

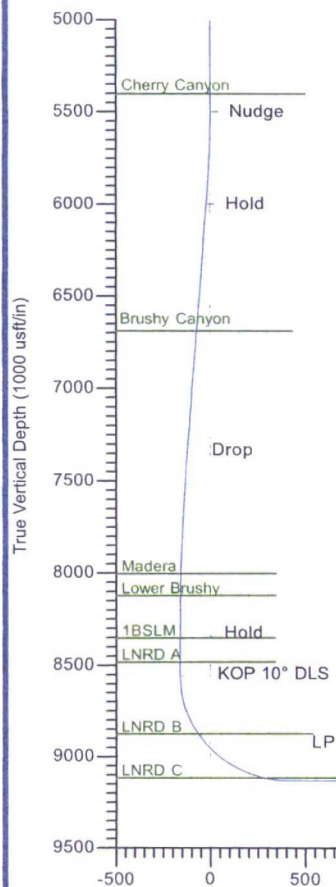


Project: Lea County, NM (NAD-83)
 Site: Cotton Draw Unit
 Well: 354H
 Wellbore: OH
 Design: Plan #1



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

Magnetic Field
 Strength: 48129.3snT
 Dip Angle: 59.87°
 Date: 7/11/2016
 Model: HDGM

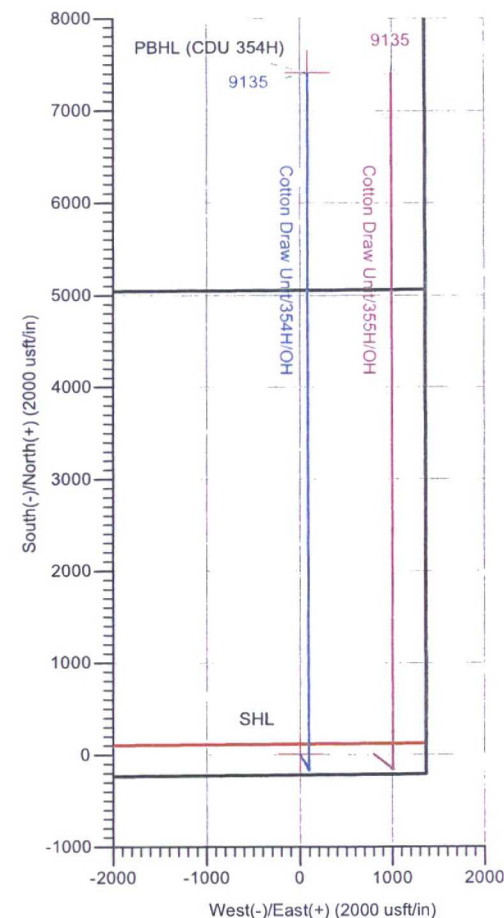


Vertical Section at 359.90° (1000 usft/in)

DESIGN TARGET DETAILS					
Name	TVD	+N/-S	+E/-W	Northing	Easting
SHL (CDU 354H)	0.00	0.00	0.00	409284.02	734204.98
PBHL (CDU 354H)	9135.00	7410.17	78.56	416694.19	734283.54

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	
5500.00	0.00	0.00	5500.00	0.00	0.00	0.00	0.00	0.00	
6000.01	5.00	150.13	5999.38	-18.91	10.86	1.00	150.13	-18.93	
7369.09	5.00	150.13	7363.24	-122.38	70.28	0.00	0.00	-122.51	
8369.11	0.00	0.00	8362.00	-160.20	92.00	0.50	180.00	-160.36	
8569.11	0.00	0.00	8562.00	-160.20	92.00	0.00	0.00	-160.36	
9469.11	90.00	359.90	9134.96	412.75	90.98	10.00	359.90	412.59	
16466.54	90.00	359.90	9135.00	7410.17	78.56	0.00	0.00	7410.02	

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



NM OIL CONSERVATION
ARTESIA DISTRICT

MAY 08 2017

RECEIVED

DEVON ENERGY

Lea County, NM (NAD-83)
Cotton Draw Unit
354H

OH

HOBBS OCD

MAY 10 2017

RECEIVED

Plan: Plan #1

Standard Planning Report

12 July, 2016

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: 354H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well 354H
TVD Reference: 3408.5' GE + 25' KB @ 3433.50usft
MD Reference: 3408.5' GE + 25' KB @ 3433.50usft
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	Latitude:	32° 8' 13.293 N
From:	Map	Easting:	733,967.43 usft	Longitude:	103° 42' 39.602 W
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.33 °

