

CORE ANALYSIS REPORT

FOR

WAGNER AND BROWN  
ROSE NO. 1 WELL  
KEARNY COUNTY, KANSAS

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*  
**DALLAS, TEXAS 75207**

June 5, 1978

REPLY TO  
SUITE 133  
400 SOUTH VERMONT  
OKLAHOMA CITY, OKLA.  
73108

Wagner and Brown  
2625 Liberty Tower  
Oklahoma City, Oklahoma 73102

Attn: Mr. Patrick Clare

Subject: Core Analysis Data  
Rose No. 1 Well  
Kearny County, Kansas  
CLI File 3402-9324

Gentlemen:

Cores taken in the subject well in the Chase Group formation were received at the Oklahoma City laboratory for special analytical testing described on the procedure page.

The accompanying Coregraph presents the Surface Core-Gamma Log and binomially averaged core analysis data in graphical form to aid correlation with downhole electrical surveys.

Tabular presentation of the measured physical properties may be found on pages one through eleven of this report. Data averages reflecting zone changes are presented on pages twelve and thirteen.

Transparent overlays of a water cut curve have been furnished to Wagner and Brown's Oklahoma City and Midland, Texas offices. These curves are presented as an aid in selecting the most desirous zones for perforation in this well.

It is a pleasure to have this opportunity of serving you.

Very truly yours,

CORE LABORATORIES, INC.

*Dale E. Boyle (sgd)*

Dale E. Boyle  
District Manager

DEB:VJP:nt

3 cc - Addressee  
3 cc - Wagner and Brown  
P. O. Box 1714  
Midland, Texas 79701

Wagner And Brown  
Rose No. 1 Well  
CLI File 3402-9324

Procedure Page

Handling and Analytical Procedures

Diamond coring equipment and salt base mud were used to obtain 4.0 inch diameter cores between 2647 and 3025, 3092 and 3152 feet.

The cores were preserved at the well site in plastic bags by CLI personnel.

The cores were transported to Oklahoma City by CLI personnel.

A Core-Gamma Log was recorded for downhole E-Log correlation.

Core analysis was made in the intervals requested on right cylinder full diameter samples.

Fluid removal was accomplished using vacuum retorts.

Porosity was determined by density balance method.

Air permeability in two horizontal directions--measured without Klinkenberg correction.

Temporary storage of cores in Oklahoma City laboratory awaiting additional instructions.

**CORE LABORATORIES, INC.**  
**Petroleum Reservoir Engineering**  
**DALLAS, TEXAS**

1

WAGNER AND BROWN  
 ROSE NO. 1 WELL  
 WILDCAT  
 KEARNY COUNTY, KANSAS

DATE: 5/5/78  
 FORMATION: CHASE GROUP  
 DRLG. FLUID: SALT BASE MUD  
 LOCATION: SEC. 34-21S-37W

FILE NO: 3402-9324  
 ENGINEER: PUGH  
 ELEVATION: 3295' GL

\* INDICATES PLUG PERM

SMP. NO.	DEPTH	PERM. TO AIR MD. MAXIMUM	PERM. TO AIR MD. 90 DEG	POROSITY PERCENT	FLUID SATS. OIL	GR. DEN.	DESCRIPTION
WHOLE CORE ANALYSIS							
+	1 2647.0-48.0	12.0	5.1	13.7	0.0 69.2	2.74	SLT,DOL,CLAY
+	2 2648.0-49.0	51.0	14.0	16.4	0.0 .64.5	2.71	SLT,DOL,CLAY
+	3 2649.0-50.0	65.0	28.0	16.1	0.0 68.3	2.70	SLT,DOL,CLAY
	2650.0-51.0						SH,SLTY,
+	4 2651.0-52.0	74.0	13.0	13.5	0.0 69.5	2.70	SLT,DOL,CLAY
+	5 2652.0-53.0	16.0	9.2	9.8	0.0 70.8	2.79	SLT,DOL,ANHY,CLAY
#	6 2653.0-54.0	245.0	173.0	21.7	0.0 64.5	2.76	SLT,ANHY,CLAY
+	7 2654.0-55.0	13.0	1.8	12.4	0.0 68.4	2.69	SLT,DOL,CLAY
#	8 2655.0-56.0	266.0	190.0	20.8	0.0 65.2	2.66	SLT,SHY,CLAY
#+	9 2656.0-57.0	653.0	597.0	21.9	0.0 60.8	2.69	SLT,SHY
+	10 2657.0-58.0	20.0	9.3	16.4	0.0 71.4	2.68	SLT,SL/DOL,CLAY
+	11 2658.0-59.0	296.0	290.0	15.2	0.0 73.8	2.75	SLT,DOL,CLAY
12	2659.0-60.0	0.3	0.1	13.9	0.0 63.3	2.72	DOL,SLTY,CLAY
13	2660.0-61.0	8.0	0.3	9.6	0.0 68.3	2.81	DOL,SLTY,SDY,CLAY
14	2661.0-62.0	<0.1	<0.1	2.3	0.0 78.6	2.82	DOL,SDY
15	2662.0-63.0	<0.1	<0.1	3.4	0.0 74.5	2.82	DOL,SDY,PP VGS,FOSS
16	2663.0-64.0	<0.1	<0.1	3.8	0.0 73.8	2.84	DOL,SDY,PP VGS,ANHY
17	2664.0-65.0	12.0	12.0	16.4	0.0 45.1	2.75	SD,DOL,MICA
18	2665.0-66.0	12.0	11.0	14.0	0.0 50.8	2.73	SD,DOL,MICA
19	2666.0-67.0	24.0	21.0	19.3	0.0 46.2	2.71	SD,DOL,MICA
20	2667.0-68.0	0.4	0.3	6.7	0.0 54.2	2.83	DOL,SDY,MICA
21	2668.0-69.0	7.5	7.5	19.6	0.0 46.8	2.72	SD,DOL,MICA
22	2669.0-70.0	0.6	0.4	9.0	0.0 47.5	2.75	DOL,SDY,MICA
23	2670.0-71.0	0.2	0.1	8.0	0.0 50.9	2.76	DOL,SDY,MICA
24	2671.0-72.0	<0.1	<0.1	12.8	0.0 45.2	2.71	DOL,SHY,SDY,ANHY
25	2672.0-73.0	50.0	31.0	14.0	0.0 62.7	2.79	SLT,DOL,SH STKS,ANHY

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, or spec. operations, or usefulness of any oil well or other mineral well or core connection with which such report is used or relied upon.

