

HOPE-ND
APR 18 2016
RECEIVED

DEVON ENERGY

Lea County, NM (NAD-83)

Rebel 20 Fed

8H

OH

Plan: APD Plan #1

Standard Planning Report

05 February, 2016

APR 22 2016

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 8H
Company:	DEVON ENERGY	TVD Reference:	3557' GE + 23.5' RKB @ 3580.50usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3557' GE + 23.5' RKB @ 3580.50usft
Site:	Rebel 20 Fed	North Reference:	Grid
Well:	8H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	APD 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	Rebel 20 Fed		
Site Position:		Northing:	440,550.57 usft
From:	Map	Easting:	738,886.46 usft
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 12' 34.333 N
		Longitude:	103° 41' 40.571 W
		Grid Convergence:	0.34 °

Well	8H		
Well Position	+N/-S	11.17 usft	Northing: 440,561.74 usft
	+E/-W	1,109.67 usft	Easting: 739,996.13 usft
Position Uncertainty	0.00 usft	Wellhead Elevation:	3,580.50 usft
		Latitude:	32° 12' 34.378 N
		Longitude:	103° 41' 27.654 W
		Ground Level:	3,557.00 usft

Wellbore	OH		
Magnetics	Model Name	Sample Date	Declination
			(°)
	BGGM2015	2/5/2016	7.26
			Dip Angle
			(°)
			60.09
			Field Strength
			(nT)
			48,130

Design	APD 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
			(°)
			180.00

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)	
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.00	0.00	0.00	0.00	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	
5,100.00	5.00	90.00	5,099.37	0.00	21.80	1.00	1.00	0.00	90.00	
7,170.00	5.00	90.00	7,161.49	0.00	202.22	0.00	0.00	0.00	0.00	
8,170.00	0.00	0.00	8,160.22	0.00	245.82	0.50	-0.50	0.00	180.00	
10,229.85	0.00	0.00	10,220.07	0.00	245.82	0.00	0.00	0.00	0.00	
11,135.41	90.56	180.00	10,793.00	-578.52	245.81	10.00	10.00	-19.88	180.00	
15,256.53	90.56	180.00	10,753.00	-4,699.44	245.73	0.00	0.00	0.00	0.00	PBHL (R20F 8H)

