

OILFIELD RESEARCH LABORATORIES

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

December 1, 1981

Prairie Petroleum
Box 284
Iola, Kansas 66749

Gentlemen:

Enclosed herewith are the results of tests run on the rotary cores taken from the H. Winans Lease, Well No. 4, located in Neosho County, Kansas.

The cores were sampled and sealed in plastic bags by a representative of the client and submitted to our laboratory on November 27, 1981.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Sanford A. Michel

SAM/mkf

5 c to Iola, Ks.

- REGISTERED ENGINEERS -

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

Oilfield Research Laboratories
GENERAL INFORMATION & SUMMARY

Company Prairie Petroleum Lease H. Winans Well No. 4

Location _____

Section 7 Twp. 28S Rge. 7E County Neosho State Kansas

Elevation, Feet

Name of Sand.....	CATTLEMAN	BARTLESVILLE
Top of Core	687.0	755.0
Bottom of Core	691.2	774.5
Top of Sand	687.0	755.0
Bottom of Sand	691.2	774.5
Total Feet of Permeable Sand	3.0	11.5

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.		
<u>CATTLEMAN SAND</u>				
0 - 8	3.0	3.0		
<u>BARTLESVILLE SAND</u>				
0 - 1	2.7	2.7		
1 - 3	5.5	8.2		
18 - 27	1.2	9.4		
70 - 267	2.1	11.5		
Average Permeability Millidarcys		4.7		29.9
Average Percent Porosity		13.0		13.1
Average Percent Oil Saturation		38.1		31.4
Average Percent Water Saturation		47.5		49.9
Average Oil Content, Bbls./A. Ft.		410.		326.
Total Oil Content, Bbls./Acre		1,720.		5,827.

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LOGName Prairie Petroleum Lease H. Winans Well No. 4

<u>Depth Interval, Feet</u>	<u>Description</u>
	CATTLEMAN SAND
687.0 - 690.0	Grayish brown shaly sandstone.
690.0 - 691.2	Grayish brown very shaly sandstone.
	BARTLESVILLE SAND
755.0 - 759.8	Grayish brown shaly sandstone.
759.8 - 760.5	Gray shale.
760.5 - 764.2	Gray shaly sandstone.
764.2 - 765.0	Black slightly carbonaceous sandstone.
765.0 - 765.5	Gray shale.
765.5 - 766.4	Dark brown sandstone with shale partings.
766.4 - 766.8	Grayish brown shaly sandstone.
766.8 - 768.1	Dark brown sandstone.
768.1 - 770.3	Gray shaly sandstone.
770.3 - 770.6	Brown sandstone.
770.6 - 774.5	Grayish brown shaly sandstone.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Prairie Petroleum Lease H. Winans Well No. 4

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	687.5	15.7	54	25	79	CATTLEMAN SAND	5.3	1.0	658	5.30	
2	688.7	16.3	42	30	72		7.7	1.0	531	7.70	
3	689.7	11.7	40	51	91		1.2	1.0	363	1.20	
4	690.4	9.0	20	78	98		Imp.	1.2	168	0.00	
5	755.5	14.4	38	52	90	BARTLESVILLE SAND	Imp.	1.0	425	0.00	
6	756.5	14.5	34	44	78		0.50	1.0	383	0.50	
7	757.6	7.6	20	77	97		Imp.	1.0	118	0.00	
8	758.5	14.1	22	52	74		Imp.	1.0	241	0.00	
9	759.4	8.2	37	60	97		1.4	0.8	188	1.12	
10	760.6	18.5	8	60	68		0.45	1.0	115	0.45	
11	761.6	11.3	10	77	87		0.17	0.7	62	0.12	
12	762.5	13.7	13	57	70		Imp.	1.0	138	0.00	
13	763.6	9.1	42	48	90		Imp.	1.0	297	0.00	
14	764.6	19.5	57	29	86		266.	0.8	690	212.80	
15	765.8	16.8	27	38	65		26.	0.5	176	13.00	
16	766.3	15.3	67	10	77		19.	0.4	318	7.60	
17	767.6	20.1	44	15	59		71.	1.3	892	92.30	
18	768.7	10.1	19	75	94	2.5	1.0	149	2.50		
19	769.4	13.6	29	47	76	2.6	1.2	367	3.12		
20	770.5	14.7	30	39	69	21.	0.3	103	6.30		
21	771.6	8.7	44	45	89	Imp.	1.4	416	0.00		
22	772.6	13.3	41	33	74	1.7	1.4	592	2.38		
23	773.5	8.8	21	76	97	1.1	1.1	157	1.21		