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*  
 DALLAS, TEXAS

2

WAGNER AND BROWN  
 ROSE NO. 1 WELL

DATE: 5/5/78  
 FORMATION: CHASE GROUP

FILE NO: 3402-9324  
 ENGINEER: PUGH

SMP. NO.	DEPTH	PERM. MAXIMUM	TO AIR MD. 90 DEG	POROSITY PERCENT	FLUID SATS. OIL WTR.	GR. DEN.	DESCRIPTION
+ 26	2673.0-74.0	3.1	2.7	11.4	0.0 48.6	2.81	SLT,DOL,SH STKS,ANH SH
	2674.0-78.0						
+ 27	2678.0-79.0	23.0	0.8	13.2	0.0 65.6	2.70	SLT,DOL,SHY
28	2679.0-80.0	<0.1	<0.1	9.1	0.0 68.8	2.74	DOL,SL/SLTY SH
	2680.0-82.0						
+ 29	2682.0-83.0	104.0	90.0	13.7	0.0 69.9	2.73	SLT,DOL,CLAY
+ 30	2683.0-84.0	18.0	0.2	10.2	0.0 71.3	2.72	SLT,DOL,CLAY
+ 31	2684.0-85.0	101.0	41.0	10.9	0.0 72.2	2.68	SLT,SL/DOL,CLAY SH
	2685.0-86.0						
+ 32	2686.0-87.0	90.0	0.3	6.1	0.0 89.9	2.79	SLT,DOL,ANHY,CLAY
33	2687.0-88.0	0.1	0.1	11.0	0.0 72.6	2.72	SLT,DOL,SL/SDY,CLAY
+ 34	2688.0-89.0	1.0	0.5	15.4	0.0 68.8	2.72	SLT,DOL,SL/SDY,CLAY
+ 35	2689.0-90.0	71.0	34.0	11.9	0.0 70.1	2.71	SLT,DOL,SL/SDY,CLAY
36	2690.0-91.0	0.7	0.2	11.5	0.0 69.1	2.77	SLT,DOL,SL/SDY,CLAY
+ 37	2691.0-92.0	17.0	1.0	12.3	0.0 68.8	2.69	SLT,DOL,SL/SDY,CLAY
38	2692.0-93.0	0.1	<0.1	13.6	0.0 68.3	2.70	SLT,DOL,SL/SDY,CLAY
+ 39	2693.0-94.0	17.0	6.5	15.2	0.0 63.5	2.68	SD,SL/DOL,SDY,CLAY
+ 40	2694.0-95.0	2.2	0.1	9.2	0.0 75.5	2.70	SLT,SL/DOL,CLAY
+ 41	2695.0-96.0	4.7	0.4	11.6	0.0 70.9	2.71	SLT,SL/DOL,CLAY
42	2696.0-97.0	0.1	0.1	16.4	0.0 64.4	2.70	SLT,SL/DOL,SDY,CLAY
+ 43	2697.0-98.0	56.0	34.0	16.5	0.0 63.5	2.68	SLT,SL/DOL,SDY,CLAY
+ 44	2698.0-99.0	14.0	4.8	13.9	0.0 68.7	2.71	SLT,DOL,SDY,CLAY
+ 45	2699.0-00.0	4.6	0.2	13.5	0.0 68.0	2.70	SLT,DOL,CLAY
#+ 46	2700.0-01.0	13.0	11.0	14.5	0.0 65.1	2.65	SLT,CLAY SH
	2701.0-04.0						
+ 47	2704.0-05.0	57.0	22.0	9.5	0.0 73.8	2.71	SLT,DOL,CLAY
48	2705.0-06.0	0.5	0.3	11.5	0.0 69.9	2.69	SLT,SL/DOL,CLAY
+ 49	2706.0-07.0	15.0	2.5	18.3	0.0 62.0	2.54	SLT,CLAY
+ 50	2707.0-08.0	29.0	27.0	15.1	0.0 72.2	2.75	SLT,DOL,CLAY SH
	2708.0-09.0						
51	2709.0-10.0	0.3	<0.1	14.6	0.0 68.1	2.86	DOL,SHY,SLTY,PP VGS
52	2710.0-11.0	0.9	0.8	13.3	0.0 57.3	2.77	SLT,DOL

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or expressed limitation or condition in connection with which such report is used or relied upon.

**CORE LABORATORIES, INC.**  
**Petroleum Reservoir Engineering**  
 DALLAS, TEXAS

3

WAGNER AND BROWN  
 ROSE NO. 1 WELL

DATE: 5/5/78  
 FORMATION: CHASE GROUP

FILE NO: 3402-9324  
 ENGINEER: PUGH

SMP. NO.	DEPTH	PERM. MAXIMUM	TO AIR MD. 90 DEG	POROSITY PERCENT	FLUID SATS. OIL	GR. DEN.	DESCRIPTION
53	2711.0-12.0	0.9	0.9	14.9	0.0 52.2	2.78	SLT,DOL,ANHY
54	2712.0-13.0	0.8	0.8	12.2	0.0 56.1	2.77	SLT,DOL,MICA
55	2713.0-14.0	0.2	0.2	10.9	0.0 51.1	2.76	SLT,DOL,MICA
56	2714.0-15.0	0.2	0.1	10.7	0.0 64.0	2.81	SLT,DOL,SH STKS,ANHY
57	2715.0-16.0	0.1	0.1	8.6	0.0 73.8	2.83	SLT,DOL,SL/SHY,ANHY
58	2716.0-17.0	<0.1	<0.1	7.3	0.0 75.5	2.87	SLT,DOL,SL/SHY,ANHY
+ 59	2717.0-18.0	37.0	19.0	10.6	0.0 55.3	2.84	DOL,SLTY,ANHY
60	2718.0-19.0	0.2	0.2	10.1	0.0 54.7	2.86	DOL,SLTY,ANHY
61	2719.0-20.0	<0.1	<0.1	8.5	0.0 70.1	2.86	DOL,SLTY,ANHY
+ 62	2720.0-21.0	17.0	7.7	15.3	0.0 73.1	2.69	SLT,SL/DOL,ANHY
63	2721.0-22.0	0.1	<0.1	8.6	0.0 75.9	2.74	SLT,SL/DOL,ANHY
64	2722.0-23.0	0.1	0.1	8.7	0.0 74.5	2.74	SLT,DOL
+ 65	2723.0-24.0	8.9	0.2	13.0	0.0 54.7	2.74	SLT,DOL
+ 66	2724.0-25.0	5.6	1.2	14.7	0.0 52.3	2.73	SLT,DOL
+ 67	2725.0-26.0	5.8	4.1	14.9	0.0 54.1	2.73	SLT,DOL
+ 68	2726.0-27.0	26.0	19.0	18.3	0.0 43.6	2.71	SLT,SL/DOL,ANHY
+ 69	2727.0-28.0	17.0	7.4	17.0	0.0 49.0	2.71	SLT,SL/DOL,ANHY
70	2728.0-29.0	0.3	0.3	13.5	0.0 53.9	2.74	SLT,DOL
+ 71	2729.0-30.0	<0.1	<0.1	10.8	0.0 63.9	2.82	SLT,SL/DOL,ANHY
72	2730.0-31.0	0.1	<0.1	8.6	0.0 86.6	2.78	SLT,DOL,CLAY
+ 73	2731.0-32.0	4.3	0.4	15.9	0.0 70.7	2.74	SLT,DOL,CLAY
74	2732.0-33.0	0.4	0.3	10.2	0.0 77.7	2.75	SLT,DOL,CLAY
#+ 75	2733.0-34.0	297.0	291.0	14.8	0.0 75.1	2.80	SLT,SL/DOL,ANHY
#+ 76	2734.0-35.0	112.0	100.0	12.0	0.0 78.6	2.76	SLT,DOL,CLAY
#+ 77	2735.0-36.0	110.0	75.0	15.9	0.0 71.6	2.83	SLT,DOL,ANHY
78	2736.0-37.0	*	0.3	18.0	0.0 65.1	2.78	SLT,DOL,CLAY
	2737.0-38.0						SH,SLTY
79	2738.0-39.0	*	0.3	17.3	0.0 72.5	2.73	SLT,ANHY,CLAY
80	2739.0-40.0	*	0.1	14.6	0.0 84.2	2.79	SLT,SL/DOL,ANHY,CLAY
#+ 81	2740.0-41.0	425.0	225.0	11.5	0.0 73.1	2.77	SLT,DOL,SL/ANHY
+ 82	2741.0-42.0	0.6	<0.1	10.5	0.0 75.4	2.75	SLT,DOL,SL/ANHY
+ 83	2742.0-43.0	6.9	0.2	11.9	0.0 80.2	2.75	SLT,DOL,SL/SHY

