



Project: Lea County, NM (NAD-83)
 Site: Cotton Draw Unit
 Well: 449H
 Wellbore: OH
 Design: Plan #1



Azimuths to Grid North
 True North: -0.33°
 Magnetic North: 6.62°

Magnetic Field
 Strength: 48134.4snT
 Dip Angle: 59.88°
 Date: 8/10/2016
 Model: HDGM



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

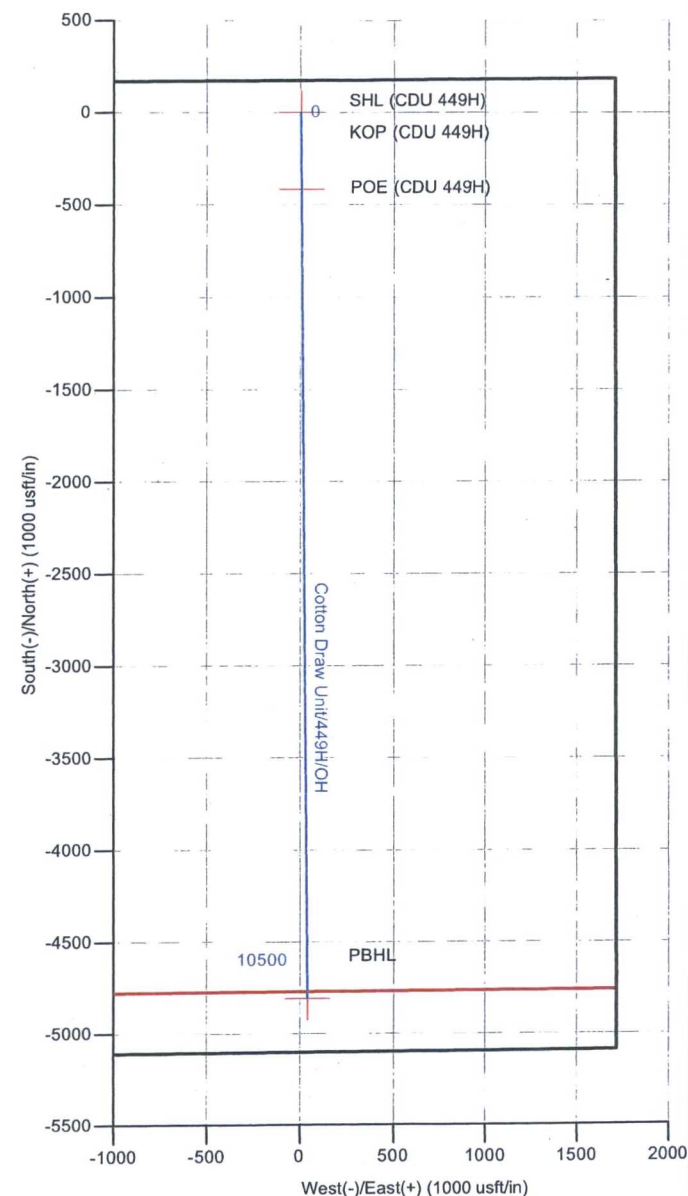
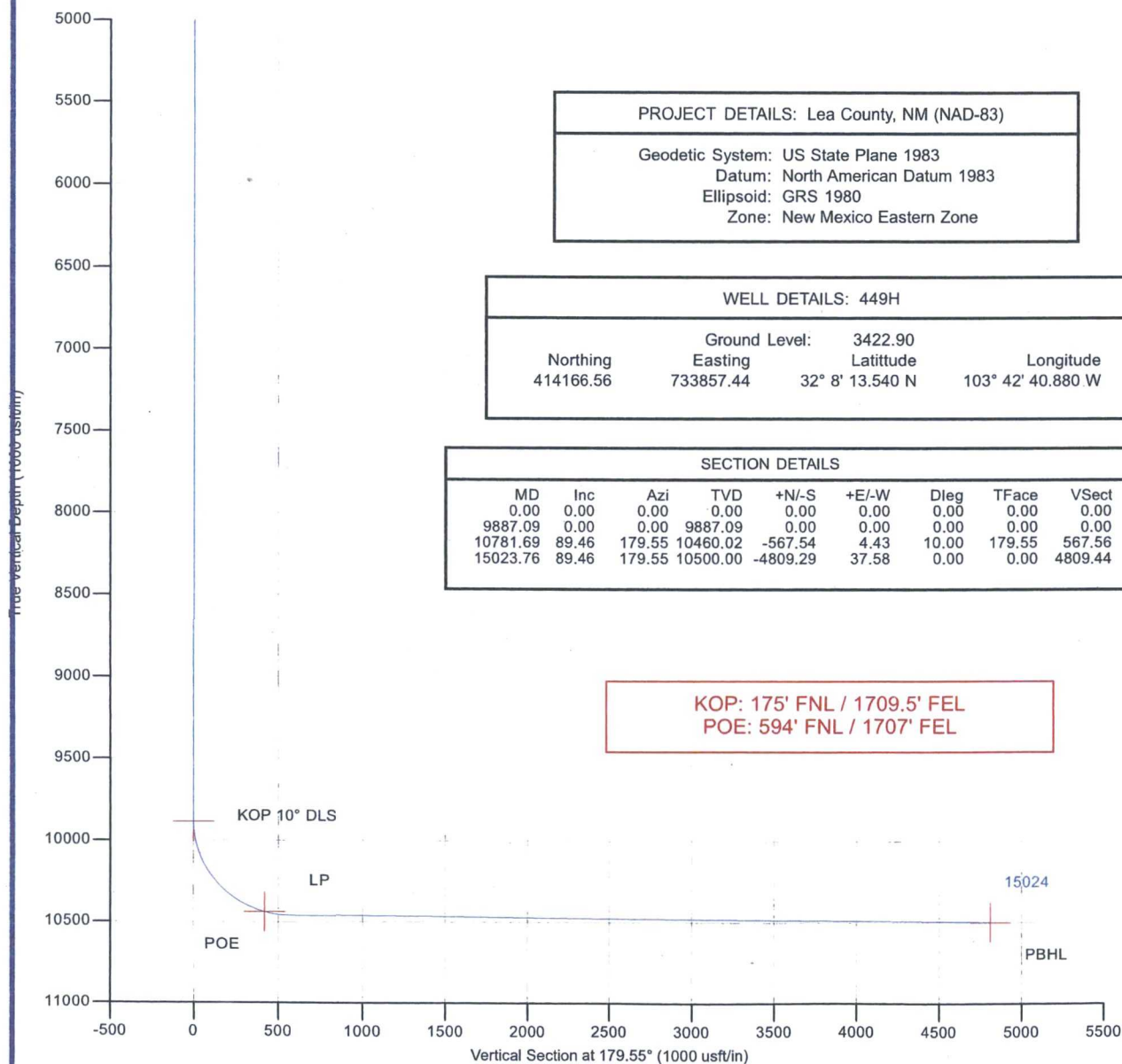
WELL DETAILS: 449H

