OILFIELD RESEARCH LABORATORIES
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February 13, 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 B.Bain-Tract 1 Lease, Well No. 7, Anderson County, Kansas, and submitted to our laboratory on January 16, 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 B. Bain-Tract 1 Well No. 7

Location 1100' SNL & 660' EWL SE¼

Section 10 Twp. 23S Rge. 19E County Anderson State Kansas

Elevation, Feet Datum: Mean Sea Level (Ground Level) 1082.4

Name of Sand	Squirrel
Top of Core	730.0
Bottom of Core	789.0
Top of Sand	730.0
Bottom of Sand	772.0
Total Feet of Permeable Sand	23.2
Total Feet of Floodable Sand	0

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 – 1	11.2	11.2
1 – 3	4.4	15.6
3 – 5	4.0	19.6
5 – 6	3.6	23.2

Average Permeability Millidarcys	1.85
Average Percent Porosity	13.5
Average Percent Oil Saturation	28.7
Average Percent Water Saturation	56.1
Average Oil Content, Bbls./A. Ft.	307.
Total Oil Content, Bbls./Acre	12,112.
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. Fresh water mud was used as a drilling fluid. The core was from a semi-virgin area.

Since the core did not respond to floodpot testing, 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
730.0 - 737.2	Shale, laminated with thin streaks of light brown sandstone, 20% sandstone, first oil show.
737.2 - 743.2	Shale, gray, slightly sandy.
743.2 - 747.2	Sandstone and shale, laminated.
747.2 - 748.2	Shale, gray, slightly sandy.
748.2 - 748.8	Sandstone, light brown, laminated, shaly.
748.8 - 749.7	Shale, gray.
749.7 - 761.9	Sandstone and shale, laminated.
761.9 - 770.7	Sandstone, light brown, shaly.
770.7 - 771.3	Shale, gray, sandy.
771.3 - 772.0	Sandstone, light brown, shaly.
772.0 - 786.2	Shale, black.
786.2 - 787.5	Coal.
787.5 - 789.0	Shale, gray, rotten.

PRIMARY RESERVES ESTIMATE

Average percent porosity for pay sand (754.0 - 772.0)	15.3
Net pay sand thickness	11.0'
Original formation volume factor	1.05
Estimated primary reserves as a percent of porosity	4.0
Estimated primary reserves, barrels per acre foot	45.
Estimated primary reserves, barrels per acre	500.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company James E. Russell Petroleum, Inc. Lease B. Bain-Tract 1 Well No. 7

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	730.5	6.4	7	88	95	35	Imp.	1.0	1.0	35	0.00
2	731.5	13.9	13	62	75	140	0.26	1.0	2.0	140	0.26
3	732.5	10.6	14	70	84	115	Imp.	1.0	3.0	115	0.00
4	733.7	12.5	26	68	94	252	Imp.	1.0	4.0	252	0.00
5	734.5	13.4	19	69	88	198	Imp.	1.0	5.0	198	0.00
6	735.5	14.5	14	65	79	158	0.41	1.0	6.0	158	0.41
7	736.5	12.2	25	70	95	237	0.14	1.2	7.2	284	0.17
8	737.5	11.8	16	79	95	147	Imp.	0.8	8.0	118	0.00
9	738.5	13.5	24	60	84	251	Imp.	1.0	9.0	251	0.00
10	739.6	7.0	43	55	98	234	Imp.	1.5	10.5	351	0.00
11	741.4	13.8	43	56	99	460	Imp.	2.7	13.2	1242	0.00
12	743.5	12.4	22	73	95	212	Imp.	0.8	14.0	170	0.00
13	744.5	14.0	28	56	84	304	2.9	1.0	15.0	304	2.90
14	745.6	13.5	19	61	80	199	Imp.	1.0	16.0	199	0.00
15	746.5	13.8	27	54	81	289	0.14	1.2	17.2	347	0.17
16	748.4	13.9	43	40	83	464	0.22	0.6	17.8	278	0.13
17	750.5	11.6	24	73	97	216	0.16	1.3	19.1	281	0.21
18	751.5	14.3	28	57	85	311	0.39	1.0	20.1	311	0.39
19	752.4	13.8	8	67	75	86	Imp.	1.0	21.1	86	0.00
20	753.5	14.4	34	45	79	380	Imp.	1.0	22.1	380	0.00
21	754.5	12.6	39	55	94	381	4.6	1.0	23.1	381	4.60
22	755.5	14.8	28	48	76	322	0.42	1.0	24.1	322	0.42
23	756.5	13.8	57	35	92	610	2.1	1.0	25.1	610	2.10
24	757.5	18.1	26	39	65	365	Imp.	1.0	26.1	365	0.00
25	758.8	17.9	20	59	79	278	5.2	1.5	27.6	417	7.80
26	760.5	10.8	7	83	90	59	Imp.	1.5	29.1	89	0.00
27	761.5	11.0	22	70	92	188	0.26	0.9	30.0	169	0.23
28	762.5	16.5	36	36	72	461	5.4	1.1	31.1	507	0.81