Well	354H					
Well Position	+N/-S	-4,858.23 usft	Northing:	409,284.02 usft	Latitude:	32° 7' 25.205 N
	+E/-W	237.55 usft	Easting:	734,204.98 usft	Longitude:	103° 42' 37.166 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	3,433.50 usft	Ground Level:	3,408.50 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	7/11/2016	6.95	59.87	48,129

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	359.90	

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	
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,000.01	5.00	150.13	5,999.38	-18.91	10.86	1.00	1.00	0.00	150.13	
7,369.09	5.00	150.13	7,363.24	-122.38	70.28	0.00	0.00	0.00	0.00	
8,369.11	0.00	0.00	8,362.00	-160.20	92.00	0.50	-0.50	0.00	180.00	
8,569.11	0.00	0.00	8,562.00	-160.20	92.00	0.00	0.00	0.00	0.00	
9,469.11	90.00	359.90	9,134.96	412.75	90.98	10.00	10.00	-0.01	359.90	
16,466.54	90.00	359.90	9,135.00	7,410.17	78.56	0.00	0.00	0.00	0.00	PBHL (CDU 354H)

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: 354H
 Wellbore: OH
 Design: Plan #1

Local Co-ordinate Reference: Well 354H
 TVD Reference: 3408.5' GE + 25' KB @ 3433.50usft
 MD Reference: 3408.5' GE + 25' KB @ 3433.50usft
 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 354H)									
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
615.00	0.00	0.00	615.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
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
945.00	0.00	0.00	945.00	0.00	0.00	0.00	0.00	0.00	0.00
Salado									
955.00	0.00	0.00	955.00	0.00	0.00	0.00	0.00	0.00	0.00
Top of Salt									
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
1,400.00	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
4,220.00	0.00	0.00	4,220.00	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

LEAM Drilling Systems LLC

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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)
4,465.00	0.00	0.00	4,465.00	0.00	0.00	0.00	0.00	0.00	0.00
Delaware									
4,470.00	0.00	0.00	4,470.00	0.00	0.00	0.00	0.00	0.00	0.00
Bell Canyon									
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
5,405.00	0.00	0.00	5,405.00	0.00	0.00	0.00	0.00	0.00	0.00
Cherry Canyon									
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00
Nudge									
5,600.00	1.00	150.13	5,600.00	-0.76	0.43	-0.76	1.00	1.00	0.00
5,700.00	2.00	150.13	5,699.96	-3.03	1.74	-3.03	1.00	1.00	0.00
5,800.00	3.00	150.13	5,799.86	-6.81	3.91	-6.82	1.00	1.00	0.00
5,900.00	4.00	150.13	5,899.68	-12.10	6.95	-12.12	1.00	1.00	0.00
6,000.01	5.00	150.13	5,999.38	-18.91	10.86	-18.93	1.00	1.00	0.00
Hold									
6,100.00	5.00	150.13	6,098.99	-26.46	15.20	-26.49	0.00	0.00	0.00
6,200.00	5.00	150.13	6,198.60	-34.02	19.54	-34.06	0.00	0.00	0.00
6,300.00	5.00	150.13	6,298.22	-41.58	23.88	-41.62	0.00	0.00	0.00
6,400.00	5.00	150.13	6,397.84	-49.14	28.22	-49.19	0.00	0.00	0.00
6,500.00	5.00	150.13	6,497.46	-56.70	32.56	-56.75	0.00	0.00	0.00
6,600.00	5.00	150.13	6,597.08	-64.26	36.90	-64.32	0.00	0.00	0.00
6,693.27	5.00	150.13	6,690.00	-71.31	40.95	-71.38	0.00	0.00	0.00
Brushy Canyon									
6,700.00	5.00	150.13	6,696.70	-71.81	41.24	-71.89	0.00	0.00	0.00
6,800.00	5.00	150.13	6,796.32	-79.37	45.58	-79.45	0.00	0.00	0.00
6,900.00	5.00	150.13	6,895.94	-86.93	49.92	-87.02	0.00	0.00	0.00
7,000.00	5.00	150.13	6,995.56	-94.49	54.26	-94.58	0.00	0.00	0.00
7,100.00	5.00	150.13	7,095.18	-102.05	58.60	-102.15	0.00	0.00	0.00
7,200.00	5.00	150.13	7,194.80	-109.60	62.94	-109.71	0.00	0.00	0.00
7,300.00	5.00	150.13	7,294.42	-117.16	67.28	-117.28	0.00	0.00	0.00
7,369.09	5.00	150.13	7,363.24	-122.38	70.28	-122.51	0.00	0.00	0.00
Drop									
7,400.00	4.85	150.13	7,394.04	-124.68	71.60	-124.81	0.50	-0.50	0.00
7,500.00	4.35	150.13	7,493.72	-131.63	75.59	-131.76	0.50	-0.50	0.00
7,600.00	3.85	150.13	7,593.46	-137.83	79.15	-137.96	0.50	-0.50	0.00
7,700.00	3.35	150.13	7,693.27	-143.26	82.27	-143.41	0.50	-0.50	0.00
7,800.00	2.85	150.13	7,793.12	-147.95	84.96	-148.10	0.50	-0.50	0.00
7,900.00	2.35	150.13	7,893.02	-151.87	87.22	-152.03	0.50	-0.50	0.00
8,000.00	1.85	150.13	7,992.95	-155.05	89.04	-155.20	0.50	-0.50	0.00
8,012.06	1.79	150.13	8,005.00	-155.38	89.23	-155.53	0.50	-0.50	0.00
Madera									
8,100.00	1.35	150.13	8,092.91	-157.46	90.43	-157.62	0.50	-0.50	0.00
8,132.10	1.19	150.13	8,125.00	-158.07	90.78	-158.23	0.50	-0.50	0.00
Lower Brushy									