Ground Level: 3422.90
 Northing 414166.56 Easting 733857.44 Latitude 32° 8' 13.540 N Longitude 103° 42' 40.880 W

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9887.09	0.00	0.00	9887.09	0.00	0.00	0.00	0.00	0.00
10781.69	89.46	179.55	10460.02	-567.54	4.43	10.00	179.55	567.56
15023.76	89.46	179.55	10500.00	-4809.29	37.58	0.00	0.00	4809.44

KOP: 175' FNL / 1709.5' FEL
 POE: 594' FNL / 1707' FEL



DEVON ENERGY

Lea County, NM (NAD-83)

Cotton Draw Unit

449H

OH

Plan: Plan #1

Standard Planning Report

10 August, 2016

HOBBS OCD
MAR 21 2017
RECEIVED

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Single User Db
 Company: DEVON ENERGY
 Project: Lea County, NM (NAD-83)
 Site: Cotton Draw Unit
 Well: 449H
 Wellbore: OH
 Design: Plan #1

Local Co-ordinate Reference: Well 449H
 TVD Reference: 3422.9' GE + 25' KB @ 3447.90usft
 MD Reference: 3422.9' GE + 25' KB @ 3447.90usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

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	Cotton Draw Unit		
Site Position:		Northing:	414,142.25 usft
From:	Map	Easting:	733,967.43 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 8' 13.293 N
		Longitude:	103° 42' 39.602 W
		Grid Convergence:	0.33 °

Well	449H		
Well Position	+N/-S	24.31 usft	Northing:
	+E/-W	-109.99 usft	Easting:
Position Uncertainty	0.00 usft	Wellhead Elevation:	3,447.90 usft
		Latitude:	32° 8' 13.540 N
		Longitude:	103° 42' 40.880 W
		Ground Level:	3,422.90 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
			(°)
	HDGM	8/10/2016	6.95
			Dip Angle
			(°)
			59.88
			Field Strength
			(nT)
			48,134

