



OILFIELD RESEARCH LABORATORIES

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

January 19, 1981

Blackhawk Oil Company
15 North Highland
Chanute, Kansas 66720

Gentlemen:

Enclosed herewith is the report of the analysis of the rotary core taken from the Campbell South Lease, Well No. 1, located in Wilson County, Kansas and submitted to our laboratory on December 1, 1980.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Sanford A. Michel

SAM/kas

5 c to Chanute, Kansas

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GENERAL INFORMATION & SUMMARY

Company Blackhawk Oil Company Lease Campbell South Well No. 1

Location -

Section - Twp - Rge - County Wilson State Kansas

Elevation, Feet -

Name of Sand - Bartlesville

Top of Core - 1000.0

Bottom of Core - 1010.0

Top of Sand - 1000.0

Bottom of Sand - 1004.8

Total Feet of Permeable Sand - 3.8

Total Feet of Floodable Sand - 0

Distribution of Permeable Sand:
Permeability Range
Millidarcys

Feet

Cum. Ft.

2.0 - 2.5

3.8

3.8

Average Permeability Millidarcys - 2.2

Average Percent Porosity - 14.8

Average Percent Oil Saturation - 32.3

Average Percent Water Saturation - 51.5

Average Oil Content, Bbls./A. Ft. - 370.

Total Oil Content, Bbls./Acre - 1780.

Average Percent Oil Recovery by Laboratory Flooding Tests - 0.

Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft. - 0.

Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre - 0.

Total Calculated Oil Recovery, Bbls./Acre - 0.

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This core was sampled and the samples sealed in plastic bags by a representative of the client. The well was reportedly drilled in virgin territory using fresh water mud as the circulating fluid.

Since the core was impermeable to water or waterflooding susceptibility testing, no oil recovery calculations are presented.

FORMATION CORED

The detailed log of the formation cored is as follows:

<u>Depth Interval, Feet</u>	<u>Description</u>
1000.0 - 1001.1	Brown and gray laminated slightly calcareous sandstone and shale.
1001.1 - 1004.8	Light brown shaly slightly calcareous sandstone.
1004.8 - 1010.0	Gray sandy shale.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Blackhawk Oil Company Lease Campbell South 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	1000.5	15.0	39	38	77	454	2.0	1.1	1.1	500	2.20
2	1001.5	14.6	35	39	74	396	2.2	1.0	2.1	396	2.20
3	1002.5	13.6	31	53	84	327	2.2	1.0	3.1	327	2.20
4	1003.4	14.5	28	68	96	315	Imp.	1.0	4.1	315	0.00
5	1004.5	17.2	26	65	91	347	2.4	0.7	4.8	242	1.68

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company		Lease		Well No.	
Blackhawk Oil Company		Campbell South		1	
Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.		
1000.0 - 1004.8	3.8	2.2	8.28		
Depth Interval, Feet	Feet of Core Analyzed	Average Percent Oil Saturation	Average Percent Water Saturation	Average Oil Content Bbl./A. Ft.	Total Oil Content Bbls./Acre
1000.0 - 1004.8	4.8	14.8	32.3	51.5	1,780

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RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

Blackhawk Oil Company			Lease			Campbell South			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			
1	1000.5	15.1	38	445	0	0	38	40	0	Imp.	-
2	1001.5	14.6	35	396	0	0	35	43	0	Imp.	-
3	1002.5	13.2	32	327	0	0	32	58	0	Imp.	-
4	1003.4	14.7	29	331	0	0	29	70	0	Imp.	-
5	1004.5	17.2	27	360	0	0	27	68	0	Imp.	-

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.