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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)
8,200.00	0.85	150.13	8,192.89	-159.12	91.38	-159.28	0.50	-0.50	0.00
8,300.00	0.35	150.13	8,292.89	-160.02	91.90	-160.18	0.50	-0.50	0.00
8,362.11	0.04	150.13	8,355.00	-160.20	92.00	-160.36	0.50	-0.50	0.00
1BSLM									
8,369.11	0.00	0.00	8,362.00	-160.20	92.00	-160.36	0.50	-0.50	0.00
Hold									
8,400.00	0.00	0.00	8,392.89	-160.20	92.00	-160.36	0.00	0.00	0.00
8,492.11	0.00	0.00	8,485.00	-160.20	92.00	-160.36	0.00	0.00	0.00
LNRD A									
8,500.00	0.00	0.00	8,492.89	-160.20	92.00	-160.36	0.00	0.00	0.00
8,569.11	0.00	0.00	8,562.00	-160.20	92.00	-160.36	0.00	0.00	0.00
KOP 10° DLS									
8,600.00	3.09	359.90	8,592.87	-159.37	92.00	-159.53	10.00	10.00	0.00
8,650.00	8.09	359.90	8,642.62	-154.50	91.99	-154.66	10.00	10.00	0.00
8,700.00	13.09	359.90	8,691.75	-145.32	91.97	-145.48	10.00	10.00	0.00
8,750.00	18.09	359.90	8,739.90	-131.88	91.95	-132.04	10.00	10.00	0.00
8,800.00	23.09	359.90	8,786.69	-114.31	91.92	-114.47	10.00	10.00	0.00
8,850.00	28.09	359.90	8,831.77	-92.72	91.88	-92.88	10.00	10.00	0.00
8,900.00	33.09	359.90	8,874.80	-67.28	91.84	-67.44	10.00	10.00	0.00
8,906.23	33.71	359.90	8,880.00	-63.85	91.83	-64.01	10.00	10.00	0.00
LNRD B									
8,950.00	38.09	359.90	8,915.45	-38.19	91.78	-38.35	10.00	10.00	0.00
9,000.00	43.09	359.90	8,953.40	-5.67	91.73	-5.83	10.00	10.00	0.00
9,050.00	48.09	359.90	8,988.38	30.03	91.66	29.87	10.00	10.00	0.00
9,100.00	53.09	359.90	9,020.12	68.65	91.59	68.49	10.00	10.00	0.00
9,150.00	58.09	359.90	9,048.37	109.89	91.52	109.73	10.00	10.00	0.00
9,200.00	63.09	359.90	9,072.91	153.43	91.44	153.27	10.00	10.00	0.00
9,250.00	68.09	359.90	9,093.57	198.95	91.36	198.79	10.00	10.00	0.00
9,300.00	73.09	359.90	9,110.18	246.09	91.28	245.93	10.00	10.00	0.00
9,337.91	76.88	359.90	9,120.00	282.69	91.21	282.53	10.00	10.00	0.00
LNRD C									
9,350.00	78.09	359.90	9,122.62	294.50	91.19	294.34	10.00	10.00	0.00
9,400.00	83.09	359.90	9,130.79	343.81	91.11	343.65	10.00	10.00	0.00
9,450.00	88.09	359.90	9,134.64	393.65	91.02	393.49	10.00	10.00	0.00
9,469.11	90.00	359.90	9,134.96	412.75	90.98	412.59	10.00	10.00	0.00
LP									
9,500.00	90.00	359.90	9,134.96	443.64	90.93	443.48	0.00	0.00	0.00
9,600.00	90.00	359.90	9,134.96	543.64	90.75	543.48	0.00	0.00	0.00
9,700.00	90.00	359.90	9,134.96	643.64	90.57	643.48	0.00	0.00	0.00
9,800.00	90.00	359.90	9,134.96	743.64	90.40	743.48	0.00	0.00	0.00
9,900.00	90.00	359.90	9,134.96	843.64	90.22	843.48	0.00	0.00	0.00