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or guarantee that such report is used or relied upon.

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*  
 DALLAS, TEXAS

4

WAGNER AND BROWN  
 ROSE NO. 1 WELL

DATE: 5/5/78  
 FORMATION: CHASE GROUP

FILE NO: 3402-9324  
 ENGINEER: PUGH

SMP. NO.	DEPTH	PERM. MAXIMUM	TO AIR MD. 90 DEG	POROSITY PERCENT	FLUID SATS. OIL	GR. DEN.	DESCRIPTION	
84	2743.0-44.0	*	0.3	18.6	0.0 65.7	2.68	SLT, SHY, CLAY	
85	2744.0-45.0	0.1	<0.1	8.6	0.0 75.1	2.73	SLT, DOL, CLAY	
	2745.0-47.0						SH	
+	86	2747.0-48.0	1.3	<0.1	9.2	0.0 80.6	2.75	SLT, DOL, CLAY
	87	2748.0-49.0	*	1.0	18.5	0.0 66.0	2.68	SLT, SDY, CLAY
+	88	2749.0-50.0	0.9	0.6	14.6	0.0 70.7	2.74	SLT, DOL, CLAY
#+	89	2750.0-51.0	107.0	87.0	19.4	0.0 56.8	2.68	SLT, SL/DOL, SDY, CLAY
+	90	2751.0-52.0	5.6	0.2	15.8	0.0 63.1	2.74	SLT, DOL, SDY
	91	2752.0-53.0	0.1	0.1	17.1	0.0 60.8	2.66	SLT, ANHY, SDY
	92	2753.0-54.0	0.1	<0.1	18.2	0.0 54.6	2.68	SLT, SL/DOL, SDY
+	93	2754.0-55.0	69.0	62.0	22.5	0.0 56.7	2.68	SLT, SDY
+	94	2755.0-56.0	8.3	6.4	17.2	0.0 58.0	2.70	SLT, SL/DOL, SDY, CLAY
+	95	2756.0-57.0	0.5	0.4	14.0	0.0 61.9	2.70	SLT, SL/DOL, ANHY, CLAY
+	96	2757.0-58.0	41.0	9.7	17.8	0.0 58.7	2.68	SLT, SL/DOL, SDY
	2758.0-59.0						SH, SLTY	
+	97	2759.0-60.0	7.6	0.4	12.8	0.0 71.8	2.69	SLT, SL/DOL
	98	2760.0-61.0	2.8	2.5	16.9	0.0 65.6	2.69	SLT, SL/DOL, CLAY
+	99	2761.0-62.0	0.6	0.2	12.9	0.0 70.9	2.71	SLT, DOL, CLAY
+	100	2762.0-63.0	0.7	0.6	8.6	0.0 80.7	2.66	SLT, SHY, CLAY
+	101	2763.0-64.0	*	1.0	18.1	0.0 59.9	2.68	SLT, SL/DOL, CLAY
#+102	2764.0-65.0	13.0	2.2	14.8	0.0 68.4	2.71	SLT, SL/DOL, CLAY	
#+103	2765.0-66.0	48.0	41.0	13.9	0.0 72.0	2.72	SLT, SL/DOL, CLAY	
104	2766.0-67.0	1.0	0.2	16.7	0.0 64.6	2.70	SLT, SL/DOL, CLAY	
#+105	2767.0-68.0	*	0.1	15.6	0.0 69.9	2.74	SLT, DOL, SHY	
#+106	2768.0-69.0	*	0.1	14.2	0.0 69.8	2.71	SLT, DOL, SHY	
107	2769.0-70.0	0.1	<0.1	10.5	0.0 74.8	2.71	SLT, SL/DOL, SHY, ANHY	
#+108	2770.0-71.0	111.0	27.0	11.3	0.0 71.9	2.76	SLT, SL/DOL, SHY, ANHY	
109	2771.0-72.0	<0.1	<0.1	2.5	0.0 69.0	2.92	SLT, V/ANHY, SHY	
110	2772.0-73.0	*	0.1	13.6	0.0 69.9	2.81	SLT, DOL, ANHY, SHY	
111	2773.0-74.0	<0.1	<0.1	1.6	0.0 69.8	2.94	SLT, V/ANHY, SHY	
112	2774.0-75.0	*	1.1	20.1	0.0 65.8	2.73	SLT, SDY, CLAY	
113	2775.0-76.0	*	0.6	19.2	0.0 62.4	2.71	SLT, SDY, CLAY	

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or guarantee of any kind, expressed or implied, concerning the mineral well or sand in connection with which such report is used or relied upon.

