

DEVON ENERGY

Project: Lea County, NM (NAD-83)
 Site: Thistle Unit
 Well: 23H
 Wellbore: OH
 Design: Plan #1



Azimuths to Grid North
 True North: -0.41°
 Magnetic North: 6.90°

Magnetic Field
 Strength: 48224.2snT
 Dip Angle: 60.12°
 Date: 1/27/2015
 Model: BGGM2014

PROJECT DETAILS: Lea County, NM (NAD-83)

Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: New Mexico Eastern Zone
 System Datum: Mean Sea Level

devon

SECTION DETAILS

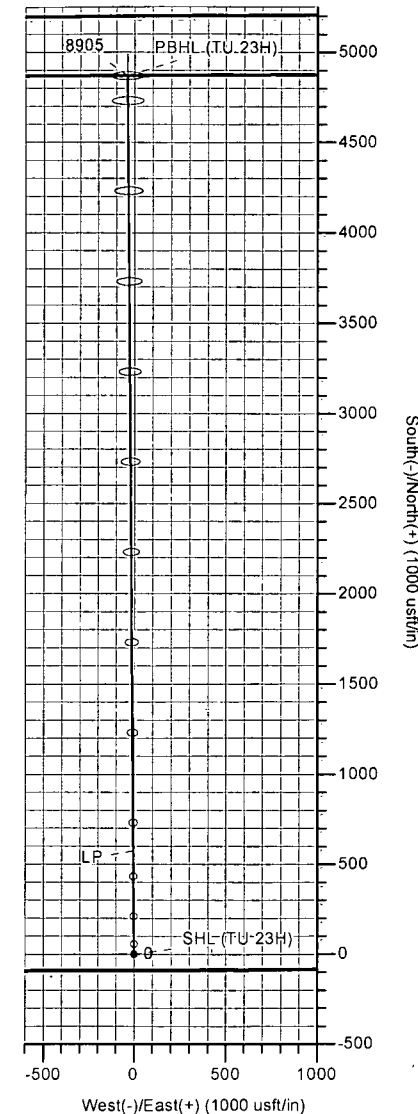
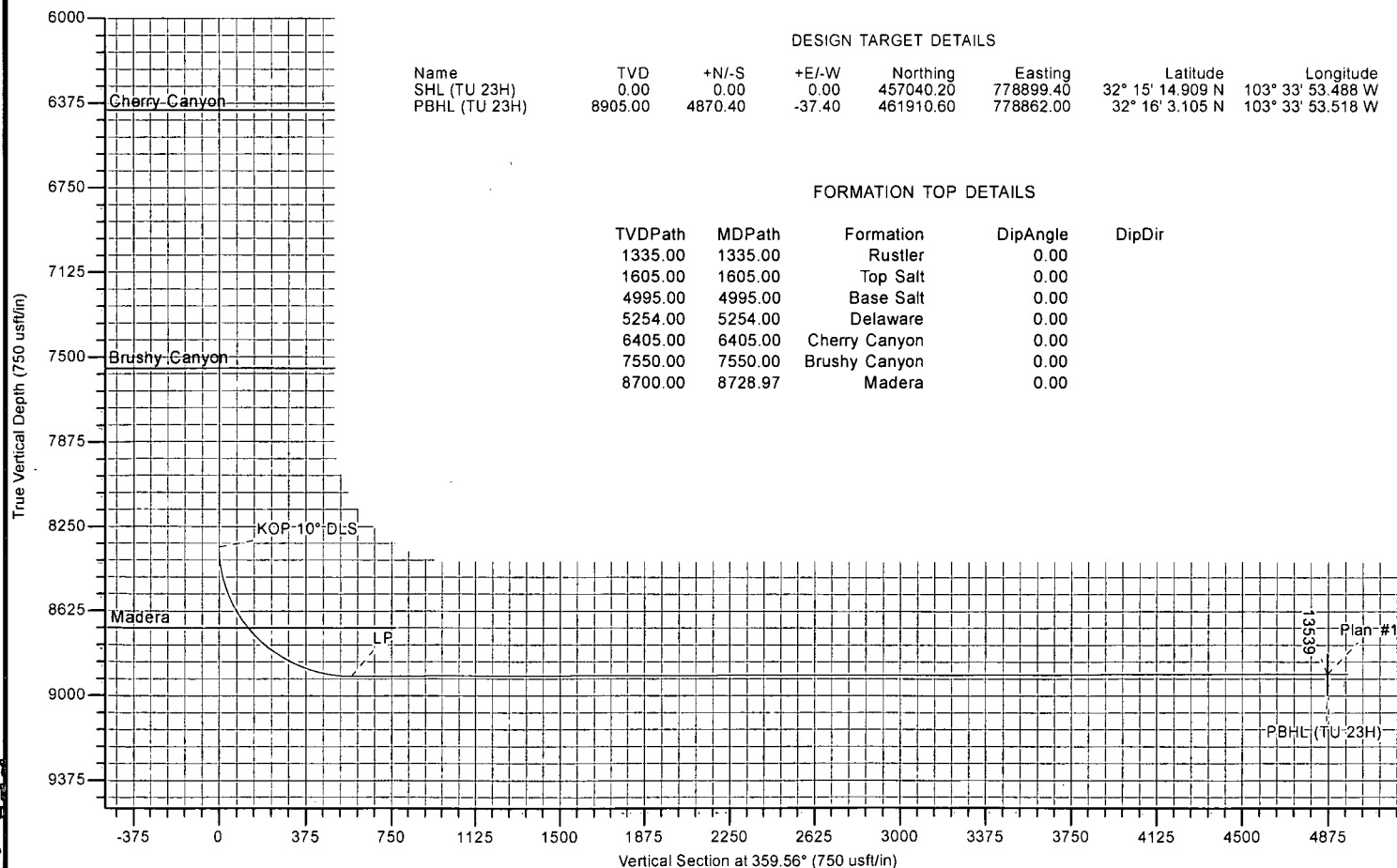
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	8341.04	0.00	0.00	8341.04	0.00	0.00	0.00	0.00	0.00	KOP 10° DLS
3	9242.24	90.12	359.56	8914.00	574.14	-4.41	10.00	359.56	574.16	LP
4	13538.64	90.12	359.56	8905.00	4870.40	-37.40	0.00	0.00	4870.54	TD

