

OILFIELD RESEARCH LABORATORIES

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April 20, 1981

Sheedy Oil Group, Inc.
Box 269
Yates Center, Kansas 66783

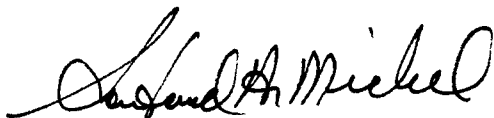
Gentlemen:

Enclosed herewith is the report of the analysis of the rotary core taken from the Marvin Chambers B Lease, Well No. 3, located in Woodson County, Kansas and submitted to our laboratory on April 1, 1981.

Your business is greatly appreciated.

Very truly yours,

OILFIELD RESEARCH LABORATORIES



Sanford A. Michel

SAM/kas

4 c to Yates Center, Kansas
1 c to Jim Guinotte, Reed Oil Co.
11½ E. Main, Chanute, Kansas

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GENERAL INFORMATION & SUMMARY

Company Sheedy Oil Group, Inc. Lease Marvin Chambers Well No. 3
 Location _____
 Section 19 Twp. 25S Rge. 17E County Woodson State Kansas

Elevation, Feet

Name of Sand.....

Lower Squirrel

Top of Core

798.0

Bottom of Core

809.6

Top of Sand

798.0

Bottom of Sand

808.5

Total Feet of Permeable Sand

8.6

Total Feet of Floodable Sand

6.0

Distribution of Permeable Sand:
Permeability Range
Millidarcys

Feet

Cum. Ft.

0 - 15

1.6

1.6

75 - 95

5.0

6.6

155 - 160

2.0

8.6

Average Permeability Millidarcys

86.9

Average Percent Porosity

16.3

Average Percent Oil Saturation

49.0

Average Percent Water Saturation

28.0

Average Oil Content, Bbls./A. Ft.

639.

Total Oil Content, Bbls./Acre.....

6,710.

Average Percent Oil Recovery by Laboratory Flooding Tests.....

3.8

Average Oil Recovery by Laboratory Flooding Tests, Bbls./A. Ft.

55.

Total Oil Recovery by Laboratory Flooding Tests, Bbls./Acre

330.

Total Calculated Oil Recovery, Bbls./Acre..... See "Calculated Recovery" Section

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The core was sampled and the samples sealed in plastic bags by a representative of the client. Salt water mud was used as a drilling fluid. The core was reported to be from a virgin area.

FORMATION CORED

The detailed log of the formation cored is as follows:

<u>Depth Interval, Feet</u>	<u>Description</u>
798.0 - 805.6	Dark brown slightly calcareous slightly carbonaceous sandstone with fine shale partings.
805.6 - 808.5	Grayish light brown slightly calcareous shaly sandstone.
808.5 - 809.6	Gray shale.

LABORATORY FLOODING TESTS

The sand in this core responded to laboratory flooding tests, as a total recovery of 330 barrels of oil per acre was obtained from 6.0 feet of sand. The weighted average percent oil saturation was reduced from 51.0 to 47.2, or represents an average recovery of 3.8 percent. The weighted average effective permeability of the samples is 12.10 millidarcys, while the average initial fluid production pressure is 16.7 pounds per square inch (See Table V).

By observing the data given in Table IV, you will note that of the 11 samples tested, 6 produced water and oil, and 1 sample produced water only. This indicates that approximately 55 percent of the sand represented by these samples is floodable pay sand.

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CALCULATED RECOVERY

It would appear from a study of the core data, that efficient primary and waterflood operations in the vicinity of this well should recover approximately 1,660 barrels of oil per acre. This is an average recovery of 276 barrels per acre foot from 6.0 feet of floodable sand analyzed in this core.

These recovery values were calculated using the following data and assumptions:

Original formation volume factor, estimated	1.05
Reservoir water saturation, percent, estimated	10.0
Average porosity, percent	18.5
Oil saturation after flooding, percent	47.2
Performance factor, percent, estimated	50.0
Net floodable sand, feet	6.0

