15-001-28669

February 1, 1996

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

Gentlemen:

Enclosed herewith are the results of tests run on the rotary cores taken from the Nelson Lease, Well No. RW-20, located in Allen County, Kansas.

The second core was sampled from 646' to 674.5' by a representative of Oilfield Research Laboratories and submitted to our laboratory on December 15, 1995. The remaining cores were sampled by a representative of the client and submitted on December 14 and 15, 1995. Salt water mud was used as the drilling fluid (9,858 mg/l chlorides).

Your business is greatly appreciated.

OILFIELD RESEARCH LABORATORIES

Alan M. Dunning

Alan M. Dunning

AMD:kw

c: Abilene - 1
TORP - 2
MSL - 1

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company James E. Russell Petroleum, Inc. Lease Nelson Well No. RW-20

Location 3444' WEL & 420' NSL, SW¼

Section 21 Twp. 26S Rge. 21E County Allen State Kansas

Elevation, Feet	1063.1
Name of Sand	Bartlesville
Top of Core	600.0
Bottom of Core	716.7
Top of Sand	646.4
Bottom of Sand (analyzed)	714.8
Total Feet of Permeable Sand	64.2

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0 - 1	12.7	12.7
1 - 5	11.1	23.8
5 - 10	7.9	31.7
10 - 20	10.1	41.8
20 - 40	10.6	52.4
40 - 70	10.0	62.4
70 - 105	1.8	64.2

Average Permeability Millidarcys	19.9
Average Percent Porosity	18.2
Average Percent Oil Saturation	39.0
Average Percent Water Saturation	45.8
Average Oil Content, Bbls./A. Ft.	553.
Total Oil Content, Bbls./Acre	35,474.

LOG

Company James E. Russell Petroleum, Inc. Lease Nelson Well No. RW-20

Depth Interval, Feet	Description
600.0 - 601.2	Shale, gray.
601.2 - 601.4	Limestone, light grayish brown.
601.4 - 603.0	Shale, gray, silty.
603.0 - 604.9	Shale, gray with scattered light brown limestone streaks.
604.9 - 605.7	Shale, light gray, silty.
605.7 - 607.4	Shale and sandstone, gray and light gray laminated.
607.4 - 608.0	Shale, black.
608.0 - 610.6	Shale, gray.
610.6 - 611.0	Shale, black, calcareous, containing calcite-filled cracks
611.0 - 611.4	Shale, black, calcareous.
611.4 - 612.1	Shale, black, calcareous, fossiliferous.
612.1 - 613.1	Coal.
613.1 - 617.5	Shale, gray with scattered root marks.
617.5 - 618.8	Sandstone, light gray, calcareous with scattered shale partings.
618.8 - 619.7	Shale, light gray with scattered root marks.
619.7 - 646.0	Interval not cored.
646.0 - 646.4	Shale, gray.
646.4 - 648.3	Sandstone, very light brown with scattered shale and mica partings and inclusions.
648.3 - 649.1	Sandstone, very light brown, shaly with scattered shale and mica partings and inclusions.
649.1 - 649.4	Shale, gray with scattered very light brown sandstone partings.
649.4 - 651.7	Sandstone, light brown with widely scattered shale and mica partings and inclusions.
651.7 - 652.1	Shale, gray.
652.1 - 655.8	Sandstone, very light brown with widely scattered shale and mica partings and inclusions and containing a vertical fracture from 652.1-653.7'.