10,000.00	90.00	359.90	9,134.96	943.64	90.04	943.48	0.00	0.00	0.00
10,100.00	90.00	359.90	9,134.96	1,043.64	89.86	1,043.48	0.00	0.00	0.00
10,200.00	90.00	359.90	9,134.96	1,143.64	89.69	1,143.48	0.00	0.00	0.00
10,300.00	90.00	359.90	9,134.96	1,243.64	89.51	1,243.48	0.00	0.00	0.00
10,400.00	90.00	359.90	9,134.96	1,343.64	89.33	1,343.48	0.00	0.00	0.00
10,500.00	90.00	359.90	9,134.96	1,443.64	89.15	1,443.48	0.00	0.00	0.00
10,600.00	90.00	359.90	9,134.96	1,543.64	88.98	1,543.48	0.00	0.00	0.00
10,700.00	90.00	359.90	9,134.97	1,643.64	88.80	1,643.48	0.00	0.00	0.00
10,800.00	90.00	359.90	9,134.97	1,743.64	88.62	1,743.48	0.00	0.00	0.00
10,900.00	90.00	359.90	9,134.97	1,843.64	88.44	1,843.48	0.00	0.00	0.00
11,000.00	90.00	359.90	9,134.97	1,943.64	88.26	1,943.48	0.00	0.00	0.00
11,100.00	90.00	359.90	9,134.97	2,043.64	88.09	2,043.48	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: 354H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well 354H
TVD Reference: 3408.5' GE + 25' KB @ 3433.50usft
MD Reference: 3408.5' GE + 25' KB @ 3433.50usft
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)
11,200.00	90.00	359.90	9,134.97	2,143.64	87.91	2,143.48	0.00	0.00	0.00
11,300.00	90.00	359.90	9,134.97	2,243.64	87.73	2,243.48	0.00	0.00	0.00
11,400.00	90.00	359.90	9,134.97	2,343.64	87.55	2,343.48	0.00	0.00	0.00
11,500.00	90.00	359.90	9,134.97	2,443.64	87.38	2,443.48	0.00	0.00	0.00
11,600.00	90.00	359.90	9,134.97	2,543.64	87.20	2,543.48	0.00	0.00	0.00
11,700.00	90.00	359.90	9,134.97	2,643.64	87.02	2,643.48	0.00	0.00	0.00
11,800.00	90.00	359.90	9,134.97	2,743.64	86.84	2,743.48	0.00	0.00	0.00
11,900.00	90.00	359.90	9,134.97	2,843.64	86.67	2,843.48	0.00	0.00	0.00
12,000.00	90.00	359.90	9,134.97	2,943.64	86.49	2,943.48	0.00	0.00	0.00
12,100.00	90.00	359.90	9,134.97	3,043.64	86.31	3,043.48	0.00	0.00	0.00
12,200.00	90.00	359.90	9,134.97	3,143.64	86.13	3,143.48	0.00	0.00	0.00
12,300.00	90.00	359.90	9,134.98	3,243.64	85.96	3,243.48	0.00	0.00	0.00
12,400.00	90.00	359.90	9,134.98	3,343.64	85.78	3,343.48	0.00	0.00	0.00
12,500.00	90.00	359.90	9,134.98	3,443.64	85.60	3,443.48	0.00	0.00	0.00
12,600.00	90.00	359.90	9,134.98	3,543.64	85.42	3,543.48	0.00	0.00	0.00
12,700.00	90.00	359.90	9,134.98	3,643.64	85.25	3,643.48	0.00	0.00	0.00
12,800.00	90.00	359.90	9,134.98	3,743.64	85.07	3,743.48	0.00	0.00	0.00
12,900.00	90.00	359.90	9,134.98	3,843.64	84.89	3,843.48	0.00	0.00	0.00
13,000.00	90.00	359.90	9,134.98	3,943.64	84.71	3,943.48	0.00	0.00	0.00
13,100.00	90.00	359.90	9,134.98	4,043.64	84.54	4,043.48	0.00	0.00	0.00
