



# OILFIELD RESEARCH LABORATORIES

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July 20, 1981

Westport Petroleum Corporation  
770 West Hampden Ave. Suite 300  
Englewood, Colorado 80110

Gentlemen:

Enclosed herewith is the report of the analysis of the rotary core taken from the Whittaker Lease, Well No. 2, located in Anderson County, Kansas and submitted to our laboratory on June 23, 1981.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Sanford A. Michel

SAM/kas

3 c to Englewood, Colorado  
2 c to Cecil Hogeln  
212 1st Street  
Osawatomie, Kansas 66064

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**GENERAL INFORMATION & SUMMARY**

Company Westport Petroleum Corporation Lease Whittaker Well No. 2  
 Location 65' SNL & 450' WEL NW $\frac{1}{4}$   
 Section 5 Twp. 23S Rge. 21E County Anderson State Kansas

Elevation, Feet .....

Name of Sand..... Cattleman

Top of Core ..... 708.0

Bottom of Core ..... 722.0

Top of Sand ..... 708.4

Bottom of Sand ..... 722.0

Total Feet of Permeable Sand ..... 9.5

Total Feet of Floodable Sand ..... 0.0

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 2	6.4	6.4
2 - 6	3.1	9.5

Average Permeability Millidarcys ..... 2.0

Average Percent Porosity ..... 12.5

Average Percent Oil Saturation ..... 19.9

Average Percent Water Saturation ..... 59.0

Average Oil Content, Bbls./A. Ft. .... 219.

Total Oil Content, Bbls./Acre ..... 2,413.

Average Percent Oil Recovery by Laboratory Flooding Tests ..... 0.0

Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft. .... 0.0

Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre ..... 0.0

Total Calculated Oil Recovery, Bbls./Acre ..... ----

The core was sampled and the samples sealed in plastic bags by a representative of the client. Fresh water mud was used as a drilling fluid. The core was reported to be from a virgin area.

Since the core did not respond to flooding susceptibility tests, no calculated recovery is given.

FORMATION CORED

The detailed log of the formation cored is as follows:

<u>Depth Interval, Feet</u>	<u>Description</u>
708.0 - 708.4	Gray shale.
708.4 - 718.2	Brown and gray laminated sandstone and shale.
718.2 - 720.8	Gray sandy shale.
720.8 - 722.0	Brown shaly sandstone.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Westport Petroleum Corporation Lease Whittaker 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			Ft.	Cum. Ft.		
1	708.5	14.6	36	33	408	1.0	1.0	408	1.00	
2	709.6	12.4	37	46	356	3.8	1.0	356	3.80	
3	710.5	11.4	12	78	106	0.25	0.9	95	0.23	
4	711.4	13.3	18	64	186	0.53	1.0	186	0.53	
5	712.4	14.7	27	50	308	1.7	1.0	308	1.70	
6	713.6	16.6	29	43	373	5.2	0.9	336	4.68	
7	714.3	12.3	7	72	67	0.84	1.0	67	0.84	
8	715.4	5.8	5	80	22	0.30	1.5	33	0.45	
9	717.5	10.3	4	75	32	Imp.	1.5	48	0.00	
10	721.5	17.2	36	35	480	5.0	1.2	576	6.00	

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## SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company	Lease	Whittaker	Well No.				
Westport Petroleum Corporation		Whittaker	2				
	Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.			
	708.4 - 722.0	9.5	2.0	19.23			
	Depth Interval, Feet	Feet of Core Analyzed	Average Percent Saturation	Average Percent Water Saturation	Average Oil Content Bbl./A. Ft.	Total Oil Content Bbls./Acre	
	708.4 - 722.0	11.0	12.5	19.9	59.0	219	2,413

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## RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

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.			
1	708.5	14.9	35	405	0	0	35	38	405	0	Imp.	-
2	709.6	12.1	38	357	0	0	38	45	357	0	Imp.	-
3	710.5	11.3	12	105	0	0	12	79	105	0	Imp.	-
4	711.4	13.3	18	186	0	0	18	65	186	0	Imp.	-
5	712.4	14.2	28	308	0	0	28	51	308	0	Imp.	-
6	713.6	16.5	29	371	0	0	29	45	371	0	Imp.	-
7	714.3	12.2	7	66	0	0	7	75	66	0	Imp.	-
8	715.4	5.5	6	26	0	0	6	81	26	0	Imp.	-
9	717.5	10.8	3	25	0	0	3	77	25	0	Imp.	-
10	721.5	17.1	36	478	0	0	36	36	478	0	Imp.	-

Company Westport Petroleum Corporation Lease Whittaker Well No. 2

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.