**OPERATOR WELL/LEASE** 

COUNTY

LEA

CML EXPLORATION, LLC PADDY 19 STATE'S F- 19-175-330 2140/N 4 1650/W

> STATE OF NEW MEXICO **DEVIATION REPORT**

30.025-38591

054-0092

235	1.00
877	1.25
1,225	1.25
1,860	1.00
2,334	1.00
2,840	1.25
3,349	0.50
3,825	2.00
4,310	2.00
4,782	1.00
5,263	0.25
5,739	1.50
6.156	0.00

STATE OF TEXAS

**COUNTY OF MIDLAND** 

The foregoing instrument was acknowledged before me on

Moore on behalf of Patterson-UT) Drilling Company LLC.

Notary Public for Midland County, Texas My Commission Expires: 4/11/11

January 8, 2008 , by Steve



JONI D. HODGES **Notary Public** STATE OF TEXAS My Commission Expires 04/11/2011 CML EXPLORATION, LLC PADDY '19' STATE # 3 LEA COUNTY, NEW MEXICO U.S.A. File: MD-01106

# RECEIVED

FEB 2 1 2008

# HOBBS OCD

30.025.38591

#### **CORE ANALYSIS PROCEDURES**

#### **FOR**

# **CML EXPLORATION, LLC**

#### **PADDY '19' STATE #3**

## LEA COUNTY, NEW MEXICO

The Rotary Sidewalls were delivered to OMNI Laboratories, Inc.

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



CML EXPLORATION, LLC PADDY 19 STATE # 3 LEA COUNTY, NEW MEXICO

A.P.I. NUMBER: 30-025-38591

FIELD: Maljamar: Paddock, East LOCATION: 2140' FNL, 1650' FWL,

Section 19, T-17-S, R-33-E

FILE NO.: MD-01106

DATE: December 28, 2007 ANALYSTS: WH, SB, PK, JR

#### **DEAN STARK EXTRACTION**

SAMPLE	DEPTH	GRAIN	POR	PERM		TURATIONS GAS FLUORESCENCE		JORESCENCE		
NO.	ft	DENSITY	%	mD	Sw	So	UNITS	<u>%</u>		LITHOLOGY
1	5,807.0	2.84	1.9	0.047	58.2	0.0	0	0		Dol tn-gy dns ssity tr pyr
2	5,817.0	2.73	7.3	0.167	27.3	16.9	45	40	Brt yl-grn	Ss opaq-tn-gy vf-fgr sbrnd-sbang sslty scalc tr pyr
3	5,819.0	2.87	1.5	tbfa	34.6	0.0	0	0	cont	Dol tn-gy dns sslty tr foss pyr frac
4	5,830.0	2.83	3.5	0.128	44.8	0.0	0	0	cont	Dol tn-gy ssity tr ppp tr foss tr pyr
5	5,833.0	2.71	11.1	1.295	28.3	24.9	67	60	Brt yl-di yl lam	Ss opaq-tn-gy lam vf-fgr sbrnd-sbang sslty scalc pyr
6	5,835.0	2.68	13.4	1.501	34.5	30.4	60	90	Brt yl-dl yl	Ss opaq-tn-brn vf-fgr sbrnd-sbang sslty scalc tr pyr
7	5,845.0	2.97	0.6	0.109	33.9	0.0	0	0	Mf	Anhy opaq-bl dns
8	5,847.0	2.82	7.9	3.341	21.5	12.5	106	70	Brt yl-dl yl	Dol tn-brn ssity sdy sc ppp
9	5,848.0	2.84	8.1	tbfa	26.6	15.4	127	90	Brt yl-dl yl	Dol tn-brn mod-ssity sdy sc ppp tr anhy frac
10	5,850.0	2.83	8.2	2.892	23.7	17.0	160	80	Brt yl-dl yl	Dol tn-brn mod-sslty sdy sli suc sc ppp
11	5,855.0	2.84	5.1	0.188	25.1	14.6	77	30	Brt yl-dl yl	Dol tn-brn mod-ssity sdy sc ppp tr anhy
12	5,861.0	2.84	9.1	tbfa	23.7	13.7	42	80	Brt yl-dl yl	Dol tn-brn mod-ssity sdy sc ppp frac
13	5,869.0	2.84	5.0	0.074	29.6	6.9	40	30	Brt yl-dl yl	Dol tn-brn mod-ssity sdy tr ppp tr pyr
14	5,875.0	2.86	12.6	23.884	29.9	10.7	110	30	Brt yl-dl yl	Dol tn-brn mod-sslty sdy sli suc sc ppp tr anhy tr foss
15	5,963.0	2.87	3.1	0.253	32.7	9.5	43	40	Brt yl-dl yl	Dol tn-brn ssity anhyd tr ppp
16	5,971.0	2.82	6.0	0.083	50.6	0.0	0	0	cont	Dol tn-brn sslty anhyd tr ppp
17	5,978.0	2.76	11.3	0.229	66.0	0.0	0	0	Mf	Ss opaq-gy vf-fgr sbrnd-sbang ssity scalc dolm
18	5,987.0	2.82	1.8	tbfa	35.3	0.0	7	0	cont	Dol tn-brn sslty anhyd tr ppp
19	6,023.0	2.85	1.8	<.001	42.5	0.0	0	0	cont	Dol tn-brn dns sslty anhyd tr ppp

# Laboratories, Inc.

# ROTARY SIDEWALL CORE ANALYSIS

CML EXPLORATION, LLC PADDY 19 STATE # 3 LEA COUNTY, NEW MEXICO

A.P.I. NUMBER : 30-025-38591 . FIELD : Maljamar: Paddock, East LOCATION: 2140' FNL, 1650' FWL,