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			Direction
			(°)
			179.55

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	
9,887.09	0.00	0.00	9,887.09	0.00	0.00	0.00	0.00	0.00	0.00	
10,781.69	89.46	179.55	10,460.02	-567.54	4.43	10.00	10.00	0.00	179.55	
15,023.76	89.46	179.55	10,500.00	-4,809.29	37.58	0.00	0.00	0.00	0.00	PBHL (CDU 449H)

LEAM Drilling Systems LLC

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 MD Reference: 3422.9' GE + 25' KB @ 3447.90usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

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 (CDU 449H)									
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
715.00	0.00	0.00	715.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
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
1,095.00	0.00	0.00	1,095.00	0.00	0.00	0.00	0.00	0.00	0.00
Salado									
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
1,400.00	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
1,700.00	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
4,235.00	0.00	0.00	4,235.00	0.00	0.00	0.00	0.00	0.00	0.00
Base of Salt									
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
4,438.00	0.00	0.00	4,438.00	0.00	0.00	0.00	0.00	0.00	0.00
Delaware									

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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)
4,500.00	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
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
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
5,300.00	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
6,500.00	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
7,600.00	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
8,390.00	0.00	0.00	8,390.00	0.00	0.00	0.00	0.00	0.00	0.00
Bone Spring									
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	0.00	0.00
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00	0.00	0.00
8,800.00	0.00	0.00	8,800.00	0.00	0.00	0.00	0.00	0.00	0.00
8,900.00	0.00	0.00	8,900.00	0.00	0.00	0.00	0.00	0.00	0.00
9,000.00	0.00	0.00	9,000.00	0.00	0.00	0.00	0.00	0.00	0.00
9,100.00	0.00	0.00	9,100.00	0.00	0.00	0.00	0.00	0.00	0.00
9,200.00	0.00	0.00	9,200.00	0.00	0.00	0.00	0.00	0.00	0.00
9,300.00	0.00	0.00	9,300.00	0.00	0.00	0.00	0.00	0.00	0.00
9,365.00	0.00	0.00	9,365.00	0.00	0.00	0.00	0.00	0.00	0.00
1st BSPG Sand									