LOG

Company James E. Russell Petroleum, Inc. Lease Nelson Well No. RW-20

Depth Interval, Feet	Description
655.8 - 656.8	Sandstone, brownish black, slightly carbonaceous with widely scattered shale and mica inclusions and containing a vertical fracture the full length of interval.
656.8 - 657.0	Shale, gray, containing a vertical fracture.
657.0 - 657.6	Sandstone, brown with scattered shale and mica partings.
657.6 - 657.9	Shale and sandstone, gray and light brown, laminated.
657.9 - 659.1	Shale, gray with very widely scattered light gray sandstone partings and inclusions.
659.1 - 660.7	Sandstone, brownish black, carbonaceous with scattered shale and mica inclusions.
660.7 - 661.0	Sandstone and shale, light brown and gray laminated.
661.0 - 662.2	Sandstone, brown with scattered shale and mica partings.
662.2 - 667.0	Sandstone, brownish black, shaly, slightly carbonaceous with scattered shale and mica inclusions.
667.0 - 668.0	Sandstone, grayish brown, very shaly with scattered shale and mica partings.
668.0 - 670.5	Sandstone, brownish black, shaly, carbonaceous with scattered shale and mica inclusions.
670.5 - 673.0	Sandstone, dark grayish brown, very shaly, slightly carbonaceous with scattered shale and mica partings and inclusions and containing a vertical fracture from 670.5'-671.2'.
673.0 - 677.6	Sandstone, light grayish brown, very shaly with scattered shale and mica partings and inclusions.
677.6 - 678.6	Sandstone, light brown with widely scattered shale and mica inclusions.
678.6 - 679.3	Shale, gray with widely scattered light brown sandstone partings.
679.3 - 680.3	Sandstone, brownish black, shaly, slightly carbonaceous.

LOG

Company James E. Russell Petroleum, Inc. Lease Nelson Well No. RW-20

Depth Interval, Feet	Description
680.3 - 681.0	Sandstone, grayish brown, shaly with scattered shale and mica partings and carbonaceous inclusions.
681.0 - 686.7	Sandstone, grayish brown with scattered shale and mica inclusions.
686.7 - 688.0	Sandstone, light grayish brown, shaly with scattered shale and mica partings.
688.0 - 692.0	Sandstone, light brown with widely scattered shale and mica inclusions.
692.0 - 692.7	Sandstone, light brown, shaly with scattered shale and mica partings.
692.7 - 693.0	Shale, and sandstone, gray and light gray laminated.
693.0 - 693.7	Sandstone, light grayish brown, shaly with widely scattered shale and mica partings.
693.7 - 694.7	Sandstone, brown with widely scattered shale and mica inclusions.
694.7 - 698.0	Sandstone, brown.
698.0 - 701.5	Sandstone, brown with very widely scattered shale and mica inclusions.
701.5 - 702.0	Core loss.
702.0 - 703.0	Sandstone, brown, slightly shaly with scattered shale and mica partings.
703.0 - 704.0	Sandstone, light grayish brown, very shaly.
704.0 - 707.3	Sandstone, light brown with very widely scattered shale and mica inclusions.
707.3 - 708.3	Sandstone, dark grayish brown, very slightly carbonaceous. Interval is slightly friable.
708.3 - 711.6	Sandstone, light grayish brown, very shaly with widely scattered mica and carbonaceous inclusions.
711.6 - 713.0	Sandstone, light brown with widely scattered mica and carbonaceous inclusions.
713.0 - 713.8	Sandstone, dark grayish brown, slightly carbonaceous. Interval is slightly friable.

LOG

Company James E. Russell Petroleum, Inc. Lease Nelson Well No. RW-20

Depth Interval, Feet	Description
713.8 - 714.8	Sandstone, brownish black, slightly carbonaceous (salt and pepper) with widely scattered mica partings.
714.8 - 715.3	Sandstone, grayish brown, conglomeratic.
715.3 - 715.7	Sandstone and shale, grayish brown and gray laminated.
715.7 - 716.7	Shale, light gray.

Oilfield Research Laboratories

RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company James E. Russell Petroleum, Inc. Lease Nelson Well No. RW-20

