



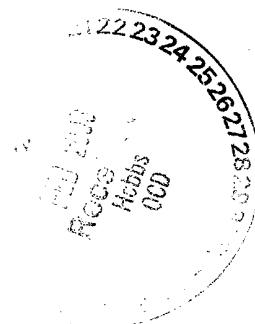
Rotary Sidewall Core Analysis Report

For

PATTERSON PETROLEUM LP

PADDY 24 FEDERAL # 1

LEA COUNTY, NEW MEXICO





CORE ANALYSIS PROCEDURES
FOR
PATTERSON PETROLEUM LP
PADDY 24 FEDERAL # 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.

ROTARY SIDEWALL CORE ANALYSIS

PATTERSON PETROLEUM LP
PADDY 24 FEDERAL # 1
LEA COUNTY, NEW MEXICO

A.P.I. NUMBER : 30-025-37378
FIELD : Paddock, East
LOCATION : 660' FNL, 400' FEL,
Section 24, T-17-S, R-32-E

FILE NO. : 051201-1
DATE : December 3, 2005
ANALYSTS : WH, SB, PK

DEAN STARK EXTRACTION

SAMPLE NO.	DEPTH ft	GRAIN DENSITY	POROSITY %	PERM mD	SATURATIONS Sw	So	GAS UNITS	FLUORESCENCE %	LITHOLOGY
1	5,852.0	2.85	5.9	0.04	74.9	0.0	0	0	DI mf Dol tn-brn ssly ssdy tr ppp
2	5,857.0	2.85	3.1	0.06	30.9	9.0	51	30	Br t yl-wht Dol tn-brn-gy mott ssly ssdy sc anhy incl frac
3	5,862.0	2.85	6.5	0.21	25.5	29.6	113	40	Br t yl-wht Dol tn-brn ssly ssdy sc ppp frac sty
4	5,864.0	2.84	9.6	18.53	21.4	24.9	341	90	Br t yl-wht Dol tn-brn ssly sdy suc i/p sc ppp
5	5,867.0	2.83	14.0	104.58	19.6	28.8	447	90	Br t yl-dl yl Dol tn-brn ssly sdy suc ppp mudcake
6	5,868.0	2.85	3.6	0.07	16.7	19.4	200	50	Br t yl-yl Dol tn-brn ssly ssdy sc ppp lrg anhy incl
7	5,875.0	2.84	3.8	0.10	35.9	10.4	144	30	Br t yl-gld-bl Dol tn-brn ssly ssdy suc i/p sc ppp sty
8	5,890.0	2.82	7.8	0.67	80.8	0.0	1	0	DI mf Dol tn-brn ssly ssdy suc i/p sc ppp
9	5,894.0	2.81	7.3	0.98	79.7	0.0	0	0	DI mf Dol tn-brn ssly ssdy suc i/p sc ppp
10	5,900.0	2.77	9.4	2.79	85.4	0.0	0	0	DI mf Dol tn-brn ssly ssdy suc i/p sc ppp
11	5,904.0	2.81	5.1	0.12	78.7	0.0	0	0	DI mf Dol tn-brn ssly ssdy suc i/p sc ppp
12	5,905.0	2.84	6.8	0.91	74.1	0.0	0	0	DI mf Dol tn-brn ssly ssdy suc i/p anhyd sc ppp
13	5,914.0	2.84	8.9	4.49	75.5	0.0	0	0	DI mf Dol tn-brn ssly ssdy suc i/p sc ppp
14	5,916.0	2.84	6.1	0.06	74.7	0.0	0	0	DI mf Dol tn-brn ssly ssdy suc i/p sc ppp
15	5,918.0	2.78	1.8	<.01	73.5	0.0	0	0	DI mf Dol tn-brn ssly ssdy tr ppp
16	5,927.0	2.84	4.6	0.03	54.0	0.0	0	0	DI mf Dol tn-brn ssly ssdy tr ppp
17	5,967.0	2.84	3.7	0.03	29.9	9.2	111	30	Br t yl-bl Dol tn-brn ssly ssdy tr ppp frac
18	5,972.0	2.81	2.7	0.04	58.8	0.0	1	0	DI mf Dol tn-brn ssly ssdy tr ppp sty



P.O. Box 3501 • Midland, Texas 79702-3501 • 432-684-8800 • Fax 432-684-8821 • E-mail rotarylab@prodigy.net

ROTARY SIDEWALL CORE ANALYSIS

PATTERSON PETROLEUM LP
PADDY 24 FEDERAL # 1
LEA COUNTY, NEW MEXICO

A.P.I. NUMBER : 30-025-37378
FIELD : Paddock, East
LOCATION : 660' FNL, 400' FEL,
Section 24, T-17-S, R-32-E