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Site:	Rebel 20 Fed	North Reference:	Grid
Well:	8H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	APD 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 (R20F 8H)									
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
930.00	0.00	0.00	930.00	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
1,182.00	0.00	0.00	1,182.00	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
4,462.00	0.00	0.00	4,462.00	0.00	0.00	0.00	0.00	0.00	0.00
Base of Salt									
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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Nudge									
4,700.00	1.00	90.00	4,700.00	0.00	0.87	0.00	1.00	1.00	0.00
4,702.01	1.02	90.00	4,702.00	0.00	0.91	0.00	1.00	1.00	0.00
Delaware									
4,800.00	2.00	90.00	4,799.96	0.00	3.49	0.00	1.00	1.00	0.00
4,900.00	3.00	90.00	4,899.86	0.00	7.85	0.00	1.00	1.00	0.00
5,000.00	4.00	90.00	4,999.68	0.00	13.96	0.00	1.00	1.00	0.00
5,100.00	5.00	90.00	5,099.37	0.00	21.80	0.00	1.00	1.00	0.00
Hold									
5,200.00	5.00	90.00	5,198.99	0.00	30.52	0.00	0.00	0.00	0.00
5,300.00	5.00	90.00	5,298.60	0.00	39.23	0.00	0.00	0.00	0.00
5,400.00	5.00	90.00	5,398.22	0.00	47.95	0.00	0.00	0.00	0.00
5,500.00	5.00	90.00	5,497.84	0.00	56.67	0.00	0.00	0.00	0.00
5,600.00	5.00	90.00	5,597.46	0.00	65.38	0.00	0.00	0.00	0.00
5,700.00	5.00	90.00	5,697.08	0.00	74.10	0.00	0.00	0.00	0.00
5,800.00	5.00	90.00	5,796.70	0.00	82.81	0.00	0.00	0.00	0.00
5,900.00	5.00	90.00	5,896.32	0.00	91.53	0.00	0.00	0.00	0.00
6,000.00	5.00	90.00	5,995.94	0.00	100.24	0.00	0.00	0.00	0.00
6,100.00	5.00	90.00	6,095.56	0.00	108.96	0.00	0.00	0.00	0.00
6,200.00	5.00	90.00	6,195.18	0.00	117.67	0.00	0.00	0.00	0.00
6,300.00	5.00	90.00	6,294.80	0.00	126.39	0.00	0.00	0.00	0.00
6,400.00	5.00	90.00	6,394.42	0.00	135.11	0.00	0.00	0.00	0.00
6,500.00	5.00	90.00	6,494.04	0.00	143.82	0.00	0.00	0.00	0.00
6,600.00	5.00	90.00	6,593.66	0.00	152.54	0.00	0.00	0.00	0.00
6,700.00	5.00	90.00	6,693.28	0.00	161.25	0.00	0.00	0.00	0.00
6,800.00	5.00	90.00	6,792.90	0.00	169.97	0.00	0.00	0.00	0.00
6,900.00	5.00	90.00	6,892.52	0.00	178.68	0.00	0.00	0.00	0.00
7,000.00	5.00	90.00	6,992.14	0.00	187.40	0.00	0.00	0.00	0.00
7,100.00	5.00	90.00	7,091.76	0.00	196.11	0.00	0.00	0.00	0.00
7,170.00	5.00	90.00	7,161.49	0.00	202.22	0.00	0.00	0.00	0.00
Drop									
7,200.00	4.85	90.00	7,191.38	0.00	204.79	0.00	0.50	-0.50	0.00
7,300.00	4.35	90.00	7,291.06	0.00	212.81	0.00	0.50	-0.50	0.00
7,400.00	3.85	90.00	7,390.80	0.00	219.96	0.00	0.50	-0.50	0.00
7,500.00	3.35	90.00	7,490.60	0.00	226.24	0.00	0.50	-0.50	0.00
7,600.00	2.85	90.00	7,590.46	0.00	231.65	0.00	0.50	-0.50	0.00
7,700.00	2.35	90.00	7,690.35	0.00	236.18	0.00	0.50	-0.50	0.00
7,800.00	1.85	90.00	7,790.28	0.00	239.85	0.00	0.50	-0.50	0.00
7,900.00	1.35	90.00	7,890.25	0.00	242.64	0.00	0.50	-0.50	0.00
8,000.00	0.85	90.00	7,990.23	0.00	244.56	0.00	0.50	-0.50	0.00
8,100.00	0.35	90.00	8,090.22	0.00	245.61	0.00	0.50	-0.50	0.00
8,170.00	0.00	0.00	8,160.22	0.00	245.82	0.00	0.50	-0.50	-128.57
Hold									
8,200.00	0.00	0.00	8,190.22	0.00	245.82	0.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,290.22	0.00	245.82	0.00	0.00	0.00	0.00
8,400.00	0.00	0.00	8,390.22	0.00	245.82	0.00	0.00	0.00	0.00
8,500.00	0.00	0.00	8,490.22	0.00	245.82	0.00	0.00	0.00	0.00
8,600.00	0.00	0.00	8,590.22	0.00	245.82	0.00	0.00	0.00	0.00
8,627.78	0.00	0.00	8,618.00	0.00	245.82	0.00	0.00	0.00	0.00
BSPG									
8,700.00	0.00	0.00	8,690.22	0.00	245.82	0.00	0.00	0.00	0.00
8,800.00	0.00	0.00	8,790.22	0.00	245.82	0.00	0.00	0.00	0.00
8,900.00	0.00	0.00	8,890.22	0.00	245.82	0.00	0.00	0.00	0.00

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Wellbore:	OH		
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Planned Survey