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	646.6	15.9	14	70	84	173	11.	0.9	0.9	156	9.90
2	647.5	16.7	17	80	97	220	17.	1.0	1.9	220	17.00
3	648.4	14.5	21	77	98	236	1.1	0.8	2.7	189	0.88
4	649.6	20.4	16	70	86	253	46.	0.8	3.5	202	36.80
5	650.4	18.2	17	50	67	240	102.	0.8	4.3	192	81.60
6	651.5	18.1	23	59	82	323	38.	0.7	5.0	226	26.60
7	652.5	18.6	25	50	75	361	30.	0.9	5.9	325	27.00
8	653.5	17.0	22	67	89	290	14.	1.0	6.9	290	14.00
9	654.5	16.9	22	60	82	288	31.	1.0	7.9	288	31.00
10	655.5	19.6	15	69	84	228	59.	0.8	8.7	182	47.20
11	656.5	20.1	44	40	84	686	39.	1.0	9.7	686	39.00
12	657.5	19.5	28	47	75	424	48.	0.6	10.3	254	28.80
13	659.5	19.5	60	29	89	908	38.	1.0	11.3	908	38.00
14	660.5	19.2	71	26	97	1058	2.2	0.6	11.9	635	1.32
15	661.5	17.7	34	48	82	467	8.0	1.2	13.1	560	9.60
16	662.5	19.5	48	29	77	726	2.5	0.8	13.9	581	2.00
17	663.5	19.3	45	34	79	674	0.72	1.0	14.9	674	0.72
18	664.5	18.4	53	26	79	757	0.66	1.0	15.9	757	0.66
19	665.5	20.4	36	33	69	570	2.2	1.0	16.9	570	2.20
20	666.5	21.5	40	25	65	667	2.6	1.0	17.9	667	2.60
21	667.5	15.9	38	49	87	469	0.47	1.0	18.9	469	0.47
22	668.5	21.5	43	23	66	717	8.8	1.0	19.9	717	8.80
23	669.4	17.6	69	22	91	942	0.71	0.8	20.7	754	0.57
24	670.4	20.4	54	16	70	855	7.2	0.7	21.4	599	5.04
25	671.4	16.2	58	35	93	729	0.43	1.3	22.7	948	0.56
26	672.5	15.7	54	40	94	658	0.63	1.2	23.9	790	0.76
27	673.5	15.8	37	60	97	454	0.60	1.0	24.9	454	0.60
28	674.5	15.3	56	42	98	665	1.0	1.0	25.9	665	1.00
29	675.5	14.4	28	70	98	313	1.1	1.0	26.9	313	1.10
30	676.5	15.1	32	65	97	375	0.79	0.8	27.7	300	0.63

Oilfield Research Laboratories

RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company James E. Russell Petroleum, Inc. Lease Nelson Well No. RW-20

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.		
31	677.5	17.3	38	60	98	510	1.7	0.8	28.5	408	1.36
32	678.5	18.9	39	49	88	572	43.	1.0	29.5	572	43.00
33	679.6	18.8	46	35	81	671	4.6	1.0	30.5	671	4.60
34	680.5	18.2	54	30	84	763	2.1	0.7	31.2	534	1.47
35	681.5	18.3	44	34	78	625	10.	1.0	32.2	625	10.00
36	682.5	17.9	48	35	83	667	32.	1.0	33.2	667	32.00
37	683.5	17.3	44	38	82	591	20.	1.0	34.2	591	20.00
38	684.5	19.0	39	33	72	575	36.	1.0	35.2	575	36.00
39	685.5	17.5	45	40	85	611	9.5	1.0	36.2	611	9.50
40	686.5	16.5	51	39	90	653	12.	0.7	36.9	457	8.40
41	687.5	15.5	25	68	93	301	3.2	1.3	38.2	391	4.16
42	688.5	18.8	38	46	84	554	26.	1.0	39.2	554	26.00
43	689.5	18.4	34	45	79	485	18.	1.0	40.2	485	18.00
44	690.5	17.0	33	41	74	435	12.	1.0	41.2	435	12.00
45	691.5	18.2	39	38	77	551	30.	1.0	42.2	551	30.00
46	692.4	16.5	49	49	98	627	1.5	0.7	42.9	439	1.05
47	693.5	16.3	55	42	97	696	1.3	0.7	43.6	487	0.91
48	694.5	16.9	50	40	90	656	7.5	1.0	44.6	656	7.50
49	695.5	19.8	38	40	78	584	47.	1.3	45.9	759	61.10
50	696.5	21.3	43	38	81	711	69.	1.0	46.9	711	69.00
51	697.5	20.3	37	36	73	583	48.	1.0	47.9	583	48.00
52	698.5	19.4	42	36	78	632	77.	1.0	48.9	632	77.00
53	699.5	19.6	40	36	76	608	70.	1.0	49.9	608	70.00
54	700.5	18.0	39	39	78	545	43.	0.8	50.7	436	34.40
55	701.4	20.3	38	40	78	599	70.	0.7	51.4	419	49.00
56	702.4	17.9	36	53	89	500	7.3	1.0	52.4	500	7.30
57	703.4	14.9	42	55	97	486	0.35	1.0	53.4	486	0.35
58	704.4	18.5	33	59	92	474	7.7	1.0	54.4	474	7.70
59	705.5	21.4	29	51	80	482	54.	1.0	55.4	482	54.00
60	706.5	19.7	28	51	79	428	17.	1.3	56.7	556	22.10

