

HOBBS OCD

APR 29 2016

RECEIVED

DEVON ENERGY

Lea County, NM (NAD-83)

Arena Roja Fed Unit

17H

OH

Plan: Plan #1

Standard Planning Report

28 April, 2015

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MAY 02 2016

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 17H
Company:	DEVON ENERGY	TVD Reference:	3085.1' GL + 25' RKB @ 3110.10usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3085.1' GL + 25' RKB @ 3110.10usft
Site:	Arena Roja Fed Unit	North Reference:	Grid
Well:	17H	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	Arena Roja Fed Unit		
Site Position:		Northing:	372,721.16 usft
From:	Map	Easting:	843,594.22 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 1' 15.387 N
		Longitude:	103° 21' 29.063 W
		Grid Convergence:	0.52 °

Well	17H, Wolfcamp		
Well Position	+N/-S	0.43 usft	Northing: 372,721.59 usft
	+E/-W	49.99 usft	Easting: 843,644.21 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	3,110.10 usft
		Latitude:	32° 1' 15.386 N
		Longitude:	103° 21' 28.483 W
		Ground Level:	3,085.10 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	12/2/2014	7.21	59.94	48,130

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	181.02	

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	
8,682.00	0.00	0.00	8,682.00	0.00	0.00	0.00	0.00	0.00	0.00	
9,578.58	89.65	181.02	9,255.00	-569.42	-10.14	10.00	10.00	0.00	181.02	
12,009.12	89.65	181.02	9,269.85	-2,999.52	-53.40	0.00	0.00	0.00	0.00	
12,069.22	90.55	181.02	9,269.74	-3,059.62	-54.47	1.50	1.50	0.00	0.03	
16,197.55	90.55	181.02	9,230.00	-7,187.10	-127.99	0.00	0.00	0.00	0.00	PBHL (ARFU 17H)

LEAM Drilling Systems LLC

Planning Report

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 Company: DEVON ENERGY
 Project: Lea County, NM (NAD-83)
 Site: Arena Roja Fed Unit
 Well: 17H
 Wellbore: OH
 Design: Plan #1

Local Co-ordinate Reference: Well 17H
 TVD Reference: 3085.1' GL + 25' RKB @ 3110.10usft
 MD Reference: 3085.1' GL + 25' RKB @ 3110.10usft
 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 (ARFU 17H)									
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
918.00	0.00	0.00	918.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
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
1,878.00	0.00	0.00	1,878.00	0.00	0.00	0.00	0.00	0.00	0.00
Top Salt									
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
4,700.00	0.00	0.00	4,700.00	0.00	0.00	0.00	0.00	0.00	0.00

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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
5,659.00	0.00	0.00	5,659.00	0.00	0.00	0.00	0.00	0.00	0.00
Bell Canyon									
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
6,155.00	0.00	0.00	6,155.00	0.00	0.00	0.00	0.00	0.00	0.00
Cherry Canyon									
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
8,400.00	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
8,682.00	0.00	0.00	8,682.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP 10° DLS									
8,700.00	1.80	181.02	8,700.00	-0.28	-0.01	0.28	10.00	10.00	0.00
8,750.00	6.80	181.02	8,749.84	-4.03	-0.07	4.03	10.00	10.00	0.00
8,800.00	11.80	181.02	8,799.17	-12.11	-0.22	12.11	10.00	10.00	0.00
8,842.07	16.01	181.02	8,840.00	-22.21	-0.40	22.21	10.00	10.00	0.00
Lwr Br Canyon									
8,850.00	16.80	181.02	8,847.60	-24.45	-0.44	24.45	10.00	10.00	0.00
8,900.00	21.80	181.02	8,894.78	-40.96	-0.73	40.97	10.00	10.00	0.00
8,950.00	26.80	181.02	8,940.34	-61.53	-1.10	61.54	10.00	10.00	0.00
9,000.00	31.80	181.02	8,983.93	-85.98	-1.53	86.00	10.00	10.00	0.00