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

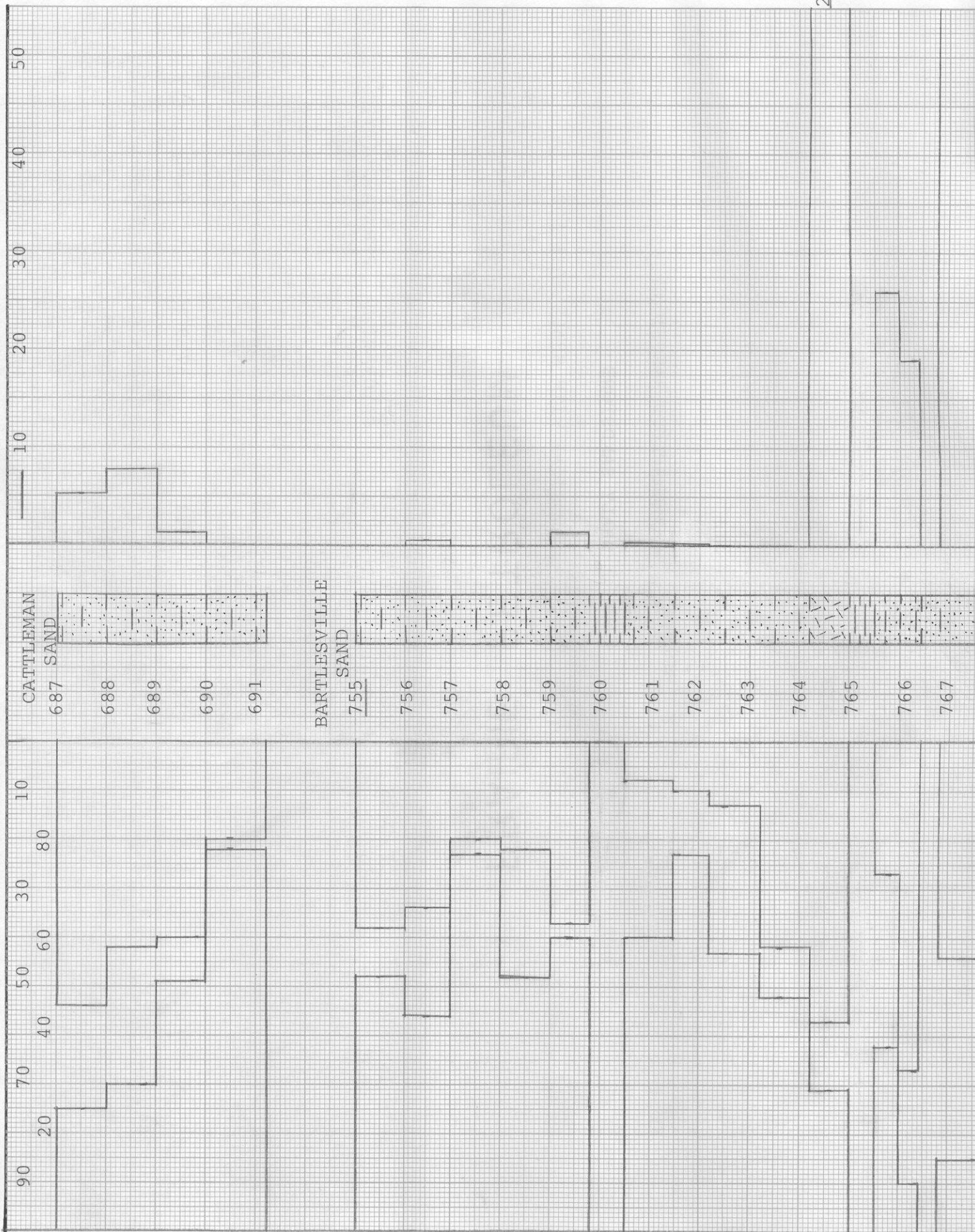
Company Prairie Petroleum Lease H. Winans Well No. 4

Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.		
<u>CATTLEMAN SAND</u>					
687.0 - 691.2	3.0	4.7	14.20		
<u>BARTLESVILLE SAND</u>					
755.0 - 764.2	3.5	0.63	2.19		
764.2 - 768.1	3.0	108.6	325.70		
768.1 - 774.5	5.0	3.1	15.51		
755.0 - 774.5	11.5	29.9	343.40		
Depth Interval, Feet	Feet of Core Analyzed	Average Percent Oil Saturation	Average Percent Water Saturation	Average Oil Content Bbl./A. Ft.	Total Oil Content Bbl./Acre
<u>CATTLEMAN SAND</u>					
687.0 - 691.2	4.2	38.1	47.5	410	1,720
<u>BARTLESVILLE SAND</u>					
755.0 - 764.2	8.5	25.1	57.9	231	1,967
764.2 - 768.1	3.0	47.7	21.9	692	2,076
768.1 - 774.5	6.4	32.0	52.5	279	1,784
755.0 - 774.5	17.9	31.4	49.9	326	5,827

PERMEABILITY, IN MILLIDARCYS

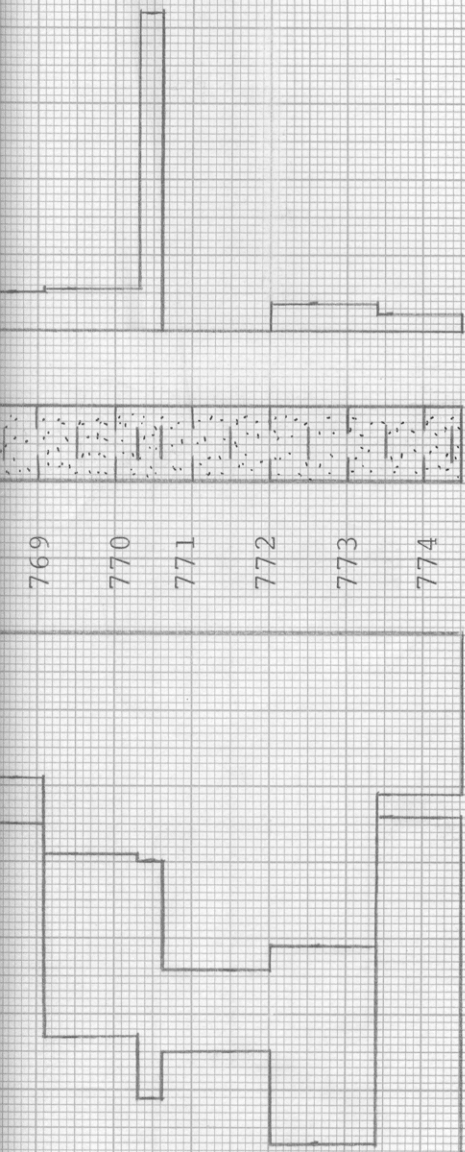
WATER SAT., PERCENT

OIL SAT., PERCENT





266 →


71 →





KEY:

 SANDSTONE

 SHALE

 CARBONACEOUS SANDSTONE

 SHALY SANDSTONE

 SANDSTONE WITH SHALE PARTINGS

PRAIRIE PETROLEUM

H. WINANS LEASE
 NEOSHO COUNTY, KANSAS

WELL NO. 4

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE PERCENT POROSITY	AVERAGE OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVERAGE PERMEABILITY, MILLIDARCY
687.0 - 691.2	4.2	13.0	38.1	47.5	4.7
CATTLEMAN SAND					
BARTLESVILLE SAND					
755.0 - 764.2	8.5	12.5	25.1	57.9	0.63
764.2 - 768.1	3.0	18.7	47.7	21.9	108.6
768.1 - 774.5	6.4	11.1	32.0	52.5	3.1
755.0 - 774.5	17.9	13.1	31.4	49.9	29.9

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 CHANUTE, KANSAS
 DECEMBER, 1981