



Devon Energy

Chaves Co, New Mexico (Nad-83)

Longhorn 28 Fee #1H

Longhorn 28 Fee #1H

#14535

Lateral #1

Plan: Design #2

Standard Survey Report

22 July, 2010



Company:	Devon Energy	Local Co-ordinate Reference:	Site Longhorn 28 Fee #1H
Project:	Chaves Co, New Mexico (Nad-83)	TVD Reference:	WELL @ 3919.00ft (Original Well Elev)
Site:	Longhorn 28 Fee #1H	MD Reference:	WELL @ 3919.00ft (Original Well Elev)
Well:	Longhorn 28 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)	System Datum:	Mean Sea Level
Map System:	US State Plane 19:		
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Longhorn 28 Fee #1H, Sec 28, T-10S, R-29E		
Site Position:		Northing:	881,543.90 ft
From:	Map	Easting:	645,021.58 ft
Position Uncertainty:	0.00 ft	Slot Radius:	"
		Latitude:	33° 25' 22.151 N
		Longitude:	103° 59' 36.616 W
		Grid Convergence:	0.19 °

Well	Longhorn 28 Fee #1H					
Well Position	+N/-S	0.00 ft	Northing:	881,543.90 ft	Latitude:	33° 25' 22.151 N
	+E/-W	0.00 ft	Easting:	645,021.58 ft	Longitude:	103° 59' 36.616 W
Position Uncertainty		0.00 ft	Wellhead Elevation:	3,919.00 ft	Ground Level:	3,900.00 ft

Wellbore	Lateral #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	06/16/10	7.98	61.26	49,417

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)	(°)
	8,815.00	0.00	0.00	91.09

Survey Tool Program	Date	07/22/10		
From	To	Survey (Wellbore)	Tool Name	Description
(ft)	(ft)			
0.00	8,000.00	Design #2 (Lateral #1)	NS-GYRO-MS	North sensing gyrocompassing m/s
8,000.00	11,375.21	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
5,925.00	0.00	0.00	5,925.00	0.00	0.00	0.00	0.00	0.00	0.00
Abo									
6,345.00	0.00	0.00	6,345.00	0.00	0.00	0.00	0.00	0.00	0.00
Abo Dolomite									
6,495.00	0.00	0.00	6,495.00	0.00	0.00	0.00	0.00	0.00	0.00
Wolfcamp									
7,450.00	0.00	0.00	7,450.00	0.00	0.00	0.00	0.00	0.00	0.00
Pennsylvanian									
8,177.24	0.00	0.00	8,177.24	0.00	0.00	0.00	0.00	0.00	0.00
KOP - Build 10°/100'									



CUDD Drilling & Measurement Services

Survey Report



Company: Devon Energy
Project: Chaves Co, New Mexico (Nad-83)
Site: Longhorn 28 Fee #1H
Well: Longhorn 28 Fee #1H
Wellbore: Lateral #1
Design: Design #2

Local Co-ordinate Reference: Site Longhorn 28 Fee #1H
TVD Reference: WELL @ 3919.00ft (Original Well Elev)
MD Reference: WELL @ 3919.00ft (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)
8,463.52	28.63	91.09	8,451.76	-1.34	70.03	70.05	10.00	10.00	0.00
Mississippian									
8,517.03	33.98	91.09	8,497.46	-1.87	97.82	97.84	10.00	10.00	0.00
Mississippian Meramec									
8,574.36	39.71	91.09	8,543.32	-2.52	132.18	132.20	10.00	10.00	0.00
Mississippian Osage									
8,950.51	77.33	91.09	8,736.24	-8.53	447.18	447.26	10.00	10.00	0.00
Mississippian Lower Osage									
9,061.14	88.39	91.09	8,749.97	-10.62	556.76	556.86	10.00	10.00	0.00
EOC - Hold I:88.39° @ A:91.09°									
11,375.60	88.39	91.09	8,815.00	-54.72	2,869.89	2,870.41	0.00	0.00	0.00
PBHL - TD(L28F#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(L28F#1H)	0.00	359.86	8,815.00	-54.72	2,869.89	881,489.18	647,891.46	33° 25' 21.516 N	103° 59' 2.756 W
- plan hits target center									
- Point									

