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30-025-38512

ROTARY SIDEWALL CORE ANALYSIS REPORT

FOR

CONOCOPHILLIPS COMPANY

WARREN UNIT # 323

LEA COUNTY, NEW MEXICO

CONOCOPHILLIPS COMPANY
WARREN UNIT # 323
LEA COUNTY, NEW MEXICO
U.S.A.
File: MD-42098



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LABORATORIES



December 16, 2008

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MAR 25 2009

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CONOCOPHILLIPS COMPANY

Attn: DEWI LARASATI
Westlake II, Room 13082
P.O. Box 2197
Houston, TX 77252-2197

Attn: DEWI LARASATI

RE: WARREN UNIT # 323
Rotary Sidewall Core Analysis

Mr. LARASATI:

The core analysis data from the above referenced well is enclosed in the following pages.

All quality control data is enclosed in a separate section of the report. The data, results, and photographic negatives will be maintained in our files for your future reference. If you have any questions regarding our results or procedures, please do not hesitate to contact us. We appreciate the opportunity to analyze the core from the above referenced well and look forward to working with you again in the future.

DISTRIBUTION

CONOCOPHILLIPS COMPANY

Attn: DEWI LARASATI
Westlake II, Room 13082
P.O. Box 2197
Houston, TX 77252-2197
3 Copies of the report with photographs and 3 CD-ROMs

CONOCOPHILLIPS COMPANY

Attn: MICHELLE NAVARRETTE
4001 Penbrook Street
Odessa, TX. 79762
4 Copies of the Report and 1 CD-ROM

Sincerely,

Wayne Helms, General Manager
Weatherford Laboratories

CONOCOPHILLIPS COMPANY
WARREN UNIT # 323
LEA COUNTY, NEW MEXICO
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CONOCOPHILLIPS COMPANY

Attn: DONNA J. WILLIAMS
3300 N. A Street, Bldg. 6, Room 136
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2 Copies of the Report

BP – PERMIAN BUSINESS UNIT

Attn: TINA FOSTER
Westlake I, 6th Floor
501 Westlake Park Blvd.
Houston, TX. 77079
2 Copies of the Report (1 with Photographs and 1 CD-ROM)

APACHE CORPORATION

Attn: BRET PEARCY
Two Warren Place, Suite 1500
6120 South Yale Avenue
Tulsa, OK. 74136-4224
2 Copies of the Report (1 with Photographs and 1 CD-ROM)

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CORE ANALYSIS PROCEDURES
FOR
CONOCOPHILLIPS COMPANY
WARREN UNIT # 323
LEA COUNTY, NEW MEXICO

The Rotary Sidewalls were picked up by Weatherford Laboratories.

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.

CONOCOPHILLIPS COMPANY
WARREN UNIT # 323
LEA COUNTY, NEW MEXICO
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ROTARY SIDEWALL CORE ANALYSIS

CONOCO PHILLIPS COMPANY
WARREN UNIT NO. 323
LEA COUNTY, NEW MEXICO

A.P.I. NUMBER : 30-025-38512
FIELD : Warren
LOCATION: 610' FSL, 1820' FEL,
Section 21, T-20-S, R-38-E