LEAM Drilling Systems LLC

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 Project: Lea County, NM (NAD-83)
 Site: Arena Roja Fed Unit
 Well: 17H
 Wellbore: OH
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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)
9,050.00	36.80	181.02	9,025.22	-114.14	-2.03	114.16	10.00	10.00	0.00
9,100.00	41.80	181.02	9,063.90	-145.80	-2.60	145.82	10.00	10.00	0.00
9,150.00	46.80	181.02	9,099.68	-180.70	-3.22	180.73	10.00	10.00	0.00
9,150.47	46.84	181.02	9,100.00	-181.04	-3.22	181.07	10.00	10.00	0.00
Bone Spring									
9,196.34	51.43	181.02	9,130.00	-215.71	-3.84	215.75	10.00	10.00	0.00
Leonard Shale A									
9,200.00	51.80	181.02	9,132.28	-218.58	-3.89	218.52	10.00	10.00	0.00
9,250.00	56.79	181.02	9,161.45	-259.17	-4.61	259.21	10.00	10.00	0.00
9,300.00	61.79	181.02	9,186.97	-302.14	-5.38	302.18	10.00	10.00	0.00
9,350.00	66.79	181.02	9,208.65	-347.17	-6.18	347.22	10.00	10.00	0.00
9,400.00	71.79	181.02	9,226.32	-393.91	-7.01	393.98	10.00	10.00	0.00
9,450.00	76.79	181.02	9,239.86	-442.02	-7.87	442.09	10.00	10.00	0.00
9,500.00	81.79	181.02	9,249.14	-491.13	-8.74	491.21	10.00	10.00	0.00
9,550.00	86.79	181.02	9,254.11	-540.86	-9.63	540.94	10.00	10.00	0.00
9,578.58	89.65	181.02	9,255.00	-569.42	-10.14	569.51	10.00	10.00	0.00
LP									
9,600.00	89.65	181.02	9,255.13	-590.83	-10.52	590.93	0.00	0.00	0.00
9,700.00	89.65	181.02	9,255.74	-690.82	-12.30	690.93	0.00	0.00	0.00
9,800.00	89.65	181.02	9,256.35	-790.80	-14.08	790.92	0.00	0.00	0.00
9,900.00	89.65	181.02	9,256.96	-890.78	-15.86	890.92	0.00	0.00	0.00
10,000.00	89.65	181.02	9,257.57	-990.76	-17.64	990.92	0.00	0.00	0.00
10,100.00	89.65	181.02	9,258.19	-1,090.75	-19.42	1,090.92	0.00	0.00	0.00
10,200.00	89.65	181.02	9,258.80	-1,190.73	-21.20	1,190.92	0.00	0.00	0.00
10,300.00	89.65	181.02	9,259.41	-1,290.71	-22.98	1,290.91	0.00	0.00	0.00
10,400.00	89.65	181.02	9,260.02	-1,390.69	-24.76	1,390.91	0.00	0.00	0.00
10,500.00	89.65	181.02	9,260.63	-1,490.67	-26.54	1,490.91	0.00	0.00	0.00
10,600.00	89.65	181.02	9,261.24	-1,590.66	-28.32	1,590.91	0.00	0.00	0.00
10,700.00	89.65	181.02	9,261.85	-1,690.64	-30.10	1,690.91	0.00	0.00	0.00
10,800.00	89.65	181.02	9,262.46	-1,790.62	-31.88	1,790.90	0.00	0.00	0.00
10,900.00	89.65	181.02	9,263.07	-1,890.60	-33.66	1,890.90	0.00	0.00	0.00
11,000.00	89.65	181.02	9,263.68	-1,990.59	-35.44	1,990.90	0.00	0.00	0.00
11,100.00	89.65	181.02	9,264.29	-2,090.57	-37.22	2,090.90	0.00	0.00	0.00
11,200.00	89.65	181.02	9,264.90	-2,190.55	-39.00	2,190.90	0.00	0.00	0.00
11,300.00	89.65	181.02	9,265.52	-2,290.53	-40.78	2,290.90	0.00	0.00	0.00
11,400.00	89.65	181.02	9,266.13	-2,390.51	-42.56	2,390.89	0.00	0.00	0.00
11,500.00	89.65	181.02	9,266.74	-2,490.50	-44.34	2,490.89	0.00	0.00	0.00
11,600.00	89.65	181.02	9,267.35	-2,590.48	-46.12	2,590.89	0.00	0.00	0.00
11,700.00	89.65	181.02	9,267.96	-2,690.46	-47.90	2,690.89	0.00	0.00	0.00
11,800.00	89.65	181.02	9,268.57	-2,790.44	-49.68	2,790.89	0.00	0.00	0.00
11,900.00	89.65	181.02	9,269.18	-2,890.43	-51.46	2,890.88	0.00	0.00	0.00
12,009.12	89.65	181.02	9,269.85	-2,999.52	-53.40	3,000.00	0.00	0.00	0.00
Build									
12,069.22	90.55	181.02	9,269.74	-3,059.62	-54.47	3,060.10	1.50	1.50	0.00
Hold									
12,100.00	90.55	181.02	9,269.45	-3,090.39	-55.02	3,090.88	0.00	0.00	0.00
12,200.00	90.55	181.02	9,268.48	-3,190.37	-56.80	3,190.88	0.00	0.00	0.00
12,300.00	90.55	181.02	9,267.52	-3,290.35	-58.58	3,290.87	0.00	0.00	0.00
12,400.00	90.55	181.02	9,266.56	-3,390.33	-60.36	3,390.87	0.00	0.00	0.00
12,500.00	90.55	181.02	9,265.59	-3,490.31	-62.15	3,490.86	0.00	0.00	0.00
12,600.00	90.55	181.02	9,264.63	-3,590.29	-63.93	3,590.86	0.00	0.00	0.00
12,700.00	90.55	181.02	9,263.67	-3,690.27	-65.71	3,690.85	0.00	0.00	0.00
12,800.00	90.55	181.02	9,262.71	-3,790.25	-67.49	3,790.85	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: Arena Roja Fed Unit
 Well: 17H
 Wellbore: OH
 Design: Plan #1

