

HOBBS OCD

APR 2-5-2016

RECEIVED

DEVON ENERGY

Lea County, NM (NAD-83)

Green Wave 20-17 Fed

21H

OH

Plan: Plan #1

Standard Planning Report

08 July, 2015

APR 25 2016

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 21H
Company:	DEVON ENERGY	TVD Reference:	3354.8' GL + 25' RKB @ 3379.80usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3354.8' GL + 25' RKB @ 3379.80usft
Site:	Green Wave 20-17 Fed	North Reference:	Grid
Well:	21H	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:	Green Wave 20-17 Fed		
Site Position:		Northing:	375,027.44 usft
From:	Map	Easting:	799,785.56 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 1' 41.837 N
		Longitude:	103° 29' 57.677 W
		Grid Convergence:	0.44 °

Well	21H					
Well Position	+N-S	0.00 usft	Northing:	375,027.44 usft	Latitude:	32° 1' 41.837 N
	+E-W	0.00 usft	Easting:	799,785.56 usft	Longitude:	103° 29' 57.677 W
Position Uncertainty		0.00 usft	Wellhead Elevation:	3,379.80 usft	Ground Level:	3,354.80 usft

Wellbore		OH			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2015	7/8/2015	7.21	59.97	48,107

Design:	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.00	0.00	0.00	359.52

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	
6,000.00	0.00	0.00	6,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,500.00	5.00	25.00	6,499.37	19.76	9.21	1.00	1.00	0.00	25.00	
7,000.00	5.00	25.00	6,997.46	59.25	27.63	0.00	0.00	0.00	0.00	
8,000.00	0.00	0.00	7,996.19	98.78	46.06	0.50	-0.50	0.00	180.00	
9,367.94	0.00	0.00	9,364.13	98.78	46.06	0.00	0.00	0.00	0.00	
10,187.21	90.12	359.52	9,885.00	620.71	41.73	11.00	11.00	-0.06	359.52	
17,389.95	90.12	359.52	9,870.00	7,823.19	-18.00	0.00	0.00	0.00	0.00	PBHL (GW20-17F 21I)