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Grid
Minimum Curvature

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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)
9,400.00	0.00	0.00	9,400.00	0.00	0.00	0.00	0.00	0.00	0.00
9,500.00	0.00	0.00	9,500.00	0.00	0.00	0.00	0.00	0.00	0.00
9,600.00	0.00	0.00	9,600.00	0.00	0.00	0.00	0.00	0.00	0.00
9,700.00	0.00	0.00	9,700.00	0.00	0.00	0.00	0.00	0.00	0.00
9,755.00	0.00	0.00	9,755.00	0.00	0.00	0.00	0.00	0.00	0.00
2nd BSPG Lime									
9,800.00	0.00	0.00	9,800.00	0.00	0.00	0.00	0.00	0.00	0.00
9,887.09	0.00	0.00	9,887.09	0.00	0.00	0.00	0.00	0.00	0.00
KOP 10° DLS - KOP (CDU 449H)									
9,900.00	1.29	179.55	9,900.00	-0.15	0.00	0.15	10.00	10.00	0.00
9,950.00	6.29	179.55	9,949.87	-3.45	0.03	3.45	10.00	10.00	0.00
9,981.50	9.44	179.55	9,981.07	-7.76	0.06	7.76	10.00	10.00	0.00
2nd BSPG Sand									
10,000.00	11.29	179.55	9,999.27	-11.09	0.09	11.09	10.00	10.00	0.00
10,050.00	16.29	179.55	10,047.81	-23.00	0.18	23.01	10.00	10.00	0.00
10,100.00	21.29	179.55	10,095.13	-39.10	0.31	39.11	10.00	10.00	0.00
10,150.00	26.29	179.55	10,140.87	-59.27	0.46	59.27	10.00	10.00	0.00
10,200.00	31.29	179.55	10,184.68	-83.34	0.65	83.34	10.00	10.00	0.00
10,250.00	36.29	179.55	10,226.22	-111.14	0.87	111.14	10.00	10.00	0.00
10,300.00	41.29	179.55	10,265.18	-142.45	1.11	142.46	10.00	10.00	0.00
10,350.00	46.29	179.55	10,301.26	-177.04	1.38	177.05	10.00	10.00	0.00
10,400.00	51.29	179.55	10,334.19	-214.65	1.68	214.65	10.00	10.00	0.00
10,450.00	56.29	179.55	10,363.71	-254.97	1.99	254.98	10.00	10.00	0.00
10,500.00	61.29	179.55	10,389.61	-297.72	2.33	297.73	10.00	10.00	0.00
10,550.00	66.29	179.55	10,411.69	-342.57	2.68	342.58	10.00	10.00	0.00
10,600.00	71.29	179.55	10,429.77	-389.17	3.04	389.18	10.00	10.00	0.00
10,631.12	74.40	179.55	10,438.95	-418.90	3.27	418.91	10.00	10.00	0.00
2BSSS L Top - POE (CDU 449H)									
10,650.00	76.29	179.55	10,443.72	-437.16	3.42	437.17	10.00	10.00	0.00
10,700.00	81.29	179.55	10,453.44	-486.19	3.80	486.21	10.00	10.00	0.00
10,750.00	86.29	179.55	10,458.85	-535.88	4.19	535.90	10.00	10.00	0.00
10,781.69	89.46	179.55	10,460.02	-567.54	4.43	567.56	10.00	10.00	0.00
LP									
10,800.00	89.46	179.55	10,460.19	-585.85	4.58	585.87	0.00	0.00	0.00
10,900.00	89.46	179.55	10,461.14	-685.84	5.36	685.86	0.00	0.00	0.00
11,000.00	89.46	179.55	10,462.08	-785.84	6.14	785.86	0.00	0.00	0.00
11,100.00	89.46	179.55	10,463.02	-885.83	6.92	885.86	0.00	0.00	0.00
11,200.00	89.46	179.55	10,463.96	-985.82	7.70	985.85	0.00	0.00	0.00
11,300.00	89.46	179.55	10,464.91	-1,085.81	8.48	1,085.85	0.00	0.00	0.00
11,400.00	89.46	179.55	10,465.85	-1,185.81	9.27	1,185.84	0.00	0.00	0.00
11,500.00	89.46	179.55	10,466.79	-1,285.80	10.05	1,285.84	0.00	0.00	0.00
11,600.00	89.46	179.55	10,467.73	-1,385.79	10.83	1,385.83	0.00	0.00	0.00
11,700.00	89.46	179.55	10,468.68	-1,485.78	11.61	1,485.83	0.00	0.00	0.00
11,800.00	89.46	179.55	10,469.62	-1,585.78	12.39	1,585.82	0.00	0.00	0.00
11,900.00	89.46	179.55	10,470.56	-1,685.77	13.17	1,685.82	0.00	0.00	0.00
12,000.00	89.46	179.55	10,471.50	-1,785.76	13.95	1,785.82	0.00	0.00	0.00
12,100.00	89.46	179.55	10,472.44	-1,885.75	14.74	1,885.81	0.00	0.00	0.00
12,200.00	89.46	179.55	10,473.39	-1,985.75	15.52	1,985.81	0.00	0.00	0.00
12,300.00	89.46	179.55	10,474.33	-2,085.74	16.30	2,085.80	0.00	0.00	0.00
12,400.00	89.46	179.55	10,475.27	-2,185.73	17.08	2,185.80	0.00	0.00	0.00
12,500.00	89.46	179.55	10,476.21	-2,285.72	17.86	2,285.79	0.00	0.00	0.00
12,600.00	89.46	179.55	10,477.16	-2,385.72	18.64	2,385.79	0.00	0.00	0.00
12,700.00	89.46	179.55	10,478.10	-2,485.71	19.42	2,485.79	0.00	0.00	0.00
12,800.00	89.46	179.55	10,479.04	-2,585.70	20.20	2,585.78	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Single User Db
 Company: DEVON ENERGY
 Project: Lea County, NM (NAD-83)
 Site: Cotton Draw Unit
 Well: 449H
 Wellbore: OH
 Design: Plan #1

Local Co-ordinate Reference: Well 449H
 TVD Reference: 3422.9' GE + 25' KB @ 3447.90usft
 MD Reference: 3422.9' GE + 25' KB @ 3447.90usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