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company James E. Russell Petroleum, Inc. Lease B.Bain-Tract 1 Well No. 7

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.		
29	763.5	14.5	35	46	81	394	0.74	1.0	32.1	394	0.74
30	764.5	14.4	40	39	79	447	3.1	1.0	33.1	447	3.10
31	765.5	15.9	47	33	80	580	3.6	1.0	34.1	580	3.60
32	766.5	16.7	39	30	69	505	4.3	1.0	35.1	505	4.30
33	767.6	15.3	46	33	79	546	5.8	1.0	36.1	546	5.80
34	768.6	16.5	43	28	71	550	1.6	1.0	37.1	550	1.60
35	769.6	14.1	28	50	78	306	0.40	1.0	38.1	306	0.40
36	770.4	12.0	19	70	89	177	2.6	0.7	38.8	124	1.82
37	771.6	13.5	41	32	73	429	1.3	0.7	39.5	300	0.91

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company James E. Russell Petroleum, Inc. Lease B. Bain-Tract 1 Well No. 7

Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.
730.0 - 754.0	8.3	0.56	4.64
754.0 - 772.0	14.9	2.57	38.23
730.0 - 772.0	23.2	1.85	42.87

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
730.0 - 754.0	22.1	12.5	25.5	62.9	249	5,500
754.0 - 772.0	17.4	14.7	32.8	47.3	380	6,612
730.0 - 772.0	39.5	13.5	28.7	56.1	307	12,112

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RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

Company James E. Russell Petroleum, Inc. Lease B. Bain-Tract 1 Well No. 7

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	730.5	6.4	7	35	0	0	7	88	35	0	Imp.	-
2	731.5	14.0	13	141	0	0	13	64	141	0	Imp.	-
3	732.5	10.4	14	113	0	0	14	71	113	0	Imp.	-
4	733.7	12.5	26	252	0	0	26	68	252	0	Imp.	-
5	734.5	13.2	19	195	0	0	19	70	195	0	Imp.	-
6	735.5	14.7	14	160	0	0	14	65	160	0	Imp.	-
7	736.5	12.5	25	242	0	0	25	70	242	0	Imp.	-
8	737.5	11.6	16	144	0	0	16	79	144	0	Imp.	-
9	738.5	13.5	24	251	0	0	24	62	251	0	Imp.	-
10	739.6	7.3	43	244	0	0	43	55	244	0	Imp.	-
11	741.4	14.0	43	467	0	0	43	56	467	0	Imp.	-
12	743.5	12.3	22	210	0	0	22	73	210	0	Imp.	-
13	744.5	13.8	28	300	0	0	28	57	300	0	Imp.	-
14	745.6	13.8	19	203	0	0	19	61	203	0	Imp.	-
15	746.5	13.6	27	285	0	0	27	54	285	0	Imp.	-
16	748.4	13.6	43	454	0	0	43	40	454	0	Imp.	-
17	750.5	11.8	24	220	0	0	24	73	220	0	Imp.	-
18	751.5	14.4	28	313	0	0	28	57	313	0	Imp.	-
19	752.4	13.6	8	84	0	0	8	67	84	0	Imp.	-
20	753.5	14.4	34	380	0	0	34	45	380	0	Imp.	-
21	754.5	12.5	39	378	0	0	39	55	378	0	Imp.	-
22	755.5	14.9	28	324	0	0	28	48	324	0	Imp.	-
23	756.5	14.0	57	619	0	0	57	35	619	0	Imp.	-
24	757.5	18.0	26	363	0	0	26	40	363	0	Imp.	-
25	758.8	17.9	20	278	0	0	20	59	278	0	Imp.	-
26	760.5	11.0	7	60	0	0	7	83	60	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.

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RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

Company James E. Russell Petroleum, Inc. Lease B.Bain-Tract 1 Well No. 7

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.			
27	761.5	11.0	22	188	0	0	22	70	188	0	Imp.	-
28	762.5	16.4	36	458	0	0	36	36	458	0	Imp.	-
29	763.5	14.7	35	399	0	0	35	46	399	0	Imp.	-
30	764.5	14.8	40	459	0	0	40	39	459	0	Imp.	-
31	765.5	16.0	47	583	0	0	47	33	583	0	Imp.	-
32	766.5	16.5	39	499	0	0	39	30	499	0	Imp.	-
33	767.6	15.4	46	550	0	0	46	33	550	0	Imp.	-
34	768.6	16.3	43	544	0	0	43	30	544	0	Imp.	-
35	769.6	14.0	28	304	0	0	28	50	304	0	Imp.	-
36	770.4	12.3	19	181	0	0	19	70	181	0	Imp.	-
37	771.6	13.4	41	426	0	0	41	33	426	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.