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9,000.00	0.00	0.00	8,990.22	0.00	245.82	0.00	0.00	0.00	0.00
9,100.00	0.00	0.00	9,090.22	0.00	245.82	0.00	0.00	0.00	0.00
9,200.00	0.00	0.00	9,190.22	0.00	245.82	0.00	0.00	0.00	0.00
9,300.00	0.00	0.00	9,290.22	0.00	245.82	0.00	0.00	0.00	0.00
9,400.00	0.00	0.00	9,390.22	0.00	245.82	0.00	0.00	0.00	0.00
9,500.00	0.00	0.00	9,490.22	0.00	245.82	0.00	0.00	0.00	0.00
9,600.00	0.00	0.00	9,590.22	0.00	245.82	0.00	0.00	0.00	0.00
9,641.78	0.00	0.00	9,632.00	0.00	245.82	0.00	0.00	0.00	0.00
1BSSS									
9,700.00	0.00	0.00	9,690.22	0.00	245.82	0.00	0.00	0.00	0.00
9,800.00	0.00	0.00	9,790.22	0.00	245.82	0.00	0.00	0.00	0.00
9,900.00	0.00	0.00	9,890.22	0.00	245.82	0.00	0.00	0.00	0.00
10,000.00	0.00	0.00	9,990.22	0.00	245.82	0.00	0.00	0.00	0.00
10,026.78	0.00	0.00	10,017.00	0.00	245.82	0.00	0.00	0.00	0.00
2BSLM									
10,100.00	0.00	0.00	10,090.22	0.00	245.82	0.00	0.00	0.00	0.00
10,200.00	0.00	0.00	10,190.22	0.00	245.82	0.00	0.00	0.00	0.00
10,229.85	0.00	0.00	10,220.07	0.00	245.82	0.00	0.00	0.00	0.00
KOP 10° DLS									
10,250.00	2.02	180.00	10,240.22	-0.35	245.82	0.35	10.00	10.00	0.00
10,296.93	6.71	180.00	10,287.00	-3.92	245.82	3.92	10.00	10.00	0.00
2BSSS									
10,300.00	7.02	180.00	10,290.04	-4.29	245.82	4.29	10.00	10.00	0.00
10,350.00	12.02	180.00	10,339.34	-12.55	245.82	12.55	10.00	10.00	0.00
10,400.00	17.02	180.00	10,387.73	-25.08	245.82	25.08	10.00	10.00	0.00
10,450.00	22.02	180.00	10,434.84	-41.78	245.82	41.78	10.00	10.00	0.00
10,500.00	27.02	180.00	10,480.32	-62.52	245.82	62.52	10.00	10.00	0.00
10,550.00	32.02	180.00	10,523.82	-87.14	245.82	87.14	10.00	10.00	0.00
10,600.00	37.02	180.00	10,565.00	-115.46	245.82	115.46	10.00	10.00	0.00
10,650.00	42.02	180.00	10,603.56	-147.27	245.82	147.27	10.00	10.00	0.00
10,700.00	47.02	180.00	10,639.21	-182.31	245.82	182.31	10.00	10.00	0.00
10,750.00	52.02	180.00	10,671.66	-220.33	245.82	220.33	10.00	10.00	0.00
10,800.00	57.02	180.00	10,700.67	-261.03	245.82	261.03	10.00	10.00	0.00
10,850.00	62.02	180.00	10,726.03	-304.10	245.81	304.10	10.00	10.00	0.00
10,900.00	67.02	180.00	10,747.54	-349.22	245.81	349.22	10.00	10.00	0.00
10,950.00	72.02	180.00	10,765.03	-396.05	245.81	396.05	10.00	10.00	0.00
10,974.15	74.43	180.00	10,772.00	-419.16	245.81	419.16	10.00	10.00	0.00
2BSSS Lower									
11,000.00	77.02	180.00	10,778.38	-444.22	245.81	444.22	10.00	10.00	0.00
11,050.00	82.02	180.00	10,787.47	-493.37	245.81	493.37	10.00	10.00	0.00
11,100.00	87.02	180.00	10,792.25	-543.12	245.81	543.12	10.00	10.00	0.00
11,135.41	90.56	180.00	10,793.00	-578.52	245.81	578.52	10.00	10.00	0.00
LP									
11,200.00	90.56	180.00	10,792.37	-643.11	245.81	643.11	0.00	0.00	0.00
11,300.00	90.56	180.00	10,791.40	-743.10	245.81	743.10	0.00	0.00	0.00
11,400.00	90.56	180.00	10,790.43	-843.10	245.80	843.10	0.00	0.00	0.00
11,500.00	90.56	180.00	10,789.46	-943.09	245.80	943.09	0.00	0.00	0.00
11,600.00	90.56	180.00	10,788.49	-1,043.09	245.80	1,043.09	0.00	0.00	0.00
11,700.00	90.56	180.00	10,787.52	-1,143.08	245.80	1,143.08	0.00	0.00	0.00
11,800.00	90.56	180.00	10,786.55	-1,243.08	245.80	1,243.08	0.00	0.00	0.00
11,900.00	90.56	180.00	10,785.58	-1,343.07	245.79	1,343.07	0.00	0.00	0.00
12,000.00	90.56	180.00	10,784.61	-1,443.07	245.79	1,443.07	0.00	0.00	0.00
12,100.00	90.56	180.00	10,783.64	-1,543.06	245.79	1,543.06	0.00	0.00	0.00