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
5,925.00	5,925.00	Abo		1.44	89.87
6,345.00	6,345.00	Abo Dolomite		1.44	89.87
6,495.00	6,495.00	Wolfcamp		1.44	89.87
7,450.00	7,450.00	Pennsylvanian		1.44	89.87
8,463.52	8,450.00	Mississippian		1.44	89.87
8,517.03	8,495.00	Mississippian Meramec		1.44	89.87
8,574.36	8,540.00	Mississippian Osage		1.44	89.87
8,950.51	8,725.00	Mississippian Lower Osage		1.44	89.87
	9,045.00	Siluro-Devonian		1.44	89.87

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates	Comment
		+N/-S (ft)	+E/-W (ft)
8,177.24	8,177.24	0.00	0.00
9,061.14	8,749.97	-10.62	556.76
			KOP - Build 10°/100'
			EOC - Hold I:88.39° @ A:91.09°

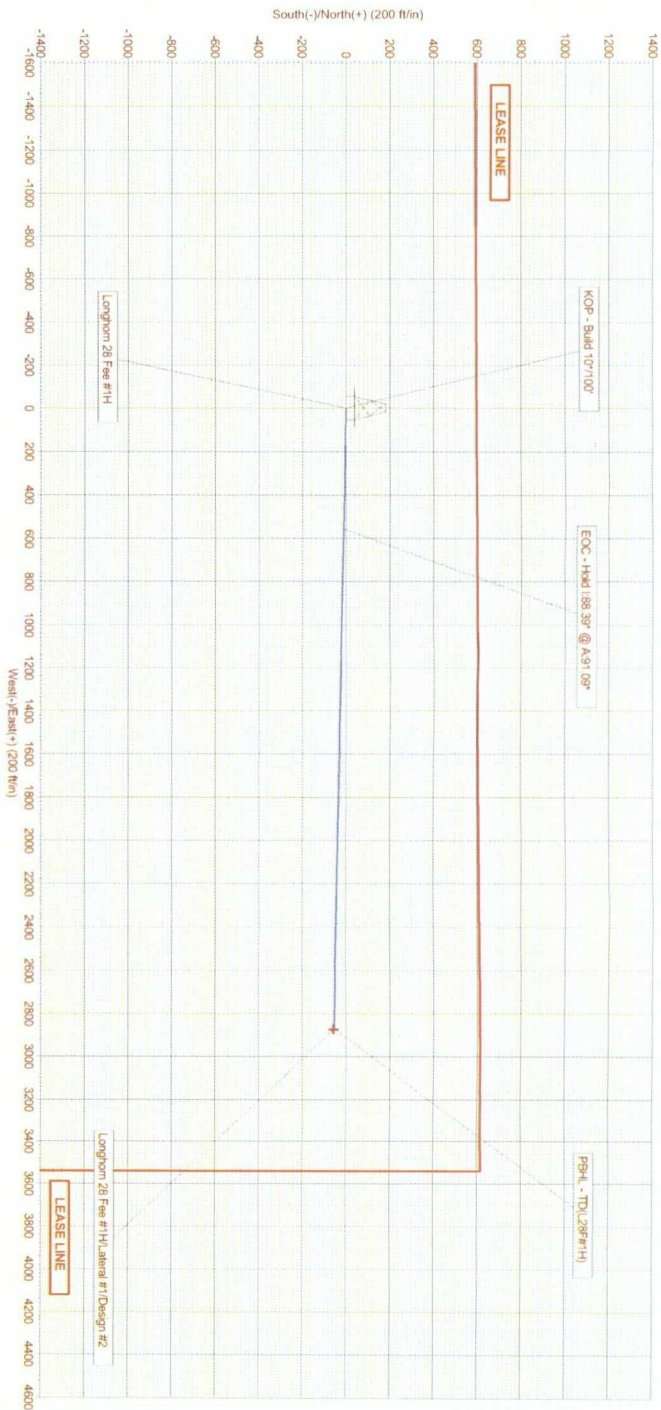
Checked By: _____ Approved By: _____ Date: _____



Project: Chavez Co., New Mexico (Nad-83)
Site: Longhorn 28 Fee #1H
Well: Longhorn 28 Fee #1H
Wellbore: Lateral #1
Design: Design #2



