

OILFIELD RESEARCH LABORATORIES

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

August 20, 1981

General Energy, Inc. of Linn County
Box 216
Mound City, Kansas 66056

Gentlemen:

Enclosed herewith is the report of the analysis of the rotary core taken from the Herrman Lease, Well No. 1, located in Linn County, Kansas and submitted to our laboratory on August 17, 1981.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Sanford A. Michel
by B. R.

Sanford A. Michel

SAM/kas

5 c to Mound City, Kansas

- REGISTERED ENGINEERS -

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

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GENERAL INFORMATION & SUMMARY

Company General Energy, Inc. of Linn County Lease Herrman Well No. 1
 Location 450' NSL & 600' WEL SE $\frac{1}{4}$
 Section 12 Twp. 22S Rge. 23E County Linn State Kansas

Elevation, Feet

Name of Sand

Top of Core 449.0

Bottom of Core 455.0

Top of Sand 449.0

Bottom of Sand 455.0

Total Feet of Permeable Sand 6.0

Total Feet of Floodable Sand 0.0

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 5	1.9	1.9
10 - 20	4.1	6.0

Average Permeability Millidarcys 11.1

Average Percent Porosity 21.3

Average Percent Oil Saturation 27.9

Average Percent Water Saturation 48.8

Average Oil Content, Bbls./A. Ft. 462.

Total Oil Content, Bbls./Acre 2,771.

Average Percent Oil Recovery by Laboratory Flooding Tests 0.

Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft. 0.

Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre 0.

Total Calculated Oil Recovery, Bbls./Acre 0.

The core was sampled and the samples sealed in plastic bags by a representative of the client.

Since the core did not respond to flooding susceptibility tests, no calculated recovery is given.

FORMATION CORED

The detailed log of the formation cored is as follows:

<u>Depth Interval, Feet</u>	<u>Description</u>
449.0 - 449.8	Brown sandstone.
449.8 - 450.8	Grayish brown shaly sandstone.
450.8 - 454.1	Brown sandstone.
454.1 - 455.0	Grayish brown shaly sandstone.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company General Energy, Inc. of Linn County Lease Herrman Well No. 1

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	449.5	23.1	34	49	609	10.	0.8	0.8	487	8.00
2	450.5	18.7	36	49	522	4.0	1.0	1.8	522	4.00
3	451.5	20.9	26	51	422	11.	1.0	2.8	422	11.00
4	452.5	21.6	24	40	402	15.	1.0	3.8	402	15.00
5	453.4	23.9	28	47	519	19.	1.3	5.1	675	24.70
6	454.6	18.8	20	58	292	4.2	0.9	6.0	263	3.78

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company General Energy, Inc. of Linn County Lease Herrman Well No. 1

Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.	Average Percent Oil Saturation	Average Percent Water Saturation	Average Oil Content Bbl./A. Ft.	Total Oil Content Bbls./Acre
449.0 - 455.0	6.0	11.1	66.48	27.9	48.8	462	2,771
449.0 - 455.0	6.0			21.3			

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RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

Company General Energy, Inc. of Linn County Lease Herrman Well No. 1

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	449.5	23.0	34	607	0	0	34	50	607	0	Imp.	-
2	450.5	18.8	36	525	0	0	36	51	525	0	Imp.	-
3	451.5	20.4	27	427	0	0	27	51	427	0	Imp.	-
4	452.5	21.7	24	404	0	0	24	41	404	0	Imp.	-
5	453.4	23.8	28	517	0	0	28	48	517	0	Imp.	-
6	454.6	18.9	20	293	0	0	20	59	293	0	Imp.	-