13,200.00	90.00	359.90	9,134.98	4,143.64	84.36	4,143.48	0.00	0.00	0.00
13,300.00	90.00	359.90	9,134.98	4,243.64	84.18	4,243.48	0.00	0.00	0.00
13,400.00	90.00	359.90	9,134.98	4,343.64	84.00	4,343.48	0.00	0.00	0.00
13,500.00	90.00	359.90	9,134.98	4,443.64	83.83	4,443.48	0.00	0.00	0.00
13,600.00	90.00	359.90	9,134.98	4,543.64	83.65	4,543.48	0.00	0.00	0.00
13,700.00	90.00	359.90	9,134.98	4,643.64	83.47	4,643.48	0.00	0.00	0.00
13,800.00	90.00	359.90	9,134.98	4,743.64	83.29	4,743.48	0.00	0.00	0.00
13,900.00	90.00	359.90	9,134.98	4,843.64	83.12	4,843.48	0.00	0.00	0.00
14,000.00	90.00	359.90	9,134.99	4,943.64	82.94	4,943.48	0.00	0.00	0.00
14,100.00	90.00	359.90	9,134.99	5,043.64	82.76	5,043.48	0.00	0.00	0.00
14,200.00	90.00	359.90	9,134.99	5,143.64	82.58	5,143.48	0.00	0.00	0.00
14,300.00	90.00	359.90	9,134.99	5,243.64	82.41	5,243.48	0.00	0.00	0.00
14,400.00	90.00	359.90	9,134.99	5,343.64	82.23	5,343.48	0.00	0.00	0.00
14,500.00	90.00	359.90	9,134.99	5,443.64	82.05	5,443.48	0.00	0.00	0.00
14,600.00	90.00	359.90	9,134.99	5,543.64	81.87	5,543.48	0.00	0.00	0.00
14,700.00	90.00	359.90	9,134.99	5,643.64	81.70	5,643.48	0.00	0.00	0.00
14,800.00	90.00	359.90	9,134.99	5,743.64	81.52	5,743.48	0.00	0.00	0.00
14,900.00	90.00	359.90	9,134.99	5,843.64	81.34	5,843.48	0.00	0.00	0.00
15,000.00	90.00	359.90	9,134.99	5,943.63	81.16	5,943.48	0.00	0.00	0.00
15,100.00	90.00	359.90	9,134.99	6,043.63	80.99	6,043.48	0.00	0.00	0.00
15,200.00	90.00	359.90	9,134.99	6,143.63	80.81	6,143.48	0.00	0.00	0.00
15,300.00	90.00	359.90	9,134.99	6,243.63	80.63	6,243.48	0.00	0.00	0.00
15,400.00	90.00	359.90	9,134.99	6,343.63	80.45	6,343.48	0.00	0.00	0.00
15,500.00	90.00	359.90	9,134.99	6,443.63	80.28	6,443.48	0.00	0.00	0.00
15,600.00	90.00	359.90	9,134.99	6,543.63	80.10	6,543.48	0.00	0.00	0.00
15,700.00	90.00	359.90	9,135.00	6,643.63	79.92	6,643.48	0.00	0.00	0.00
15,800.00	90.00	359.90	9,135.00	6,743.63	79.74	6,743.48	0.00	0.00	0.00
15,900.00	90.00	359.90	9,135.00	6,843.63	79.57	6,843.48	0.00	0.00	0.00
16,000.00	90.00	359.90	9,135.00	6,943.63	79.39	6,943.48	0.00	0.00	0.00
16,100.00	90.00	359.90	9,135.00	7,043.63	79.21	7,043.48	0.00	0.00	0.00
16,200.00	90.00	359.90	9,135.00	7,143.63	79.03	7,143.48	0.00	0.00	0.00
16,300.00	90.00	359.90	9,135.00	7,243.63	78.86	7,243.48	0.00	0.00	0.00
16,400.00	90.00	359.90	9,135.00	7,343.63	78.68	7,343.48	0.00	0.00	0.00
16,466.54	90.00	359.90	9,135.00	7,410.17	78.56	7,410.02	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: 354H
 Wellbore: OH
 Design: Plan #1

