

Devon Energy
Planning Report

FEB 01 2017

RECEIVED

Database:	EDM r5000 US Production	Local Co-ordinate Reference:	Well Thistle Unit 102H
Company:	WESTERN DIVISION	TVD Reference:	RKB @ 3662.80ft
Project:	PBNM	MD Reference:	RKB @ 3662.80ft
Site:	Norwalk	North Reference:	Grid
Well:	Thistle Unit 102H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	PBNM		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site		Norwalk			
Site Position:		Northing:	0.00 usft	Latitude:	30.988446
From:	Map	Easting:	0.00 usft	Longitude:	-106.060830
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.89 °

Well	Thistle Unit 102H					
Well Position	+N/-S	457,157.69 ft	Northing:	457,156.78 usft	Latitude:	32.254390
	+E/-W	782,528.68 ft	Easting:	782,527.12 usft	Longitude:	-103.553121
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	3,637.80 ft

Wellbore		Wellbore #1			
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/29/2016	6.94	60.09	48,114

Design	Design #1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	0.09

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	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	
5,200.00	0.00	0.00	5,200.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,600.00	4.00	180.00	5,599.68	-13.96	0.00	1.00	1.00	0.00	180.00	
6,600.00	4.00	180.00	6,597.24	-83.71	0.00	0.00	0.00	0.00	0.00	
7,000.00	0.00	0.00	6,996.92	-97.67	0.00	1.00	-1.00	0.00	180.00	
9,522.00	0.00	0.00	9,518.92	-97.67	0.00	0.00	0.00	0.00	0.00	
10,421.99	90.00	0.09	10,091.88	475.28	0.91	10.00	10.00	0.01	0.09	
17,679.71	90.00	0.09	10,092.00	7,732.99	12.49	0.00	0.00	0.00	0.00	Thistle Unit 102H_BH

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Project:	PBNM	MD Reference:	RKB @ 3662.80ft
Site:	Norwalk	North Reference:	Grid
Well:	Thistle Unit 102H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	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
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
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
4,300.00	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
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	1.00	180.00	5,300.00	-0.87	0.00	-0.87	1.00	1.00	0.00

