OILFIELD RESEARCH LABORATORIES

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May 23, 1984

Prairie Energy Corporation
8600 West 110th St., Suite 202
Overland Park, Kansas 66210

Gentlemen:

Enclosed herewith is the report of the analysis of the rotary core taken from the Effertz Lease, Well No. 5-H, located in Johnson County, Kansas and submitted to our laboratory on May 15, 1984.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Benjamin R. Pearman

Benjamin R. Pearman

BRP/ph

5 c to Overland Park, Kansas

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company Prairie Energy Corporation Lease Effertz Well No. 5-H

Location

Section 19 Twp. 14S Rge. 24E County Johnson State Kansas

Elevation, Feet	
Name of Sand	Lower Squirrel
Top of Core	710.5
Bottom of Core	725.0
Top of Sand (Tested)	710.6
Bottom of Sand	720.1
Total Feet of Permeable Sand	6.9
Total Feet of Floodable Sand	5.7

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 11	2.2	2.2
46 - 55	1.1	3.3
65 - 80	2.1	5.4
105 - 122	1.5	6.9

Average Permeability Millidarcys	57.2
Average Percent Porosity	20.8
Average Percent Oil Saturation	46.4
Average Percent Water Saturation	37.4
Average Oil Content, Bbls./A. Ft.	750.
Total Oil Content, Bbls./Acre	5,177.
Average Percent Oil Recovery by Laboratory Flooding Tests	10.4
Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft.	177.
Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre	1,010.
Total Calculated Oil Recovery, Bbls./Acre	See "Calculated Recovery" Section

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.

FORMATION CORED

The detailed log of the formation cored is as follows:

Depth Interval, Feet	Description
710.5 - 710.6	Grayish brown shaly sandstone.
710.6 - 712.3	Brown slightly calcareous sandstone.
712.3 - 713.0	Gray shale with scattered brown sandstone stringers.
713.0 - 715.1	Brown slightly calcareous sandstone with scattered gray shale and mica partings.
715.1 - 716.0	Grayish brown very shaly sandstone.
716.0 - 717.0	Alternate layers gray shale and brown slightly calcareous sandstone.
717.0 - 718.5	Brown slightly calcareous sandstone.
718.5 - 718.7	Brown shaly slightly calcareous sandstone.
718.7 - 719.7	Gray shale.
719.7 - 720.1	Brown slightly calcareous sandstone with scattered carbonaceous and mica partings.
720.1 - 725.0	Gray shale.

LABORATORY FLOODING TESTS

The sand in this core responded to laboratory flooding tests, as a total recovery of 1,010 barrels of oil per acre was obtained from 5.7 feet of sand. The weighted average percent oil saturation was reduced from 45.9 to 35.5, or represents an average recovery of 10.4 percent. The weighted average effective permeability of the samples is 3.76 millidarcys, while the average initial fluid production pressure is 32.8 pounds per square inch (See Table V).

By observing the data given in Table IV, you will note that of the 11 samples tested, 9 produced water and oil. This indicates that approximately 82 percent of the sand represented by these samples is floodable pay sand.

CALCULATED RECOVERY

It would appear from a study of the core data, that efficient primary and waterflood operations in the vicinity of this well should recover approximately 1,730 barrels of oil per acre. This is an average recovery of 304 barrels per acre foot from 5.7 feet of floodable sand analyzed in this core.

These recovery values were calculated using the following data and assumptions:

Original formation volume factor, estimated	1.05
Reservoir water saturation, percent, estimated	25.0
Average porosity, percent	21.8
Oil saturation after flooding, percent	35.5
Performance factor, percent, estimated	50.0
Net floodable sand, feet	5.7

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Prairie Energy Corporation Lease Effertz Well No. 5-H

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	710.7	22.4	48	40	88	834	10.	0.6	0.6	500	6.00
2	711.4	21.0	52	34	86	847	46.	0.6	1.2	508	27.60
3	711.9	19.9	41	37	78	633	54.	0.5	1.7	317	27.00
4	713.5	22.2	42	35	77	723	79.	0.7	2.4	506	55.30
5	714.4	22.6	47	33	80	824	73.	0.8	3.2	659	58.40
6	714.8	22.0	47	39	86	802	65.	0.6	3.8	481	39.00
7	716.5	15.8	48	47	95	588	8.5	1.0	4.8	588	8.50
8	717.5	22.7	46	30	76	810	105.	0.8	5.6	648	84.00
9	718.2	23.1	47	30	77	842	121.	0.7	6.3	589	84.70
10	718.6	21.1	52	39	91	851	1.2	0.2	6.5	170	0.24
11	719.8	16.6	41	52	93	528	10.	0.4	6.9	211	4.00

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company Prairie Energy Corporation Lease Effertz Well No. 5-H

Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.
710.6 - 720.1	6.9	57.2	394.74

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
710.6 - 720.1	6.9	20.8	46.4	37.4	750	5,177

RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

Company Prairie Energy Corporation Lease Effertz Well No. 5-H

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	710.7	21.9	48	816	11	187	37	59	629	19	0.20	40
2	711.4	21.4	52	863	15	249	37	53	614	86	1.60	30
3	711.9	20.3	41	646	8	126	33	63	520	44	0.93	35
4	713.5	22.0	42	717	12	205	30	67	512	362	6.66	30
5	714.4	22.2	47	809	14	241	33	59	568	156	3.33	30
6	714.8	22.3	47	813	10	173	37	61	640	298	7.73	30
7	716.5	16.3	48	607	0	0	48	49	607	0	Imp.	-
8	717.5	22.9	46	817	9	160	37	53	657	222	5.73	30
9	718.2	23.4	47	853	8	145	39	54	708	193	4.73	30
10	718.6	21.1	52	851	0	0	52	40	851	0	Imp.	-
11	719.8	16.4	41	522	3	38	38	57	484	16	0.15	40

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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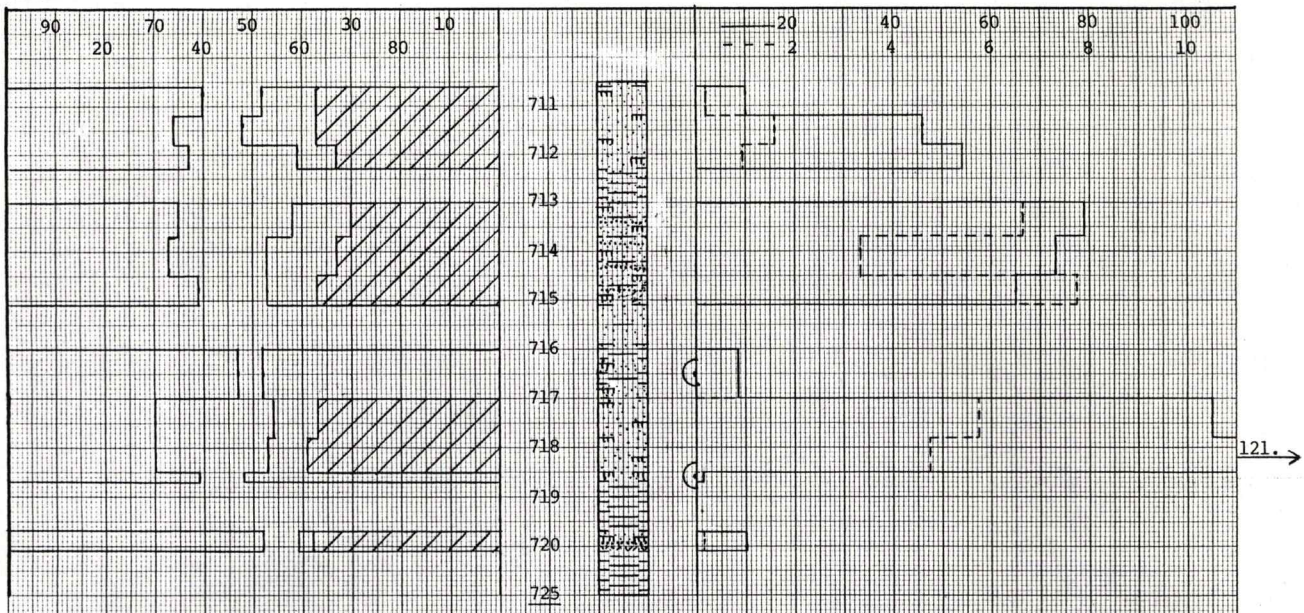
SUMMARY OF LABORATORY FLOODING TESTS

TABLE V

Company Prairie Energy Corporation Lease Effertz Well No. 5-H

Depth Interval, Feet	710.6 - 720.1
Feet of Core Analyzed	5.7
Average Percent Porosity	21.8
Average Percent Original Oil Saturation	45.9
Average Percent Oil Recovery	10.4
Average Percent Residual Oil Saturation	35.5
Average Percent Residual Water Saturation	58.3
Average Percent Total Residual Fluid Saturation	93.8
Average Original Oil Content, Bbls./A. Ft.	776.
Average Oil Recovery, Bbls./A. Ft.	177.
Average Residual Oil Content, Bbls./A. Ft.	599.
Total Original Oil Content, Bbls./Acre	4,427.
Total Oil Recovery, Bbls./Acre	1,010.
Total Residual Oil Content, Bbls./Acre	3,417.
Average Effective Permeability, Millidarcys	3.76
Average Initial Fluid Production Pressure, p.s.i.	32.8

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



KEY:

- SHALY SANDSTONE
- CALCAREOUS SANDSTONE
- SHALY CALCAREOUS SANDSTONE
- SHALE
- IMPERMEABLE TO WATER
- SHALE WITH SANDSTONE STRINGERS
- CALCAREOUS SANDSTONE WITH SHALE AND MICA PARTINGS
- ALTERNATE LAYERS SHALE AND CALCAREOUS SANDSTONE
- SHALY CALCAREOUS SANDSTONE WITH CARBONACEOUS AND MICA PARTINGS
- FLOODPOT RESIDUAL OIL SATURATION

PRAIRIE ENERGY CORPORATION

EFFERTZ LEASE — WELL NO. 5-H

JOHNSON COUNTY, KANSAS

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE PERCENT POROSITY	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVERAGE PERMEABILITY, MILLIDARCYS	CALCULATED OIL RECOVERY BBLS. / ACRE
710.6 - 720.1	6.9	20.8	46.4	37.4	57.2	1,730 (PRIMARY AND WATERFLOODING)

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CHANUTE, KANSAS
MAY, 1984 RAL