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
SHL (TU 23H)	0.00	0.00	0.00	457040.20	778899.40	32° 15' 14.909 N	103° 33' 53.488 W
PBHL (TU 23H)	8905.00	4870.40	-37.40	461910.60	778862.00	32° 16' 3.105 N	103° 33' 53.518 W

FORMATION TOP DETAILS

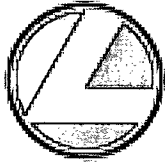
TVDPath	MDPath	Formation	DipAngle	DipDir
1335.00	1335.00	Rustler	0.00	
1605.00	1605.00	Top Salt	0.00	
4995.00	4995.00	Base Salt	0.00	
5254.00	5254.00	Delaware	0.00	
6405.00	6405.00	Cherry Canyon	0.00	
7550.00	7550.00	Brushy Canyon	0.00	
8700.00	8728.97	Madera	0.00	



LEAM DRILLING SYSTEMS LLC
 2010 East Davis, Conroe, Texas 77301
 Phone: 936/756-7577, Fax 936/756-7595

Plan: Plan #1 (23H/OH)
 Thistle Unit
 Created By: Brady Deaver Date: 11:41, January 27 2015
 Date: _____
 Approved: _____ Date: _____

FEB 05 2015



LEAM
Drilling Systems, Inc.

