

OILFIELD RESEARCH LABORATORIES

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

January 26, 1981

Mid-States Energy Corporation
P. O. Box 371
Paola, Kansas 66071

Gentlemen:

Enclosed herewith are the results of tests run on the rotary core taken from the Burkdall Lease, Well No. 3, located in Franklin County, Kansas.

The core was sampled and sealed in plastic by a representative of the client and submitted to our laboratory on January 19, 1981.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Sanford A. Michel

SAM/kas

5 c to Paola, Kansas

- REGISTERED ENGINEERS -

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

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GENERAL INFORMATION & SUMMARY

Company Mid-States Energy Corporation Lease Burkdall Well No. 3
 Location -
 Section 29 Twp. 18S Rge. 21E County Franklin State Kansas

Elevation, Feet	-
Name of Sand	Third Squirrel
Top of Core	734.0
Bottom of Core	744.7
Top of Sand	734.0
Bottom of Sand (Tested)	741.9
Total Feet of Permeable Sand	5.7

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 4	1.8	1.8
25 - 35	1.8	3.6
35 & Above	2.1	5.7

Average Permeability Millidarcys	24.6
Average Percent Porosity	16.3
Average Percent Oil Saturation	56.5
Average Percent Water Saturation	6.1
Average Oil Content, Bbls./A. Ft.	707.
Total Oil Content, Bbls./Acre	5,583.

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LOG

Name Mid-States Energy Corporation Lease Burkdall Well No. 3

<u>Depth Interval,</u> <u>Feet</u>	<u>Description</u>
734.0 - 735.2	Grayish brown shaly sandstone.
735.2 - 737.3	Brown and gray laminated slightly calcareous sandstone and shale.
737.3 - 738.2	Light brown and gray laminated sandstone and shale.
738.2 - 740.0	Brown and gray laminated slightly calcareous sandstone and shale.
740.0 - 741.9	Light brown and gray laminated sandstone and shale.
741.9 - 743.3	Gray laminated sandstone and shale.
743.3 - 744.7	Gray sandy shale.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Mid-States Energy Corporation Lease Burkdall Well No. 3

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	734.7	13.6	74	4	78	781	Imp.	1.2	1.2	937	0.00
2	735.5	19.0	60	2	62	884	46.	1.0	2.2	884	46.00
3	736.5	19.5	68	1	69	1029	35.	1.1	3.3	1132	38.50
4	737.4	16.5	40	3	43	512	3.5	0.9	4.2	461	3.15
5	738.7	13.4	81	2	83	842	26.	1.0	5.2	842	26.00
6	739.8	18.1	44	9	53	618	33.	0.8	6.0	494	26.40
7	740.6	16.7	33	7	40	428	Imp.	1.0	7.0	428	0.00
8	741.7	13.8	42	24	66	450	0.27	0.9	7.9	405	0.24

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company Mid-States Energy Corporation Lease Burkdall Well No. 3

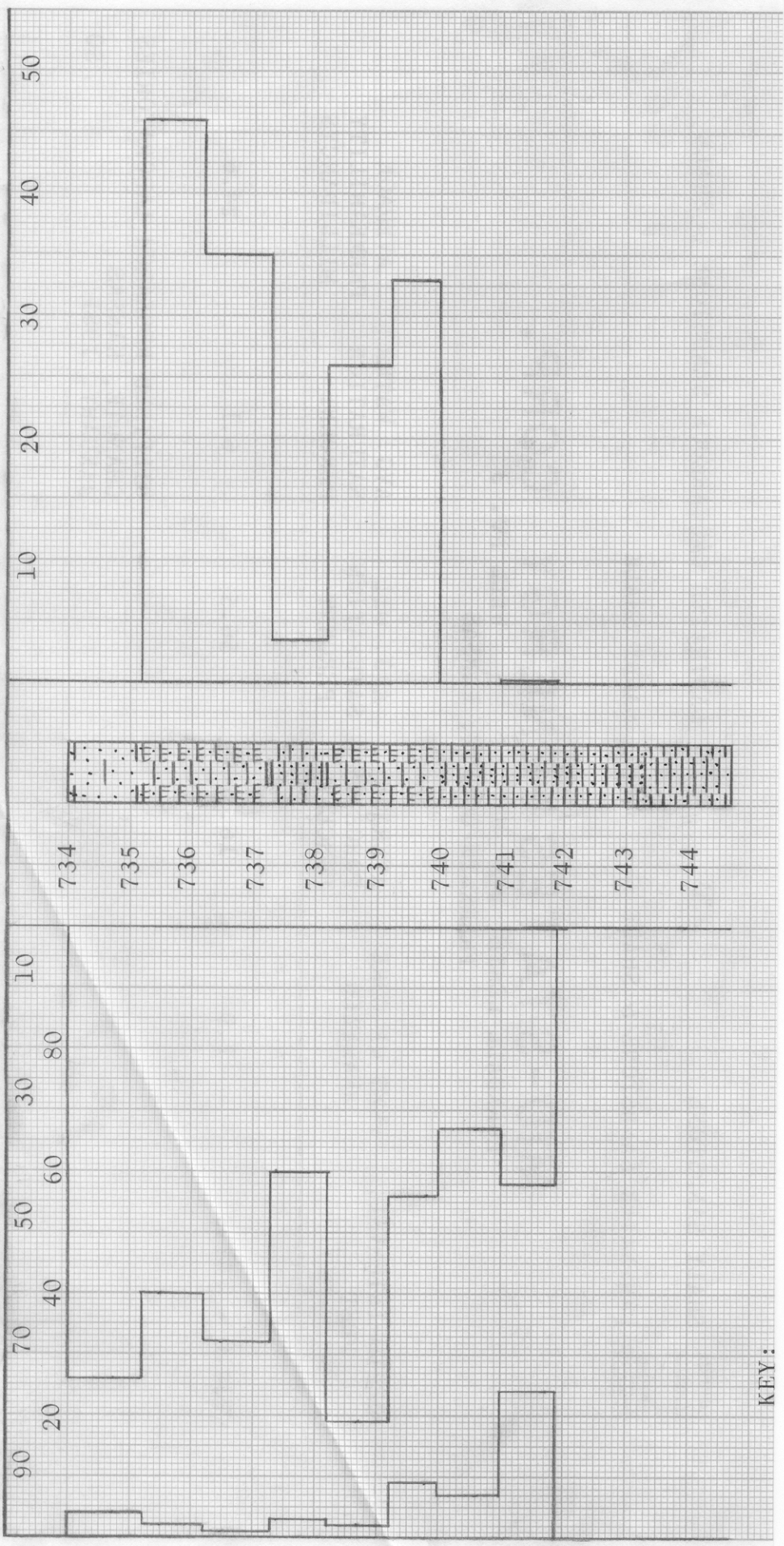
Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.
734.0 - 741.9	5.7	24.6	140.29

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
734.0 - 741.9	7.9	16.3	56.5	6.1	707	5,583

PERMEABILITY, IN MILLIDARCYS

WATER SAT., PERCENT

OIL SAT., PERCENT



KEY:

SHALY SANDSTONE



LAMINATED CALCAREOUS SANDSTONE & SHALE

LAMINATED SANDSTONE & SHALE



SANDY SHALE

MID-STATES ENERGY CORP.

BURKDALL LEASE

WELL NO. 3

FRANKLIN COUNTY, KANSAS

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE POROSITY PERCENT	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVERAGE	
					PERMEABILITY MILLIDARCYS	
734.0 - 741.9	7.9	16.3	56.5	6.1	24.6	

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 CHANUTE, KANSAS
 JANUARY, 1981