OILFIELD RESEARCH LABORATORIES

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

April 28, 1980

James E. Russell Petroleum, Inc.
P.O. Box 2618
Abilene, Texas 79604

Gentlemen:

Enclosed herewith is the report of the analysis of the rotary core taken from the Foster Lease, Well No. 1, Anderson County, Kansas, and submitted to our laboratory on March 24, 1980.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Sanford A. Michel

SAM/tem

3 c to Abilene, Texas
2 c to Chanute, Kansas

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company James E. Russell Petroleum, Inc Lease Foster Well No. 1

Location 220' EWL & 1980' SNL W½ SW¼

Section 11 Twp. 23S Rge. 19E County Anderson State Kansas

Elevation, Feet	1092.1
Name of Sand	Squirrel
Top of Core	750.0
Bottom of Core	795.5
Top of Sand	750.0
Bottom of Sand	783.0
Total Feet of Permeable Sand	16.8
Total Feet of Floodable Sand	0.0

Distribution of Permeable Sand:

Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 1	7.5	7.5
1 - 5	9.3	16.8

Average Permeability Millidarcys	1.7
Average Percent Porosity	14.6
Average Percent Oil Saturation	26.6
Average Percent Water Saturation	51.7
Average Oil Content, Bbls./A. Ft.	310.
Total Oil Content, Bbls./Acre	7,722.
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

The core was sampled by a representative of Oilfield Research Laboratories. Air and light foam was used as a drilling fluid. The core was from a virgin area.

Since the core did not respond to flooding susceptability tests, no calculated recovery is given. However, an estimate of primary reserves is presented.

FORMATION CORED

The detailed log of the formation cored is as follows:

Depth Interval, Feet	Description
750.0 - 751.3	First oil show. Shale, brown and gray, laminated
751.3 - 751.8	Shale, gray, sandy.
751.8 - 754.2	Sandstone and shale, brown and gray, laminated.
754.2 - 755.3	Sandstone, brown, shaly.
755.3 - 758.2	Sandstone and shale, brown and gray, laminated.
758.2 - 758.8	Shale,gray, sandy.
758.8 - 759.2	Sandstone, brown, shaly.
759.2 - 759.8	Shale, gray, sandy.
759.8 - 768.3	Sandstone and shale, brown and gray, laminated.
768.3 - 771.3	Shale, gray, sandy, containing a vertical fracture.
771.3 - 771.8	Sandstone and shale, brown and gray laminated.
771.8 - 773.4	Shale, gray, sandy.
773.4 - 780.4	Sandstone, brown, shaly.
780.4 - 783.8	Sandstone and shale, brown and gray laminated.
783.8 - 784.6	Shale, fossiliferrous, calcareous, sandy, gray.
784.6 - 786.9	Shale, gray.

Depth Interval, Feet	Description
786.9 - 790.0	Shale, black, calcareous.
790.0 - 792.5	Shale, gray.
792.5 - 793.8	Coal.
793.8 - 795.5	Shale, gray, sandy.

PRIMARY RESERVES ESTIMATE

Average porosity (permeability 1.0 millidarcy or greater)	16.2
Net pay thickness (773.4 - 783.0) (permeability 1.0 millidarcys or greater)	6.6'
Estimated primary reserves as a percent of oil in place	4.0
Estimated formation volume factor	1.05
Reservoir water saturation percent, estimated	20.0
Estimated primary reserves, barrels per acre foot	38.
Estimated primary reserves, barrels per acre	250.

