



SUR: H-25-17s-33em 1980/N & 1260/E
BHL: H-25-17s-33e, 1865/N & 1221/E
API # 30-025-37823

Rotary Sidewall Core Analysis Report

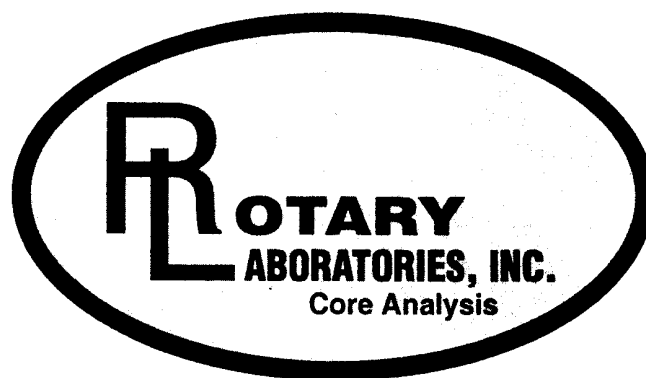
For

PATTERSON PETROLEUM LP

GEN MONTCALM 25 STATE # 1

LEA COUNTY, NEW MEXICO





CORE ANALYSIS PROCEDURES

FOR

PATTERSON PETROLEUM LP

GEN MONTCALM 25 STATE # 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
GEN MONTCALM 25 STATE # 1
LEA COUNTY, NEW MEXICO

A.P.I. NUMBER : 30-025-37823
FIELD : Vacuum: Morrow
LOCATION: 1980' FNL, 1260' FEL,
Section 25, T-17-S, R-33-E

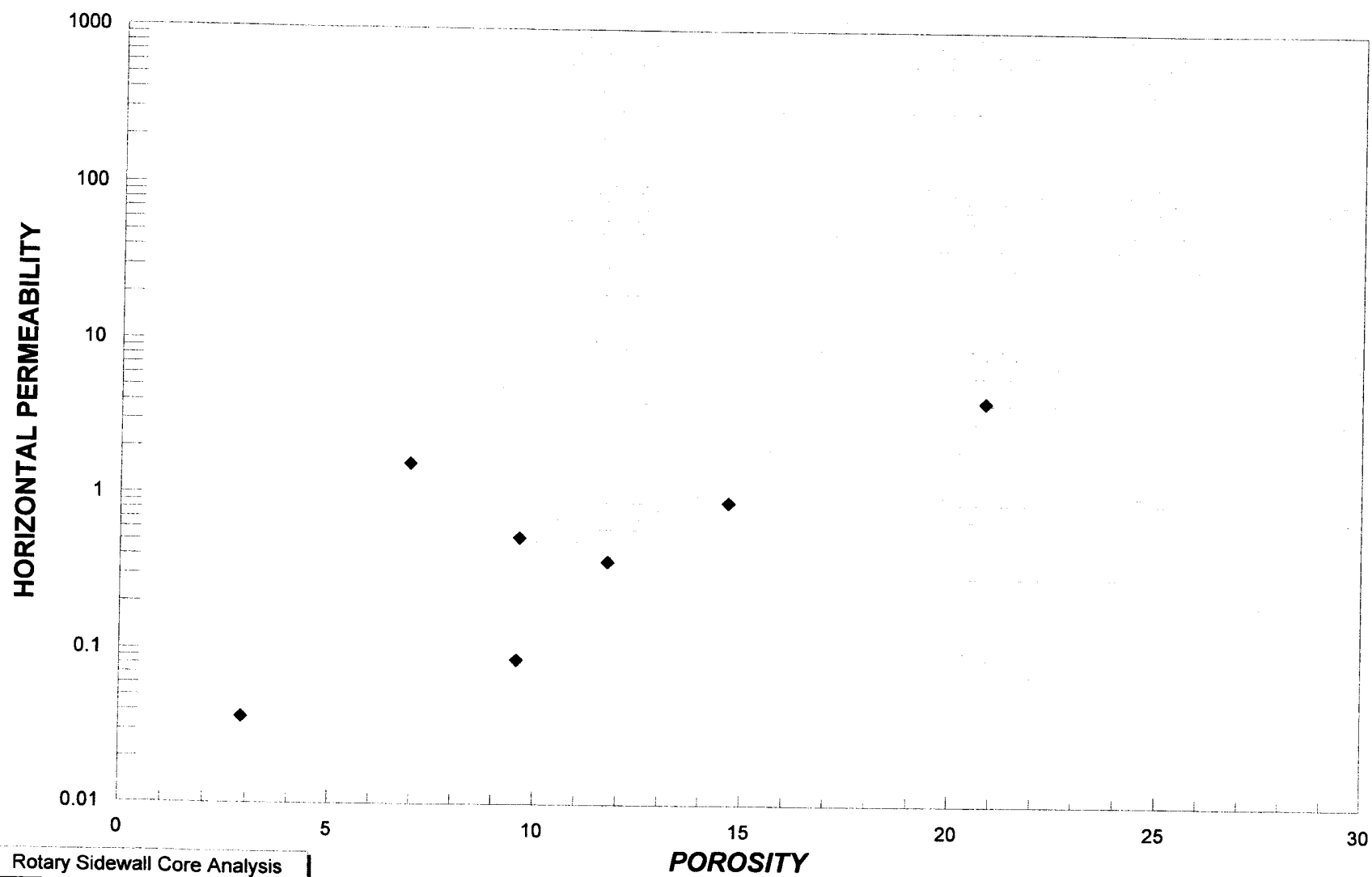
FILE NO. : 060722-1
DATE : July 24, 2006
ANALYSTS : WH, SB, PK, JR