Oilfield Research Laboratories

RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company James E. Russell Petroleum, Inc. Lease Nelson Well No. RW-20

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.		
61	707.5	22.2	42	54	96	723	21.	1.0	57.7	723	21.00
62	708.5	18.7	38	52	90	551	2.4	0.7	58.4	386	1.68
63	709.5	15.2	38	60	98	448	0.28	1.0	59.4	448	0.28
64	710.5	15.8	34	60	94	417	0.81	0.8	60.2	334	0.65
65	711.4	14.5	23	74	97	259	0.23	0.8	61.0	207	0.18
66	712.6	19.7	32	42	74	489	12.	1.4	62.4	685	16.80
67	713.5	21.8	59	35	94	998	14.	0.8	63.2	798	11.20
68	714.5	20.1	62	32	94	967	22.	1.0	64.2	967	22.00
	AVERAGES								TOTALS		
	646.4 - 660.1	18.0	25.5	59.0		364	35.2		11.3	4,118	397.78
	660.1 - 677.6	17.7	45.8	39.6		631	2.3		17.2	10,861	39.99
	677.6 - 701.5	18.3	41.4	40.7		587	29.4		22.9	13,449	673.09
	702.0 - 714.8	18.6	37.7	51.6		550	12.9		12.8	7,046	165.24
overall	646.4 - 714.8	18.2	39.0	45.8		553	19.9		64.2	35,474	1276.10

Oilfield Research Laboratories

RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

Company James E. Russell Petroleum, Inc. Lease Nelson Well No. RW-20

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	646.6	16.4	14	178	0	0	14	82	178	124	0.94	25
2	647.5	16.9	18	236	0	0	18	80	236	216	1.50	15
3	648.4	14.4	21	235	0	0	21	77	235	0	Imp.	-
4	649.6	20.0	16	248	0	0	16	80	248	440	7.20	5
5	650.4	18.6	17	245	0	0	17	78	245	288	22.99	5
6	651.5	17.8	23	318	0	0	23	73	318	528	7.73	5
7	652.5	18.9	25	367	0	0	25	73	367	516	5.66	15
8	653.5	17.3	22	295	0	0	22	76	295	26	0.27	35
9	654.5	16.9	23	302	0	0	23	74	302	550	4.33	15
10	655.5	19.3	15	225	0	0	15	81	225	464	7.06	10
11	656.5	20.1	44	686	0	0	44	52	686	30	0.48	40
12	657.5	19.2	28	417	0	0	28	69	417	40	0.63	40
13	659.5	19.5	60	908	0	0	60	38	908	608	5.00	25
14	660.5	18.9	71	1041	0	0	71	26	1041	0	Imp.	-
15	661.5	17.3	34	456	0	0	34	63	456	30	0.28	40
16	662.5	19.4	48	722	0	0	48	29	722	0	Imp.	-
17	663.5	19.0	44	649	0	0	44	35	649	0	Imp.	-
18	664.5	18.4	53	757	0	0	53	26	757	0	Imp.	-
19	665.5	20.2	36	564	0	0	36	34	564	0	Imp.	-
20	666.5	21.4	39	647	0	0	39	27	647	0	Imp.	-
21	667.5	15.9	38	469	0	0	38	49	469	0	Imp.	-
22	668.5	21.5	43	717	0	0	43	24	717	0	Imp.	-
23	669.4	17.4	68	918	0	0	68	24	918	0	Imp.	-
24	670.4	20.2	54	846	0	0	54	17	846	0	Imp.	-
25	671.4	16.2	58	729	0	0	58	35	729	0	Imp.	-
26	672.5	15.5	54	649	0	0	54	40	649	0	Imp.	-
27	673.5	15.9	38	469	0	0	38	60	469	0	Imp.	-
28	674.5	15.3	56	665	0	0	56	42	665	0	Imp.	-

*—Volume of water recovered at the time of maximum oil recovery.

