					10,953

WATER SAT., PERCENT

OIL SAT., PERCENT

PERMEABILITY, IN MILLIDARCYS



KEY:



SANDSTONE



SHALE



SHALY CALCAREOUS SANDSTONE

WELL NO.

SHALY SANDSTONE

WELL NO.

SANDY LIMESTONE

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
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888.3 - 900.8

10.5

23.8

56.5

11.3

327.5

OILFIELD RESEARCH LABORATORIES
CHANUTE, KANSAS
APRIL, 1982 PDC