**CORE LABORATORIES, INC.**  
**Petroleum Reservoir Engineering**  
**DALLAS, TEXAS**

5

WAGNER AND BROWN  
 ROSE NO. 1 WELL

DATE: 5/5/78  
 FORMATION: CHASE GROUP

FILE NO: 3402-9324  
 ENGINEER: PUGH

SMP. NO.	DEPTH	PERM. MAXIMUM	TO AIR MD. 90 DEG	POROSITY PERCENT	FLUID SATS. OIL	GR. DEN.	DESCRIPTION
114	2776.0-77.0	*	0.2	13.7	0.0 75.3	2.67	SLT, SL/DOL, CLAY
115	2777.0-78.0	<0.1	<0.1	13.3	0.0 76.5	2.72	SLT, SL/DOL, CLAY
+ 116	2778.0-79.0	0.4	0.2	13.9	0.0 72.6	2.74	SLT, DOL, CLAY
+ 117	2779.0-80.0	3.0	2.5	16.0	0.0 67.8	2.73	SLT, DOL, CLAY
+ 118	2780.0-81.0	9.5	6.3	17.6	0.0 52.5	2.72	SLT, SL/DOL, ANHY, CLAY
+ 119	2781.0-82.0	1.7	1.6	15.9	0.0 66.1	2.73	SLT, DOL, CLAY
+ 120	2782.0-83.0	1.6	1.2	15.5	0.0 65.4	2.73	SLT, DOL, CLAY
+ 121	2783.0-84.0	12.0	4.8	18.6	0.0 60.9	2.72	SLT, DOL, CLAY
+ 122	2784.0-85.0	1.5	1.3	16.9	0.0 61.8	2.72	SLT, DOL, CLAY
+ 123	2785.0-86.0	0.4	0.1	16.2	0.0 64.3	2.73	SLT, DOL, CLAY
	2786.0-87.0						SH, SLTY
+ 124	2787.0-88.0	16.0	16.0	17.8	0.0 66.7	2.70	SLT, SL/DOL, CLAY
125	2788.0-89.0	0.2	0.1	9.8	0.0 77.3	2.72	SLT, DOL, CLAY
126	2789.0-90.0	<0.1	<0.1	8.7	0.0 78.6	2.70	SLT, DOL, CLAY
+ 127	2790.0-91.0	0.6	0.5	7.7	0.0 79.3	2.72	SLT, DOL, CLAY
# 128	2791.0-92.0	13.0	8.6	15.4	0.0 69.3	2.69	SLT, SL/DOL, CLAY
	2792.0-94.0						SH, SLTY
+ 129	2794.0-95.0	<0.1	<0.1	13.4	0.0 63.0	2.74	SLT, DOL, CLAY
130	2795.0-96.0	0.1	<0.1	14.0	0.0 58.9	2.72	SLT, DOL, CLAY
131	2796.0-97.0	1.3	1.0	16.3	0.0 50.3	2.71	SLT, DOL, CLAY
132	2797.0-98.0	1.0	0.9	13.9	0.0 58.1	2.77	SLT, DOL, ANHY, CLAY
133	2798.0-99.0	2.9	1.6	14.3	0.0 58.8	2.77	SLT, DOL, ANHY, CLAY
134	2799.0-00.0	0.7	0.6	11.7	0.0 60.2	2.75	SLT, DOL, CLAY
135	2800.0-01.0	0.7	0.6	9.4	0.0 68.6	2.75	SLT, DOL, CLAY
136	2801.0-02.0	1.9	1.6	16.8	0.0 54.3	2.72	SLT, SL/DOL, CLAY
+ 137	2802.0-03.0	17.0	0.9	15.0	0.0 55.4	2.74	SLT, SL/DOL, ANHY
+ 138	2803.0-04.0	1151.0	822.0	13.6	0.0 72.8	2.68	SLT, SHY, ANHY
139	2804.0-05.0	1.4	1.2	14.0	0.0 55.0	2.85	DOL, SLTY, ANHY
140	2805.0-06.0	3.2	2.7	15.2	0.0 48.8	2.85	SLT, DOL, ANHY
141	2806.0-07.0	0.2	0.2	12.1	0.0 66.7	2.84	DOL, SLTY, ANHY
142	2807.0-08.0	0.3	0.2	14.2	0.0 64.4	2.84	DOL, SLTY, SHY, ANHY
143	2808.0-09.0	<0.1	<0.1	13.4	0.0 67.5	2.84	DOL, SLTY, SHY, ANHY

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operations, or soundness of any oil well or other mineral well or sand in connection with which such report is used or relied upon.