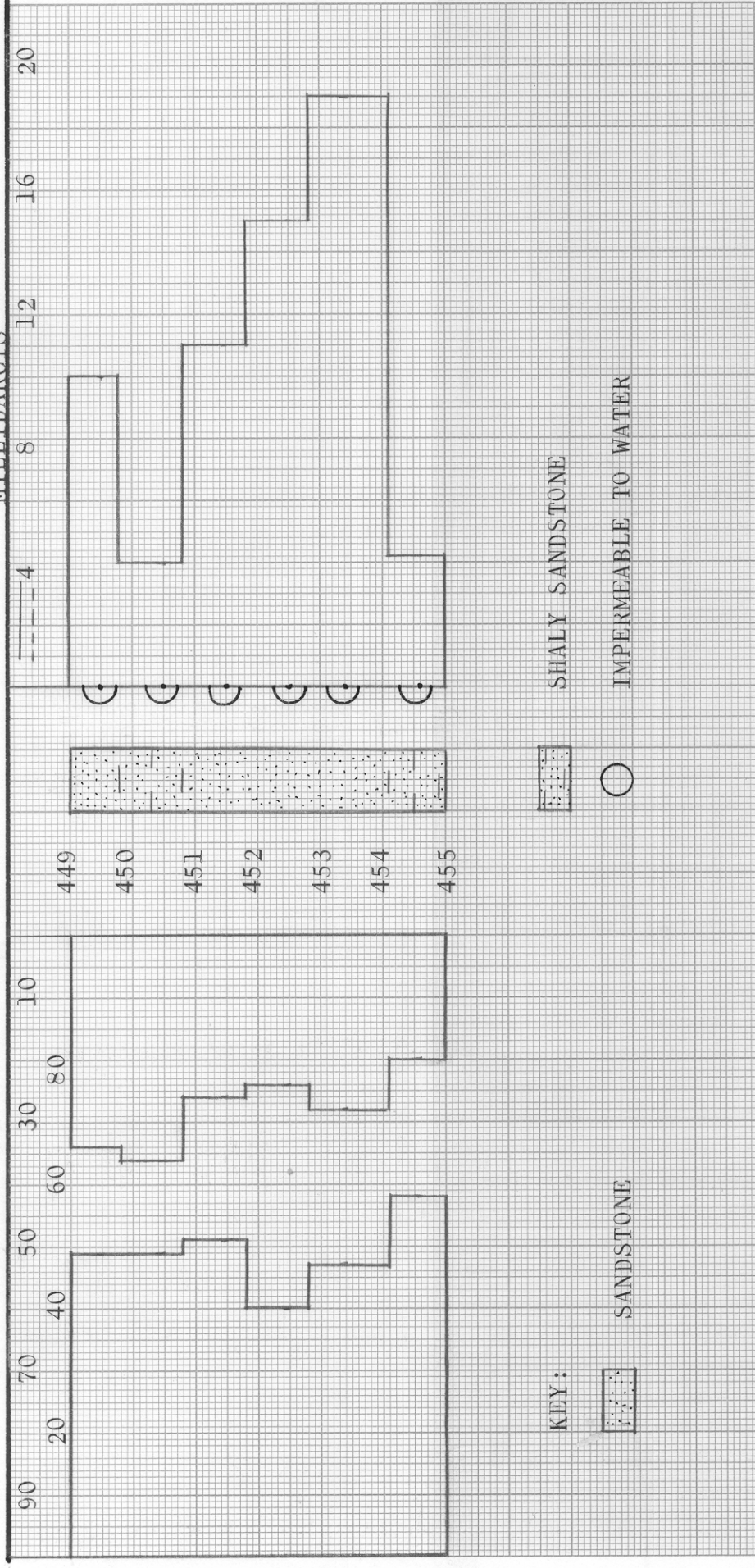
Notes: cc—cubic centimeter.

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

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

WATER SAT., PERCENT ← → OIL SAT., PERCENT

PERMEABILITY, IN MILLIDARCS
EFFECTIVE PERMEABILITY TO WATER, IN MILLIDARCS



GENERAL ENERGY, INC. OF LINN COUNTY

HERRMAN LEASE
LINN 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, MILLIDARCS	CALCULATED OIL RECOVERY BBL5. / ACRE
449.0 - 455.0	6.0	21.3	27.9	48.8	11.1	-

OILFIELD RESEARCH LABORATORIES
CHANUTE, KANSAS
AUGUST, 1981