

OILFIELD RESEARCH LABORATORIES

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

September 20, 1982

Triple-I Energy Corporation
8100 Marty, Suite 117
Overland Park, Kansas 66204

Gentlemen:

Enclosed herewith is the report of the analysis of the rotary core taken from the Jensen Lease, Well No. 11, located in Franklin County, Kansas and submitted to our laboratory on September 14, 1982.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Sanford A. Michel

4 c to Overland Park, Kansas
1 c to Hutchinson, Kansas

- REGISTERED ENGINEERS -

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

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GENERAL INFORMATION & SUMMARY

Company Triple-I Energy Corporation Lease Jensen Well No. 11
 Location _____
 Section 33 Twp. 17S Rge. 21E County Franklin State Kansas

Elevation, Feet

Name of Sand.....

Cattleman

Top of Core

622.0

Bottom of Core

628.0

Top of Sand (Tested)

622.5

Bottom of Sand (Tested)

627.8

Total Feet of Permeable Sand

4.5

Total Feet of Floodable Sand

2.2

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 3	1.1	1.1
5 - 8	3.4	4.5

Average Permeability Millidarcys

5.2

Average Percent Porosity

14.1

Average Percent Oil Saturation

41.2

Average Percent Water Saturation.....

40.0

Average Oil Content, Bbls./ A. Ft.

467.

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

2,474.

Average Percent Oil Recovery by Laboratory Flooding Tests.....

13.6

Average Oil Recovery by Laboratory Flooding Tests, Bbls./ A. Ft.

175.

Total Oil Recovery by Laboratory Flooding Tests, Bbls./ Acre

386.

Total Calculated Oil Recovery, Bbls./ Acre.....

See "Calculated Recovery"
Section

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The core was sampled and the samples sealed in plastic bags by a representative of the client. The core was reported to be from a non-virgin area.

FORMATION CORED

The detailed log of the formation cored is as follows:

<u>Depth Interval, Feet</u>	<u>Description</u>
622.0 - 622.5	Gray very shaly slightly calcareous sandstone.
622.5 - 623.0	Grayish light brown very shaly slightly calcareous sandstone.
623.0 - 624.2	Grayish dark brown slightly shaly sandstone.
624.2 - 625.4	Grayish brown slightly shaly sandstone containing scattered fine shale partings.
625.4 - 626.0	Grayish brown shaly slightly calcareous sandstone.
626.0 - 626.8	Grayish brown very shaly calcareous sandstone.
626.8 - 627.8	Grayish brown slightly shaly slightly calcareous sandstone containing scattered fine shale partings.
627.8 - 628.0	Grayish brown calcareous sandstone.

LABORATORY FLOODING TESTS

The sand in this core responded to laboratory flooding tests, as a total recovery of 386 barrels of oil per acre was obtained from 2.2 feet of sand. The weighted average percent oil saturation was reduced from 53.2 to 39.6, or represents an average recovery of 13.6 percent. The weighted average effective permeability of the samples is 1.45 millidarcys, while the average initial fluid production pressure is 30.0 pounds per square inch (See Table V).

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By observing the data given in Table IV, you will note that of the 6 samples tested, 2 produced water and oil. This indicates that approximately 33 percent of the sand represented by these samples is floodable pay sand.

CALCULATED RECOVERY

It would appear from a study of the core data, that efficient primary and waterflood operations in the vicinity of this well should recover approximately 380 barrels of oil per acre. This is an average recovery of 171 barrels per acre foot from 2.2 feet of floodable sand analyzed in this core.

These recovery values were calculated using the following data and assumptions:

Original formation volume factor, estimated	1.05
Reservoir water saturation, percent, estimated	30.0
Average porosity, percent	16.3
Oil saturation after flooding, percent	39.6
Performance factor, percent, estimated	50.0
Net floodable sand, feet	2.2

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Triple-I Energy Corporation Lease Jenson Well No. 11

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			Ft.	Cum. Ft.		
1	622.7	15.2	12	71	83	0.26	0.5	0.5	71	0.13
2	623.5	18.5	51	30	81	6.3	1.2	1.7	878	7.56
3	624.5	15.1	44	31	75	7.8	1.2	2.9	618	9.36
4	625.5	13.8	33	43	76	2.1	0.6	3.5	212	1.26
5	626.4	6.2	28	68	96	Imp.	0.8	4.3	108	0.00
6	627.4	13.5	56	23	79	5.2	1.0	5.3	587	5.20

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company		Lease		Jensen		Well No.	
Triple-I Energy Corporation						11	
Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.				
622.5 - 627.8	4.5	5.2	23.51				
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	
622.5 - 627.8	5.3	14.1	41.2	40.0	467	2,474	

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RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

Company			Triple-I Energy Corporation			Lease			Jensen			Well No.		11	
Sample No.	Depth, Feet	Effective Porosity Percent	Original Oil Saturation		Oil Recovery		Residual Saturation			Volume of Water Recovered cc*	Effective Permeability Millidarcys**	Initial Fluid Production Pressure Lbs./Sq./In.			
			%	Bbls./A. Ft.	%	Bbls./A. Ft.	% Oil	% Water	Bbls./A. Ft.						
1	622.7	15.5	12	140	0	0	12	72	144	0	Imp.	-			
2	623.5	18.6	51	736	15	216	36	57	520	96	2.25	30			
3	624.5	15.0	44	512	0	0	44	31	512	0	Imp.	-			
4	625.5	14.3	32	355	0	0	32	44	355	0	Imp.	-			
5	626.4	6.4	28	139	0	0	28	68	139	0	Imp.	-			
6	627.4	13.6	56	591	12	127	44	51	464	34	0.50	30			

Notes: cc—cubic centimeter.