**CORE LABORATORIES, INC.**  
**Petroleum Reservoir Engineering**  
**DALLAS, TEXAS**

6

WAGNER AND BROWN  
 ROSE NO. 1 WELL

DATE: 5/5/78  
 FORMATION: CHASE GROUP

FILE NO: 3402-9324  
 ENGINEER: PUGH

SMP. NO.	DEPTH	PERM. MAXIMUM	TO AIR MD. 90 DEG	POROSITY PERCENT	FLUID SATS. OIL	GR. DEN.	DESCRIPTION
144	2809.0-10.0	0.1	<0.1	13.9	0.0 65.8	2.84	DOL,SLTY,SHY,ANHY
145	2810.0-11.0	<0.1	<0.1	10.6	0.0 70.3	2.83	DOL,SLTY,SHY,ANHY
146	2811.0-12.0	<0.1	<0.1	12.1	0.0 67.8	2.86	DOL,SLTY,SL/SHY,PEL
147	2812.0-13.0	<0.1	<0.1	11.0	0.0 69.2	2.85	DOL,SLTY,SL/SHY,PEL
148	2813.0-14.0	0.1	<0.1	9.9	0.0 73.7	2.85	DOL,SLTY,SL/SHY,PEL
149	2814.0-15.0	0.1	<0.1	10.4	0.0 66.6	2.86	DOL,SLTY,PEL,ANHY
150	2815.0-16.0	0.8	0.7	13.4	0.0 59.7	2.86	DOL,SLTY,PEL,ANHY
151	2816.0-17.0	<0.1	<0.1	11.9	0.0 66.6	2.82	DOL,SLTY,SL/SHY,PEL
152	2817.0-18.0	0.4	0.2	11.2	0.0 69.8	2.83	DOL,SLTY,SL/SHY,PEL
153	2818.0-19.0	0.1	0.1	13.9	0.0 66.5	2.83	DOL,SLTY,SL/SHY,PEL
154	2819.0-20.0	*	0.4	14.3	0.0 58.8	2.85	DOL,SLTY,SL/SHY,PEL
155	2820.0-21.0	0.3	0.2	14.7	0.0 56.6	2.85	DOL,SLTY,SL/SHY,PEL
156	2821.0-22.0	0.3	0.2	14.9	0.0 54.5	2.85	DOL,SLTY,PEL,ANHY
157	2822.0-23.0	0.1	<0.1	13.7	0.0 60.3	2.84	DOL,SLTY,PEL,ANHY
158	2823.0-24.0	0.4	0.3	13.4	0.0 61.7	2.86	DOL,SLTY,PEL,ANHY
159	2824.0-25.0	0.5	0.4	15.5	0.0 51.4	2.83	DOL,SLTY,PEL,ANHY
160	2825.0-26.0	2.1	1.7	17.9	0.0 49.2	2.84	DOL,SLTY,PEL,ANHY
161	2826.0-27.0	*	0.3	15.9	0.0 50.2	2.89	DOL,SLTY,PEL,ANHY
162	2827.0-28.0	6.2	5.0	13.9	0.0 53.1	2.86	DOL,SLTY,PEL,ANHY
163	2828.0-29.0	12.0	10.0	15.3	0.0 49.9	2.86	DOL,SLTY,PEL,ANHY
164	2829.0-30.0	5.2	4.0	14.5	0.0 49.8	2.86	DOL,SLTY,PEL,ANHY
165	2830.0-31.0	22.0	20.0	18.1	0.0 41.0	2.85	DOL,SLTY,PEL,ANHY
166	2831.0-32.0	9.3	8.2	14.2	0.0 48.8	2.86	DOL,SLTY,PEL,ANHY
167	2832.0-33.0	11.0	10.0	15.2	0.0 51.9	2.85	DOL,SLTY,PEL,ANHY
168	2833.0-34.0	8.3	6.9	14.5	0.0 58.7	2.85	DOL,SLTY,PEL,ANHY
169	2834.0-35.0	2.4	1.9	14.1	0.0 54.9	2.86	DOL,SLTY,PEL,ANHY
170	2835.0-36.0	1.5	1.3	13.0	0.0 55.1	2.85	DOL,SLTY,PEL,ANHY
171	2836.0-37.0	2.6	2.3	12.9	0.0 55.1	2.87	DOL,SLTY,PEL,ANHY
172	2837.0-38.0	4.2	3.6	13.6	0.0 59.6	2.86	DOL,SLTY,ANHY
173	2838.0-39.0	5.7	4.6	16.7	0.0 68.3	2.85	DOL,SLTY,ANHY
174	2839.0-40.0	9.8	8.0	18.7	0.0 65.9	2.86	DOL,SLTY,ANHY
175	2840.0-41.0	0.3	0.2	16.2	0.0 64.2	2.83	SLT,DOL,SL/SHY,ANHY

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or guarantee concerning the results obtained from the analyses or any other services furnished. The material well is said in connection with which such report is used or relied upon.

Petroleum Reservoir Engineering  
DALLAS, TEXAS

7

WAGNER AND BROWN  
ROSE NO. 1 WELL

DATE: 5/5/78  
FORMATION: CHASE GROUP

FILE NO: 3402-9324  
ENGINEER: PUGH

SMP. NO.	DEPTH	PERM. MAXIMUM	TO AIR MD. 90 DEG	POROSITY PERCENT	FLUID SATS. OIL    WTR.	GR. DEN.	DESCRIPTION
176	2841.0-42.0	*	0.1	14.5	0.0    80.6	2.69	SLT, SHY, SL/DOL
# 177	2842.0-43.0	0.1	<0.1	12.4	0.0    75.6	2.71	SLT, DOL, ANHY
178	2843.0-44.0	2.5	2.3	19.6	0.0    66.5	2.70	SLT, SL/DOL, ANHY
179	2844.0-45.0	2.2	1.8	18.3	0.0    65.9	2.70	SLT, SL/DOL, ANHY
180	2845.0-46.0	6.3	5.3	21.0	0.0    60.9	2.70	SLT, SL/DOL, ANHY
181	2846.0-47.0	9.3	8.1	22.3	0.0    58.0	2.70	SLT, DOL, ANHY
182	2847.0-48.0	7.9	6.5	20.2	0.0    60.6	2.72	SLT, DOL, ANHY
183	2848.0-49.0	0.8	0.6	12.6	0.0    70.4	2.75	SLT, DOL, ANHY
184	2849.0-50.0	13.0	12.0	21.3	0.0    61.2	2.71	SLT, SL/DOL
185	2850.0-51.0	6.1	5.1	20.3	0.0    62.3	2.63	SLT, SL/DOL
186	2851.0-52.0	4.2	3.1	19.7	0.0    63.1	2.72	SLT, SL/DOL
187	2852.0-53.0	1.2	1.1	17.2	0.0    66.9	2.72	SLT, SL/DOL
+ 188	2853.0-54.0	14.0	12.0	16.5	0.0    68.5	2.73	SLT, SL/DOL
#+189	2854.0-55.0	11.0	4.2	15.3	0.0    73.1	2.70	SLT, SL/DOL
	2855.0-62.0					SH	
190	2862.0-63.0	<0.1	<0.1	10.4	0.0    79.6	2.74	SLT, DOL
191	2863.0-64.0	<0.1	<0.1	10.1	0.0    75.2	2.71	SLT, DOL
192	2864.0-65.0	<0.1	<0.1	11.6	0.0    73.5	2.71	SLT, DOL
193	2865.0-66.0	0.6	0.5	15.7	0.0    67.0	2.74	SLT, SL/DOL, ANHY
194	2866.0-67.0	0.2	0.1	15.5	0.0    65.2	2.75	SLT, SL/DOL, ANHY
	2867.0-79.0					SH	
195	2879.0-80.0	0.1	<0.1	19.4	0.0    59.2	2.84	SLT, DOL, ANHY
196	2880.0-81.0	<0.1	<0.1	21.7	0.0    66.2	2.83	SLT, DOL, ANHY
197	2881.0-82.0	0.1	0.1	17.5	0.0    63.5	2.79	SLT, DOL, ANHY
198	2882.0-83.0	<0.1	<0.1	5.7	0.0    74.6	2.74	LM, SLTY, SH STKS
199	2883.0-84.0	<0.1	<0.1	6.0	0.0    71.8	2.79	LM, SLTY, ANHY
200	2884.0-85.0	<0.1	<0.1	6.8	0.0    70.9	2.76	LM, SLTY, ANHY
201	2885.0-86.0	2.0	0.8	15.2	0.0    65.1	2.78	SLT, DOL
202	2886.0-87.0	0.8	0.8	15.8	0.0    60.4	2.80	SLT, DOL, ANHY
203	2887.0-88.0	0.1	<0.1	15.1	0.0    64.7	2.80	SLT, DOL, ANHY
204	2888.0-89.0	<0.1	<0.1	11.3	0.0    63.5	2.77	SLT, DOL, SL/LMY, ANHY
	2889.0-96.0					SH	

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted), but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations as to the productivity, proper operations, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

