

**Oilfield Research Laboratories**

**RESULTS OF SATURATION & PERMEABILITY TESTS**

**TABLE 1-B**

Company James E. Russell Petroleum, Inc. Lease Minckley "B" Well No. 103

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	720.6	12.9	15	78	93	150	Imp.	1.0	1.0	150	0.00
2	721.5	13.7	13	75	88	138	Imp.	1.0	2.0	138	0.00
3	722.5	14.6	18	54	72	204	3.8	1.0	3.0	204	3.80
4	725.5	10.9	25	70	95	211	0.62	1.7	4.7	359	1.05
5	726.4	11.6	18	76	94	162	0.61	1.0	5.7	162	0.61
6	727.6	12.7	18	78	96	177	0.36	1.0	6.7	177	0.36
7	728.4	13.2	23	72	95	236	0.83	0.8	7.5	189	0.66
8	729.2	14.8	18	60	78	206	0.87	1.6	9.1	330	1.39
9	730.5	14.6	30	45	75	340	3.8	0.6	9.7	204	2.28
10	731.5	13.4	33	49	82	343	5.6	1.0	10.7	343	5.60
11	732.5	12.1	31	63	94	291	2.0	1.0	11.7	291	2.00
12	733.5	16.3	33	34	67	416	1.9	1.0	12.7	416	1.90
13	734.5	14.6	40	40	80	453	3.7	1.0	13.7	453	3.70
14	735.5	18.1	35	32	67	491	13.	0.8	14.5	393	10.40
15	736.5	14.0	38	48	86	413	15.	0.6	15.1	248	9.00
16	737.4	12.8	29	59	88	288	0.60	1.2	16.3	340	7.20
17	738.5	16.3	33	38	71	417	2.1	0.9	17.2	375	1.89
18	739.6	13.6	25	69	94	264	0.27	1.0	18.2	264	0.27
19	740.4	19.7	38	23	61	580	21.	0.7	18.9	406	14.70
20	742.5	19.3	45	30	75	674	7.6	0.3	19.2	202	2.28
21	743.3	15.6	43	48	91	521	26.	0.4	19.6	208	10.40
F-21	743.5	14.5	33	-	-	371	-	0.9	20.5	334	-
22	744.5	18.1	45	36	81	632	8.5	0.7	21.2	442	5.95
23	745.5	13.8	26	68	94	278	10.	1.0	22.2	278	10.00
24	746.5	14.4	38	44	82	424	2.2	1.0	23.2	424	2.20
25	747.5	15.6	44	42	86	534	0.48	0.9	24.1	481	0.43
26	748.3	17.3	50	29	79	673	8.5	1.2	25.3	808	10.20
27	749.5	13.7	22	67	89	234	-	0.2	25.5	47	-
F-27	749.7	16.9	41	-	-	564	10.	0.5	26.0	282	5.00
28	750.5	14.7	45	38	83	514	2.3	0.9	26.9	463	2.07

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			Oil	Water	Total			Ft.	Cum. Ft.		
29	751.6	15.7	43	39	82	525	3.7	0.7	27.6	367	2.59
30	752.6	15.9	33	55	88	408	3.9	1.5	29.1	612	5.85
31	753.5	17.7	46	34	80	633	11.	0.8	29.9	506	8.80
32	755.6	16.7	41	42	83	532	20.	0.4	30.3	213	8.00
33	756.6	13.4	37	49	86	386	0.62	1.2	31.5	463	0.74
34	757.4	15.1	41	40	81	481	13.	0.8	32.3	385	10.40
35	758.5	17.8	50	28	78	692	23.	1.1	33.4	761	25.30
36	759.5	16.2	52	27	79	655	11.	1.0	34.4	655	11.00
37	760.5	15.6	59	24	83	716	8.5	1.0	35.4	716	8.50
38	761.6	17.6	60	23	83	821	11.	0.7	36.1	575	7.70
39	762.6	15.9	66	28	94	816	4.5	1.5	37.6	1224	6.75
40	763.7	18.7	60	26	86	872	38.	0.9	38.5	785	34.20
41	764.6	15.9	77	21	98	952	3.4	0.6	39.1	571	2.04
42	765.5	13.0	62	21	83	627	3.7	1.1	40.2	690	4.07