**—Determined by passing water through sample which still contains residual oil.

Oilfield Research Laboratories

RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

Company James E. Russell Petroleum, Inc. Lease Nelson Well No. RW-20

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.			
29	675.5	14.0	29	315	0	0	29	68	315	0	Imp.	-
30	676.5	15.1	32	375	0	0	32	65	375	0	Imp.	-
31	677.5	16.9	38	498	0	0	38	60	498	0	Imp.	-
32	678.5	19.2	39	581	10	149	29	69	432	282	9.16	10
33	679.6	18.4	46	657	0	0	46	35	657	0	Imp.	-
34	680.5	17.9	54	750	0	0	54	44	750	8	0.11	50
35	681.5	18.1	44	618	4	56	40	56	562	52	0.72	40
36	682.5	17.6	48	655	0	0	48	35	655	0	Imp.	-
37	683.5	17.7	44	604	4	55	40	58	549	134	1.78	40
38	684.5	19.3	39	584	0	0	39	57	584	64	0.89	40
39	685.5	17.3	45	604	0	0	45	53	604	20	0.28	45
40	686.5	16.8	51	665	9	117	42	56	548	170	1.89	35
41	687.5	15.5	25	301	0	0	25	71	301	18	0.33	50
42	688.5	19.2	38	566	2	30	36	60	536	342	4.16	20
43	689.5	18.4	34	485	2	29	32	65	456	82	0.94	35
44	690.5	17.4	33	445	4	54	29	69	391	288	2.61	20
45	691.5	18.3	39	554	6	85	33	65	469	282	3.16	30
46	692.4	16.5	49	627	0	0	49	49	627	0	Imp.	-
47	693.5	16.1	55	687	0	0	55	42	687	0	Imp.	-
48	694.5	17.2	50	667	13	173	37	61	494	212	2.28	35
49	695.5	19.8	38	584	2	31	36	62	553	442	5.61	25
50	696.5	21.1	43	704	11	181	32	66	523	212	7.70	20
51	697.5	20.6	37	591	3	48	34	65	543	298	6.79	25
52	698.5	19.7	42	642	5	76	37	60	566	382	6.65	25
53	699.5	19.9	40	618	3	46	37	61	572	480	6.77	20
54	700.5	18.0	39	545	2	28	37	60	517	344	3.78	30
55	701.4	20.6	38	607	2	32	36	62	575	452	5.33	30
56	702.4	17.9	36	500	0	0	36	53	500	0	Imp.	-

*—Volume of water recovered at the time of maximum oil recovery.

**—Determined by passing water through sample which still contains residual oil.

Oilfield Research Laboratories

RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

Company James E. Russell Petroleum, Inc. Lease Nelson Well No. RW-20

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.			
57	703.4	14.7	42	479	0	0	42	55	479	0	Imp.	-
58	704.4	18.5	33	474	0	0	33	59	474	0	Imp.	-
59	705.5	21.8	29	490	0	0	29	69	490	262	6.26	15
60	706.5	20.0	28	434	0	0	28	68	434	518	5.11	15
61	707.5	22.1	42	720	0	0	42	54	720	298	2.44	20
62	708.5	19.1	38	563	0	0	38	58	563	36	0.33	35
63	709.5	15.0	38	442	0	0	38	60	442	0	Imp.	-
64	710.5	15.8	34	417	0	0	34	60	417	0	Imp.	-
65	711.4	14.4	22	246	0	0	22	75	246	0	Imp.	-
66	712.6	19.5	32	484	0	0	32	43	484	0	Imp.	-
67	713.5	21.6	59	989	0	0	59	38	989	22	0.28	40
68	714.5	20.4	62	981	0	0	62	34	981	28	0.22	35
					AVERAGES							
	646.4 - 600.1	-	-	-	0	0	-	-	-	-	5.06	-
	660.1 - 677.6	-	-	-	0	0	-	-	-	-	0.28	-
	677.6 - 701.5	18.9	40.4	591	5.1	74	35.3	62.3	517	-	4.39	28.4
	702.0 - 714.8	-	-	-	0	0	-	-	-	-	3.16	-

NOTE: The interval from 677.6-701.5 was averaged using only the samples which recovered oil.

