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Devon Energy

Chaves Co, New Mexico (Nad-83)

Open Range 34 Fee #1H

Open Range 34 Fee #1H

Lateral #1

Plan: Design #2

Standard Survey Report

21 July, 2010





CUDD Drilling & Measurement Services

Survey Report



Company:	Devon Energy	Local Co-ordinate Reference:	Site Open Range 34 Fee #1H
Project:	Chaves Co, New Mexico (Nad-83)	TVD Reference:	WELL @ 3809.00ft (Original Well Elev)
Site:	Open Range 34 Fee #1H	MD Reference:	WELL @ 3809.00ft (Original Well Elev)
Well:	Open Range 34 Fee #1H	North Reference:	Grid
Wellbore:	Lateral #1	Survey Calculation Method:	Minimum Curvature
Design:	Design #2	Database:	EDM 2003.21 Single User Db

Project	Chaves Co, New Mexico (Nad-83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Open Range 34 Fee #1H, Sec 34, T-11S, R-29E		
Site Position:		Northing:	846,530.09 ft
From:	Map	Easting:	635,611.99 ft
Position Uncertainty:	0.00 ft	Slot Radius:	"
		Latitude:	33° 19' 36.012 N
		Longitude:	104° 1' 28.864 W
		Grid Convergence:	0.17 °

Well	Open Range 34 Fee #1H		
Well Position	+N/-S	0.00 ft	Northing: 846,530.09 ft
	+E/-W	0.00 ft	Easting: 635,611.99 ft
Position Uncertainty	0.00 ft	Wellhead Elevation:	3,809.00 ft
		Ground Level:	3,790.00 ft

Wellbore	Lateral #1		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF200510	06/15/10	7.99
			Dip Angle (°)
			61.17
			Field Strength (nT)
			49,358

Design	Design #2		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)
	8,555.00	0.00	0.00
			Direction (°)
			89.82

Survey Tool Program	Date 07/21/10		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name
0.00	7,700.00	Design #2 (Lateral #1)	NS-GYRO-MS
7,700.00	12,118.72	Design #2 (Lateral #1)	CUDD MWD
			Description
			North sensing gyrocompassing m/s
			MWD - Standard CUDD MWD

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5,730.00	0.00	0.00	5,730.00	0.00	0.00	0.00	0.00	0.00	0.00
Abo									
6,135.00	0.00	0.00	6,135.00	0.00	0.00	0.00	0.00	0.00	0.00
Abo Dol.									
6,560.00	0.00	0.00	6,560.00	0.00	0.00	0.00	0.00	0.00	0.00
Wolfcamp									
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
Wolfcamp Mkr									
7,275.00	0.00	0.00	7,275.00	0.00	0.00	0.00	0.00	0.00	0.00
Pennsylvanian									



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Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
7,847.47	0.00	0.00	7,847.47	0.00	0.00	0.00	0.00	0.00	0.00
7,847.53	0.00	89.82	7,847.53	0.00	0.00	0.00	0.00	0.00	0.00
KOP - Build 10°/100'									
8,233.55	38.61	89.82	8,204.99	0.38	125.23	125.23	10.00	10.00	0.00
Mississippian									
8,274.50	42.70	89.82	8,236.05	0.46	151.90	151.90	10.00	10.00	0.00
Mississippian Meramec									
8,402.90	55.54	89.82	8,319.91	0.76	248.79	248.79	10.00	10.00	0.00
Mississippian Osage									
8,724.67	87.72	89.82	8,419.97	1.68	550.16	550.16	10.00	10.00	0.00
8,724.73	87.72	89.82	8,419.98	1.68	550.22	550.22	0.00	0.00	0.00
EOC - Hold 1:87.72° @ A:89.82°									
12,118.72	87.72	89.82	8,555.00	12.04	3,941.51	3,941.53	0.00	0.00	0.00
PBHL - TD (OR34F#1H)									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL - TD (OR34F#1H)	0.00	359.85	8,555.00	12.04	3,941.51	846,542.13	639,553.49	33° 19' 36.013 N	104° 0' 42.409 W
- plan hits target center									
- Point									

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
5,730.00	5,730.00	Abo		2.28	89.85
6,135.00	6,135.00	Abo Dol.		2.28	89.85
6,560.00	6,560.00	Wolfcamp		2.28	89.85
6,700.00	6,700.00	Wolfcamp Mkr		2.28	89.85
7,275.00	7,275.00	Pennsylvanian		2.28	89.85
8,233.55	8,200.00	Mississippian		2.28	89.85
8,274.50	8,230.00	Mississippian Meramec		2.28	89.85
8,402.90	8,310.00	Mississippian Osage		2.28	89.85
	8,500.00	Mississippian Lower Osage		2.28	89.85
	8,775.00	Siluro-Devonian		2.28	89.85

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
7,847.53	7,847.53	0.00	0.00	KOP - Build 10°/100'
8,724.73	8,419.98	1.68	550.22	EOC - Hold 1:87.72° @ A:89.82°

Checked By: _____	Approved By: _____	Date: _____
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