



Devon Energy

Chaves Co, New Mexico (Nad-83)

Goodnight 1 Fee #1H

Goodnight 1 Fee #1H

#14534

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 Goodnight 1 Fee #1H
Project:	Chaves Co, New Mexico (Nad-83)	TVD Reference:	WELL @ 3689.00ft (Original Well Elev)
Site:	Goodnight 1 Fee #1H	MD Reference:	WELL @ 3689.00ft (Original Well Elev)
Well:	Goodnight 1 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	Goodnight 1 Fee #1H, Sec 1, T-12S, R-28E				
Site Position:		Northing:	839,401.43 ft	Latitude:	33° 18' 25.961 N
From:	Map	Easting:	617,405.59 ft	Longitude:	104° 5' 3.646 W
Position Uncertainty:	0.00 ft	Slot Radius:	"	Grid Convergence:	0.14 °

Well	Goodnight 1 Fee #1H					
Well Position	+N/-S	0.00 ft	Northing:	839,401.43 ft	Latitude:	33° 18' 25.961 N
	+E/-W	0.00 ft	Easting:	617,405.59 ft	Longitude:	104° 5' 3.646 W
Position Uncertainty	0.00 ft	Wellhead Elevation:	3,689.00 ft	Ground Level:	3,670.00 ft	

Wellbore	Lateral #1				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF200510	06/15/10	8.01	61.14	49,340

Design	Design #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00

Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	7,745.00	0.00	0.00	100.22

Survey Tool Program	Date	07/21/10		
From	To	Survey (Wellbore)	Tool Name	Description
(ft)	(ft)			
0.00	7,000.00	Design #2 (Lateral #1)	NS-GYRO-MS	North sensing gyrocompassing m/s
7,000.00	11,524.18	Design #2 (Lateral #1)	CUDD MWD	MWD - Standard CUDD MWD

Planned Survey									
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Vertical	Dogleg	Build	Turn
Depth	(°)	(°)	Depth	(ft)	(ft)	Section	Rate	Rate	Rate
(ft)			(ft)			(ft)	(°/100ft)	(°/100ft)	(°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6,170.00	0.00	0.00	6,170.00	0.00	0.00	0.00	0.00	0.00	0.00
Wolfcamp									
6,860.00	0.00	0.00	6,860.00	0.00	0.00	0.00	0.00	0.00	0.00
Pennsylvanian									
7,172.04	0.00	0.00	7,172.04	0.00	0.00	0.00	0.00	0.00	0.00
KOP - Build 10°/100'									
7,655.29	48.32	100.22	7,600.00	-34.08	188.95	192.00	10.00	10.00	0.00
Mississippian									
7,711.07	53.90	100.22	7,635.00	-41.78	231.65	235.39	10.00	10.00	0.00
Mississippian Osage									

Company: Devon Energy
Project: Chaves Co, New Mexico (Nad-83)
Site: Goodnight 1 Fee #1H
Well: Goodnight 1 Fee #1H
Wellbore: Lateral #1
Design: Design #2

Local Co-ordinate Reference:
TVD Reference: WELL @ 3689.00ft (Original Well Elev)
MD Reference: WELL @ 3689.00ft (Original Well Elev)
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.21 Single User Db

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)
8,072.04	90.00	100.22	7,745.00	-101.70	563.86	572.96	10.00	10.00	0.00
EOC - Hold I:90° @ A:100.22*									
11,524.18	90.00	100.22	7,745.00	-714.49	3,961.18	4,025.10	0.00	0.00	0.00
PBHL - TD (G1F#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 (G1F#1H)	0.00	359.88	7,745.00	-714.49	3,961.18	838,686.94	621,366.76	33° 18' 18.795 N	104° 4' 16.991 W
- plan hits target center									
- Point									

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,170.00	6,170.00	Wolfcamp		0.00	
6,860.00	6,860.00	Pennsylvanian		0.00	
7,655.29	7,600.00	Mississippian		0.00	
7,711.07	7,635.00	Mississippian Osage		0.00	
	7,805.00	Mississippian Lower Osage		0.00	
	8,055.00	Mississippian Kinderhook		0.00	
	8,095.00	Siluro-Devonian		0.00	

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
7,172.04	7,172.04	0.00	0.00	KOP - Build 10°/100'
8,072.04	7,745.00	-101.70	563.86	EOC - Hold I:90° @ A:100.22*