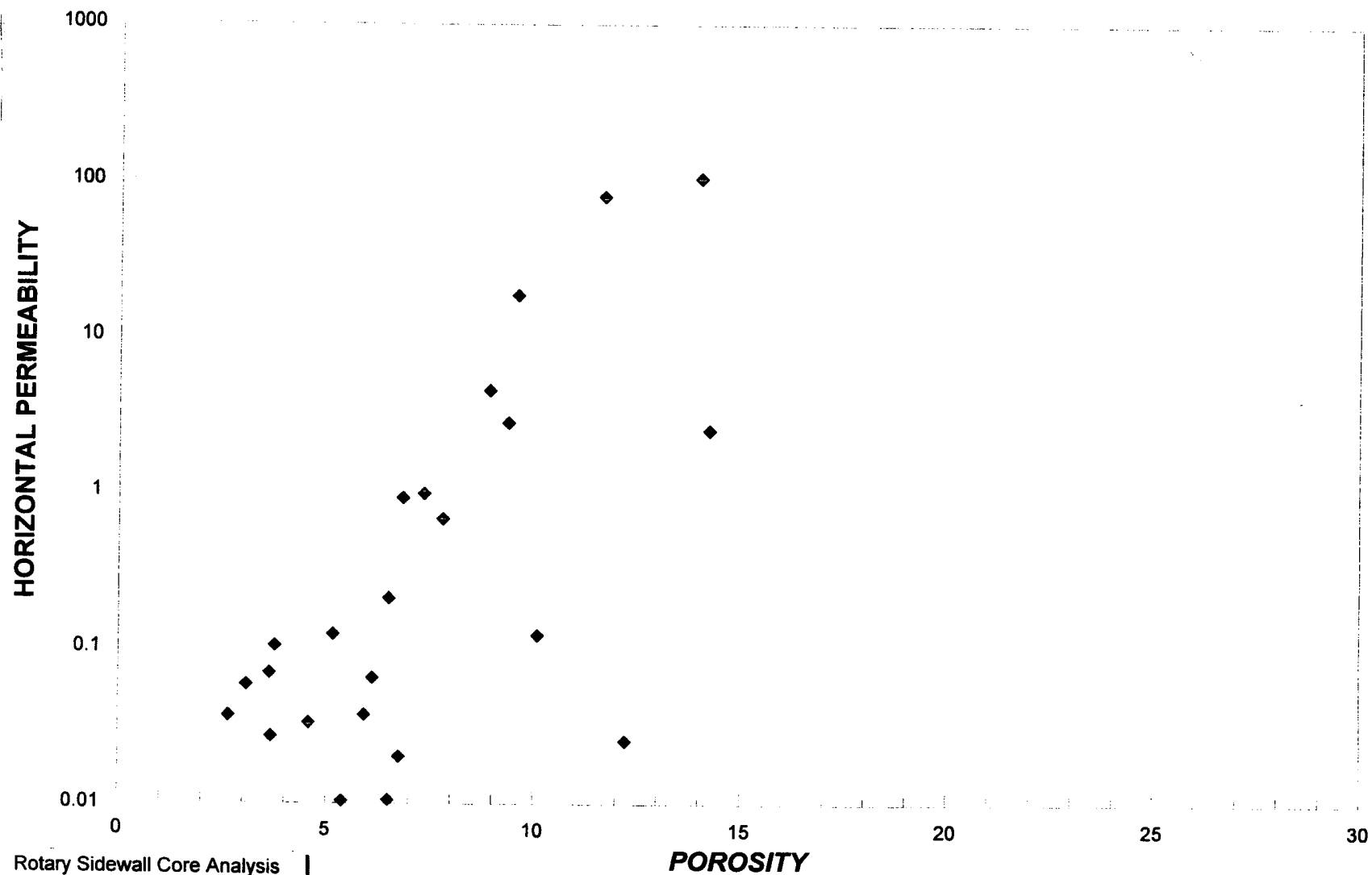
FILE NO. : 051201-1
DATE : December 3, 2005
ANALYSTS : WH, SB, PK