Oilfield Research Laboratories

RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company James E. Russell Petroleum, Inc. Lease Foster 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	750.5	12.9	20	70	90	200	Imp.	1.3	1.3	260	0.00
2	752.7	14.4	26	56	82	291	0.13	1.0	2.3	291	0.13
3	754.5	14.1	18	58	76	197	0.47	1.1	3.4	217	0.52
4	755.5	13.9	20	63	83	216	1.4	0.7	4.1	151	0.98
5	756.5	12.0	23	75	98	214	2.4	1.0	5.1	214	2.40
6	757.5	12.9	18	68	86	180	Imp.	1.2	6.3	216	0.00
7	760.5	15.9	22	48	70	271	0.28	1.2	7.5	325	0.34
8	761.5	13.9	21	59	80	227	Imp.	1.0	8.5	227	0.00
9	762.5	14.6	26	46	72	295	2.3	1.0	9.5	295	2.30
10	763.5	15.5	25	36	61	301	0.16	1.0	10.5	301	0.16
11	764.5	12.8	20	64	84	199	0.15	1.5	12.0	299	0.23
12	766.5	12.6	6	90	96	59	Imp.	1.5	13.5	89	0.00
13	768.2	17.7	31	31	62	426	0.16	1.3	14.8	554	0.21
14	771.5	15.3	31	38	69	368	Imp.	0.5	15.3	184	0.00
15	773.5	13.9	33	50	83	356	1.9	0.6	15.9	214	1.14
16	774.5	16.0	36	37	73	447	2.1	1.0	16.9	447	2.10
17	775.5	17.2	40	28	68	534	4.7	1.0	17.9	534	4.70
18	776.5	15.7	34	43	77	414	3.3	1.0	18.9	414	3.30
19	777.5	16.9	40	28	68	524	4.7	1.0	19.9	524	4.70
20	778.5	17.1	36	42	78	478	1.6	1.0	20.9	478	1.60
21	779.5	15.7	47	22	69	573	3.6	1.0	21.9	573	3.60
22	780.3	14.0	46	32	78	500	0.21	0.4	22.3	200	0.08
23	780.8	13.6	25	58	83	264	Imp.	0.6	22.9	158	0.00
24	781.5	13.7	25	62	87	266	Imp.	1.0	23.9	266	0.00
25	782.7	13.9	27	57	84	291	Imp.	1.0	24.9	291	0.00

Oilfield Research Laboratories

SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company James E. Russell Petroleum, Inc. Lease Foster Well No. 1

Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.
750.0 - 771.8	9.8	0.74	7.27
773.4 - 783.0	7.0	3.0	21.22
750.0 - 783.0	16.8	1.7	28.49

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
750.0 - 771.8	15.3	14.1	21.2	58.9	237	3,623
773.4 - 783.0	9.6	15.5	35.2	40.3	427	4,099
750.0 - 783.0	24.9	14.6	26.6	51.7	310	7,722

Oilfield Research Laboratories

RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

Company James E. Russell Petroleum, Inc. Lease Foster 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	Bbls./A. Ft.			
1	750.7	13.3	19	196	0	0	19	72	196	0	Imp.	-
2	752.7	14.1	26	284	0	0	26	56	284	0	Imp.	-
3	754.5	14.6	17	193	0	0	17	60	193	0	Imp.	-
4	755.5	13.5	21	220	0	0	21	62	220	0	Imp.	-
5	756.5	12.4	22	212	0	0	22	77	212	0	Imp.	-
6	757.5	12.5	19	184	0	0	19	69	184	0	Imp.	-
7	760.5	15.9	22	271	0	0	22	48	271	0	Imp.	-
8	761.5	14.2	21	231	0	0	21	62	231	0	Imp.	-
9	762.5	15.0	25	291	0	0	25	48	291	0	Imp.	-
10	763.5	15.2	25	295	0	0	25	39	295	0	Imp.	-
11	764.5	13.0	20	202	0	0	20	64	202	0	Imp.	-
12	766.5	12.2	7	66	0	0	7	90	66	0	Imp.	-
13	768.2	18.0	30	419	0	0	30	35	419	0	Imp.	-
14	771.5	15.0	31	361	0	0	31	39	361	0	Imp.	-
15	773.5	14.0	32	348	0	0	32	52	348	0	Imp.	-
16	774.5	16.5	35	448	0	0	35	43	448	10	0.15	50
17	775.5	17.0	40	528	0	0	40	30	528	0	Imp.	-
18	776.5	16.1	33	412	0	0	33	44	412	0	Imp.	-
19	777.5	17.0	40	528	0	0	40	29	528	0	Imp.	-
20	778.5	17.0	36	475	0	0	36	42	475	11	0.15	45
21	779.5	16.1	45	562	0	0	45	25	562	0	Imp.	-
22	780.3	14.0	46	500	0	0	46	32	500	0	Imp.	-
23	780.8	13.3	25	258	0	0	23	60	258	0	Imp.	-
24	781.5	14.1	24	263	0	0	24	63	263	0	Imp.	-
25	782.7	14.0	27	293	0	0	27	57	293	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.