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

November 3, 1980

R. F. B. Exploration
P. O. Box N
Sedan, Kansas 67361

Gentlemen:

Enclosed herewith is the report of the analysis of the rotary core taken from the Rising Lease, Well No. 14, located in Chautauqua County, Kansas and submitted to our laboratory on August 7, 1980.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES

Sanford A. Michel

SAM/ks

5 c to Sedan, Kansas

Oilfield Research Laboratories

GENERAL INFORMATION & SUMMARY

Company R. F. B. Exploration Lease Rising Well No. 14

Location SE - SW - SW

Section 21 Twp. 32S Rge. 12E County Chautauqua State Kansas

Elevation, Feet	-
Name of Sand	Wayside
Top of Core	1173.0
Bottom of Core	1192.3
Top of Sand (Received)	1173.0
Bottom of Sand	1184.8
Total Feet of Permeable Sand	3.6
Total Feet of Floodable Sand	0.0

Distribution of Permeable Sand: Permeability Range Millidarcys	Feet	Cum. Ft.
0.1 - 0.5	3.6	3.6

Average Permeability Millidarcys	0.31
Average Percent Porosity	12.3
Average Percent Oil Saturation	21.4
Average Percent Water Saturation	68.4
Average Oil Content, Bbls./A. Ft.	199.
Total Oil Content, Bbls./Acre	2,353.
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

This core was sampled by a representative of Oilfield Research Laboratories. The well was drilled in non-virgin territory using fresh water mud as the circulating fluid. Robert Hopkins, a registered geologist, representing the client reports that two (2) feet of sand were drilled before coring operations started.

In as much as the core did not respond to laboratory water flooding susceptibility tests, no calculated recovery value is presented.

FORMATION CORED

The detailed log of the formation cored is as follows:

Depth Interval, Feet	Description
1173.0 - 1176.3	Brown slightly calcareous sandstone, containing a vertical fracture.
1176.3 - 1177.7	Grayish light brown hard very calcareous sandstone, containing a vertical fracture.
1177.7 - 1181.3	Brown shaly slightly calcareous sandstone, containing a vertical fracture.
1181.3 - 1184.8	Grayish light brown very shaly sandstone.
1184.8 - 1192.3	Gray sandy calcareous shale.

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company R. F. B. Exploration Lease Rising Well No. 14

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	1173.5	8.8	33	59	92	225	0.45	1.0	1.0	225	0.45
2	1174.5	8.5	30	61	91	198	Imp.	1.0	2.0	198	0.00
3	1175.7	9.4	28	62	90	204	Imp.	1.3	3.3	265	0.00
4	1176.6	5.5	12	80	92	51	Imp.	0.4	3.7	20	0.00
5	1177.5	13.0	9	71	80	91	Imp.	1.0	4.7	91	0.00
6	1178.5	14.4	17	68	85	190	0.29	1.6	6.3	304	0.46
7	1179.5	16.4	37	48	85	471	0.20	1.0	7.3	471	0.20
8	1180.7	15.7	16	67	83	195	Imp.	1.0	8.3	195	0.00
9	1181.7	13.6	10	88	98	106	Imp.	0.7	9.0	74	0.00
10	1182.7	13.6	11	84	95	116	Imp.	1.0	10.0	116	0.00
11	1183.7	12.7	21	77	98	207	Imp.	1.0	11.0	207	0.00
12	1184.5	11.6	26	71	97	234	Imp.	0.8	11.8	187	0.00

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company R. F. B. Exploration Lease Rising Well No. 14

Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.
1173.0 - 1184.8	3.6	0.31	1.11

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
1173.0 - 1184.8	11.8	12.3	21.4	68.4	199	2,353

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RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

