

OILFIELD RESEARCH LABORATORIES

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

October 5, 1978

Tutcher Oil & Gas Company
Box 308
Overbrook, Kansas 66524

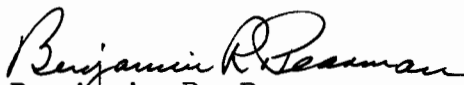
Gentlemen:

Enclosed herewith are the results of tests run on the rotary core taken from the Robert L. West Lease, Well No. 1, Coffey County, Kansas, and submitted to our laboratory on September 24, 1978.

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

Your business is greatly appreciated.

Very truly yours,


Benjamin R. Pearman

BRP:km
4 c to Overbrook, Kansas
1 c to Topeka, Kansas

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GENERAL INFORMATION & SUMMARY

Company Tutcher Oil & Gas Company Lease Robert L. West Well No. 1

Location NW NW SW

Section 28 Twp. 22S Rge. 17E County Coffey State Kansas

Name of Sand - - - - - Lower Squirrel

Top of Core - - - - - 968.0

Bottom of Core - - - - - 988.0

Top of Sand - - - - - 970.0

Bottom of Sand - - - - - 976.7

Total Feet of Permeable Sand - - - - - 4.7

Total Feet of Floodable Sand - - - - - (Tested) 1.2

Distribution of Permeable Sand:
Permeability Range
Millidarcys

Feet

Cum. Ft.

0.41 - 2.2
27. - 90.

3.5
1.2

3.5
4.7

Average Permeability Millidarcys - - - - - 14.3

Average Percent Porosity - - - - - 16.2

Average Percent Oil Saturation - - - - - 45.4

Average Percent Water Saturation - - - - - 35.8

Average Oil Content, Bbls./A. Ft. - - - - - 585.

Total Oil Content, Bbls./Acre - - - - - 2,750.

Average Percent Oil Recovery by Laboratory Flooding Tests - - - - - 14.4

Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft. - - - - - 218.

Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre - - - - - 262.

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 Tutcher Oil & Gas Company Lease Robert L. West Well No. 1

<u>Depth Interval, Feet</u>	<u>Description</u>
968.0 - 970.0	Gray shale.
970.0 - 970.8	Gray laminated very shaly sandstone.
970.8 - 971.5	Brown laminated shaly sandstone.
971.5 - 973.5	Gray sandy shale.
973.5 - 974.4	Light brown laminated shaly sandstone.
974.4 - 975.6	Brown sandstone.
975.6 - 976.7	Light brown laminated shaly sandstone.
976.7 - 988.0	Gray shale.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE I-B

Company Tutcher Oil & Gas Company Lease Robert L. West 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	Total			Ft.	Cum. Ft.		
1	970.2	12.6	34	61	95	332	0.62	0.8	0.8	266	0.50
2	971.2	15.6	42	34	76	508	0.41	0.7	1.5	355	0.29
3	973.7	18.2	47	19	66	664	2.2	0.9	2.4	596	1.98
4	974.5	21.0	58	20	78	945	90.	0.5	2.9	473	45.00
5	975.5	18.1	61	19	80	857	27.	0.7	3.6	600	18.90
6	976.3	13.8	39	50	89	418	0.46	1.1	4.7	460	0.51

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company	Tutcher Oil & Gas Company		Lease	Robert L. West		Well No.	1
	Depth Interval, Feet	Feet of Core Analyzed		Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.		
	970.0 - 976.7	4.7		14.3	67.18		
	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
	970.0 - 976.7	4.7	16.2	45.4	35.8	585	2,750

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RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

Tutcher Oil & Gas Company			Lease		Robert L. West		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.			
4	974.5	20.9	58	939	15	242	43	50	482	8.10	20	
5	975.5	18.6	61	879	14	201	47	51	228	3.35	20	

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.

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SUMMARY OF LABORATORY FLOODING TESTS

TABLE V

Company	Tutcher Oil & Gas Company	Lease	Robert L. West	Well No.	1
Depth Interval, Feet	974.4 - 975.6				
Feet of Core Analyzed	1.2				
Average Percent Porosity	19.6				
Average Percent Original Oil Saturation	59.7				
Average Percent Oil Recovery	14.4				
Average Percent Residual Oil Saturation	45.3				
Average Percent Residual Water Saturation	50.6				
Average Percent Total Residual Fluid Saturation	95.9				
Average Original Oil Content, Bbls./A. Ft.	904.				
Average Oil Recovery, Bbls./A. Ft.	218.				
Average Residual Oil Content, Bbls./A. Ft.	686.				
Total Original Oil Content, Bbls./Acre	1,085.				
Total Oil Recovery, Bbls./Acre	262.				
Total Residual Oil Content, Bbls./Acre	823.				
Average Effective Permeability, Millidarcys	5.32				
Average Initial Fluid Production Pressure, p.s.i.	20.0				

NOTE: Only those samples which recovered oil were used in calculating the above averages.