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Wellbore:	Wellbore #1		
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Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,400.00	2.00	180.00	5,399.96	-3.49	0.00	-3.49	1.00	1.00	0.00
5,500.00	3.00	180.00	5,499.86	-7.85	0.00	-7.85	1.00	1.00	0.00
5,600.00	4.00	180.00	5,599.68	-13.96	0.00	-13.96	1.00	1.00	0.00
5,700.00	4.00	180.00	5,699.43	-20.93	0.00	-20.93	0.00	0.00	0.00
5,800.00	4.00	180.00	5,799.19	-27.91	0.00	-27.91	0.00	0.00	0.00
5,900.00	4.00	180.00	5,898.94	-34.88	0.00	-34.88	0.00	0.00	0.00
6,000.00	4.00	180.00	5,998.70	-41.86	0.00	-41.86	0.00	0.00	0.00
6,100.00	4.00	180.00	6,098.46	-48.84	0.00	-48.84	0.00	0.00	0.00
6,200.00	4.00	180.00	6,198.21	-55.81	0.00	-55.81	0.00	0.00	0.00
6,300.00	4.00	180.00	6,297.97	-62.79	0.00	-62.79	0.00	0.00	0.00
6,400.00	4.00	180.00	6,397.73	-69.76	0.00	-69.76	0.00	0.00	0.00
6,500.00	4.00	180.00	6,497.48	-76.74	0.00	-76.74	0.00	0.00	0.00
6,600.00	4.00	180.00	6,597.24	-83.71	0.00	-83.71	0.00	0.00	0.00
6,700.00	3.00	180.00	6,697.05	-89.82	0.00	-89.82	1.00	-1.00	0.00
6,800.00	2.00	180.00	6,796.96	-94.18	0.00	-94.18	1.00	-1.00	0.00
6,900.00	1.00	180.00	6,896.92	-96.80	0.00	-96.80	1.00	-1.00	0.00
7,000.00	0.00	0.00	6,996.92	-97.67	0.00	-97.67	1.00	-1.00	0.00
7,100.00	0.00	0.00	7,096.91	-97.67	0.00	-97.67	0.00	0.00	0.00
7,200.00	0.00	0.00	7,196.91	-97.67	0.00	-97.67	0.00	0.00	0.00
7,300.00	0.00	0.00	7,296.91	-97.67	0.00	-97.67	0.00	0.00	0.00
7,400.00	0.00	0.00	7,396.91	-97.67	0.00	-97.67	0.00	0.00	0.00
7,500.00	0.00	0.00	7,496.91	-97.67	0.00	-97.67	0.00	0.00	0.00
7,600.00	0.00	0.00	7,596.91	-97.67	0.00	-97.67	0.00	0.00	0.00
7,700.00	0.00	0.00	7,696.91	-97.67	0.00	-97.67	0.00	0.00	0.00
7,800.00	0.00	0.00	7,796.91	-97.67	0.00	-97.67	0.00	0.00	0.00
7,900.00	0.00	0.00	7,896.91	-97.67	0.00	-97.67	0.00	0.00	0.00
8,000.00	0.00	0.00	7,996.91	-97.67	0.00	-97.67	0.00	0.00	0.00
8,100.00	0.00	0.00	8,096.91	-97.67	0.00	-97.67	0.00	0.00	0.00
8,200.00	0.00	0.00	8,196.91	-97.67	0.00	-97.67	0.00	0.00	0.00
8,300.00	0.00	0.00	8,296.91	-97.67	0.00	-97.67	0.00	0.00	0.00
8,400.00	0.00	0.00	8,396.91	-97.67	0.00	-97.67	0.00	0.00	0.00
8,500.00	0.00	0.00	8,496.91	-97.67	0.00	-97.67	0.00	0.00	0.00
8,600.00	0.00	0.00	8,596.91	-97.67	0.00	-97.67	0.00	0.00	0.00
8,700.00	0.00	0.00	8,696.91	-97.67	0.00	-97.67	0.00	0.00	0.00
8,800.00	0.00	0.00	8,796.91	-97.67	0.00	-97.67	0.00	0.00	0.00
8,900.00	0.00	0.00	8,896.91	-97.67	0.00	-97.67	0.00	0.00	0.00
9,000.00	0.00	0.00	8,996.91	-97.67	0.00	-97.67	0.00	0.00	0.00
9,100.00	0.00	0.00	9,096.91	-97.67	0.00	-97.67	0.00	0.00	0.00
9,200.00	0.00	0.00	9,196.91	-97.67	0.00	-97.67	0.00	0.00	0.00
9,300.00	0.00	0.00	9,296.91	-97.67	0.00	-97.67	0.00	0.00	0.00
9,400.00	0.00	0.00	9,396.91	-97.67	0.00	-97.67	0.00	0.00	0.00
9,500.00	0.00	0.00	9,496.91	-97.67	0.00	-97.67	0.00	0.00	0.00
9,522.00	0.00	0.00	9,518.92	-97.67	0.00	-97.67	0.00	0.00	0.00
9,550.00	2.80	0.09	9,546.90	-96.99	0.00	-96.99	10.00	10.00	0.00
9,600.00	7.80	0.09	9,596.67	-92.37	0.01	-92.37	10.00	10.00	0.00
9,650.00	12.80	0.09	9,645.85	-83.43	0.02	-83.43	10.00	10.00	0.00
9,700.00	17.80	0.09	9,694.07	-70.24	0.04	-70.24	10.00	10.00	0.00
9,750.00	22.80	0.09	9,740.94	-52.90	0.07	-52.90	10.00	10.00	0.00
9,800.00	27.80	0.09	9,786.13	-31.54	0.11	-31.54	10.00	10.00	0.00
9,850.00	32.80	0.09	9,829.29	-6.32	0.15	-6.32	10.00	10.00	0.00
9,900.00	37.80	0.09	9,870.08	22.56	0.19	22.56	10.00	10.00	0.00
9,950.00	42.80	0.09	9,908.21	54.89	0.24	54.89	10.00	10.00	0.00
10,000.00	47.80	0.09	9,943.37	90.42	0.30	90.42	10.00	10.00	0.00
10,050.00	52.80	0.09	9,975.29	128.88	0.36	128.88	10.00	10.00	0.00