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 8H
Company:	DEVON ENERGY	TVD Reference:	3557' GE + 23.5' RKB @ 3580.50usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3557' GE + 23.5' RKB @ 3580.50usft
Site:	Rebel 20 Fed	North Reference:	Grid
Well:	8H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	APD 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)
12,200.00	90.56	180.00	10,782.67	-1,643.06	245.79	1,643.06	0.00	0.00	0.00
12,300.00	90.56	180.00	10,781.70	-1,743.05	245.79	1,743.05	0.00	0.00	0.00
12,400.00	90.56	180.00	10,780.73	-1,843.05	245.79	1,843.05	0.00	0.00	0.00
12,500.00	90.56	180.00	10,779.76	-1,943.04	245.78	1,943.04	0.00	0.00	0.00
12,600.00	90.56	180.00	10,778.78	-2,043.04	245.78	2,043.04	0.00	0.00	0.00
12,700.00	90.56	180.00	10,777.81	-2,143.03	245.78	2,143.03	0.00	0.00	0.00
12,800.00	90.56	180.00	10,776.84	-2,243.03	245.78	2,243.03	0.00	0.00	0.00
12,900.00	90.56	180.00	10,775.87	-2,343.03	245.78	2,343.03	0.00	0.00	0.00
13,000.00	90.56	180.00	10,774.90	-2,443.02	245.77	2,443.02	0.00	0.00	0.00
13,100.00	90.56	180.00	10,773.93	-2,543.02	245.77	2,543.02	0.00	0.00	0.00
13,200.00	90.56	180.00	10,772.96	-2,643.01	245.77	2,643.01	0.00	0.00	0.00
13,300.00	90.56	180.00	10,771.99	-2,743.01	245.77	2,743.01	0.00	0.00	0.00
13,400.00	90.56	180.00	10,771.02	-2,843.00	245.77	2,843.00	0.00	0.00	0.00
13,500.00	90.56	180.00	10,770.05	-2,943.00	245.76	2,943.00	0.00	0.00	0.00
13,600.00	90.56	180.00	10,769.08	-3,042.99	245.76	3,042.99	0.00	0.00	0.00
13,700.00	90.56	180.00	10,768.11	-3,142.99	245.76	3,142.99	0.00	0.00	0.00
13,800.00	90.56	180.00	10,767.14	-3,242.98	245.76	3,242.98	0.00	0.00	0.00
13,900.00	90.56	180.00	10,766.17	-3,342.98	245.76	3,342.98	0.00	0.00	0.00
14,000.00	90.56	180.00	10,765.20	-3,442.97	245.75	3,442.97	0.00	0.00	0.00
14,100.00	90.56	180.00	10,764.23	-3,542.97	245.75	3,542.97	0.00	0.00	0.00
14,200.00	90.56	180.00	10,763.25	-3,642.96	245.75	3,642.96	0.00	0.00	0.00
14,300.00	90.56	180.00	10,762.28	-3,742.96	245.75	3,742.96	0.00	0.00	0.00
14,400.00	90.56	180.00	10,761.31	-3,842.95	245.75	3,842.95	0.00	0.00	0.00
14,500.00	90.56	180.00	10,760.34	-3,942.95	245.74	3,942.95	0.00	0.00	0.00
14,600.00	90.56	180.00	10,759.37	-4,042.95	245.74	4,042.95	0.00	0.00	0.00
14,700.00	90.56	180.00	10,758.40	-4,142.94	245.74	4,142.94	0.00	0.00	0.00
14,800.00	90.56	180.00	10,757.43	-4,242.94	245.74	4,242.94	0.00	0.00	0.00
14,900.00	90.56	180.00	10,756.46	-4,342.93	245.74	4,342.93	0.00	0.00	0.00
15,000.00	90.56	180.00	10,755.49	-4,442.93	245.73	4,442.93	0.00	0.00	0.00
15,100.00	90.56	180.00	10,754.52	-4,542.92	245.73	4,542.92	0.00	0.00	0.00
15,200.00	90.56	180.00	10,753.55	-4,642.92	245.73	4,642.92	0.00	0.00	0.00
15,256.53	90.56	180.00	10,753.00	-4,699.44	245.73	4,699.44	0.00	0.00	0.00
TD - PBHL (R20F 8H)									