LEAM Drilling Systems LLC

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Project:	Lea County, NM (NAD-83)	MD Reference:	3354.8' GL + 25' RKB @ 3379.80usft
Site:	Green Wave 20-17 Fed	North Reference:	Grid
Well:	21H	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 (GW20-17F 21H)									
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
733.00	0.00	0.00	733.00	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
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,163.00	0.00	0.00	1,163.00	0.00	0.00	0.00	0.00	0.00	0.00
Salado									
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
4,300.00	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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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)
4,800.00	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
5,289.00	0.00	0.00	5,289.00	0.00	0.00	0.00	0.00	0.00	0.00
Lamar									
5,300.00	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00
5,324.00	0.00	0.00	5,324.00	0.00	0.00	0.00	0.00	0.00	0.00
Bell Canyon									
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
Nudge									
6,100.00	1.00	25.00	6,100.00	0.79	0.37	0.79	1.00	1.00	0.00
6,200.00	2.00	25.00	6,199.96	3.16	1.48	3.15	1.00	1.00	0.00
6,300.00	3.00	25.00	6,299.86	7.12	3.32	7.09	1.00	1.00	0.00
6,400.00	4.00	25.00	6,399.68	12.65	5.90	12.60	1.00	1.00	0.00
6,405.34	4.05	25.00	6,405.00	12.99	6.06	12.94	1.00	1.00	0.00
Cherry Canyon									
6,500.00	5.00	25.00	6,499.37	19.76	9.21	19.68	1.00	1.00	0.00
Hold									
6,600.00	5.00	25.00	6,598.99	27.66	12.90	27.55	0.00	0.00	0.00
6,700.00	5.00	25.00	6,698.60	35.56	16.58	35.42	0.00	0.00	0.00
6,800.00	5.00	25.00	6,798.22	43.46	20.26	43.29	0.00	0.00	0.00
6,900.00	5.00	25.00	6,897.84	51.36	23.95	51.15	0.00	0.00	0.00
7,000.00	5.00	25.00	6,997.46	59.25	27.63	59.02	0.00	0.00	0.00
Drop									
7,100.00	4.50	25.00	7,097.12	66.76	31.13	66.50	0.50	-0.50	0.00
7,200.00	4.00	25.00	7,196.84	73.48	34.26	73.19	0.50	-0.50	0.00
7,300.00	3.50	25.00	7,296.63	79.40	37.03	79.09	0.50	-0.50	0.00
7,400.00	3.00	25.00	7,396.47	84.54	39.42	84.21	0.50	-0.50	0.00
7,500.00	2.50	25.00	7,496.35	88.89	41.45	88.54	0.50	-0.50	0.00
7,600.00	2.00	25.00	7,596.28	92.45	43.11	92.08	0.50	-0.50	0.00
7,700.00	1.50	25.00	7,696.23	95.22	44.40	94.84	0.50	-0.50	0.00
7,800.00	1.00	25.00	7,796.20	97.19	45.32	96.81	0.50	-0.50	0.00
7,900.00	0.50	25.00	7,896.20	98.38	45.88	97.99	0.50	-0.50	0.00
7,956.81	0.22	25.00	7,953.00	98.70	46.03	98.31	0.50	-0.50	0.00
Brushy Canyon									
8,000.00	0.00	0.00	7,996.19	98.78	46.06	98.39	0.50	-0.50	0.00
Hold									
8,100.00	0.00	0.00	8,096.19	98.78	46.06	98.39	0.00	0.00	0.00
8,200.00	0.00	0.00	8,196.19	98.78	46.06	98.39	0.00	0.00	0.00
8,300.00	0.00	0.00	8,296.19	98.78	46.06	98.39	0.00	0.00	0.00
8,400.00	0.00	0.00	8,396.19	98.78	46.06	98.39	0.00	0.00	0.00
8,500.00	0.00	0.00	8,496.19	98.78	46.06	98.39	0.00	0.00	0.00
8,600.00	0.00	0.00	8,596.19	98.78	46.06	98.39	0.00	0.00	0.00
8,700.00	0.00	0.00	8,696.19	98.78	46.06	98.39	0.00	0.00	0.00
8,800.00	0.00	0.00	8,796.19	98.78	46.06	98.39	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