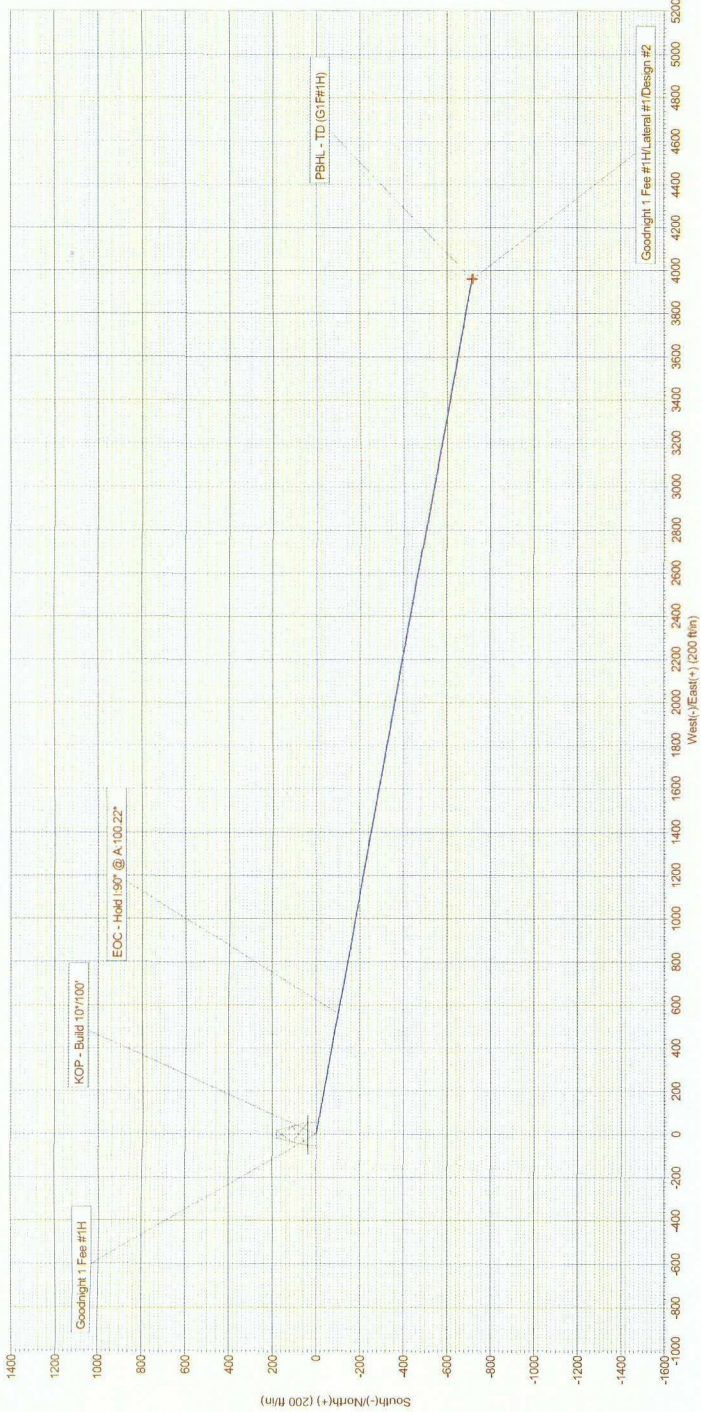
Checked By: _____ Approved By: _____ Date: _____



Project: Chaves Co, New Mexico (Nad-83)
Site: Goodnight 1 Fee #1H
Well: Goodnight 1 Fee #1H
Wellbore: Lateral #1
Design: Design #2



Plan: Design #2 (Goodnight 1 Fee #1H Lateral #1)	
Created By: Mike Starkey	Date: 10/15, July 21 2010
Checked: _____	Date: _____
Reviewed: _____	Date: _____
Approved: _____	Date: _____