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 (R20F 8H)	0.00	0.00	0.00	0.00	0.00	440,561.74	739,996.13	32° 12' 34.378 N	103° 41' 27.654 W
- plan hits target center									
- Point									
PBHL (R20F 8H)	0.00	0.00	10,753.00	-4,699.44	245.73	435,862.30	740,241.86	32° 11' 47.860 N	103° 41' 25.121 W
- plan hits target center									
- Point									

LEAM Drilling Systems LLC

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well 8H
Company:	DEVON ENERGY	TVD Reference:	3557' GE + 23.5' RKB @ 3580.50usft
Project:	Lea County, NM (NAD-83)	MD Reference:	3557' GE + 23.5' RKB @ 3580.50usft
Site:	Rebel 20 Fed	North Reference:	Grid
Well:	8H	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	APD Plan #1		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
930.00	930.00	Rustler		0.00	
1,182.00	1,182.00	Salado		0.00	
4,462.00	4,462.00	Base of Salt		0.00	
4,702.01	4,702.00	Delaware		0.00	
8,627.78	8,618.00	BSPG		0.00	
9,641.78	9,632.00	1BSSS		0.00	
10,026.78	10,017.00	2BSLM		0.00	
10,296.93	10,287.00	2BSSS		0.00	
10,974.15	10,772.00	2BSSS Lower		0.00	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
4,600.00	4,600.00	0.00	0.00	Nudge
5,100.00	5,099.37	0.00	21.80	Hold
7,170.00	7,161.49	0.00	202.22	Drop
8,170.00	8,160.22	0.00	245.82	Hold
10,229.85	10,220.07	0.00	245.82	KOP 10° DLS
11,135.41	10,793.00	-578.52	245.81	LP
15,256.53	10,753.00	-4,699.44	245.73	TD

**Weatherford**

Weatherford Drilling Services

GeoDec4 v2.1.0.0

Report Date: May 20, 2015
Job Number: _____
Customer: Devon Energy
Well Name: Rebel 20 Fed 8H
API Number: _____
Rig Name: _____
Location: Lea Co, NM Nad83 NME
Block: _____
Engineer: RWJ

NAD83 / New Mexico East (ftUS)	NAD83 (1986)
Projected Coordinate System	Geodetic Coordinate System
Datum: North American Datum 1983 (1986)	Datum: North American Datum 1983 (1986)
Ellipsoid: GRS 1980	Ellipsoid: GRS 1980
EPSG: 2257	EPSG: 4269
North: 440561.74 US Survey Foot	Latitude: 32.209549 Degree
East: 739996.13 US Survey Foot	Longitude: -103.691015 Degree
Convergence: 0.34°	
Declination: 7.31°	
Total Correction: 6.97°	
Datum Transformation: none	

Geodetic Location WGS84

MSL Elevation = 0 m
Latitude = 32° 12' 34.38" N
Longitude = 103° 41' 27.65" W

Magnetic Declination	=	7.31 deg	[True North Offset]	
Local Gravity	=	.9988 g	Checksum	= 6591
Local Field Strength	=	48198 nT	Magnetic Vector X	= 23831 nT
Magnetic Dip	=	60.10 deg	Magnetic Vector Y	= 3055 nT
Magnetic Model	=	bggm2015.dat	Magnetic Vector Z	= 41783 nT
Run Date	=	September 15, 2015	Magnetic Vector H	= 24026 nT

Signed: _____ Date: _____