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RESULTS OF SATURATION & PERMEABILITY TESTS

TABLE 1-B

Company Sheedy Oil Group, Inc. Lease Marvin Chambers B Well No. 3

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	798.5	18.5	54	18	72	775	80.	1.0	1.0	775	80.00
2	799.5	18.6	54	21	75	779	155.	1.0	2.0	779	155.00
3	800.5	18.6	43	17	60	621	157.	1.0	3.0	621	157.00
4	801.5	19.0	51	19	70	752	78.	1.0	4.0	752	78.00
5	802.5	17.2	53	25	78	707	82.	1.0	5.0	707	82.00
6	803.5	18.9	51	12	63	748	94.	1.0	6.0	748	94.00
7	804.4	17.6	70	6	76	956	90.	1.0	7.0	956	90.00
8	805.4	17.7	53	17	70	728	12.	0.6	7.6	437	7.20
9	806.4	12.6	52	42	94	508	3.9	1.0	8.6	508	3.90
10	807.4	9.4	38	59	97	277	Imp.	1.0	9.6	277	0.00
11	808.4	11.3	19	72	91	167	Imp.	0.9	10.5	150	0.00

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SUMMARY OF PERMEABILITY & SATURATION TESTS

TABLE III

Company		Lease		Well No.	
Sheedy Oil Group, Inc.		Marvin Chambers B		3	
Depth Interval, Feet	Feet of Core Analyzed	Average Permeability, Millidarcys	Permeability Capacity Ft. x Md.		
798.0 - 805.6	7.6	97.8	743.20		
805.6 - 808.5	1.0	3.9	3.90		
798.0 - 808.5	8.6	86.9	747.10		

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
798.0 - 805.6	7.6	18.3	53.7	16.9	760	5,775
805.6 - 808.5	2.9	11.1	36.9	57.2	322	935
798.0 - 808.5	10.5	16.3	49.0	28.0	639	6,710

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RESULTS OF LABORATORY FLOODING TESTS

TABLE IV

Company Sheedy Oil Group, Inc. Lease Marvin Chambers B. Well No. 3

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			
1	798.5	18.6	54	779	6	87	48	36	296	11.99	15
2	799.5	18.7	54	783	5	73	49	42	226	11.83	20
3	800.5	18.4	43	614	2	29	41	40	368	13.12	15
4	801.5	18.8	51	744	3	44	48	43	344	6.60	20
5	802.5	17.2	53	707	4	53	49	33	382	14.05	15
6	803.5	19.0	51	752	3	44	48	32	204	14.99	15
7	804.4	17.5	70	950	0	0	70	23	290	9.83	15
8	805.4	17.4	54	729	0	0	54	18	0	Imp.	-
9	806.4	12.8	51	506	0	0	51	44	0	Imp.	-
10	807.4	9.4	38	277	0	0	38	59	0	Imp.	-
11	808.4	11.8	18	165	0	0	18	73	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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SUMMARY OF LABORATORY FLOODING TESTS