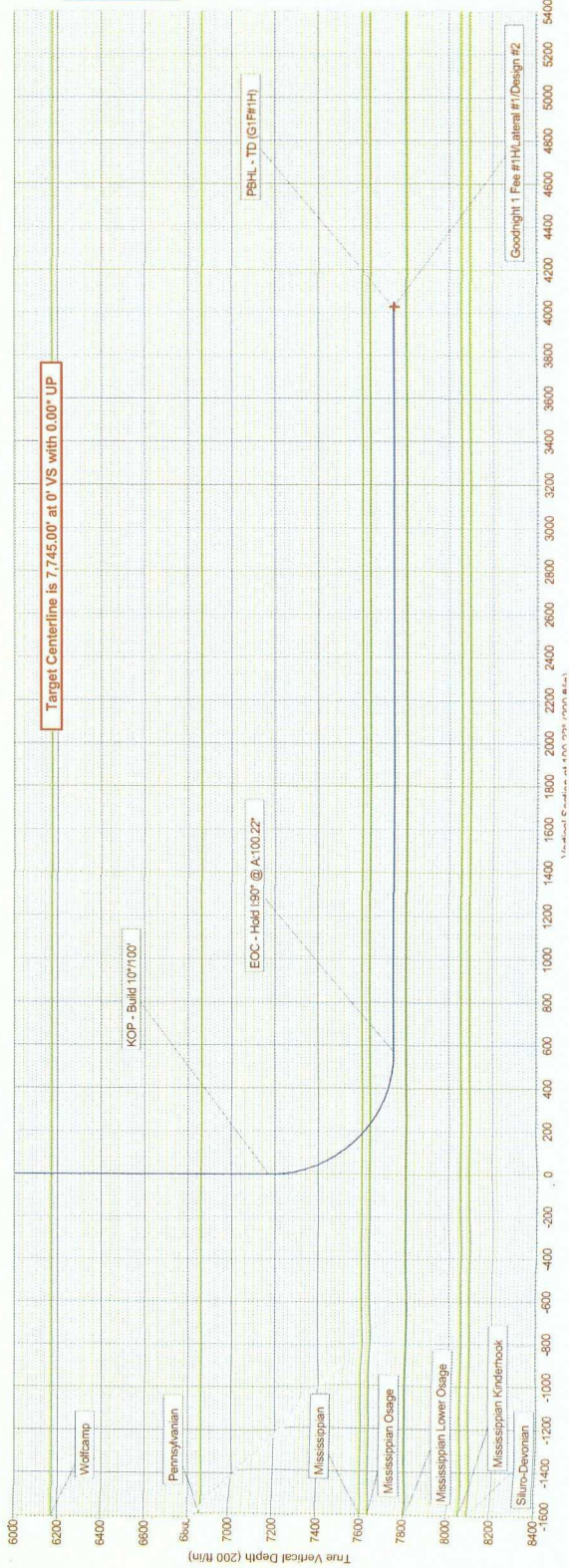


SECTION DETAILS									
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	DLeg	TFace	VSec
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	7172.04	0.00	0.00	7172.04	0.00	0.00	0.00	0.00	0.00
3	8072.04	50.00	100.22	7745.00	-101.71	583.86	10.00	100.22	572.96
4	11524.16	50.00	100.22	7745.00	-714.49	3961.16	0.00	0.00	4025.10

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)									
Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude	Shape	Point
PBHL - TD (G1F#1H)	7745.00	-714.49	3961.18	838686.94	621366.76	33° 18' 18.95" N	104° 4' 16.99" W		

ANNOTATIONS			
TVD	MD	Annotation	
7172.04	7172.04	KOP - Build 10°/100'	
7745.00	8072.04	EOC - Hold 150' @ A:100.22°	

WELL DETAILS: Goodnight 1 Fee #1H					
Ground Level: 3870.00					
+N-S	0.00	+E-W	0.00	Northing	638401.43
				Easting	617405.59
				Latitude	33° 18' 25.96" N
				Longitude	104° 5' 3.66" W
				Slot	



PROJECT DETAILS: Chaves Co, New Mexico (Nad-83)	
Geodetic System:	US State Plane 1983
Datum:	North American Datum 1983
Ellipsoid:	Clarke 1866
Zone:	New Mexico Eastern Zone
System Datum:	Mean Sea Level



Goodnight 1 Fee #1H_Plan #2_Report_07-21-10.txt

Devon Energy

Goodnight 1 Fee #1H - Design #2

Chaves Co, New Mexico (Nad-83)