*—Volume of water recovered at the time of maximum oil recovery.

**—Determined by passing water through sample which still contains residual oil.

Oilfield Research Laboratories

RESULTS OF WATER DIFFERENTIATION TESTS

TABLE VI

Company James E. Russell Petroleum, Inc. Lease Nelson Well No. RW-20

Sample No.	Depth, Feet	Chloride Content of Brine in Sand ppm	Percent Water Saturation Connate	Drilling & Foreign	Total
1	646.6	20,094.			
2	647.5	16,131.			
3	648.4	17,526.			
4	649.6	11,196.			
5	650.4	11,093.			
6	651.5	11,616.			
7	652.5	12,181.			
8	653.5	10,487.			
9	654.5	10,492.			
10	655.5	11,742.			
11	656.5	12,674.			
12	657.5	13,466.			
13	659.5	19,204.			
14	660.5	24,838.			
15	661.5	18,180.			
16	662.5	24,695.			
17	663.5	22,248.			
18	664.5	26,433.			
19	665.5	22,862.			
20	666.5	26,079.			
21	667.5	20,525.			
22	668.5	19,484.			
23	669.4	26,477.			
24	670.4	25,643.			
25	671.4	23,696.			
26	672.5	24,774.			
27	673.5	19,477.			
28	674.5	25,835.			
29	675.5	18,371.			
30	676.5	19,235.			
31	677.5	12,137.			
32	678.5	12,418.			
33	679.6	19,997.			
34	680.5	25,883.			
35	681.5	21,045.			
36	682.5	16,414.			
37	683.5	16,906.			
38	684.5	21,799.			
39	685.5	22,501.			
40	686.5	19,984.			
41	687.5	22,961.			
42	688.5	19,792.			
43	689.5	17,997.			
44	690.5	22,429.			

Note: ppm — parts per million

Oilfield Research Laboratories

RESULTS OF WATER DIFFERENTIATION TESTS

TABLE VI

Company James E. Russell Petroleum, Inc. Lease Nelson Well No. RW-20

Sample No.	Depth, Feet	Chloride Content of Brine in Sand ppm	Percent Water Saturation		
			Connate	Drilling & Foreign	Total
45	691.5	20,432.			
46	692.4	16,083.			
47	693.5	25,464.			
48	694.5	16,214.			
49	695.5	11,632.			
50	696.5	14,169.			
51	697.5	15,497.			
52	698.5	14,510.			
53	699.5	16,493.			
54	700.5	15,692.			
55	701.4	12,057.			
56	702.4	12,084			
57	703.4	23,967.			
58	704.4	14,838.			
59	705.5	13,136.			
60	706.5	12,176.			
61	707.5	13,247.			
62	708.5	17,570.			
63	709.5	23,996.			
64	710.5	20,342.			
65	711.4	18,381.			
66	712.6	22,336.			
67	713.5	15,760.			
68	714.5	19,581.			

Note: ppm — parts per million

OILFIELD RESEARCH LABORATORIES

JAMES E. RUSSELL PETROLEUM, INC.