FILE NO. : MD-42098
DATE : December 18, 2008
ANALYSTS : WH, SB, JR

DEAN STARK EXTRACTION

SAMPLE NO.	DEPTH ft	GRAIN DENSITY	POR %	PERM mD	SATURATIONS Sw	GAS So	FLUORESCENCE UNITS %	LITHOLOGY
1	3003.0	2.73	10.3	0.051	85.9	0.0	10 0	Ss rd-brn-opaq vf-fgr sbrnd-sbang sslty sc gy ss incl sc A/I
2	3025.0	2.60	27.0	7.770	78.5	0.0	109 0	Ss opaq-tn-brn vf-f-mgr sbrnd-sbang sslty sc A/I
3	3033.0	2.67	26.9	20.050	73.4	0.0	20 0	Ss rd-brn-opaq vf-f-mgr sbrnd-sbang sslty sc gy ss incl
4	3113.0	2.69	12.6	4.077	87.8	0.0	49 0	Ss opaq-gy-rd vf-fgr sbrnd-sbang sc ss intrbd
5	3115.0	2.78	3.3	0.089	72.6	0.0	19 0	Ss opaq-gy vf-fgr sbrnd-sbang sslty sc A/I
6	4096.0	2.84	7.3	0.021	71.3	0.0	18 0	Dol crm-tn mod-sslty tr pyr
7	4098.0	2.82	8.8	0.113	29.9	17.9	645 90 Brt yl-gld	Dol tn-gy sslty ssdy foss sty
8	4103.0	2.79	7.0	0.023	66.8	0.0	22 0	Dol tn-gy mod-sslty ssdy abd slty intrbd
9	4123.0	2.68	13.8	0.475	22.4	28.2	551 80 Brt yl-dl yl	Ss opaq-tn-gy vf-fgr sbrnd-sbang sslty sty
10	4135.0	2.83	10.8	tbfa	94.2	0.0	23 0	Dol crm-tn sslty tr ppp-sml vug frac
11	4139.0	2.82	8.3	0.082	39.6	11.5	338 90 Fnt yl	Dol crm-tn sslty tr ppp-sml vug foss sty s/p
12	4154.0	2.65	16.3	2.507	23.6	33.7	428 90 Brt yl-dl yl	Ss opaq-tn-gy vf-fgr sbrnd-sbang sslty
13	4174.0	2.84	12.7	6.459	18.1	28.7	487 90 Brt yl	Dol crm-tn sslty sc ppp-sml vug foss
14	4177.0	2.83	6.9	0.085	23.9	31.9	456 80 Brt yl-gld-brn	Dol crm-tn-brn sslty tr ppp-sml vug sc foss sty
15	4183.0	2.84	11.4	0.904	18.4	16.4	551 90 Brt yl-gld	Dol crm-tn-brn sslty sc ppp-sml vug foss sty
16	4187.0	2.85	9.0	0.015	24.7	12.6	524 60 Brt yl-gld	Dol crm-tn sslty sc ppp-sml vug foss
17	4195.0	2.85	9.1	1.708	25.2	20.6	308 70 Brt yl-gld	Dol crm-tn sslty sc ppp-sml vug foss sty
18	4200.0	2.84	10.0	0.453	10.4	13.1	518 80 Brt yl-gld	Dol crm-tn sslty sc ppp-sml vug foss
19	4206.0	2.84	10.9	0.225	11.7	23.2	636 90 Brt yl-gld	Dol crm-tn sslty ssdy



ROTARY SIDEWALL CORE ANALYSIS



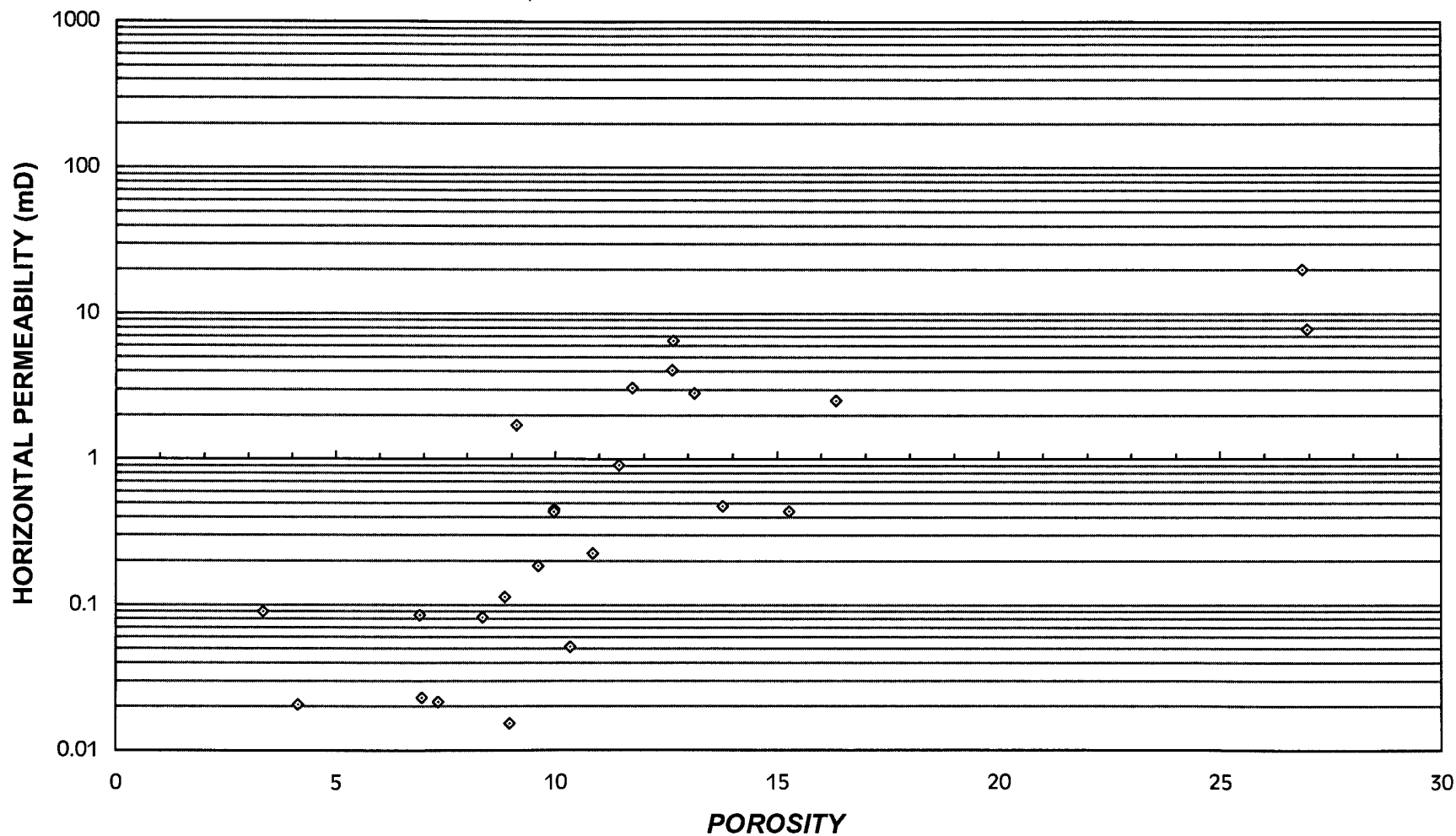
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DEAN STARK EXTRACTION