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## RESULTS OF LABORATORY FLOODING TESTS

### TABLE IV

Company James E. Russell Petroleum, Inc. Lease Minckley "B" Well No. 103

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	720.6	12.9	15	150	0	0	15	78	150	0	Imp.	-
2	721.5	13.7	13	138	0	0	13	75	138	0	Imp.	-
3	722.5	14.6	18	204	0	0	18	54	204	0	Imp.	-
4	725.5	10.9	25	211	0	0	25	70	211	0	Imp.	-
5	726.4	11.6	18	162	0	0	18	76	162	0	Imp.	-
6	727.6	14.1	21	230	0	0	21	75	230	4	0.15	45
7	728.4	15.4	20	239	0	0	20	75	239	0	Imp.	-
8	729.2	15.8	19	233	0	0	19	64	233	0	Imp.	-
9	730.5	14.6	30	340	0	0	30	45	340	0	Imp.	-
10	731.5	13.4	33	343	0	0	33	49	343	0	Imp.	-
11	732.5	12.1	31	291	0	0	31	63	291	0	Imp.	-
12	733.5	16.3	33	416	0	0	33	34	416	0	Imp.	-
13	734.5	14.6	40	453	0	0	40	40	453	0	Imp.	-
14	735.5	19.2	35	521	5	74	30	60	447	17	0.24	40
15	736.5	15.8	38	466	7	86	31	61	380	10	0.16	40
16	737.4	12.8	29	288	0	0	29	59	288	0	Imp.	-
17	738.5	16.3	33	417	0	0	33	38	417	0	Imp.	-
18	739.6	13.6	25	264	0	0	25	69	264	0	Imp.	-
19	740.4	19.7	38	642	11	168	27	63	474	14	0.24	40
20	742.5	19.9	45	695	14	216	31	62	479	7	0.16	40
21	743.5	14.5	33	371	0	0	33	48	371	0	Imp.	-
22	744.5	17.2	45	600	10	133	35	56	467	8	0.16	40
23	745.5	13.8	26	278	0	0	26	68	278	0	Imp.	-
24	746.5	14.4	38	424	0	0	38	44	424	0	Imp.	-
25	747.5	15.6	44	534	0	0	44	42	534	0	Imp.	-
26	748.3	16.8	50	652	15	196	35	59	456	6	0.16	45
27	749.7	16.9	41	564	7	92	36	56	472	10	0.22	40
28	750.5	14.7	45	514	0	0	45	38	514	0	Imp.	-
29	751.6	14.9	40	462	0	0	40	52	462	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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			%	Bbls./A. Ft.	%	Bbls./A. Ft.	% Oil	% Water	Bbls./A. Ft.			
30	752.6	14.0	33	359	0	0	33	63	359	0	Imp.	-
31	753.5	18.3	46	653	11	156	35	59	497	10	0.16	40
32	755.6	16.2	41	515	6	75	35	57	440	10	0.16	40
33	756.6	13.4	37	386	0	0	37	49	386	0	Imp.	-
34	757.4	16.1	41	512	7	87	34	58	425	5	0.17	45
35	758.5	19.2	50	744	15	223	35	55	521	143	2.30	35
36	759.5	16.9	52	682	2	26	50	44	656	16	0.77	30
37	760.5	15.6	59	716	0	0	59	24	716	0	Imp.	-
38	761.6	16.6	60	773	2	26	58	34	747	9	0.30	30
39	762.6	15.9	66	816	0	0	66	28	816	0	Imp.	-
40	763.7	18.7	60	872	0	0	60	26	872	0	Imp.	-
41	764.6	15.9	77	952	0	0	77	21	952	0	Imp.	-
42	765.5	13.0	62	627	0	0	62	21	627	0	Imp.	-

Notes: cc—cubic centimeter.

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

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