Plan: Design #2 (Longhorn 28 Fee #1H Lateral #1)	
Created By: Mike Sharkey	Date: 11/09, July 22, 2010
Checked: _____	Date: _____
Reviewed: _____	Date: _____
Approved: _____	Date: _____

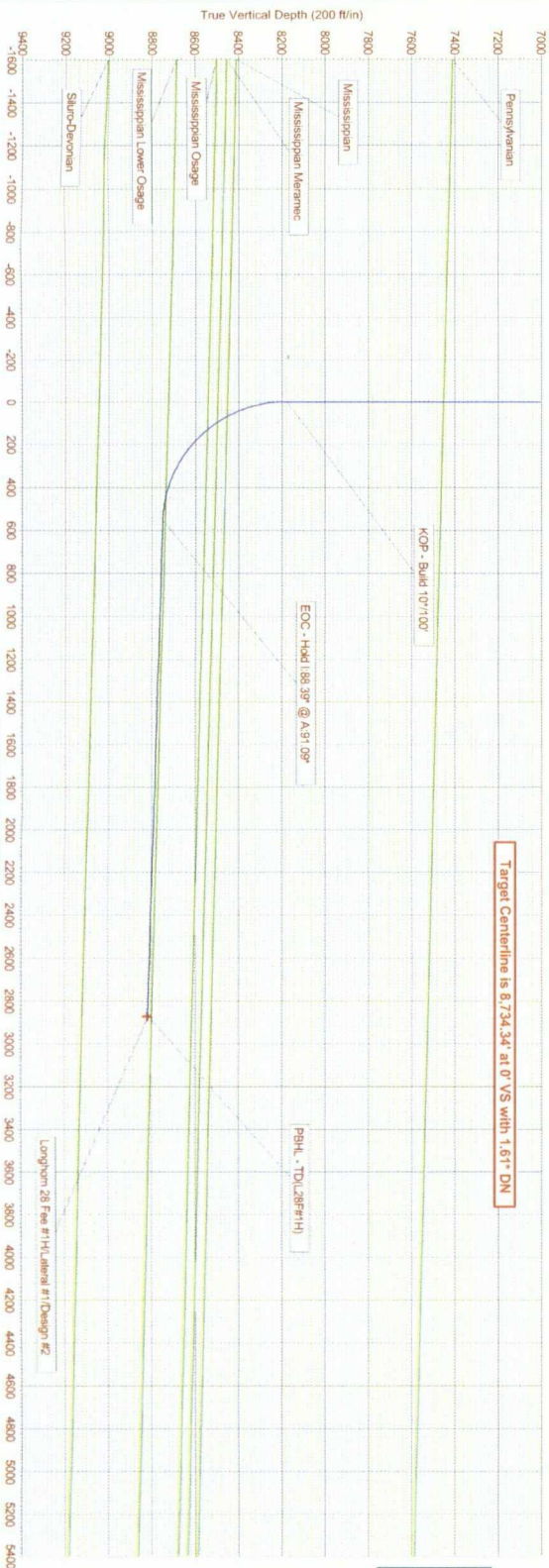


SECTION DETAILS									
Sec	MD	Inc	Ad	TVD	+N/S	+E/W	Dip	Tface	VSec
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	8177.24	0.00	0.00	8177.24	0.00	0.00	0.00	0.00	0.00
3	8177.24	0.00	0.00	8177.24	0.00	0.00	0.00	0.00	0.00
4	11375.60	88.39	91.09	8815.00	-54.72	2869.89	0.00	0.00	2870.41

ANNOTATIONS			
TVD	MD	Annotation	
8177.24	8177.24	KOP - Build 10°/100°	
8148.97	9061.14	EOC - Hdd 188.39° @ A91.09°	

WELL DETAILS: Longhorn 28 Fee #1H			
Ground Level: 3800.00			
WELL @ 3919.00ft (Original Well Elev)			
+N/S	+E/W	Northing	Longitude
0.00	0.00	881543.90	103° 59' 26.616 W

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)							
Name	TVD	+N/S	+E/W	Northing	Easting	Latitude	Longitude
PBHL - TD(28F#1H)	8815.00	-54.72	2869.89	881489.18	647891.46	33° 25' 21.516 N	103° 59' 27.756 W