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Company:	DEVON ENERGY	TVD Reference:	3354.8' GL + 25' RKB @ 3379.80usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3354.8' GL + 25' RKB @ 3379.80usft
Site:	Green Wave 20-17 Fed	North Reference:	Grid
Well:	21H	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)
8,900.00	0.00	0.00	8,896.19	98.78	46.06	98.39	0.00	0.00	0.00
9,000.00	0.00	0.00	8,996.19	98.78	46.06	98.39	0.00	0.00	0.00
9,100.00	0.00	0.00	9,096.19	98.78	46.06	98.39	0.00	0.00	0.00
9,200.00	0.00	0.00	9,196.19	98.78	46.06	98.39	0.00	0.00	0.00
9,300.00	0.00	0.00	9,296.19	98.78	46.06	98.39	0.00	0.00	0.00
9,367.94	0.00	0.00	9,364.13	98.78	46.06	98.39	0.00	0.00	0.00
KOP 11° DLS									
9,377.81	1.09	359.52	9,374.00	98.87	46.06	98.48	11.00	11.00	0.00
Lwr Brushy									
9,400.00	3.53	359.52	9,396.17	99.76	46.05	99.37	11.00	11.00	0.00
9,450.00	9.03	359.52	9,445.86	105.23	46.01	104.84	11.00	11.00	0.00
9,500.00	14.53	359.52	9,494.78	115.43	45.92	115.04	11.00	11.00	0.00
9,550.00	20.03	359.52	9,542.51	130.27	45.80	129.88	11.00	11.00	0.00
9,600.00	25.53	359.52	9,588.59	149.62	45.64	149.23	11.00	11.00	0.00
9,635.41	29.42	359.52	9,620.00	165.95	45.50	165.56	11.00	11.00	0.00
Bone Spring									
9,650.00	31.03	359.52	9,632.61	173.29	45.44	172.91	11.00	11.00	0.00
9,658.67	31.98	359.52	9,640.00	177.82	45.40	177.44	11.00	11.00	0.00
Upr Leonard									
9,700.00	36.53	359.52	9,674.15	201.08	45.21	200.69	11.00	11.00	0.00
9,750.00	42.03	359.52	9,712.84	232.72	44.95	232.34	11.00	11.00	0.00
9,800.00	47.53	359.52	9,748.32	267.92	44.66	267.54	11.00	11.00	0.00
9,850.00	53.03	359.52	9,780.27	306.36	44.34	305.98	11.00	11.00	0.00
9,900.00	58.53	359.52	9,808.38	347.69	44.00	347.31	11.00	11.00	0.00
9,950.00	64.03	359.52	9,832.40	391.52	43.63	391.14	11.00	11.00	0.00
10,000.00	69.53	359.52	9,852.10	437.45	43.25	437.07	11.00	11.00	0.00
10,050.00	75.03	359.52	9,867.32	485.05	42.86	484.68	11.00	11.00	0.00
10,100.00	80.53	359.52	9,877.90	533.90	42.45	533.53	11.00	11.00	0.00
10,150.00	86.03	359.52	9,883.75	583.54	42.04	583.16	11.00	11.00	0.00
10,187.21	90.12	359.52	9,885.00	620.71	41.73	620.34	11.00	11.00	0.00
LP									
10,200.00	90.12	359.52	9,884.98	633.51	41.62	633.13	0.00	0.00	0.00
10,300.00	90.12	359.52	9,884.77	733.50	40.80	733.13	0.00	0.00	0.00
10,400.00	90.12	359.52	9,884.56	833.50	39.97	833.13	0.00	0.00	0.00
10,500.00	90.12	359.52	9,884.35	933.49	39.14	933.13	0.00	0.00	0.00
10,600.00	90.12	359.52	9,884.14	1,033.49	38.31	1,033.13	0.00	0.00	0.00
10,700.00	90.12	359.52	9,883.94	1,133.49	37.48	1,133.13	0.00	0.00	0.00
10,800.00	90.12	359.52	9,883.73	1,233.48	36.65	1,233.13	0.00	0.00	0.00
10,900.00	90.12	359.52	9,883.52	1,333.48	35.82	1,333.13	0.00	0.00	0.00
11,000.00	90.12	359.52	9,883.31	1,433.48	34.99	1,433.13	0.00	0.00	0.00
11,100.00	90.12	359.52	9,883.10	1,533.47	34.16	1,533.13	0.00	0.00	0.00
11,200.00	90.12	359.52	9,882.89	1,633.47	33.33	1,633.13	0.00	0.00	0.00
11,300.00	90.12	359.52	9,882.69	1,733.47	32.50	1,733.13	0.00	0.00	0.00
11,400.00	90.12	359.52	9,882.48	1,833.46	31.67	1,833.13	0.00	0.00	0.00
11,500.00	90.12	359.52	9,882.27	1,933.46	30.84	1,933.13	0.00	0.00	0.00
11,600.00	90.12	359.52	9,882.06	2,033.45	30.02	2,033.13	0.00	0.00	0.00
11,700.00	90.12	359.52	9,881.85	2,133.45	29.19	2,133.13	0.00	0.00	0.00
11,800.00	90.12	359.52	9,881.64	2,233.45	28.36	2,233.13	0.00	0.00	0.00
11,900.00	90.12	359.52	9,881.44	2,333.44	27.53	2,333.13	0.00	0.00	0.00
12,000.00	90.12	359.52	9,881.23	2,433.44	26.70	2,433.13	0.00	0.00	0.00
12,100.00	90.12	359.52	9,881.02	2,533.44	25.87	2,533.13	0.00	0.00	0.00
12,200.00	90.12	359.52	9,880.81	2,633.43	25.04	2,633.13	0.00	0.00	0.00
12,300.00	90.12	359.52	9,880.60	2,733.43	24.21	2,733.13	0.00	0.00	0.00
12,400.00	90.12	359.52	9,880.39	2,833.43	23.38	2,833.13	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 21H