*—Volume of water recovered at the time of maximum oil recovery.

**—Determined by passing water through sample which still contains residual oil.

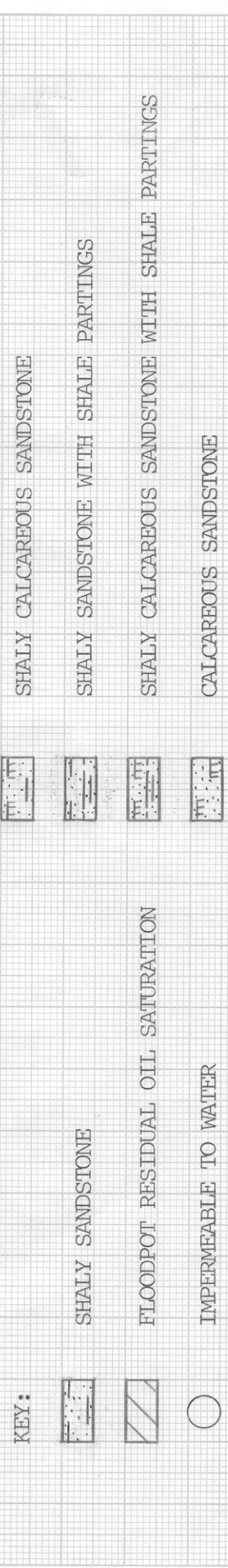
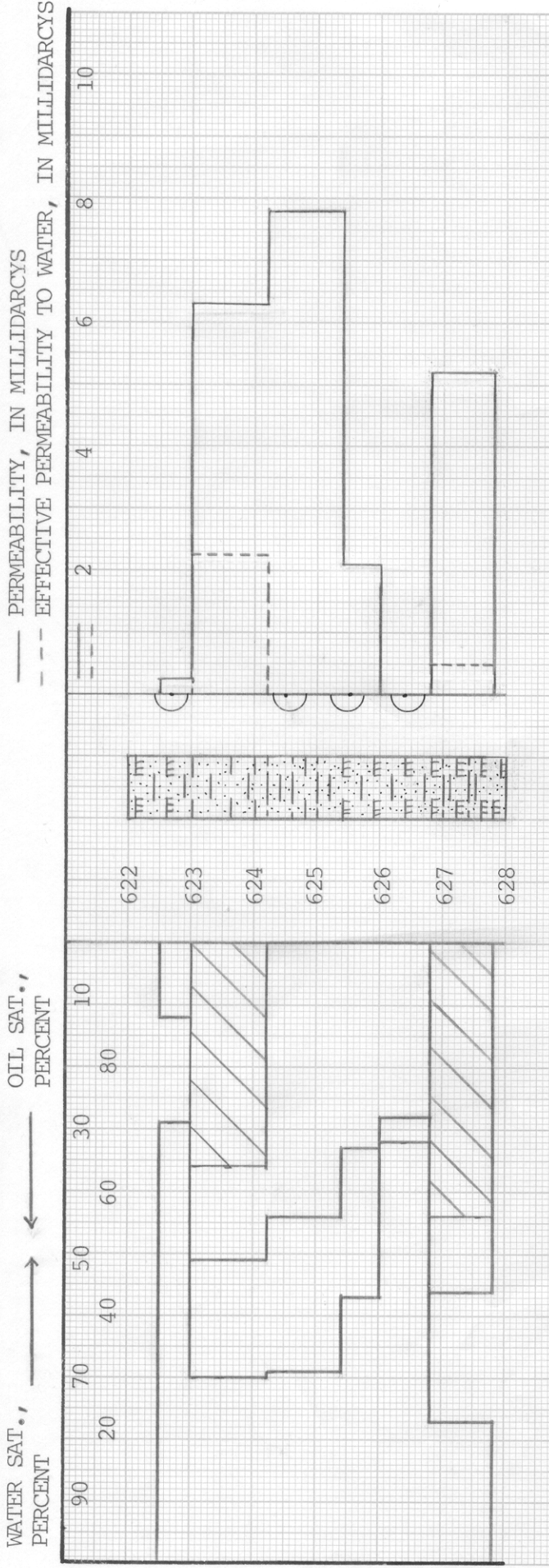
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SUMMARY OF LABORATORY FLOODING TESTS

TABLE V

Company	Triple-I Energy Corporation	Lease	Jensen	Well No.	11
Depth Interval, Feet	622.5 - 627.8				
Feet of Core Analyzed	2.2				
Average Percent Porosity	16.3				
Average Percent Original Oil Saturation	53.2				
Average Percent Oil Recovery	13.6				
Average Percent Residual Oil Saturation	39.6				
Average Percent Residual Water Saturation	54.3				
Average Percent Total Residual Fluid Saturation	93.9				
Average Original Oil Content, Bbls./A. Ft.	670.				
Average Oil Recovery, Bbls./A. Ft.	175.				
Average Residual Oil Content, Bbls./A. Ft.	495.				
Total Original Oil Content, Bbls./Acre	1,474.				
Total Oil Recovery, Bbls./Acre	386.				
Total Residual Oil Content, Bbls./Acre	1,088.				
Average Effective Permeability, Millidarcys	1.45				
Average Initial Fluid Production Pressure, p.s.i.	30.0				

NOTE: Only those samples which recovered oil were used in calculating the above averages.



TRIPLE I ENERGY CORPORATION

JENSEN LEASE
 FRANKLIN COUNTY, KANSAS
 WELL NO. 11

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE PERCENT POROSITY	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVERAGE PERMEABILITY, MILLIDARCS	CALCULATED OIL RECOVERY BBLs. / ACRE
622.5 - 627.8	5.3	14.1	41.2	40.0	5.2	380 (PRIMARY AND WATERFLOODING)