CORE LABORATORIES, INC.  
Petroleum Reservoir Engineering  
DALLAS, TEXAS

8

WAGNER AND BROWN  
ROSE NO. 1 WELL

DATE: 5/5/78  
FORMATION: CHASE GROUP

FILE NO: 3402-9324  
ENGINEER: PUGH

SMP. NO.	DEPTH	PERM. MAXIMUM	TO AIR MD. 90 DEG	POROSITY PERCENT	FLUID SATS. OIL	GR. DEN.	DESCRIPTION
#205	2896.0-97.0	24.0	<0.1	10.8	0.0 66.5	2.70	SLT, SL/DOL, ANHY, CLAY
+ 206	2897.0-98.0	3.2	<0.1	9.5	0.0 75.7	2.72	SLT, SL/DOL, CLAY
207	2898.0-99.0	0.1	0.1	10.0	0.0 73.2	2.72	SLT, SL/DOL, CLAY
208	2899.0-00.0	0.1	<0.1	10.8	0.0 71.1	2.73	SLT, SL/DOL, CLAY
209	2900.0-01.0	1443.0	0.1	12.2	0.0 67.8	2.76	SLT, SL/DOL, ANHY, CLAY
210	2901.0-02.0	0.1	0.1	13.8	0.0 63.2	2.71	SLT, SL/DOL, CLAY
211	2902.0-03.0	1.0	0.9	17.6	0.0 57.6	2.71	SLT, SL/DOL, CLAY
212	2903.0-04.0	0.6	0.5	16.9	0.0 61.9	2.71	SLT, SL/DOL, ANHY, CLAY
213	2904.0-05.0	6.6	5.5	21.1	0.0 54.9	2.71	SLT, SL/DOL, CLAY
214	2905.0-06.0	6.2	6.2	20.8	0.0 52.8	2.70	SLT, SL/DOL, ANHY, CLAY
215	2906.0-07.0	6.0	6.0	20.9	0.0 56.3	2.70	SLT, SL/DOL, ANHY, CLAY
+ 216	2907.0-08.0	26.0	24.0	22.4	0.0 51.5	2.72	SLT, SL/DOL, ANHY, CLAY
217	2908.0-09.0	16.0	12.0	20.0	0.0 54.6	2.74	SLT, SL/DOL, ANHY, CLAY
218	2909.0-10.0	7.9	7.9	22.4	0.0 50.9	2.72	SLT, SL/DOL, ANHY, CLAY
219	2910.0-11.0	13.0	9.7	23.7	0.0 51.6	2.71	SLT, SL/DOL, ANHY, CLAY
220	2911.0-12.0	10.0	9.7	20.3	0.0 57.5	2.71	SLT, SL/DOL, ANHY, CLAY
221	2912.0-13.0	*	12.0	19.0	0.0 60.7	2.71	SLT, SL/DOL, ANHY, CLAY
222	2913.0-14.0	*	20.0	20.2	0.0 56.9	2.71	SLT, SL/DOL, ANHY, CLAY
223	2914.0-15.0	2.6	1.9	18.3	0.0 61.5	2.72	SLT, SL/DOL, ANHY, CLAY
224	2915.0-16.0	2.1	2.0	18.9	0.0 63.2	2.72	SLT, SL/DOL, CLAY
225	2916.0-17.0	1.1	0.8	17.1	0.0 65.5	2.72	SLT, SL/DOL, CLAY
#226	2917.0-18.0	138.0	0.4	13.1	0.0 71.8	2.72	SLT, SL/DOL, CLAY
227	2918.0-19.0	*	0.3	12.7	0.0 73.0	2.66	SLT, SL/DOL, SHY
228	2919.0-20.0	0.1	0.1	11.7	0.0 74.0	2.71	SLT, DOL
	2920.0-25.0					SH	
229	2925.0-26.0	1.0	0.7	13.9	0.0 68.2	2.73	LM, SL/DOL, SLTY
230	2926.0-27.0	0.7	0.5	13.8	0.0 66.4	2.73	LM, SLTY
231	2927.0-28.0	0.4	0.4	12.8	0.0 66.3	2.72	LM, SLTY
232	2928.0-29.0	<0.1	<0.1	12.1	0.0 73.8	2.82	DOL, SLT, STKS, FOSS
233	2929.0-30.0	0.5	0.2	10.9	0.0 61.6	2.74	LM, SLTY, ANHY
234	2930.0-31.0	1.2	1.1	12.5	0.0 66.5	2.76	LM, SLTY
235	2931.0-32.0	0.9	0.8	13.8	0.0 64.7	2.74	LM, SLTY, SH, STKS

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representation as to the productivity, proper operations, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*  
 DALLAS, TEXAS

9

WAGNER AND BROWN  
 ROSE NO. 1 WELL

DATE: 5/5/78  
 FORMATION: CHASE GROUP

FILE NO: 3402-9324  
 ENGINEER: PUGH

SMP. NO.	DEPTH	PERM. MAXIMUM	TO AIR MD. 90 DEG	POROSITY PERCENT	FLUID SATS. OIL	GR. DEN.	DESCRIPTION
236	2932.0-33.0	0.5	0.4	12.8	0.0 65.0	2.73	LM,SLTY
237	2933.0-34.0	0.7	0.6	12.6	0.0 63.1	2.74	LM,SLTY
238	2934.0-35.0	0.5	0.5	9.3	0.0 62.0	2.75	LM,SL/SLTY
239	2935.0-36.0	0.1	0.1	5.5	0.0 75.8	2.81	LM,SL/SLTY,FOSS
240	2936.0-37.0	0.1	0.1	9.4	0.0 68.8	2.73	LM,SLTY,SH,STKS,FOSS
241	2937.0-38.0	<0.1	<0.1	5.9	0.0 73.1	2.77	LM,SLTY,FOSS,ANHY
	2938.0-40.0						SH
242	2940.0-41.0	<0.1	<0.1	8.2	0.0 69.5	2.71	LM,SLTY,FOSS
243	2941.0-42.0	0.7	0.7	10.4	0.0 61.1	2.72	LM,SLTY,FOSS
244	2942.0-43.0	0.6	0.6	12.0	0.0 63.1	2.73	LM,SLTY,FOSS
245	2943.0-44.0	0.6	0.5	11.4	0.0 59.1	2.72	LM,SLTY,FOSS
246	2944.0-45.0	<0.1	<0.1	6.1	0.0 76.8	2.73	LM,SHY,SLTY,FOSS,PEL
247	2945.0-46.0	<0.1	<0.1	6.7	0.0 72.1	2.72	LM,SL/DOL,SLT STKS
248	2946.0-47.0	<0.1	<0.1	4.3	0.0 79.0	2.70	LM,SLT STKS
# 249	2947.0-48.0	6.7	6.3	11.5	0.0 69.6	2.77	SLT,DOL,ANHY
#+250	2948.0-49.0	*	0.1	8.0	0.0 77.9	2.73	SLT,LMY
	2949.0-57.0						SH
251	2957.0-58.0	0.3	0.2	12.3	0.0 71.3	2.73	SLT,DOL,ANHY,CLAY
252	2958.0-59.0	0.2	0.2	12.4	0.0 61.7	2.69	SLT,DOL,CLAY
253	2959.0-60.0	1.1	0.3	14.0	0.0 57.1	2.69	SLT,DOL,CLAY
254	2960.0-61.0	0.4	0.3	13.7	0.0 65.1	2.70	SLT,DOL,CLAY
255	2961.0-62.0	0.3	0.3	13.5	0.0 64.5	2.69	SLT,DOL,CLAY
256	2962.0-63.0	0.2	0.1	11.0	0.0 69.1	2.69	SLT,DOL,CLAY
257	2963.0-64.0	0.9	0.7	14.4	0.0 61.0	2.70	SLT,DOL,CLAY
258	2964.0-65.0	0.3	0.2	15.6	0.0 62.5	2.72	SLT,DOL,CLAY
259	2965.0-66.0	0.1	0.1	12.2	0.0 68.3	2.69	SLT,DOL,CLAY
# 260	2966.0-67.0	12.0	1.3	11.9	0.0 71.0	2.69	SLT,DOL
	2967.0-71.0						SH
261	2971.0-72.0	0.5	0.4	9.4	0.0 73.5	2.78	LM,SLTY,ANHY
262	2972.0-73.0	0.2	0.1	4.9	0.0 80.9	2.72	LM,SLTY,FOSS
+ 263	2973.0-74.0	103.0	7.5	5.9	0.0 78.8	2.77	LM,SLTY,ANHY
264	2974.0-75.0	1.8	1.8	15.5	0.0 66.6	2.80	LM,SLTY,ANHY