LEASE Nelson WELL NO RW-20

FIELD Savonburg

COUNTY Allen STATE Kansas

LOCATION 420' NSL & 3444' WEL,
Section 21, T26S, R21E

INTERVAL CORED 600.0' - 620.0'
646.0' - 674.5'
674.5' - 702.0'
702.0' - 718.0'

DATE RECEIVED 12-14 & 15-95

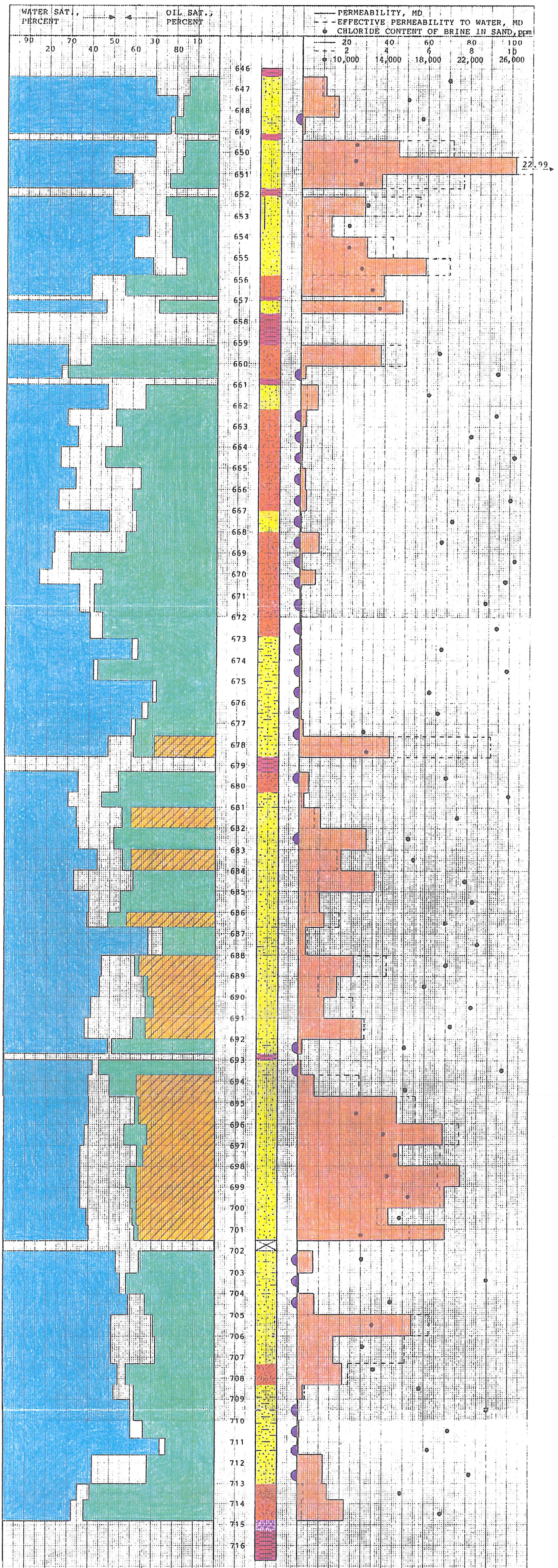
ELEVATION 1063.1'

FORMATION Bartlesville

DRILLING FLUID Salt Water Mud

TYPE OF CORE Rotary

INTERVAL RECEIVED 600.0' - 619.7'
646.0' - 674.5'
674.5' - 701.5'
702.0' - 716.7'



KEY:

- SANDSTONE
- SHALE
- SANDSTONE, SHALY
- SANDSTONE, CARBONACEOUS
- SANDSTONE AND SHALE, LAMINATED
- SANDSTONE, SHALY, CARBONACEOUS
- SANDSTONE, CONGLOMERATIC
- SANDSTONE, CARBONACEOUS, FRIABLE
- FLOODPOT RESIDUAL OIL SATURATION
- LOSS
- FORMATION CONTAINING A VERTICAL FRACTURE
- IMPERMEABLE TO WATER

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE PERCENT POROSITY	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVERAGE PERMEABILITY, MILLIDARCYS
646.4 - 660.1	11.3	18.0	25.5	59.0	35.2
660.1 - 677.6	17.2	17.7	45.9	39.6	2.3
677.6 - 701.5	22.9	18.3	41.4	40.7	29.4
702.0 - 714.8	12.8	18.6	37.7	51.6	12.9
646.4 - 714.8	64.2	18.2	39.0	45.8	19.9

NOTE: The core from 600.0' - 619.7' is predominantly shale and therefore not graphed.