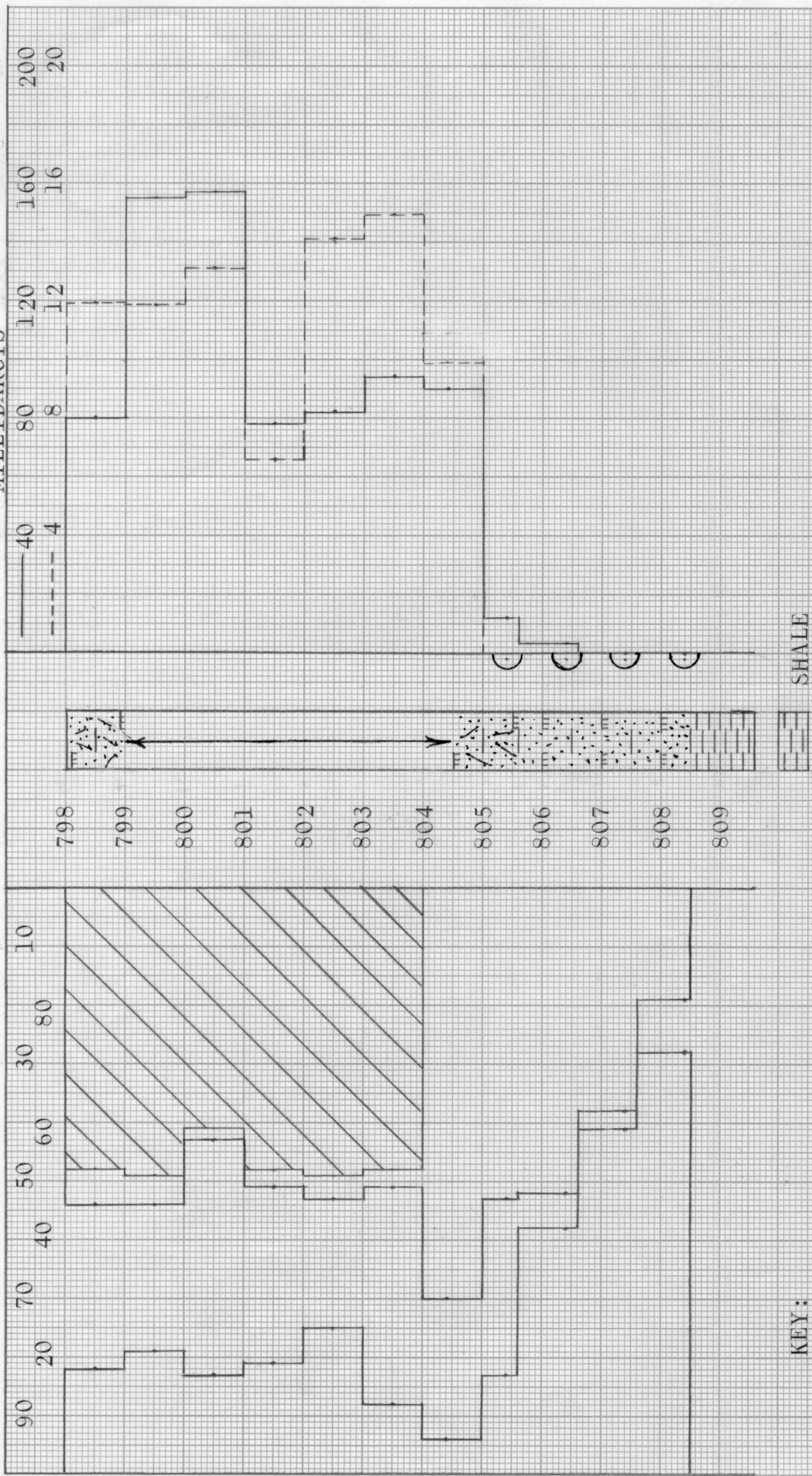
TABLE V

Company	Sheedy Oil Group, Inc.	Lease	Marvin Chambers B	Well No.	3
Depth Interval, Feet	798.0 - 805.6				
Feet of Core Analyzed	6.0				
Average Percent Porosity	18.5				
Average Percent Original Oil Saturation	51.0				
Average Percent Oil Recovery	3.8				
Average Percent Residual Oil Saturation	47.2				
Average Percent Residual Water Saturation	37.7				
Average Percent Total Residual Fluid Saturation	84.9				
Average Original Oil Content, Bbls./A. Ft.	730.				
Average Oil Recovery, Bbls./A. Ft.	55.				
Average Residual Oil Content, Bbls./A. Ft.	675.				
Total Original Oil Content, Bbls./Acre	4,379.				
Total Oil Recovery, Bbls./Acre	330.				
Total Residual Oil Content, Bbls./Acre	4,049.				
Average Effective Permeability, Millidarcys	12.10				
Average Initial Fluid Production Pressure, p.s.i.	16.7				

NOTE: Only those samples which recovered oil were used in calculating the above averages.

WATER SAT., PERCENT → ← OIL SAT., PERCENT

— PERMEABILITY, IN MILLIDARCYS
 - - - - - EFFECTIVE PERMEABILITY TO WATER, IN MILLIDARCYS



KEY:

- SHALY CALCAREOUS SANDSTONE
- CARBONACEOUS CALCAREOUS SANDSTONE WITH FINE SHALE PARTINGS
- SHALE
- FLOODPOT RESIDUAL OIL SATURATION
- IMPERMEABLE TO WATER

SHEEDY OIL GROUP, INC.

MARVIN CHAMBERS "B" LEASE

WELL NO. 3

WOODSON COUNTY, KANSAS

DEPTH INTERVAL, FEET	FEET OF CORE ANALYZED	AVERAGE PERCENT POROSITY	AVG. OIL SATURATION PERCENT	AVG. WATER SATURATION PERCENT	AVERAGE PERMEABILITY, MILLIDARCS	CALCULATED OIL RECOVERY BBLs. / ACRE
798.0 - 805.6	7.6	18.3	53.7	16.9	97.8	
805.6 - 808.5	2.9	11.1	36.9	57.2	3.9	
798.0 - 808.5	10.5	16.3	49.0	28.0	86.9	1660 (PRIMARY AND WATERFLOODING)

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CHANUTE, KANSAS
APRIL, 1981

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