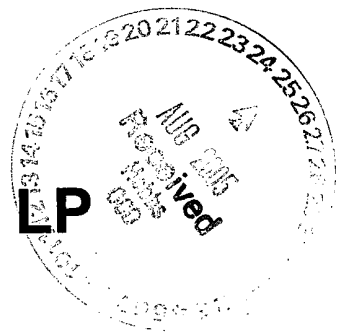
ROTARY LABORATORIES, INC.
Core Analysis

30-025-36942



CORE ANALYSIS PROCEDURES

FOR

PATTERSON PETROLEUM LP

DUNCAN '32' STATE COM # 1

LEA COUNTY, NEW MEXICO

The Rotary Sidewalls were delivered to Rotary Laboratories, Inc.

Gases from the Sidewalls were measured by Hot Wire Chromatography and reported in Gas Units.

A brief Lithological Description of the Sidewalls was recorded.

A description of the Fluorescence of the Sidewalls was recorded.

Ultraviolet Light Photographs were taken of the Sidewalls for a permanent record.

Natural Light Photographs were taken of the Sidewalls for a permanent record.

Composite Photographs of the Sidewall End Trims were taken under Natural and Ultraviolet Light.

The Sidewalls were extracted utilizing the Dean Stark method.

The fluids were measured by the Dean Stark method.

Porosities were measured in a Boyle's Law Porosimeter utilizing Helium.

Permeabilities were measured in a Hassler Sleeve Permeameter utilizing Nitrogen at 300 psi confining pressure.

Test samples of a known permeability were measured before and after the Sidewall permeabilities were measured.

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ROTARY SIDEWALL CORE ANALYSIS

PATTERSON PETROLEUM LP
DUNCAN '32' STATE COM # 1
LEA COUNTY, NEW MEXICO

A.P.I. NUMBER : 30-025-36942
FIELD : Vacuum Morrow
LOCATION : 2245' FNL, 660' FEL,
Section 32, T-17-S, R-34-E

FILE NO. : 050330-5
DATE : April 4, 2005
ANALYSTS : WH, SB, PK

DEAN STARK EXTRACTION

SAMPLE NO.	DEPTH ft	GRAIN DENSITY	POROSITY %	PERM mD	SATURATIONS Sw	SATURATIONS So	GAS UNITS	FLUORESCENCE %		LITHOLOGY
1	5,901.0	2.74	17.5	10.47	52.6	14.5	29	30	Gld-yl-brn	Cht tn-brn-gy mott sslty ssdy tr ppp sc dol tr anhy scalc
2	5,903.0	2.71	17.4	8.32	67.7	7.1	10	20	Dl gld-yl-brn	Cht tn-brn-gy mott sslty ssdy tr ppp-vug sc dol tr anhy scalc
3	5,905.0	2.78	13.4	7.74	59.0	10.5	16	30	Dl gld-yl-brn	Dol tn-brn mott slty ssdy tr ppp-vug cht intrbd
4	5,910.0	2.77	14.0	3.66	60.4	10.1	12	30	Dl gld-yl-brn	Dol tn-brn mott slty ssdy tr ppp cht intrbd
5	5,914.0	2.83	5.0	0.51	45.4	10.5	10	50	Dl gld-yl-brn	Dol tn-brn mott slty ssdy suc i/p tr ppp-vug tr anhy sty
6	5,916.0	2.74	13.3	2.13	66.9	7.0	14	30	Dl gld-brn	Cht tn-brn-gy mott sslty ssdy tr ppp sc dol tr anhy scalc
7	5,922.0	2.77	12.4	3.36	67.4	10.8	18	50	Dl gld-brn	Dol tn-brn slty ssdy suc i/p tr ppp-vug tr anhy sty
8	5,924.0	2.74	16.3	3.76	64.4	7.0	13	Tr	Dl gld-brn	Dol tn-brn mott sslty ssdy tr ppp sc sml anhy incl
9	5,926.0	2.74	16.0	5.94	60.7	11.2	12	30	Dl gld-brn	Dol tn-brn mott sslty ssdy tr ppp sc sml anhy incl
10	5,935.0	2.73	18.9	3.26	61.8	9.7	13	10	Dl gld-brn	Cht tn-brn-gy mott sslty ssdy tr ppp sc dol tr anhy scalc
11	5,937.0	2.73	20.0	7.13	64.2	4.9	10	Tr	Dl gld-brn	Cht tn-brn-gy mott sslty ssdy tr ppp sc dol tr anhy scalc hal
12	5,944.0	2.72	9.9	1.81	59.6	4.5	16	Tr	Dl gld-brn	Cht tn-brn-gy mott sslty ssdy tr ppp sc dol tr anhy scalc frac
13	5,946.0	2.69	15.4	1.78	62.6	6.2	14	Tr	Dl gld-brn	Cht tn-brn-gy mott sslty ssdy tr ppp sc dol tr anhy scalc
14	5,986.0	2.69	9.6	0.27	68.9	11.7	89	30	Dl gld-brn	Cht tn-brn-gy mott sslty ssdy tr ppp sc dol tr anhy scalc frac
15	5,988.0	2.73	8.4	0.06	73.0	8.1	52	30	Dl gld-brn	Dol tn-brn mott slty ssdy suc i/p tr ppp tr anhy sty

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Core Analysis

PATTERSON PETROLEUM LP
DUNCAN '32' STATE COM # 1
04/05/2005

QUALITY CONTROL RERUN DATA

Sample No.	GRAIN DENSITY original	GRAIN DENSITY reruns	POROSITY original	POROSITY reruns	*kstandard* Test Sample	PERMEABILITY original	PERMEABILITY reruns
1	2.744	2.745	17.48	17.53	**2.605**	10.472	10.497
3	2.781	2.779	13.42	13.36			
5	2.829	2.828	5.02	5.00		0.505	0.498
8	2.735	2.736	16.28	16.30			
10	2.725	2.726	18.91	18.92		3.259	3.234
13	2.691	2.693	15.42	15.46			
15	2.731	2.734	8.42	8.51	**2.600**	0.062	0.052

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