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted), but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representation as to the productivity, proper operations, or profitability of any oil, gas, or other mineral well or sand in connection with which such report is used or relied upon.

CORE LABORATORIES, INC.  
Petroleum Reservoir Engineering  
DALLAS, TEXAS

10

WAGNER AND BROWN  
ROSE NO. 1 WELL

DATE: 5/5/78  
FORMATION: CHASE GROUP

FILE NO: 3402-9324  
ENGINEER: PUGH

SMP. NO.	DEPTH	PERM. MAXIMUM	TO AIR MD. 90 DEG	POROSITY PERCENT	FLUID SATS. OIL WTR.	GR. DEN.	DESCRIPTION
265	2975.0-76.0	2.2	2.1	17.0	0.0 70.2	2.79	LM,SLTY
266	2976.0-77.0	0.1	0.1	12.9	0.0 72.3	2.77	LM,SLTY,ANHY
267	2977.0-78.0	0.1	0.1	15.7	0.0 62.0	2.78	LM,SL,DOL,SLTY SH
	2978.0-82.0						SLT,DOL,ANHY,CLAY
268	2982.0-83.0	<0.1	<0.1	8.5	0.0 72.5	2.71	SLT,DOL,CLAY
269	2983.0-84.0	<0.1	<0.1	6.0	0.0 81.9	2.71	SLT,DOL,ANHY,CLAY
270	2984.0-85.0	<0.1	<0.1	16.3	0.0 62.3	2.81	SLT,DOL,ANHY,CLAY
271	2985.0-86.0	<0.1	<0.1	15.2	0.0 64.5	2.80	SLT,DOL,ANHY,CLAY SH
	2986.0-92.0						SLT,LMY,ANHY,CLAY
272	2992.0-93.0	<0.1	<0.1	5.1	0.0 79.1	2.68	SLT,LMY,ANHY,CLAY
273	2993.0-94.0	<0.1	<0.1	4.9	0.0 83.6	2.69	SLT,LMY,ANHY,CLAY
# 274	2994.0-95.0	0.1	0.1	6.0	0.0 77.9	2.71	SLT,LMY,ANHY,CLAY SH,SLTY
	2995.0-05.0						SLT,DOL,ANHY
275	3005.0-06.0	<0.1	<0.1	10.7	0.0 69.7	2.74	SLT,SHY,ANHY,CLAY
	3006.0-15.0						SH
	3015.0-16.0						SLT,DOL,ANHY,CLAY
	3016.0-23.0						SH
	3023.0-25.0						
	3025.0-3092.0		DRILLED				
	3092.0-02.0						SH,SLTY,SL/LMY
276	3102.0-03.0	0.5	0.4	10.7	0.0 72.4	2.73	LM,SLTY,ANHY
277	3103.0-04.0	<0.1	<0.1	6.2	0.0 82.0	2.74	LM,SLTY,ANHY
278	3104.0-05.0	<0.1	<0.1	5.7	0.0 86.9	2.70	LM,SLTY,ANHY
279	3105.0-06.0	0.1	<0.1	7.4	0.0 79.2	2.70	LM,SLTY,ANHY
280	3106.0-07.0	0.1	0.1	12.0	0.0 71.0	2.70	LM,SL,DOL,SLTY,ANHY
281	3107.0-08.0	0.1	<0.1	10.2	0.0 71.2	2.71	LM,SL,DOL,SLTY,ANHY
+ 282	3108.0-09.0	2.0	0.7	12.2	0.0 70.3	2.72	LM,SL,DOL,SLTY,ANHY
283	3109.0-10.0	0.1	<0.1	13.3	0.0 70.5	2.73	LM,SL,DOL,SLTY,ANHY
284	3110.0-11.0	0.1	<0.1	11.4	0.0 72.7	2.74	DOL,SL,LMY,SLTY,ANHY
285	3111.0-12.0	0.1	0.1	13.6	0.0 68.4	2.78	DOL,SLTY,ANHY

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representation as to the truth, accuracy, completeness or usefulness of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*  
 DALLAS, TEXAS