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Project:	PBNM	MD Reference:	RKB @ 3662.80ft
Site:	Norwalk	North Reference:	Grid
Well:	Thistle Unit 102H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,100.00	57.80	0.09	10,003.75	169.97	0.43	169.97	10.00	10.00	0.00
10,150.00	62.80	0.09	10,028.51	213.39	0.50	213.39	10.00	10.00	0.00
10,200.00	67.80	0.09	10,049.40	258.80	0.57	258.80	10.00	10.00	0.00
10,250.00	72.80	0.09	10,066.25	305.86	0.64	305.86	10.00	10.00	0.00
10,300.00	77.80	0.09	10,078.93	354.20	0.72	354.21	10.00	10.00	0.00
10,350.00	82.80	0.09	10,087.36	403.47	0.80	403.47	10.00	10.00	0.00
10,400.00	87.80	0.09	10,091.45	453.29	0.88	453.29	10.00	10.00	0.00
10,421.99	90.00	0.09	10,091.88	475.28	0.91	475.28	10.00	10.00	0.00
10,500.00	90.00	0.09	10,091.88	553.28	1.04	553.29	0.00	0.00	0.00
10,600.00	90.00	0.09	10,091.88	653.28	1.20	653.29	0.00	0.00	0.00
10,700.00	90.00	0.09	10,091.88	753.28	1.36	753.29	0.00	0.00	0.00
10,800.00	90.00	0.09	10,091.88	853.28	1.52	853.29	0.00	0.00	0.00
10,900.00	90.00	0.09	10,091.88	953.28	1.68	953.29	0.00	0.00	0.00
11,000.00	90.00	0.09	10,091.89	1,053.28	1.84	1,053.29	0.00	0.00	0.00
11,100.00	90.00	0.09	10,091.89	1,153.28	2.00	1,153.29	0.00	0.00	0.00
11,200.00	90.00	0.09	10,091.89	1,253.28	2.15	1,253.29	0.00	0.00	0.00
11,300.00	90.00	0.09	10,091.89	1,353.28	2.31	1,353.29	0.00	0.00	0.00
11,400.00	90.00	0.09	10,091.89	1,453.28	2.47	1,453.29	0.00	0.00	0.00
11,500.00	90.00	0.09	10,091.89	1,553.28	2.63	1,553.29	0.00	0.00	0.00
11,600.00	90.00	0.09	10,091.90	1,653.28	2.79	1,653.29	0.00	0.00	0.00
11,700.00	90.00	0.09	10,091.90	1,753.28	2.95	1,753.29	0.00	0.00	0.00
11,800.00	90.00	0.09	10,091.90	1,853.28	3.11	1,853.29	0.00	0.00	0.00
11,900.00	90.00	0.09	10,091.90	1,953.28	3.27	1,953.29	0.00	0.00	0.00
12,000.00	90.00	0.09	10,091.90	2,053.28	3.43	2,053.29	0.00	0.00	0.00
12,100.00	90.00	0.09	10,091.90	2,153.28	3.59	2,153.29	0.00	0.00	0.00
12,200.00	90.00	0.09	10,091.91	2,253.28	3.75	2,253.29	0.00	0.00	0.00
12,300.00	90.00	0.09	10,091.91	2,353.28	3.91	2,353.29	0.00	0.00	0.00
12,400.00	90.00	0.09	10,091.91	2,453.28	4.07	2,453.29	0.00	0.00	0.00
12,500.00	90.00	0.09	10,091.91	2,553.28	4.23	2,553.29	0.00	0.00	0.00
12,600.00	90.00	0.09	10,091.91	2,653.28	4.39	2,653.29	0.00	0.00	0.00
12,700.00	90.00	0.09	10,091.91	2,753.28	4.55	2,753.29	0.00	0.00	0.00
12,800.00	90.00	0.09	10,091.92	2,853.28	4.71	2,853.29	0.00	0.00	0.00
12,900.00	90.00	0.09	10,091.92	2,953.28	4.87	2,953.29	0.00	0.00	0.00
13,000.00	90.00	0.09	10,091.92	3,053.28	5.03	3,053.29	0.00	0.00	0.00
13,100.00	90.00	0.09	10,091.92	3,153.28	5.19	3,153.29	0.00	0.00	0.00
13,200.00	90.00	0.09	10,091.92	3,253.28	5.34	3,253.29	0.00	0.00	0.00
13,300.00	90.00	0.09	10,091.92	3,353.28	5.50	3,353.29	0.00	0.00	0.00
13,400.00	90.00	0.09	10,091.93	3,453.28	5.66	3,453.29	0.00	0.00	0.00
13,500.00	90.00	0.09	10,091.93	3,553.28	5.82	3,553.29	0.00	0.00	0.00
13,600.00	90.00	0.09	10,091.93	3,653.28	5.98	3,653.29	0.00	0.00	0.00
13,700.00	90.00	0.09	10,091.93	3,753.28	6.14	3,753.29	0.00	0.00	0.00
13,800.00	90.00	0.09	10,091.93	3,853.28	6.30	3,853.29	0.00	0.00	0.00
13,900.00	90.00	0.09	10,091.94	3,953.28	6.46	3,953.29	0.00	0.00	0.00
14,000.00	90.00	0.09	10,091.94	4,053.28	6.62	4,053.29	0.00	0.00	0.00
14,100.00	90.00	0.09	10,091.94	4,153.28	6.78	4,153.29	0.00	0.00	0.00
14,200.00	90.00	0.09	10,091.94	4,253.28	6.94	4,253.29	0.00	0.00	0.00
14,300.00	90.00	0.09	10,091.94	4,353.28	7.10	4,353.29	0.00	0.00	0.00
14,400.00	90.00	0.09	10,091.94	4,453.28	7.26	4,453.29	0.00	0.00	0.00
14,500.00	90.00	0.09	10,091.95	4,553.28	7.42	4,553.29	0.00	0.00	0.00
14,600.00	90.00	0.09	10,091.95	4,653.28	7.58	4,653.29	0.00	0.00	0.00
14,700.00	90.00	0.09	10,091.95	4,753.28	7.74	4,753.29	0.00	0.00	0.00
14,800.00	90.00	0.09	10,091.95	4,853.28	7.90	4,853.29	0.00	0.00	0.00
14,900.00	90.00	0.09	10,091.95	4,953.28	8.06	4,953.29	0.00	0.00	0.00
15,000.00	90.00	0.09	10,091.95	5,053.28	8.22	5,053.29	0.00	0.00	0.00