PROJECT DETAILS: Chavez Co., New Mexico (Nad-83)			
Geoid System	US State Plane 1983		
Ellipsoid	NAD 83		
Zone	New Mexico Eastern Zone		
System Datum	Mean Sea Level		



Longhorn 28 Fee #1H_Plan #2_Report_07-22-10.txt

Fee #1H - Design #2

New Mexico (Nad-83)

Fee #1H

Incl.	Azim.	Vertical Depth (ft)	Northings (ft)	Eastings (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
0.00	0.00	0.00	0.00 N	0.00 E	0.00	0.00
0.00	0.00	8177.24	0.00 N	0.00 E	0.00	0.00
2.28	91.09	8199.99	0.01 S	0.45 E	0.45	10.00
12.28	91.09	8299.06	0.25 S	13.10 E	13.10	10.00
22.28	91.09	8394.43	0.82 S	42.75 E	42.76	10.00
32.28	91.09	8483.20	1.69 S	88.51 E	88.53	10.00
42.28	91.09	8562.67	2.84 S	148.99 E	149.02	10.00
52.28	91.09	8630.43	4.24 S	222.35 E	222.39	10.00
62.28	91.09	8684.42	5.84 S	306.35 E	306.41	10.00
72.28	91.09	8723.00	7.60 S	398.46 E	398.53	10.00
82.28	91.09	8745.00	9.45 S	495.86 E	495.95	10.00
88.39	91.09	8749.97	10.62 S	556.76 E	556.86	10.00
88.39	91.09	8751.06	11.36 S	595.60 E	595.70	0.00
88.39	91.09	8753.87	13.26 S	695.54 E	695.66	0.00
88.39	91.09	8756.68	15.17 S	795.48 E	795.63	0.00
88.39	91.09	8759.49	17.07 S	895.42 E	895.59	0.00
88.39	91.09	8762.30	18.98 S	995.37 E	995.55	0.00
88.39	91.09	8765.11	20.88 S	1095.31 E	1095.51	0.00
88.39	91.09	8767.92	22.79 S	1195.25 E	1195.47	0.00
88.39	91.09	8770.73	24.70 S	1295.19 E	1295.43	0.00
88.39	91.09	8773.54	26.60 S	1395.13 E	1395.39	0.00
88.39	91.09	8776.35	28.51 S	1495.08 E	1495.35	0.00
88.39	91.09	8779.16	30.41 S	1595.02 E	1595.31	0.00
88.39	91.09	8781.97	32.32 S	1694.96 E	1695.27	0.00
88.39	91.09	8784.78	34.22 S	1794.90 E	1795.23	0.00
88.39	91.09	8787.59	36.13 S	1894.85 E	1895.19	0.00
88.39	91.09	8790.40	38.03 S	1994.79 E	1995.15	0.00
88.39	91.09	8793.21	39.94 S	2094.73 E	2095.11	0.00
88.39	91.09	8796.02	41.85 S	2194.67 E	2195.07	0.00
88.39	91.09	8798.83	43.75 S	2294.62 E	2295.03	0.00
88.39	91.09	8801.64	45.66 S	2394.56 E	2394.99	0.00
88.39	91.09	8804.45	47.56 S	2494.50 E	2494.95	0.00
88.39	91.09	8807.26	49.47 S	2594.44 E	2594.91	0.00
88.39	91.09	8810.07	51.37 S	2694.39 E	2694.87	0.00
88.39	91.09	8812.88	53.28 S	2794.33 E	2794.84	0.00
88.39	91.09	8815.00	54.72 S	2869.89 E	2870.41	0.00

are in feet unless otherwise stated. Directions and coordinates are relative to Grid
depths are relative to WELL. Northings and Eastings are relative to Site.

Severity is in Degrees per 100 feet.
Section is from slot and calculated along an Azimuth of 91.090° (Grid).

System is North American Datum 1983 US State Plane 1983, New Mexico Eastern Zone.
Meridian is -104.333°.
Dip angle at Surface is 0.187°.

Minimum Curvature type calculations, at a Measured Depth of 11375.60ft.,
Hole Displacement is 2870.41ft., in the Direction of 91.090° (Grid).