



# OILFIELD RESEARCH LABORATORIES

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

August 14, 1979

C-K Oil Company  
c/o Mr. Glenn Caldwell  
P. O. Box 42  
Garnett, Kansas 66032

Gentlemen:

Enclosed herewith are the results of tests run on the rotary core taken from the Kirk Lease, Well No. 22, Anderson County, Kansas, and submitted to our laboratory on August 9, 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

BRP:dlb

5 c to Garnett, Kansas

# Oilfield Research Laboratories

## GENERAL INFORMATION & SUMMARY

Company C-K Oil Company Lease Kirk Well No. 22

Location SW SE

Section 8 Twp 21S Rge. 20E County Anderson State Kansas

Name of Sand	-	Squirrel
Top of Core	-	754.0
Bottom of Core	-	790.5
Top of Sand	-	754.0
Bottom of Sand	-	789.6
Total Feet of Permeable Sand	-	24.9
Total Feet of Floodable Sand	-	

**Distribution of Permeable Sand:**  
Permeability Range  
Millidarcys

	Feet	Cum. Ft.
0 - 1	8.6	8.6
1 - 3	6.5	15.1
3 - 6	4.0	19.1
6 - 9	1.0	20.1
9 & Above	4.8	24.9

Average Permeability Millidarcys	-	4.2
Average Percent Porosity	-	15.8
Average Percent Oil Saturation	-	37.0
Average Percent Water Saturation	-	42.1
Average Oil Content, Bbls./A. Ft.	-	471.
Total Oil Content, Bbls./Acre	-	14,802.
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 C-K Oil Company Lease Kirk Well No. 22

<u>Depth Interval, Feet</u>	<u>Description</u>
754.0 - 755.5	Gray to light brown very shaly sandstone.
755.5 - 757.0	Gray sandy shale.
757.0 - 761.2	Light brown very shaly sandstone.
761.2 - 763.0	Gray sandy shale.
763.0 - 777.6	Brown and gray broken shaly sandstone.
777.6 - 778.5	Gray sandy shale.
778.5 - 789.6	Brown and gray broken shaly sandstone.
789.6 - 790.5	Gray sandy shale.

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**RESULTS OF SATURATION & PERMEABILITY TESTS**

**TABLE 1-B**

Company C-K Oil Company Lease Kirk Well No. 22

Sample No.	Depth, Feet	Effective Porosity Percent	Percent Saturation			Oil Content Bbbls. / A Ft.	Perm., Mill.	Feet of Sand		Total Oil Content	Perm. Capacity Ft. X md.
			Oil	Water	Total			Ft.	Cum. Ft.		
1	754.3	13.6	27	67	94	285	Imp.	0.7	0.7	200	0.00
2	755.2	14.7	29	52	81	331	Imp.	0.8	1.5	265	0.00
3	757.5	12.8	5	67	72	50	Imp.	1.0	2.5	50	0.00
4	758.4	13.6	27	59	86	285	Imp.	1.0	3.5	285	0.00
5	759.4	12.9	28	61	89	280	Imp.	1.0	4.5	280	0.00
6	760.2	8.6	27	60	87	180	0.62	1.2	5.7	216	0.75
7	763.6	14.6	30	58	88	340	1.0	1.0	6.7	340	1.00
8	764.4	13.5	24	57	81	251	0.15	1.0	7.7	251	0.15
9	765.4	17.7	46	42	88	632	5.4	1.0	8.7	632	5.40
10	766.2	18.6	46	27	73	664	4.7	1.0	9.7	664	4.70
11	767.4	17.6	47	29	76	642	0.40	1.0	10.7	642	0.40
12	768.4	13.7	31	57	88	330	0.19	1.0	11.7	330	0.19
13	769.5	16.1	39	38	77	487	1.7	1.0	12.7	487	1.70
14	770.5	15.1	46	44	90	539	0.25	1.0	13.7	539	0.25
15	771.5	14.4	21	56	77	235	Imp.	1.0	14.7	235	0.00
16	772.6	15.7	34	43	77	414	0.28	1.0	15.7	414	0.28
17	773.6	17.7	52	25	77	714	8.3	1.0	16.7	714	8.30
18	774.6	18.0	46	29	75	642	3.1	1.0	17.7	642	3.10
19	775.5	18.1	47	29	76	660	2.3	1.0	18.7	660	2.30
20	776.4	15.9	42	41	83	518	0.86	0.8	19.5	414	0.69
21	777.2	16.3	40	36	76	506	12.	0.8	20.3	405	0.60
22	779.6	14.1	29	52	81	317	1.0	1.5	21.8	476	1.50
23	780.4	20.3	53	19	72	835	15.	1.0	22.8	835	9.60
24	781.5	16.6	23	51	74	296	2.0	1.0	23.8	296	15.00
25	782.4	16.8	42	37	79	547	2.3	1.0	24.8	547	2.30

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**RESULTS OF SATURATION & PERMEABILITY TESTS**

**TABLE 1-B**

Company C-K Oil Company Lease Kirk Well No. 22

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.		
26	783.5	16.9	46	31	77	603	Imp.	1.0	25.8	603	0.00
27	784.6	19.3	52	22	74	779	13.	1.0	26.8	779	13.00
28	785.5	15.9	41	32	73	506	12.	1.0	27.8	506	12.00
29	786.6	19.3	49	22	71	734	14.	1.0	28.8	734	14.00
30	787.5	17.2	40	33	73	534	0.72	1.0	29.8	534	0.72
31	788.8	16.9	41	34	75	538	4.2	1.0	30.8	538	4.20
32	789.4	16.3	38	33	71	481	0.91	0.6	31.4	289	0.55

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### SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company	Lease	Kirk	Well No.			
C-K Oil Company			22			
Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.			
754.0 - 765.0	3.2	0.59	1.90			
765.0 - 789.6	21.7	4.7	102.18			
754.0 - 789.6	24.9	4.2	104.08			
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
754.0 - 765.0	7.7	12.9	24.5	60.1	245	1,887
765.0 - 789.6	23.7	16.8	41.1	36.3	545	12,915
754.0 - 789.6	31.4	15.8	37.0	42.1	471	14,802