



OILFIELD RESEARCH LABORATORIES

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

August 10, 1979

Arnieville Oil Company
c/o Mr. Paul Porter
Route #2 North Cottonwood
Iola, Kansas 66749

Gentlemen:

Enclosed herewith are the results of tests run on the rotary core taken from the Lair Lease, Well No. 2, Woodson County, Kansas, and submitted to our laboratory on August 7, 1979.

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

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Benjamin R. Pearman
Benjamin R. Pearman

BRP:dlb

5 c to Iola, Kansas
1 c to Perry Brigham
Iola, Kansas

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GENERAL INFORMATION & SUMMARY

Company Arnieville Oil Company Lease Lair Well No. 2

Location SW

Section 9 Twp. 24S Rge. 17E County Woodson State Kansas

Name of Sand	Squirrel
Top of Core	864.0
Bottom of Core	869.8
Top of Sand	864.2
Bottom of Sand	869.8
Total Feet of Permeable Sand	4.1
Total Feet of Floodable Sand	

Distribution of Permeable Sand:
Permeability Range
Millidarcys

Feet

Cum. Ft.

0 - 1	1.1	1.1
1 - 6	0.8	1.9
17 - 28	2.2	4.1

Average Permeability Millidarcys	12.4
Average Percent Porosity	16.1
Average Percent Oil Saturation	53.5
Average Percent Water Saturation	23.2
Average Oil Content, Bbls./A. Ft.	665.
Total Oil Content, Bbls./Acre	2,724.
Average Percent Oil Recovery by Laboratory Flooding Tests	
Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft.	
Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre	
Total Calculated Oil Recovery, Bbls./Acre	
Packer Setting, Feet	
Viscosity, Centipoises @	
A. P. I. Gravity, degrees @ 60 °F	
Elevation, Feet	

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LOG

Company Arnieville Oil Company Lease Lair Well No. 2

<u>Depth Interval, Feet</u>	<u>Description</u>
864.0 - 864.2	Gray sandy shale.
864.2 - 864.7	Brown slightly shaly sandstone.
864.7 - 865.8	Brown and gray laminated sandstone and shale.
865.8 - 866.6	Dark brown sandstone.
866.6 - 867.0	Gray sandy shale.
867.0 - 868.4	Dark brown sandstone.
868.4 - 869.5	Gray sandy shale.
869.5 - 869.8	Brown shaly sandstone.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE I-B

Company Arnieville Oil Company Lease Lair Well No. 2

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	864.5	9.6	65	21	86	484	5.1	0.5	0.5	242	2.51
2	865.6	14.5	44	37	81	495	0.23	1.1	1.6	544	0.25
3	866.4	18.3	56	17	73	795	28.	0.8	2.4	636	22.40
4	867.3	18.9	53	12	65	777	17.	1.0	3.4	777	17.00
5	868.2	17.7	60	17	77	824	21.	0.4	3.8	330	8.40
6	869.7	15.2	55	37	92	649	1.2	0.3	4.1	195	0.36

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company		Lease		Well No.	
Arnieville Oil Company		Lair		2	
Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.		
864.2 - 869.8	4.1	12.4	50.92		
Depth Interval, Feet	Feet of Core Analyzed	Average Percent Porosity	Average Percent Oil Saturation	Average Percent Water Saturation	Total Oil Content Bbls./Acre
864.2 - 869.8	4.1	16.1	53.5	23.2	2,724