Company:	DEVON ENERGY	TVD Reference:	3354.8' GL + 25' RKB @ 3379.80usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3354.8' GL + 25' RKB @ 3379.80usft
Site:	Green Wave 20-17 Fed	North Reference:	Grid
Well:	21H	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)
12,500.00	90.12	359.52	9,880.19	2,933.42	22.55	2,933.13	0.00	0.00	0.00
12,600.00	90.12	359.52	9,879.98	3,033.42	21.72	3,033.13	0.00	0.00	0.00
12,700.00	90.12	359.52	9,879.77	3,133.41	20.89	3,133.13	0.00	0.00	0.00
12,800.00	90.12	359.52	9,879.56	3,233.41	20.06	3,233.13	0.00	0.00	0.00
12,900.00	90.12	359.52	9,879.35	3,333.41	19.23	3,333.13	0.00	0.00	0.00
13,000.00	90.12	359.52	9,879.14	3,433.40	18.41	3,433.13	0.00	0.00	0.00
13,100.00	90.12	359.52	9,878.94	3,533.40	17.58	3,533.13	0.00	0.00	0.00
13,200.00	90.12	359.52	9,878.73	3,633.40	16.75	3,633.13	0.00	0.00	0.00
13,300.00	90.12	359.52	9,878.52	3,733.39	15.92	3,733.13	0.00	0.00	0.00
13,400.00	90.12	359.52	9,878.31	3,833.39	15.09	3,833.13	0.00	0.00	0.00
13,500.00	90.12	359.52	9,878.10	3,933.38	14.26	3,933.13	0.00	0.00	0.00
13,600.00	90.12	359.52	9,877.89	4,033.38	13.43	4,033.13	0.00	0.00	0.00
13,700.00	90.12	359.52	9,877.69	4,133.38	12.60	4,133.13	0.00	0.00	0.00
13,800.00	90.12	359.52	9,877.48	4,233.37	11.77	4,233.13	0.00	0.00	0.00
13,900.00	90.12	359.52	9,877.27	4,333.37	10.94	4,333.13	0.00	0.00	0.00
14,000.00	90.12	359.52	9,877.06	4,433.37	10.11	4,433.13	0.00	0.00	0.00
14,100.00	90.12	359.52	9,876.85	4,533.36	9.28	4,533.13	0.00	0.00	0.00
14,200.00	90.12	359.52	9,876.65	4,633.36	8.45	4,633.13	0.00	0.00	0.00
14,300.00	90.12	359.52	9,876.44	4,733.36	7.62	4,733.13	0.00	0.00	0.00
14,400.00	90.12	359.52	9,876.23	4,833.35	6.80	4,833.13	0.00	0.00	0.00
14,500.00	90.12	359.52	9,876.02	4,933.35	5.97	4,933.13	0.00	0.00	0.00
14,600.00	90.12	359.52	9,875.81	5,033.34	5.14	5,033.13	0.00	0.00	0.00
14,700.00	90.12	359.52	9,875.60	5,133.34	4.31	5,133.12	0.00	0.00	0.00
14,800.00	90.12	359.52	9,875.40	5,233.34	3.48	5,233.12	0.00	0.00	0.00
14,900.00	90.12	359.52	9,875.19	5,333.33	2.65	5,333.12	0.00	0.00	0.00
15,000.00	90.12	359.52	9,874.98	5,433.33	1.82	5,433.12	0.00	0.00	0.00
15,100.00	90.12	359.52	9,874.77	5,533.33	0.99	5,533.12	0.00	0.00	0.00
15,200.00	90.12	359.52	9,874.56	5,633.32	0.16	5,633.12	0.00	0.00	0.00
15,300.00	90.12	359.52	9,874.35	5,733.32	-0.67	5,733.12	0.00	0.00	0.00
15,400.00	90.12	359.52	9,874.15	5,833.32	-1.50	5,833.12	0.00	0.00	0.00
15,500.00	90.12	359.52	9,873.94	5,933.31	-2.33	5,933.12	0.00	0.00	0.00
15,600.00	90.12	359.52	9,873.73	6,033.31	-3.16	6,033.12	0.00	0.00	0.00
15,700.00	90.12	359.52	9,873.52	6,133.30	-3.99	6,133.12	0.00	0.00	0.00
15,800.00	90.12	359.52	9,873.31	6,233.30	-4.81	6,233.12	0.00	0.00	0.00
15,900.00	90.12	359.52	9,873.10	6,333.30	-5.64	6,333.12	0.00	0.00	0.00
16,000.00	90.12	359.52	9,872.90	6,433.29	-6.47	6,433.12	0.00	0.00	0.00
16,100.00	90.12	359.52	9,872.69	6,533.29	-7.30	6,533.12	0.00	0.00	0.00
16,200.00	90.12	359.52	9,872.48	6,633.29	-8.13	6,633.12	0.00	0.00	0.00
16,300.00	90.12	359.52	9,872.27	6,733.28	-8.96	6,733.12	0.00	0.00	0.00
16,400.00	90.12	359.52	9,872.06	6,833.28	-9.79	6,833.12	0.00	0.00	0.00
16,500.00	90.12	359.52	9,871.85	6,933.28	-10.62	6,933.12	0.00	0.00	0.00
16,600.00	90.12	359.52	9,871.65	7,033.27	-11.45	7,033.12	0.00	0.00	0.00
16,700.00	90.12	359.52	9,871.44	7,133.27	-12.28	7,133.12	0.00	0.00	0.00
16,800.00	90.12	359.52	9,871.23	7,233.26	-13.11	7,233.12	0.00	0.00	0.00
16,900.00	90.12	359.52	9,871.02	7,333.26	-13.94	7,333.12	0.00	0.00	0.00
17,000.00	90.12	359.52	9,870.81	7,433.26	-14.77	7,433.12	0.00	0.00	0.00
17,100.00	90.12	359.52	9,870.60	7,533.25	-15.60	7,533.12	0.00	0.00	0.00
17,200.00	90.12	359.52	9,870.40	7,633.25	-16.42	7,633.12	0.00	0.00	0.00
17,300.00	90.12	359.52	9,870.19	7,733.25	-17.25	7,733.12	0.00	0.00	0.00
17,389.95	90.12	359.52	9,870.00	7,823.19	-18.00	7,823.07	0.00	0.00	0.00
TD - PBHL (GW20-17F 21H)									