DEVON ENERGY

Lea County, NM (NAD-83)

Thistle Unit

23H

OH

Plan: Plan #1

Standard Planning Report

27 January, 2015


devon

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 23H
Company:	DEVON ENERGY	TVD Reference:	3632' GL + 25' RKB @ 3657.00usft (Original Well Elev)
Project:	Lea County, NM (NAD-83)	MD Reference:	3632' GL + 25' RKB @ 3657.00usft (Original Well Elev)
Site:	Thistle Unit	North Reference:	Grid
Well:	23H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project	Lea County, NM (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	Thistle Unit				
Site Position:		Northing:	468,026.90 usft	Latitude:	32° 17' 3.494 N
From:	Map	Easting:	780,722.56 usft	Longitude:	103° 33' 31.335 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.41

Well	23H, Delaware					
Well Position	+N/-S	-10,986.70 usft	Northing:	457,040.20 usft	Latitude:	32° 15' 14.909 N
	+E/-W	-1,823.16 usft	Easting:	778,899.40 usft	Longitude:	103° 33' 53.488 W
Position Uncertainty	0.00 usft		Wellhead Elevation:	3,657.00 usft	Ground Level:	3,632.00 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	1/27/2015	7.31	60.12	48,224

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	359.56

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
8,341.04	0.00	0.00	8,341.04	0.00	0.00	0.00	0.00	0.00	0.00	
9,242.24	90.12	359.56	8,914.00	574.14	-4.41	10.00	10.00	-0.05	359.56	
13,538.64	90.12	359.56	8,905.00	4,870.40	-37.40	0.00	0.00	0.00	0.00	PBHL (TU 23H)



LEAM Drilling Systems LLC
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 23H
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Project:	Lea County, NM (NAD-83)	MD Reference:	3632' GL + 25' RKB @ 3657.00usft (Original Well Elev)
Site:	Thistle Unit	North Reference:	Grid
Well:	23H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SHL (TU 23H)									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,335.00	0.00	0.00	1,335.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,605.00	0.00	0.00	1,605.00	0.00	0.00	0.00	0.00	0.00	0.00
Top Salt									
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00

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Site:	Thistle Unit	North Reference:	Grid
Well:	23H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,800.00	0.00	0.00	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,995.00	0.00	0.00	4,995.00	0.00	0.00	0.00	0.00	0.00	0.00
Base Salt									
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,100.00	0.00	0.00	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00
5,254.00	0.00	0.00	5,254.00	0.00	0.00	0.00	0.00	0.00	0.00
Delaware									
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,400.00	0.00	0.00	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,600.00	0.00	0.00	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,700.00	0.00	0.00	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,800.00	0.00	0.00	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,900.00	0.00	0.00	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,405.00	0.00	0.00	6,405.00	0.00	0.00	0.00	0.00	0.00	0.00
Cherry Canyon									
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
7,550.00	0.00	0.00	7,550.00	0.00	0.00	0.00	0.00	0.00	0.00
Brushy Canyon									
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00
8,341.04	0.00	0.00	8,341.04	0.00	0.00	0.00	0.00	0.00	0.00
KOP 10° DLS									
8,350.00	0.90	359.56	8,350.00	0.07	0.00	0.07	10.00	10.00	0.00
8,400.00	5.90	359.56	8,399.90	3.03	-0.02	3.03	10.00	10.00	0.00
8,450.00	10.90	359.56	8,449.34	10.33	-0.08	10.33	10.00	10.00	0.00
8,500.00	15.90	359.56	8,497.97	21.91	-0.17	21.91	10.00	10.00	0.00