Devon Energy
Planning Report

Database: EDM r5000 US Production
Company: WESTERN DIVISION
Project: PBNM
Site: Norwalk
Well: Thistle Unit 102H
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference:
TVD Reference: RKB @ 3662.80ft
MD Reference: RKB @ 3662.80ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
15,100.00	90.00	0.09	10,091.96	5,153.28	8.38	5,153.29	0.00	0.00	0.00
15,200.00	90.00	0.09	10,091.96	5,253.28	8.53	5,253.29	0.00	0.00	0.00
15,300.00	90.00	0.09	10,091.96	5,353.28	8.69	5,353.29	0.00	0.00	0.00
15,400.00	90.00	0.09	10,091.96	5,453.28	8.85	5,453.29	0.00	0.00	0.00
15,500.00	90.00	0.09	10,091.96	5,553.28	9.01	5,553.29	0.00	0.00	0.00
15,600.00	90.00	0.09	10,091.96	5,653.28	9.17	5,653.29	0.00	0.00	0.00
15,700.00	90.00	0.09	10,091.97	5,753.28	9.33	5,753.29	0.00	0.00	0.00
15,800.00	90.00	0.09	10,091.97	5,853.28	9.49	5,853.29	0.00	0.00	0.00
15,900.00	90.00	0.09	10,091.97	5,953.28	9.65	5,953.29	0.00	0.00	0.00
16,000.00	90.00	0.09	10,091.97	6,053.28	9.81	6,053.29	0.00	0.00	0.00
16,100.00	90.00	0.09	10,091.97	6,153.28	9.97	6,153.29	0.00	0.00	0.00
16,200.00	90.00	0.09	10,091.97	6,253.28	10.13	6,253.29	0.00	0.00	0.00
16,300.00	90.00	0.09	10,091.98	6,353.28	10.29	6,353.29	0.00	0.00	0.00
16,400.00	90.00	0.09	10,091.98	6,453.28	10.45	6,453.29	0.00	0.00	0.00
16,500.00	90.00	0.09	10,091.98	6,553.28	10.61	6,553.29	0.00	0.00	0.00
16,600.00	90.00	0.09	10,091.98	6,653.28	10.77	6,653.29	0.00	0.00	0.00
16,700.00	90.00	0.09	10,091.98	6,753.28	10.93	6,753.29	0.00	0.00	0.00
16,800.00	90.00	0.09	10,091.99	6,853.28	11.09	6,853.29	0.00	0.00	0.00
16,900.00	90.00	0.09	10,091.99	6,953.28	11.25	6,953.29	0.00	0.00	0.00
17,000.00	90.00	0.09	10,091.99	7,053.28	11.41	7,053.29	0.00	0.00	0.00
17,100.00	90.00	0.09	10,091.99	7,153.28	11.57	7,153.29	0.00	0.00	0.00
17,200.00	90.00	0.09	10,091.99	7,253.28	11.72	7,253.29	0.00	0.00	0.00
17,300.00	90.00	0.09	10,091.99	7,353.28	11.88	7,353.29	0.00	0.00	0.00
17,400.00	90.00	0.09	10,092.00	7,453.28	12.04	7,453.29	0.00	0.00	0.00
17,500.00	90.00	0.09	10,092.00	7,553.28	12.20	7,553.29	0.00	0.00	0.00
17,600.00	90.00	0.09	10,092.00	7,653.28	12.36	7,653.29	0.00	0.00	0.00
17,679.71	90.00	0.09	10,092.00	7,732.99	12.49	7,733.00	0.00	0.00	0.00

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Thistle Unit 102H_BHL - plan hits target center - Point	0.00	0.00	10,092.00	7,732.99	12.49	464,889.75	782,539.61	32.275645	-103.552899