DEAN STARK EXTRACTION

SAMPLE NO.	DEPTH ft	GRAIN DENSITY	POROSITY %	PERM mD	SATURATIONS Sw	So	GAS UNITS	FLUORESCENCE %	LITHOLOGY
1	7,011.0	2.85	7.0	1.573	36.5	11.0	159	50	Brt yl-dl yl-bl Dol tn-brn ssly ssdy tr ppp tr anhy sc slty lam
2	8,931.0	2.84	9.6	0.087	74.8	0.0	3	0	DI mf / cont Dol tn-brn ssly ssdy slty lam
3	8,946.0	2.84	11.8	0.372	78.0	0.0	4	0	Dol tn-brn ssly sdy
4	8,952.0	2.84	20.9	4.112	53.1	20.4	221	80	Brt yl-gld Dol tn-brn-gy mott ssly sdy sc ppp-sml vug sc sml A/I
5	8,956.0	2.81	14.7	0.906	74.6	5.5	52	50	DI gld Dol tn-brn-gy mott ssly sdy sc ppp-sml vug sc sml A/I
6	10,493.0	2.70	9.6	0.528	23.5	27.2	321	100	Brt yl-dl yl-grn Ls tn-brn mod-ssly ssdy sc ppp foss
7	10,498.0	2.70	11.4	tbfa	13.2	15.3	133	80	Brt yl-dl yl-grn Ls tn-brn mod-ssly ssdy sc ppp foss frac
8	10,509.0	2.73	10.7	tbfa	23.7	13.8	145	70	Brt yl-dl yl-grn Ls tn-brn mod-ssly ssdy sc ppp foss frac
9	10,763.0	2.74	6.5	tbfa	35.4	0.0	72	0	Ls tn-brn mod-ssly ssdy tr ppp foss frac
10	11,361.0	2.71	2.9	0.036	12.4	7.2	338	30	Bl-wht Ls tn-brn-gy mott dns slty tr ppp foss frac
11	11,366.0	2.70	3.8	tbfa	25.5	11.1	435	20	Bl-wht Ls tn-brn-gy mott dns slty tr ppp foss frac sty
12	12,615.0	2.69	4.2	tbfa	42.1	Tr	149	Tr	Brt yl Ss opaq-tn-gy mott vf-f-sc mgr sbrnd-sbang ssly scalc



PATTERSON PETROLEUM LP
GEN MONTCALM 25 STATE # 1



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PATTERSON PETROLEUM LP
GEN MONTCALM 25 STATE # 1
08/24/2006

QUALITY CONTROL RERUN DATA

Sample No.	GRAIN DENSITY		POROSITY		<i>k</i> standard Test Sample	PERMEABILITY	
	original	reruns	original	reruns		original	reruns
1	2.848	2.850	6.96	7.03	2.614	1.573	1.565
3	2.836	2.835	11.77	11.73			
4	2.844	2.846	20.87	20.90		4.112	4.091
7	2.701	2.700	11.36	11.31			
10	2.710	2.711	2.89	2.93	2.617	0.036	0.037
12	2.688	2.686	4.21	4.16			

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	sdly
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