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)
12,900.00	89.46	179.55	10,479.98	-2,685.69	20.99	2,685.78	0.00	0.00	0.00
13,000.00	89.46	179.55	10,480.93	-2,785.69	21.77	2,785.77	0.00	0.00	0.00
13,100.00	89.46	179.55	10,481.87	-2,885.68	22.55	2,885.77	0.00	0.00	0.00
13,200.00	89.46	179.55	10,482.81	-2,985.67	23.33	2,985.76	0.00	0.00	0.00
13,300.00	89.46	179.55	10,483.75	-3,085.66	24.11	3,085.76	0.00	0.00	0.00
13,400.00	89.46	179.55	10,484.70	-3,185.66	24.89	3,185.75	0.00	0.00	0.00
13,500.00	89.46	179.55	10,485.64	-3,285.65	25.67	3,285.75	0.00	0.00	0.00
13,600.00	89.46	179.55	10,486.58	-3,385.64	26.46	3,385.75	0.00	0.00	0.00
13,700.00	89.46	179.55	10,487.52	-3,485.63	27.24	3,485.74	0.00	0.00	0.00
13,800.00	89.46	179.55	10,488.47	-3,585.63	28.02	3,585.74	0.00	0.00	0.00
13,900.00	89.46	179.55	10,489.41	-3,685.62	28.80	3,685.73	0.00	0.00	0.00
14,000.00	89.46	179.55	10,490.35	-3,785.61	29.58	3,785.73	0.00	0.00	0.00
14,100.00	89.46	179.55	10,491.29	-3,885.60	30.36	3,885.72	0.00	0.00	0.00
14,200.00	89.46	179.55	10,492.24	-3,985.60	31.14	3,985.72	0.00	0.00	0.00
14,300.00	89.46	179.55	10,493.18	-4,085.59	31.92	4,085.71	0.00	0.00	0.00
14,400.00	89.46	179.55	10,494.12	-4,185.58	32.71	4,185.71	0.00	0.00	0.00
14,500.00	89.46	179.55	10,495.06	-4,285.57	33.49	4,285.71	0.00	0.00	0.00
14,600.00	89.46	179.55	10,496.01	-4,385.57	34.27	4,385.70	0.00	0.00	0.00
14,700.00	89.46	179.55	10,496.95	-4,485.56	35.05	4,485.70	0.00	0.00	0.00
14,800.00	89.46	179.55	10,497.89	-4,585.55	35.83	4,585.69	0.00	0.00	0.00
14,900.00	89.46	179.55	10,498.83	-4,685.54	36.61	4,685.69	0.00	0.00	0.00
15,000.00	89.46	179.55	10,499.78	-4,785.54	37.39	4,785.68	0.00	0.00	0.00
15,023.76	89.46	179.55	10,500.00	-4,809.29	37.58	4,809.44	0.00	0.00	0.00
TD - PBHL (CDU 449H)									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL (CDU 449H) - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	414,166.56	733,857.44	32° 8' 13.540 N	103° 42' 40.880 W
KOP (CDU 449H) - plan hits target center - Point	0.00	0.00	9,887.09	0.00	0.00	414,166.56	733,857.44	32° 8' 13.540 N	103° 42' 40.880 W
POE (CDU 449H) - plan hits target center - Point	0.00	0.00	10,438.95	-418.90	3.27	413,747.66	733,860.71	32° 8' 9.395 N	103° 42' 40.870 W
PBHL (CDU 449H) - plan hits target center - Point	0.00	0.00	10,500.00	-4,809.29	37.58	409,357.27	733,895.02	32° 7' 25.947 N	103° 42' 40.766 W

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Single User Db
Company: DEVON ENERGY
Project: Lea County, NM (NAD-83)
Site: Cotton Draw Unit
Well: 449H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well 449H
TVD Reference: 3422.9' GE + 25' KB @ 3447.90usft
MD Reference: 3422.9' GE + 25' KB @ 3447.90usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
715.00	715.00	Rustler		0.54	179.55
1,095.00	1,095.00	Salado		0.54	179.55
4,235.00	4,235.00	Base of Salt		0.54	179.55
4,438.00	4,438.00	Delaware		0.54	179.55
8,390.00	8,390.00	Bone Spring		0.54	179.55
9,365.00	9,365.00	1st BSPG Sand		0.54	179.55
9,755.00	9,755.00	2nd BSPG Lime		0.54	179.55
9,981.50	9,981.07	2nd BSPG Sand		0.54	179.55
10,631.12	10,438.95	2BSSS L Top		0.54	179.55

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
9,887.09	9,887.09	0.00	0.00	KOP 10° DLS
10,781.69	10,460.02	-567.54	4.43	LP
15,023.76	10,500.00	-4,809.29	37.58	TD