SAMPLE NO.	DEPTH ft	GRAIN DENSITY	POR %	PERM mD	SATURATIONS		GAS UNITS	FLUORESCENCE		LITHOLOGY
					Sw	So		%		
20	4215.0	2.84	9.6	0.184	11.2	29.4	629	90	Brt yl-gld	Dol crm-tn sslyt ssdy
21	4220.0	2.66	15.3	0.438	56.2	10.7	230	90	DI yl	Ss opaq-tn-gy vf-fgr sbrnd-sbang mod-sslyt
22	4229.0	2.84	4.1	0.021	60.2	0.0	11	0		Dol tn-gy sslyt
23	4233.0	2.83	10.0	0.431	30.8	18.6	617	70	Brt yl-gld-bl	Dol tn-gy sslyt sc ppp-sml vug foss
24	4239.0	2.84	13.1	2.832	23.0	26.7	523	70	Brt yl	Dol crm-tn sslyt sc ppp-sml vug foss
25	4255.0	2.84	11.7	3.079	22.7	19.3	361	80	Brt yl-gld-bl	Dol crm-tn sslyt sc ppp-sml vug foss





CONOCO PHILLIPS COMPANY

WARREN UNIT NO. 323

01/16/2009

QUALITY CONTROL RERUN DATA

Sample No.	GRAIN DENSITY		POROSITY		<i>k</i> standard	PERMEABILITY	
	original	reruns	original	reruns	Test Sample	original	reruns
1	2.728	2.729	10.34	10.40	2.612	0.051	0.046
4	2.686	2.684	12.63	12.60			
9	2.681	2.682	13.77	13.80		0.475	0.496
12	2.653	2.654	16.34	16.40			
16	2.853	2.852	8.96	8.90		0.015	0.009
20	2.835	2.836	9.61	9.60			
24	2.840	2.840	13.14	13.10	2.620	2.832	2.909

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	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	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	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 (for Analysis)	tbfa
Cross-bedded	x-bd	Medium	m	Thin	thn
Crystal (-line)	Xl, xln	Mineral Fluorescence	mf	Trace	Tr
Dark	dk	Moderate	mod	Very	v
Dense	dns	Mudcake	m/c	Vertical	vert, vt
Diameter	dia	No Show	N/S	Vug (-gy)	vug
Dolomite (ic)	dol, dolm	Oolite (-itic)	ool		
Dull	dl	Pale	pl		
Faint	fnt	Permeability	Perm, K		
Fair	fr	Pin-Point Porosity	ppp		