



OILFIELD RESEARCH LABORATORIES

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

June 8, 1979

McMullin Oil Company
Rt. 2
Marceline, Missouri 64658

Gentlemen:

Enclosed herewith are the results of tests run on the rotary core taken from the Van Horn Lease, Well No. 2, Franklin County, Kansas, and submitted to our laboratory on June 1, 1979.

The core was sampled by a representative of Oilfield Research Laboratories.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Benjamin R. Pearman
Benjamin R. Pearman

SAM:km
3 c to Marceline, Missouri

- REGISTERED ENGINEERS -

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

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GENERAL INFORMATION & SUMMARY

Company McMullin Oil Company Lease Van Horn Well No. 2

Location 50' FWL & 50' FSL SE $\frac{1}{4}$

Section 27 Twp. 16S Rge. 21E County Franklin State Kansas

Name of Sand	- - - - -	Upper Squirrel
Top of Core	- - - - -	625.0
Bottom of Core	- - - - -	643.0
Top of Sand	- - - - -	625.0
Bottom of Sand	- - - - -	643.0
Total Feet of Permeable Sand	- - - - -	13.1
Total Feet of Floodable Sand	- - - - -	

Distribution of Permeable Sand:
Permeability Range
Millidarcys

	Feet	Cum. Ft.
0 - 5	5.4	5.4
10 - 50	3.4	8.8
50 - 100	2.0	10.8
100 - 200	2.3	13.1

Average Permeability Millidarcys	- - - - -	38.9
Average Percent Porosity	- - - - -	18.5
Average Percent Oil Saturation	- - - - -	30.2
Average Percent Water Saturation	- - - - -	59.5
Average Oil Content, Bbls./A. Ft.	- - - - -	433.
Total Oil Content, Bbls./Acre	- - - - -	6,545.
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

Name McMullin Oil Company Lease Van Horn Well No. 2

<u>Depth Interval, Feet</u>	<u>Description</u>
625.0 - 632.3	Brown sandstone.
632.3 - 634.7	Brown and gray laminated sandstone and shale.
634.7 - 636.3	Gray sandy shale with fine sandstone partings.
636.3 - 636.7	Brown sandstone.
636.7 - 638.0	Gray sandy shale with fine sandstone partings.
638.0 - 640.3	Brown and gray laminated sandstone and shale.
640.3 - 642.3	Brown very shaly sandstone.
642.3 - 643.0	Light brown very shaly sandstone.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE I-B

Company McMullin Oil Company Lease Van Horn 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.		
1	625.5	22.6	16	69	85	101.	1.0	1.0	281	101.00
2	626.5	21.3	27	59	86	58.	1.0	2.0	446	58.00
3	627.5	20.6	25	64	89	42.	1.0	3.0	400	42.00
4	628.5	19.0	28	63	91	49.	1.0	4.0	413	49.00
5	629.5	18.7	35	60	95	26.	1.0	5.0	508	26.00
6	630.5	21.1	29	57	86	57.	1.0	6.0	475	57.00
7	631.5	19.9	34	60	94	123.	1.3	7.3	683	159.90
8	632.5	15.1	36	58	94	1.3	0.7	8.0	295	0.91
9	633.5	22.6	41	47	88	1.8	1.0	9.0	719	1.80
10	634.5	14.7	27	67	94	0.26	0.7	9.7	216	0.18
11	636.5	15.9	36	59	95	22.	0.4	10.1	178	8.80
12	638.5	18.1	30	49	79	0.52	1.0	11.1	421	0.52
13	639.5	17.7	35	48	83	3.0	1.3	12.4	625	3.90
14	640.5	14.2	36	58	94	0.16	0.7	13.1	278	0.11
15	641.5	15.2	31	64	95	Imp.	1.3	14.4	476	0.00
16	642.5	14.2	17	78	95	Imp.	0.7	15.1	131	0.00

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company	Lease	Well No.					
McMullin Oil Company	Van Horn	2					
Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.	Average Percent Porosity	Average Percent Saturation	Average Oil Content Ebl./A. Ft.	Total Oil Content Bbls./Acre
625.0 - 632.3	7.3	67.5	492.90			439	3,206
632.3 - 643.0	5.8	2.8	16.22			428	3,339
625.0 - 643.0	13.1	38.9	509.12			433	6,545
625.0 - 632.3	7.3			20.4	28.0	61.6	
632.3 - 643.0	7.8			16.7	32.4	57.4	
625.0 - 643.0	15.1			18.5	30.2	59.5	