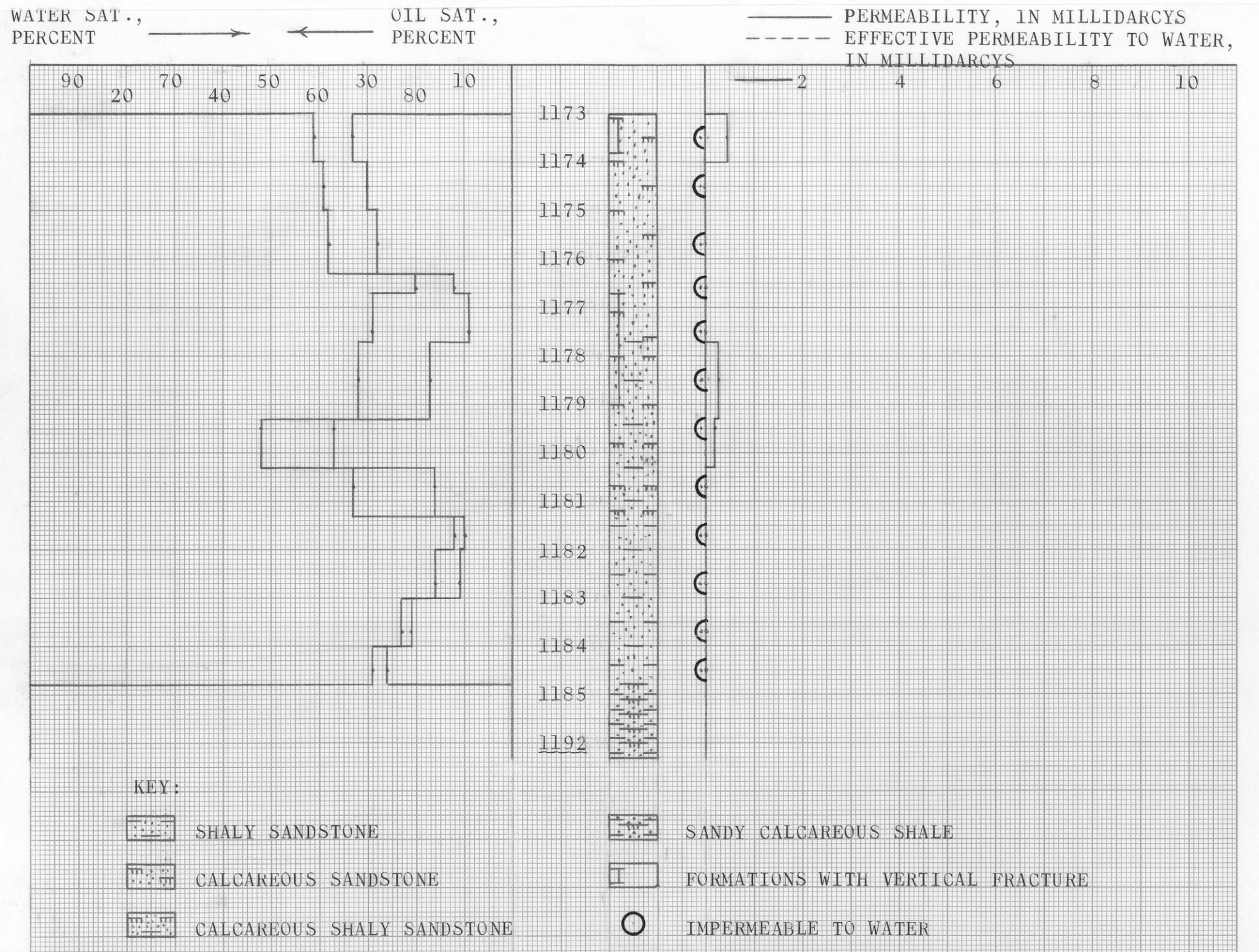
Company R. F. B. Exploration Lease Rising Well No. 14

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	1173.5	9.0	32	223	0	0	32	61	223	0	Imp.	-
2	1174.5	8.5	30	198	0	0	30	63	198	0	Imp.	-
3	1175.7	9.8	30	228	0	0	30	64	228	0	Imp.	-
4	1176.6	5.3	14	58	0	0	14	81	58	0	Imp.	-
5	1177.5	13.4	11	114	0	0	11	73	114	0	Imp.	-
6	1178.5	14.2	17	187	0	0	17	70	187	0	Imp.	-
7	1179.5	16.5	37	474	0	0	37	50	474	0	Imp.	-
8	1180.7	16.0	15	186	0	0	15	70	186	0	Imp.	-
9	1181.7	13.8	12	128	0	0	12	86	128	0	Imp.	-
10	1182.7	13.6	11	116	0	0	11	85	116	0	Imp.	-
11	1183.7	12.9	22	220	0	0	22	76	220	0	Imp.	-
12	1184.5	11.8	27	247	0	0	27	72	247	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.


WATER SAT., PERCENT
OIL SAT., PERCENT
PERMEABILITY, IN MILLIDARCYS
EFFECTIVE PERMEABILITY TO WATER, IN MILLIDARCYS
90 20 70 40 50 60 30 80 10
2 4 6 8 10
1173
1174
1175
1176
1177
1178
1179
1180
1181
1182
1183
1184
1185
1192
KEY:
SHALY SANDSTONE
CALCAREOUS SANDSTONE
CALCAREOUS SHALY SANDSTONE
SANDY CALCAREOUS SHALE
FORMATIONS WITH VERTICAL FRACTURE
IMPERMEABLE TO WATER

R. F. B. EXPLORATION

RISING LEASE WELL NO. 14

CHAUTAUQUA 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
1173.0 - 1184.8	11.8	12.3	21.4	68.4	0.31	------

OILFIELD RESEARCH LABORATORIES
CHANUTE, KANSAS
OCTOBER, 1980

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