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 21H
Company:	DEVON ENERGY	TVD Reference:	3354.8' GL + 25' RKB @ 3379.80usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3354.8' GL + 25' RKB @ 3379.80usft
Site:	Green Wave 20-17 Fed	North Reference:	Grid
Well:	21H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Design Targets									
Target Name	hit/miss target	Dip Angle	Dip Dir	TVD	+N/-S	+E/-W	Northing	Easting	
Shape		(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)	
									Latitude Longitude
SHL (GW20-17F 21H)		0.00	0.00	0.00	0.00	0.00	375,027.44	799,785.56	32° 1' 41.837 N 103° 29' 57.677 W
- plan hits target center									
- Point									
PBHL (GW20-17F 21H)		0.00	0.00	9,870.00	7,823.19	-18.00	382,850.63	799,767.56	32° 2' 59.251 N 103° 29' 57.184 W
- plan hits target center									
- Point									

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
733.00	734.10	Rustler		0.00		
1,163.00	1,164.10	Salado		0.00		
5,289.00	5,290.10	Lamar		0.00		
5,324.00	5,325.10	Bell Canyon		0.00		
6,405.34	6,406.10	Cherry Canyon		0.00		
7,956.81	7,954.10	Brushy Canyon		0.00		
9,377.81	9,375.10	Lwr Brushy		0.00		
9,635.41	9,621.10	Bone Spring		0.00		
9,658.67	9,641.10	Upr Leonard		0.00		

Plan Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(usft)	(usft)	+N/-S (usft)	+E/-W (usft)	
6,000.00	6,000.00	0.00	0.00	Nudge
6,500.00	6,499.37	19.76	9.21	Hold
7,000.00	6,997.46	59.25	27.63	Drop
8,000.00	7,996.19	98.78	46.06	Hold
9,367.94	9,364.13	98.78	46.06	KOP 11° DLS
10,187.21	9,885.00	620.71	41.73	LP
17,389.95	9,870.00	7,823.19	-18.00	TD