11

WAGNER AND BROWN  
 ROSE NO. 1 WELL

DATE: 5/5/78  
 FORMATION: CHASE GROUP

FILE NO: 3402-9324  
 ENGINEER: PUGH

SMP. NO.	DEPTH	PERM. MAXIMUM	TO AIR MD. 90 DEG	POROSITY PERCENT	FLUID SATS. OIL    WTR.	GR. DEN.	DESCRIPTION
286	3112.0-13.0	0.5	0.5	16.7	0.0    75.4	2.78	DOL,SLTY,ANHY
287	3113.0-14.0	0.1	0.1	16.9	0.0    75.5	2.77	SLT,DOL,ANHY
288	3114.0-15.0	0.2	0.2	17.3	0.0    77.1	2.77	SLT,DOL,ANHY
289	3115.0-16.0	0.6	0.4	18.3	0.0    74.3	2.75	SLT,DOL,ANHY
290	3116.0-17.0	<0.1	<0.1	16.2	0.0    74.3	2.77	SLT,DOL,ANHY
291	3117.0-18.0	0.8	0.1	14.7	0.0    71.1	2.76	SLT,DOL,ANHY
292	3118.0-19.0	<0.1	<0.1	9.8	0.0    73.3	2.72	SLT,DOL,ANHY
293	3119.0-20.0	<0.1	<0.1	8.4	0.0    74.9	2.71	SLT,DOL,SL/LMY,ANHY
+ 294	3120.0-21.0	5.7	<0.1	7.9	0.0    76.0	2.70	SLT,DOL,SL/LMY,ANHY
295	3121.0-22.0	<0.1	<0.1	6.9	0.0    75.8	2.69	SLT,LMY,SL/DOL
+ 296	3122.0-23.0	16.0	0.1	5.9	0.0    79.3	2.70	SLT,LMY,SL/DOL
+ 297	3123.0-24.0	5.0	<0.1	4.8	0.0    81.8	2.67	SLT,LMY
+ 298	3124.0-25.0	4.6	<0.1	6.1	0.0    80.6	2.68	SLT,LMY
299	3125.0-26.0	<0.1	<0.1	6.0	0.0    79.4	2.70	SLT,LMY
# 300	3126.0-27.0	1.3	1.2	6.2	0.0    79.0	2.71	SLT,LMY
#+301	3127.0-28.0	7.9	6.1	6.9	0.0    78.3	2.73	SLT,LMY
	3128.0-34.0						SH
302	3134.0-35.0	0.1	0.1	10.6	0.0    63.4	2.70	LM,SLTY
303	3135.0-36.0	0.2	0.2	9.9	0.0    73.1	2.69	LM,SLTY,ANHY
+ 304	3136.0-37.0	0.4	0.4	8.6	0.0    69.6	2.73	LM,SLTY,ANHY
305	3137.0-38.0	0.1	<0.1	7.3	0.0    69.7	2.72	LM,SLTY,SHY,PEL,ANHY
	3138.0-42.0						SH
+ 306	3142.0-43.0	0.9	0.6	6.5	0.0    72.2	2.73	LM,SLTY,FOSS,ANHY
+ 307	3143.0-44.0	4.2	0.3	11.3	0.0    68.5	2.73	LM,SLTY,FOSS,ANHY
308	3144.0-45.0	0.6	0.5	10.9	0.0    69.0	2.74	LM,SLTY,ANHY
309	3145.0-46.0	0.4	0.3	11.8	0.0    66.1	2.75	LM,SLTY,ANHY
310	3146.0-47.0	0.2	0.1	8.9	0.0    71.0	2.72	LM,SLTY
311	3147.0-48.0	0.2	0.2	9.0	0.0    71.7	2.72	LM,SLTY
312	3148.0-49.0	0.2	0.1	9.5	0.0    70.9	2.72	LM,SLTY,ANHY
313	3149.0-50.0	0.1	0.1	7.1	0.0    74.0	2.74	LM,SLTY,SL/SHY,ANHY
+ 314	3150.0-51.0	14.0	0.4	8.4	0.0    70.0	2.72	LM,SLT STKS,ANHY
315	3151.0-52.0	6.7	0.1	10.2	0.0    69.1	2.72	LM,SLT STKS

+ DENOTES HORIZONTAL CRACKS

# DENOTES CHAOTIC FISSURES

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*  
**DALLAS, TEXAS**

CORE SUMMARY

Company WAGNER AND BROWN  
 Well ROSE NO. 1  
 Page 12 of 13 File 3402-9324

DEPTH FEET	HORIZONTAL PERMEABILITY, Md.		POROSITY PER CENT	SATURATION		GRAIN DENSITY
	MAXIMUM	90 DEGREES		OIL	WATER	
2647.0-50.0	43	16	15.4	0.0	67.3	2.72
2651.0-59.0	198	160	16.5	0.0	68.1	2.72
2659.0-64.0	1.7	0.1	6.6	0.0	71.7	2.80
2664.0-69.0	14	13	17.3	0.0	47.2	2.73
2669.0-72.0	0.3	0.2	9.9	0.0	47.9	2.74
2672.0-74.0	27	17	12.7	0.0	55.7	2.80
2678.0-80.0	12	0.4	11.2	0.0	67.2	2.72
2682.0-85.0	74	44	11.6	0.0	71.1	2.71
2686.0-01.0	19	6.2	12.8	0.0	69.8	2.71
2704.0-08.0	25	13	13.6	0.0	69.5	2.67
2708.0-17.0	0.4	0.4	11.6	0.0	62.3	2.81
2717.0-20.0	12	6.4	9.7	0.0	60.0	2.85
2720.0-58.0	42	26	14.5	0.0	66.7	2.73
2759.0-06.0	39	22	13.8	0.0	66.5	2.74
2806.0-40.0	3.3	2.7	13.9	0.0	59.7	2.85
2840.0-55.0	5.6	4.2	17.8	0.0	66.5	2.71

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations,

**CORE LABORATORIES, INC.**  
*Petroleum Reservoir Engineering*  
 DALLAS, TEXAS

CORE SUMMARY

Company WAGNER AND BROWN  
 Well ROSE NO. 1  
 Page 13 of 13 File 3402-9324

DEPTH FEET	HORIZONTAL PERMEABILITY, Md.		POROSITY PER CENT	SATURATION		GRAIN DENSITY
	MAXIMUM	90 DEGREES		OIL	WATER	
2862.0-67.0	0.2	0.1	12.7	0.0	72.1	2.73
2879.0-82.0	0.1	<0.1	19.5	0.0	63.0	2.82
2882.0-85.0	<0.1	<0.1	6.2	0.0	72.4	2.76
2885.0-89.0	0.7	0.4	14.4	0.0	63.4	2.79
2896.0-20.0	81	5.0	16.8	0.0	62.2	2.71
2925.0-47.0	0.4	0.4	10.2	0.0	67.8	2.74
2947.0-49.0	6.7	3.2	9.8	0.0	73.8	2.75
2957.0-67.0	1.6	0.4	13.1	0.0	66.2	2.70
2971.0-78.0	15	1.7	11.6	0.0	72.0	2.77
2982.0-86.0	<0.1	<0.1	11.5	0.0	70.3	2.76
2992.0-06.0	<0.1	<0.1	6.7	0.0	77.6	2.71
3102.0-13.0	0.3	0.2	10.9	0.0	74.5	2.73
3113.0-28.0	2.8	0.6	10.2	0.0	76.7	2.72
3134.0-38.0	0.2	0.2	9.1	0.0	69.0	2.71
3142.0-52.0	2.8	0.3	9.4	0.0	70.3	2.73