Goodnight 1 Fee #1H

Measured Depth (ft)	Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00 N	0.00 E	0.00	0.00
7172.04	0.00	0.00	7172.04	0.00 N	0.00 E	0.00	0.00
7200.00	2.80	100.22	7199.99	0.12 S	0.67 E	0.68	10.00
7300.00	12.80	100.22	7298.94	2.53 S	14.00 E	14.23	10.00
7400.00	22.80	100.22	7394.03	7.94 S	44.04 E	44.75	10.00
7500.00	32.80	100.22	7482.38	16.21 S	89.88 E	91.33	10.00
7600.00	42.80	100.22	7561.30	27.08 S	150.11 E	152.53	10.00
7700.00	52.80	100.22	7628.39	40.21 S	222.92 E	226.51	10.00
7800.00	62.80	100.22	7681.62	55.21 S	306.08 E	311.02	10.00
7900.00	72.80	100.22	7719.36	71.62 S	397.08 E	403.49	10.00
8000.00	82.80	100.22	7740.48	88.95 S	493.15 E	501.11	10.00
8072.04	90.00	100.22	7745.00	101.71 S	563.86 E	572.96	10.00
8100.00	90.00	100.22	7745.00	106.67 S	591.37 E	600.92	0.00
8200.00	90.00	100.22	7745.00	124.42 S	689.78 E	700.92	0.00
8300.00	90.00	100.22	7745.00	142.17 S	788.20 E	800.92	0.00
8400.00	90.00	100.22	7745.00	159.92 S	886.61 E	900.92	0.00
8500.00	90.00	100.22	7745.00	177.67 S	985.02 E	1000.92	0.00
8600.00	90.00	100.22	7745.00	195.42 S	1083.43 E	1100.92	0.00
8700.00	90.00	100.22	7745.00	213.17 S	1181.84 E	1200.92	0.00
8800.00	90.00	100.22	7745.00	230.92 S	1280.26 E	1300.92	0.00
8900.00	90.00	100.22	7745.00	248.68 S	1378.67 E	1400.92	0.00
9000.00	90.00	100.22	7745.00	266.43 S	1477.08 E	1500.92	0.00
9100.00	90.00	100.22	7745.00	284.18 S	1575.49 E	1600.92	0.00
9200.00	90.00	100.22	7745.00	301.93 S	1673.90 E	1700.92	0.00
9300.00	90.00	100.22	7745.00	319.68 S	1772.32 E	1800.92	0.00
9400.00	90.00	100.22	7745.00	337.43 S	1870.73 E	1900.92	0.00
9500.00	90.00	100.22	7745.00	355.18 S	1969.14 E	2000.92	0.00
9600.00	90.00	100.22	7745.00	372.93 S	2067.55 E	2100.92	0.00
9700.00	90.00	100.22	7745.00	390.68 S	2165.96 E	2200.92	0.00
9800.00	90.00	100.22	7745.00	408.43 S	2264.38 E	2300.92	0.00
9900.00	90.00	100.22	7745.00	426.18 S	2362.79 E	2400.92	0.00
10000.00	90.00	100.22	7745.00	443.94 S	2461.20 E	2500.92	0.00
10100.00	90.00	100.22	7745.00	461.69 S	2559.61 E	2600.92	0.00
10200.00	90.00	100.22	7745.00	479.44 S	2658.02 E	2700.92	0.00
10300.00	90.00	100.22	7745.00	497.19 S	2756.44 E	2800.92	0.00
10400.00	90.00	100.22	7745.00	514.94 S	2854.85 E	2900.92	0.00
10500.00	90.00	100.22	7745.00	532.69 S	2953.26 E	3000.92	0.00
10600.00	90.00	100.22	7745.00	550.44 S	3051.67 E	3100.92	0.00
10700.00	90.00	100.22	7745.00	568.19 S	3150.08 E	3200.92	0.00
10800.00	90.00	100.22	7745.00	585.94 S	3248.49 E	3300.92	0.00
10900.00	90.00	100.22	7745.00	603.69 S	3346.91 E	3400.92	0.00
11000.00	90.00	100.22	7745.00	621.44 S	3445.32 E	3500.92	0.00
11100.00	90.00	100.22	7745.00	639.20 S	3543.73 E	3600.92	0.00
11200.00	90.00	100.22	7745.00	656.95 S	3642.14 E	3700.92	0.00
11300.00	90.00	100.22	7745.00	674.70 S	3740.55 E	3800.92	0.00
11400.00	90.00	100.22	7745.00	692.45 S	3838.97 E	3900.92	0.00
11500.00	90.00	100.22	7745.00	710.20 S	3937.38 E	4000.92	0.00
11524.18	90.00	100.22	7745.00	714.49 S	3961.18 E	4025.10	0.00

All data are in feet unless otherwise stated. Directions and coordinates are relative to Grid North.

Vertical depths are relative to WELL. Northings and Eastings are relative to Site.

Goodnight 1 Fee #1H_Plan #2_Report_07-21-10.txt

The Dogleg Severity is in Degrees per 100 feet.

Vertical Section is from Slot and calculated along an Azimuth of 100.220° (Grid).

Coordinate System is North American Datum 1983 US State Plane 1983, New Mexico Eastern Zone.

Central meridian is -104.333°.

Grid Convergence at Surface is 0.137°.

Based upon Minimum Curvature type calculations, at a Measured Depth of 11524.18ft., the Bottom Hole Displacement is 4025.10ft., in the Direction of 100.220° (Grid).