DEAN STARK EXTRACTION

SAMPLE NO.	DEPTH ft	GRAIN DENSITY	POROSITY %	PERM mD	SATURATIONS Sw	So	GAS UNITS	FLUORESCENCE %	LITHOLOGY
19	6,006.0	2.86	6.8	0.02	74.1	0.0	0	0	DI mf Dol tn-brn ssly ssdy tr ppp
20	6,007.0	2.86	5.4	0.01	64.0	0.0	0	0	DI mf Dol tn-brn ssly ssdy tr ppp
21	6,010.0	2.83	6.5	0.01	78.4	0.0	0	0	DI mf Dol tn-brn ssly ssdy tr ppp
22	6,012.0	2.83	6.1	0.01	78.5	0.0	0	0	DI mf Dol tn-brn ssly ssdy suc i/p sc ppp
23	6,052.0	2.87	11.7	79.73	22.9	29.2	359	80	Br t gld-dl gld Dol tn-brn ssly ssdy suc sc ppp mudcake
24	6,065.0	2.85	14.2	2.52	87.9	0.0	2	0	DI mf Dol tn-brn ssly ssdy suc i/p sc ppp
25	6,133.0	2.84	12.2	0.03	79.4	0.0	1	0	DI mf Dol tn-brn ssly ssdy suc i/p sc ppp tr anhy
26	6,136.0	2.82	10.1	0.12	80.6	0.0	0	0	DI mf Dol tn-brn ssly ssdy



PATTERSON PETROLEUM LP
PADDY 24 FEDERAL # 1



P.O. Box 3501 • Midland, Texas 79702-3501 • 432-684-8800 • Fax 432-684-8821 • E-mail rotarylaboratories@prodigy.net



PATTERSON PETROLEUM LP
PADDY 24 FEDERAL # 1
12/06/2005

QUALITY CONTROL RERUN DATA

Sample No.	GRAIN DENSITY		POROSITY		<i>k</i> standard Test Sample	PERMEABILITY	
	original	reruns	original	reruns		original	reruns
2	2.852	2.853	3.08	3.11	2.617	0.058	0.056
5	2.834	2.833	14.02	13.99		104.584	105.020
8	2.816	2.817	7.80	7.82			
10	2.767	2.767	9.37	9.40		2.790	2.777
14	2.839	2.840	6.10	6.12		0.064	0.067
15	2.778	2.778	1.82	1.79		<.01	<.01
19	2.855	2.854	6.77	6.72		0.020	0.018
21	2.834	2.833	6.50	6.46			
23	2.872	2.872	11.68	11.67		79.728	79.430
26	2.824	2.825	10.09	10.13	2.612	0.122	0.120

LITHOLOGICAL ABBREVIATIONS

Anhydrite (-ic)	anhy, anhyd	Filled	fd	Poor	pr
Anhydrite inclusion	A/I	Fine (-ly)	f, fnly	Pyrite	pyr
Bentonite (-ic)	bent	Fluorescence	flu	Quartz (-itic)	qtz
Black (-ish)	blk, blksh	Fossil (-iferous)	foss	Red (ish)	rd, rdsh
Bleeding Oil	B/O	Fracture	frac	Round	rnd
Brecciated	brec	Fragments	frag	Residual Oil	So
Bright	brt	Friable	fri	Residual Water	Sw
Brittle	brit	Fusulinid	fus	Sample	Spl
Broken	brkn	Gilsonite	gil	Sandstone	Ss
Brown	brn	Gold	gld	Sandy	sdv
Buff	bf	Good	gd	Scattered	sc
Calcite (-ic)	calc, calctc	Grain (-s)	gr	Shaley	shy
Calcareous	calc	Granular	gran	Shale	sh
Carbonaceous	carb	Gray	gy	Shale parting	s/p
Cement	cmt	Green	grn	Silt (-y)	slt, slty
Chalk (-y)	chk, chky	Gypsum	gyp	Siliceous	sil
Chert	cht	Hair line(frac)	hl	Slight (-ly)	sli, s
Clay	cl	Halite	hal	Small	sml
Clear	clr	Inclusion	incl	Spotted (-y)	sp
Coal	c	Laminations (ated)	lam	Stringer	strgr
Coarse	crs	Large	lrg	Stylolite (-itic)	sty, styl
Conglomerate	cgl	Light	lt	Sucrosic	suc
Consolidated	consol	Limestone	ls	Sulphur	su
Contaminated	contam	Limey	lmy	Tan	tn
Crinoid (-al)	crin, crinal	Lithology	lith	Too broken	tbfa
Cross-bedded	x-bd	Medium	m	(for Analysis)	
Crystal (-line)	Xl, xln	Mineral Fluorescence	mf	Thin	thn
Dark	dk	Moderate	mod	Trace	Tr
Dense	dns	Mudcake	m/c	Very	v
Diameter	dia	No Show	N/S	Vertical	vert, vt
Dolomite (ic)	dol, dolm	Oolite (-itic)	ool	Vug (-gy)	vug
Dull	dl	Pale	pl	Well	wl
Faint	fnt	Permeability	Perm, K	White	wht
Fair	fr	Pin-Point Porosity	ppp	Yellow	yl