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Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,550.00	20.90	359.56	8,545.40	37.68	-0.29	37.68	10.00	10.00	0.00
8,600.00	25.90	359.56	8,591.27	57.53	-0.44	57.53	10.00	10.00	0.00
8,650.00	30.90	359.56	8,635.24	81.30	-0.62	81.30	10.00	10.00	0.00
8,700.00	35.90	359.56	8,676.97	108.81	-0.84	108.81	10.00	10.00	0.00
8,728.97	38.79	359.56	8,700.00	126.38	-0.97	126.38	10.00	10.00	0.00
Madera									
8,750.00	40.90	359.56	8,716.15	139.86	-1.07	139.86	10.00	10.00	0.00
8,800.00	45.90	359.56	8,752.47	174.20	-1.34	174.20	10.00	10.00	0.00
8,850.00	50.90	359.56	8,785.66	211.57	-1.62	211.58	10.00	10.00	0.00
8,900.00	55.90	359.56	8,815.46	251.69	-1.93	251.70	10.00	10.00	0.00
8,950.00	60.90	359.56	8,841.66	294.26	-2.26	294.27	10.00	10.00	0.00
9,000.00	65.90	359.56	8,864.04	338.96	-2.60	338.97	10.00	10.00	0.00
9,050.00	70.90	359.56	8,882.44	385.43	-2.96	385.44	10.00	10.00	0.00
9,100.00	75.90	359.56	8,896.73	433.33	-3.33	433.34	10.00	10.00	0.00
9,150.00	80.90	359.56	8,906.78	482.29	-3.70	482.30	10.00	10.00	0.00
9,200.00	85.90	359.56	8,912.53	531.94	-4.08	531.95	10.00	10.00	0.00
9,242.24	90.12	359.56	8,914.00	574.14	-4.41	574.16	10.00	10.00	0.00
LP									
9,300.00	90.12	359.56	8,913.88	631.90	-4.85	631.92	0.00	0.00	0.00
9,400.00	90.12	359.56	8,913.67	731.90	-5.62	731.92	0.00	0.00	0.00
9,500.00	90.12	359.56	8,913.46	831.89	-6.39	831.92	0.00	0.00	0.00
9,600.00	90.12	359.56	8,913.25	931.89	-7.16	931.92	0.00	0.00	0.00
9,700.00	90.12	359.56	8,913.04	1,031.89	-7.92	1,031.92	0.00	0.00	0.00
9,800.00	90.12	359.56	8,912.83	1,131.88	-8.69	1,131.92	0.00	0.00	0.00
9,900.00	90.12	359.56	8,912.62	1,231.88	-9.46	1,231.92	0.00	0.00	0.00
10,000.00	90.12	359.56	8,912.41	1,331.88	-10.23	1,331.92	0.00	0.00	0.00
10,100.00	90.12	359.56	8,912.20	1,431.87	-11.00	1,431.92	0.00	0.00	0.00
10,200.00	90.12	359.56	8,911.99	1,531.87	-11.76	1,531.92	0.00	0.00	0.00
10,300.00	90.12	359.56	8,911.78	1,631.87	-12.53	1,631.92	0.00	0.00	0.00
10,400.00	90.12	359.56	8,911.57	1,731.86	-13.30	1,731.92	0.00	0.00	0.00
10,500.00	90.12	359.56	8,911.36	1,831.86	-14.07	1,831.92	0.00	0.00	0.00
10,600.00	90.12	359.56	8,911.15	1,931.86	-14.83	1,931.91	0.00	0.00	0.00
10,700.00	90.12	359.56	8,910.94	2,031.85	-15.60	2,031.91	0.00	0.00	0.00
10,800.00	90.12	359.56	8,910.73	2,131.85	-16.37	2,131.91	0.00	0.00	0.00
10,900.00	90.12	359.56	8,910.53	2,231.85	-17.14	2,231.91	0.00	0.00	0.00
11,000.00	90.12	359.56	8,910.32	2,331.85	-17.91	2,331.91	0.00	0.00	0.00
11,100.00	90.12	359.56	8,910.11	2,431.84	-18.67	2,431.91	0.00	0.00	0.00
11,200.00	90.12	359.56	8,909.90	2,531.84	-19.44	2,531.91	0.00	0.00	0.00
11,300.00	90.12	359.56	8,909.69	2,631.84	-20.21	2,631.91	0.00	0.00	0.00
11,400.00	90.12	359.56	8,909.48	2,731.83	-20.98	2,731.91	0.00	0.00	0.00