Local Co-ordinate Reference: Well 17H
 TVD Reference: 3085.1' GL + 25' RKB @ 3110.10usft
 MD Reference: 3085.1' GL + 25' RKB @ 3110.10usft
 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	90.55	181.02	9,261.74	-3,890.23	-69.27	3,890.84	0.00	0.00	0.00
13,000.00	90.55	181.02	9,260.78	-3,990.21	-71.05	3,990.84	0.00	0.00	0.00
13,100.00	90.55	181.02	9,259.82	-4,090.19	-72.83	4,090.83	0.00	0.00	0.00
13,200.00	90.55	181.02	9,258.86	-4,190.17	-74.61	4,190.83	0.00	0.00	0.00
13,300.00	90.55	181.02	9,257.89	-4,290.14	-76.39	4,290.82	0.00	0.00	0.00
13,400.00	90.55	181.02	9,256.93	-4,390.12	-78.17	4,390.82	0.00	0.00	0.00
13,500.00	90.55	181.02	9,255.97	-4,490.10	-79.95	4,490.82	0.00	0.00	0.00
13,600.00	90.55	181.02	9,255.01	-4,590.08	-81.73	4,590.81	0.00	0.00	0.00
13,700.00	90.55	181.02	9,254.04	-4,690.06	-83.51	4,690.81	0.00	0.00	0.00
13,800.00	90.55	181.02	9,253.08	-4,790.04	-85.30	4,790.80	0.00	0.00	0.00
13,900.00	90.55	181.02	9,252.12	-4,890.02	-87.08	4,890.80	0.00	0.00	0.00
14,000.00	90.55	181.02	9,251.15	-4,990.00	-88.86	4,990.79	0.00	0.00	0.00
14,100.00	90.55	181.02	9,250.19	-5,089.98	-90.64	5,090.79	0.00	0.00	0.00
14,200.00	90.55	181.02	9,249.23	-5,189.96	-92.42	5,190.78	0.00	0.00	0.00
14,300.00	90.55	181.02	9,248.27	-5,289.94	-94.20	5,290.78	0.00	0.00	0.00
14,400.00	90.55	181.02	9,247.30	-5,389.92	-95.98	5,390.77	0.00	0.00	0.00
14,500.00	90.55	181.02	9,246.34	-5,489.90	-97.76	5,490.77	0.00	0.00	0.00
14,600.00	90.55	181.02	9,245.38	-5,589.88	-99.54	5,590.76	0.00	0.00	0.00
14,700.00	90.55	181.02	9,244.42	-5,689.86	-101.32	5,690.76	0.00	0.00	0.00
14,800.00	90.55	181.02	9,243.45	-5,789.84	-103.10	5,790.76	0.00	0.00	0.00
14,900.00	90.55	181.02	9,242.49	-5,889.82	-104.88	5,890.75	0.00	0.00	0.00
15,000.00	90.55	181.02	9,241.53	-5,989.80	-106.66	5,990.75	0.00	0.00	0.00
15,100.00	90.55	181.02	9,240.57	-6,089.78	-108.45	6,090.74	0.00	0.00	0.00
15,200.00	90.55	181.02	9,239.60	-6,189.76	-110.23	6,190.74	0.00	0.00	0.00
15,300.00	90.55	181.02	9,238.64	-6,289.73	-112.01	6,290.73	0.00	0.00	0.00
15,400.00	90.55	181.02	9,237.68	-6,389.71	-113.79	6,390.73	0.00	0.00	0.00
15,500.00	90.55	181.02	9,236.72	-6,489.69	-115.57	6,490.72	0.00	0.00	0.00
15,600.00	90.55	181.02	9,235.75	-6,589.67	-117.35	6,590.72	0.00	0.00	0.00
15,700.00	90.55	181.02	9,234.79	-6,689.65	-119.13	6,690.71	0.00	0.00	0.00
15,800.00	90.55	181.02	9,233.83	-6,789.63	-120.91	6,790.71	0.00	0.00	0.00
15,900.00	90.55	181.02	9,232.86	-6,889.61	-122.69	6,890.70	0.00	0.00	0.00
16,000.00	90.55	181.02	9,231.90	-6,989.59	-124.47	6,990.70	0.00	0.00	0.00
16,100.00	90.55	181.02	9,230.94	-7,089.57	-126.25	7,090.69	0.00	0.00	0.00
16,197.55	90.55	181.02	9,230.00	-7,187.10	-127.99	7,188.24	0.00	0.00	0.00
TD - PBHL (ARFU 17H)									