Local Co-ordinate Reference: Well 354H
 TVD Reference: 3408.5' GE + 25' KB @ 3433.50usft
 MD Reference: 3408.5' GE + 25' KB @ 3433.50usft
 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)
TD - PBHL (CDU 354H)									

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 354H) - plan hits target center - Point	0.00	0.00	0.00	0.00	0.00	409,284.02	734,204.98	32° 7' 25.205 N	103° 42' 37.166 W
PBHL (CDU 354H) - plan hits target center - Point	0.00	0.00	9,135.00	7,410.17	78.56	416,694.19	734,283.54	32° 8' 38.528 N	103° 42' 35.754 W

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
615.00	615.00	Rustler		0.00	
945.00	945.00	Salado		0.00	
955.00	955.00	Top of Salt		0.00	
4,220.00	4,220.00	Base of Salt		0.00	
4,465.00	4,465.00	Delaware		0.00	
4,470.00	4,470.00	Bell Canyon		0.00	
5,405.00	5,405.00	Cherry Canyon		0.00	
6,693.27	6,690.00	Brushy Canyon		0.00	
8,012.06	8,005.00	Madera		0.00	
8,132.10	8,125.00	Lower Brushy		0.00	
8,362.11	8,355.00	1BSLM		0.00	
8,492.11	8,485.00	LNRD A		0.00	
8,906.23	8,880.00	LNRD B		0.00	
9,337.91	9,120.00	LNRD C		0.00	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
5,500.00	5,500.00	0.00	0.00	Nudge
6,000.01	5,999.38	-18.91	10.86	Hold
7,369.09	7,363.24	-122.38	70.28	Drop
8,369.11	8,362.00	-160.20	92.00	Hold
8,569.11	8,562.00	-160.20	92.00	KOP 10° DLS
9,469.11	9,134.96	412.75	90.98	LP
16,466.54	9,135.00	7,410.17	78.56	TD

A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

Devon proposes using a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 3000 (3M) psi.

- Wellhead will be installed by wellhead representatives.
- If the welding is performed by a third party, the wellhead representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- Wellhead representative will install the test plug for the initial BOP test.
- Wellhead company will install a solid steel body pack-off to completely isolate the lower head after cementing intermediate casing. After installation of the pack-off, the pack-off and the lower flange will be tested to 3M, as shown on the attached schematic. Everything above the pack-off will not have been altered whatsoever from the initial nipple up. Therefore the BOP components will not be retested at that time.
- If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head will be cut and top out operations will be conducted.
- Devon will pressure test all seals above and below the mandrel (but still above the casing) to full working pressure rating.
- Devon will test the casing to 0.22 psi/ft or 1500 psi, whichever is greater, as per Onshore Order #2.

After running the 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 3M will be installed on the wellhead system and will undergo a 250 psi low pressure test followed by a 3,000 psi high pressure test. The 3,000 psi high and 250 psi low test will cover testing requirements a maximum of 30 days, as per Onshore Order #2. If the well is not complete within 30 days of this BOP test, another full BOP test will be conducted, as per Onshore Order #2.

After running the 9-5/8" intermediate casing with a mandrel hanger, the 13-5/8" BOP/BOPE system with a minimum rating of 3M will already be installed on the wellhead.

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 3,000 psi WP.

Devon's proposed wellhead manufactures will be FMC Technologies, Cactus Wellhead, or Cameron.