11,500.00	90.12	359.56	8,909.27	2,831.83	-21.75	2,831.91	0.00	0.00	0.00
11,600.00	90.12	359.56	8,909.06	2,931.83	-22.51	2,931.91	0.00	0.00	0.00
11,700.00	90.12	359.56	8,908.85	3,031.82	-23.28	3,031.91	0.00	0.00	0.00
11,800.00	90.12	359.56	8,908.64	3,131.82	-24.05	3,131.91	0.00	0.00	0.00
11,900.00	90.12	359.56	8,908.43	3,231.82	-24.82	3,231.91	0.00	0.00	0.00
12,000.00	90.12	359.56	8,908.22	3,331.81	-25.59	3,331.91	0.00	0.00	0.00
12,100.00	90.12	359.56	8,908.01	3,431.81	-26.35	3,431.91	0.00	0.00	0.00
12,200.00	90.12	359.56	8,907.80	3,531.81	-27.12	3,531.91	0.00	0.00	0.00
12,300.00	90.12	359.56	8,907.59	3,631.80	-27.89	3,631.91	0.00	0.00	0.00
12,400.00	90.12	359.56	8,907.38	3,731.80	-28.66	3,731.91	0.00	0.00	0.00
12,500.00	90.12	359.56	8,907.18	3,831.80	-29.42	3,831.91	0.00	0.00	0.00
12,600.00	90.12	359.56	8,906.97	3,931.79	-30.19	3,931.91	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 23H
Company:	DEVON ENERGY	TVD Reference:	3632' GL + 25' RKB @ 3657.00usft (Original Well Elev)
Project:	Lea County, NM (NAD-83)	MD Reference:	3632' GL + 25' RKB @ 3657.00usft (Original Well Elev)
Site:	Thistle Unit	North Reference:	Grid
Well:	23H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,700.00	90.12	359.56	8,906.76	4,031.79	-30.96	4,031.91	0.00	0.00	0.00
12,800.00	90.12	359.56	8,906.55	4,131.79	-31.73	4,131.91	0.00	0.00	0.00
12,900.00	90.12	359.56	8,906.34	4,231.79	-32.50	4,231.91	0.00	0.00	0.00
13,000.00	90.12	359.56	8,906.13	4,331.78	-33.26	4,331.91	0.00	0.00	0.00
13,100.00	90.12	359.56	8,905.92	4,431.78	-34.03	4,431.91	0.00	0.00	0.00
13,200.00	90.12	359.56	8,905.71	4,531.78	-34.80	4,531.91	0.00	0.00	0.00
13,300.00	90.12	359.56	8,905.50	4,631.77	-35.57	4,631.91	0.00	0.00	0.00
13,400.00	90.12	359.56	8,905.29	4,731.77	-36.34	4,731.91	0.00	0.00	0.00
13,500.00	90.12	359.56	8,905.08	4,831.77	-37.10	4,831.91	0.00	0.00	0.00
13,538.64	90.12	359.56	8,905.00	4,870.40	-37.40	4,870.54	0.00	0.00	0.00
TD - PBHL (TU 23H)									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
SHL (TU 23H)	0.00	0.00	0.00	0.00	0.00	457,040.20	778,899.40	32° 15' 14.909 N	103° 33' 53.488 W
- plan hits target center									
- Point									
PBHL (TU 23H)	0.00	0.00	8,905.00	4,870.40	-37.40	461,910.60	778,862.00	32° 16' 3.105 N	103° 33' 53.518 W
- plan hits target center									
- Point									

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,335.00	1,335.00	Rustler		0.00	
1,605.00	1,605.00	Top Salt		0.00	
4,995.00	4,995.00	Base Salt		0.00	
5,254.00	5,254.00	Delaware		0.00	
6,405.00	6,405.00	Cherry Canyon		0.00	
7,550.00	7,550.00	Brushy Canyon		0.00	
8,728.97	8,700.00	Madera		0.00	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		
		+N/-S (usft)	+E/-W (usft)	Comment
8,341.04	8,341.04	0.00	0.00	KOP 10° DLS
9,242.24	8,914.00	574.14	-4.41	LP
13,538.64	8,905.00	4,870.40	-37.40	TD