



OILFIELD RESEARCH LABORATORIES

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

November 2, 1978

Lance E. Ballard
820 Meadowbrook Road West
Iola, Kansas 66749

Gentlemen:

Enclosed herewith are the results of tests run on the rotary core taken from the Cummings B Lease, Well No. 14, Woodson County, Kansas, and submitted to our laboratory on October 24, 1978.

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

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES


Benjamin R. Pearman

BRP:cb

5 c to Iola, Kansas

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GENERAL INFORMATION & SUMMARY

Company Lance E. Ballard Lease Cummings B Well No. 14

Location _____

Section _____ Twp. _____ Rge. _____ County Woodson State Kansas

Name of Sand - - - - - Lower Squirrel

Top of Core - - - - - 985.0

Bottom of Core - - - - - 998.0

Top of Sand - - - - - 985.8

Bottom of Sand - - - - - 995.8

Total Feet of Permeable Sand - - - - - 7.7

Total Feet of Floodable Sand - - - - -

Distribution of Permeable Sand:
Permeability Range
Millidarcys

Feet

Cum. Ft.

0 - 4	1.2	1.2
20 - 60	6.5	7.7

Average Permeability Millidarcys - - - - - 30.0

Average Percent Porosity - - - - - 16.7

Average Percent Oil Saturation - - - - - 52.9

Average Percent Water Saturation - - - - - 27.0

Average Oil Content, Bbls./A. Ft. - - - - - 706.

Total Oil Content, Bbls./Acre - - - - - 5,575.

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 Lance E. Ballard Lease Cummings B Well No. 14

<u>Depth Interval, Feet</u>	<u>Description</u>
985.0 - 985.8	Black shale.
985.8 - 987.9	Brown slightly shaly sandstone.
987.9 - 989.1	Gray slightly sandy shale.
989.1 - 990.3	Brown laminated shaly sandstone.
990.3 - 994.7	Brown sandstone.
994.7 - 995.6	Gray sandy shale.
995.6 - 995.8	Brown slightly shaly sandstone.
995.8 - 998.0	Gray shale.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Lance E. Ballard Lease Cummings B Well No. 14

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	986.5	14.3	41	24	65	455	26.	1.0	1.0	455	26.00
2	987.3	17.7	62	21	83	851	34.	1.1	2.1	936	37.40
3	989.3	12.2	26	67	93	246	3.6	1.2	3.3	295	4.32
4	990.5	18.4	52	24	76	742	27.	0.7	4.0	520	18.90
5	991.5	16.8	57	22	79	743	39.	1.0	5.0	743	39.00
6	992.4	18.8	58	17	75	846	60.	1.0	6.0	846	60.00
7	993.8	19.1	62	15	77	919	30.	1.0	7.0	919	30.00
8	994.4	17.9	68	16	84	944	21.	0.7	7.7	661	14.70
9	995.7	16.3	79	16	95	999	Imp.	0.2	7.9	200	0.00

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company Lance E. Ballard Lease Cummings B Well No. 14

Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.
985.8 - 995.8	7.7	30.0	230.32

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
985.8 - 995.8	7.9	16.7	52.9	27.0	706	5,575