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 (ARFU 17H)	0.00	0.01	0.00	0.00	0.00	372,721.59	843,644.21	32° 1' 15.386 N	103° 21' 28.483 W
- plan hits target center									
- Point									
PBHL (ARFU 17H)	0.00	0.00	9,230.00	-7,187.10	-127.99	365,534.49	843,516.22	32° 0' 4.282 N	103° 21' 30.722 W
- plan hits target center									
- Point									

LEAM Drilling Systems LLC

Planning Report

Database: EDM 5000.1 Single User Db
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Site: Arena Roja Fed Unit
Well: 17H
Wellbore: OH
Design: Plan #1

Local Co-ordinate Reference: Well 17H
TVD Reference: 3085.1' GL + 25' RKB @ 3110.10usft
MD Reference: 3085.1' GL + 25' RKB @ 3110.10usft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
918.00	918.00	Rustler		0.00	
1,878.00	1,878.00	Top Salt		0.00	
5,659.00	5,659.00	Bell Canyon		0.00	
6,155.00	6,155.00	Cherry Canyon		0.00	
8,842.07	8,840.00	Lwr Br Canyon		0.00	
9,150.47	9,100.00	Bone Spring		0.00	
9,196.34	9,130.00	Leonard Shale A		0.00	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
8,682.00	8,682.00	0.00	0.00	KOP 10° DLS
9,578.58	9,255.00	-569.42	-10.14	LP
12,009.12	9,269.85	-2,999.52	-53.40	Build
12,069.22	9,269.74	-3,059.62	-54.47	Hold
16,197.55	9,230.00	-7,187.10	-127.99	TD