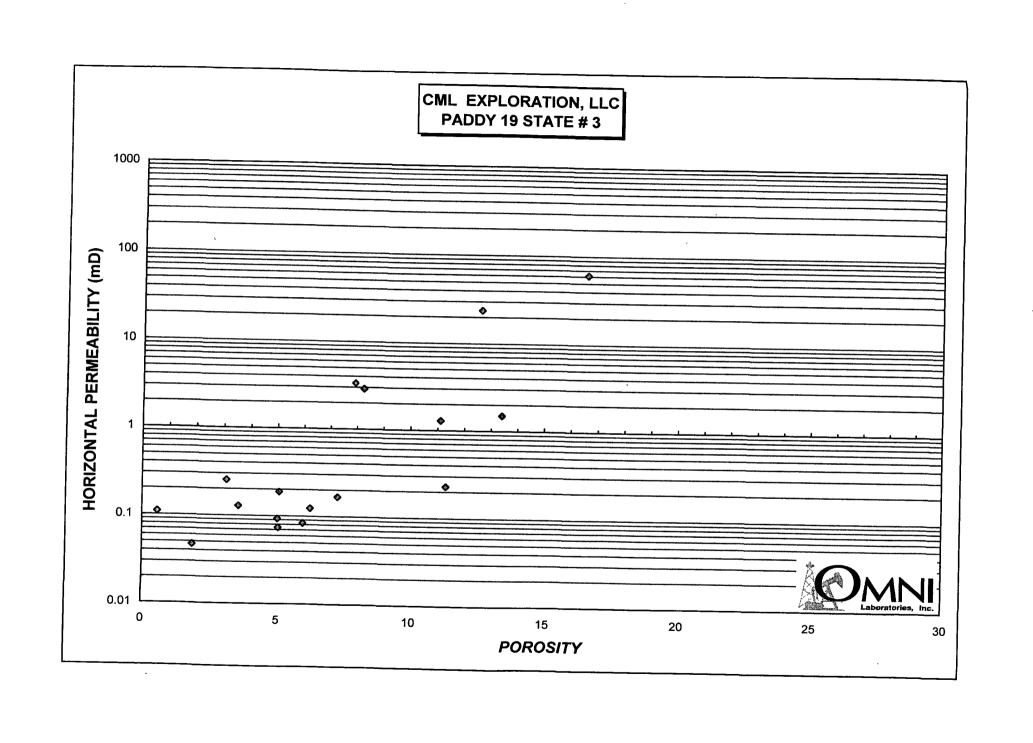
Section 19, T-17-S, R-33-E

FILE NO.: MD-01106

DATE: December 28, 2007 ANALYSTS: WH, SB, PK, JR

#### **DEAN STARK EXTRACTION**

SAMPLE		GRAIN	POR	PERM	SATURA	ATIONS	GAS	FLI	JORESCENCE	
NO.	ft	DENSITY	%	mD_	Sw So	UNITS	%		LITHOLOGY	
20	6,026.0	2.86	6.2	0.123	51.1	Tr	19	10	DI yl-brt yl	Dol tn-brn mod-ssity sc ppp anhy fd frac
21	6,027.0	2.86	5.0	0.093	48.5	Tr	5	10	Di yl-brt yl	Dol tn-brn mod-ssity sc ppp
22	6,033.0	2.82	4.7	tbfa	53.5	0.0	53	0	,	Dol tn-brn ssity tr ppp tr anhy tr foss
23	6,045.0	2.87	16.6	61.161	29.6	19.0	0	90	DI yl-gld	Dol tn-brn mod-sslty sdy suc i/p sc ppp tr pyr





# CML EXPLORATION, LLC PADDY 19 STATE # 3 12/28/2007

#### **QUALITY CONTROL RERUN DATA**

Sample	e GRAIN DENSITY original reruns		PORC	DSITY	kstandard	PERMEABILITY	
No.			original	reruns	Test Sample	original	reruns
2	2.733	2.732	7.27	7.24			
6	2.683	2.682	13.39	13.37	2.607	1.501	1.466
10	2.827	2.827	8.24	8.26			
14	2.860	2.858	12.60	12.55		23.884	23.930
17	2.758	2.756	11.31 11.25				
19	2.849	2.849	1.80	1.79		<.001	<.001
21	2.860	2.861	4.99	5.03			
23	2.866	2.864	16.56	16.52	2.611	61.161	61.269

# **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	rd
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	sdy
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	Gypsum	gyp	Silt (-y)	slt, slty
Chalk (-y)	chk, chky	Hair line(frac)	hl	Slight (-ly)	sli, s
Chert	cht	Halite	hal	Small	sml
Clay	cl	Inclusion	incl	Spotted (-y)	sp
Coal	С	Laminations (ated)	lam	Stringer	strgr
Coarse	crs	Large	Irg	Stylolite (-itic)	sty, styl
Conglemerate	cgl	Light	It	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)	XI, xIn	Mineral Fluorescence	mf	Thin	thn
Dark	dk	Moderate	mod	Trace	Tr
Dense	dns	Mudcake	m/c	Very	<b>V</b>
Diameter	dia	No Show	N/S	Vertical	vert, vt
Dolomite (ic)	dol, dolm	Oolite (-itic)	ool	Vug (-gy)	vug
Dull	dl	Pale	pl	ž.	\ <u>.</u>
Faint	fnt	Permeability	Perm, K		JAANII .
Fair	fr	Pin-Point Porosity	ppp		Laboratories, Inc.