

WESTERN DIVISION

PBNM

Dzurisin

Thistle Unit 145H

Wellbore #1

Plan: Plan 1

Standard Planning Report

12 July, 2016

HOBBS OCD

FEB 13 2017

RECEIVED

Devon Energy

Planning Report

Database: EDM r5000 US Production
 Company: WESTERN DIVISION
 Project: PBNM
 Site: Dzurisin
 Well: Thistle Unit 145H
 Wellbore: Wellbore #1
 Design: Plan 1

Local Co-ordinate Reference: Well Thistle Unit 145H
 TVD Reference: 1 @ 3674.80ft
 MD Reference: 1 @ 3674.80ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature

Project	PBNM		
Map System:	Flat Earth	System Datum:	Mean Sea Level
Geo Datum:	WGS 1984		
Map Zone:	No Conversions		

Site	Dzurisin		
Site Position:		Northing:	429,922.27 usft
From:	Map	Easting:	725,391.41 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "
		Latitude:	0.000000
		Longitude:	0.000000
		Grid Convergence:	

Well	Thistle Unit 145H		
Well Position	+N/-S	27,141.45 ft	Northing: 457,063.67 usft
	+E/-W	51,474.59 ft	Easting: 776,865.90 usft
Position Uncertainty	0.00 ft	Wellhead Elevation:	0.00 ft
		Latitude:	0.000000
		Longitude:	0.000000
		Ground Level:	3,651.30 ft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
	User Defined	7/12/2016	0.00
			Dip Angle
			0.00
			Field Strength
			0

Design	Plan 1		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(ft)	(ft)	(ft)
	0.00	0.00	0.00
			Direction
			(°)
			2.37

Plan Sections										
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target
Depth	(°)	(°)	Depth	(ft)	(ft)	Rate	Rate	Rate	(°)	
(ft)			(ft)			(°/100usft)	(°/100usft)	(°/100usft)		
0.00	0.00	0.00	0.00	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	
4,000.00	5.00	60.00	3,999.37	10.90	18.88	1.00	1.00	0.00	60.00	
7,500.00	5.00	60.00	7,486.05	163.42	283.06	0.00	0.00	0.00	0.00	
8,500.00	0.00	0.00	8,484.78	185.23	320.82	0.50	-0.50	0.00	180.00	
9,225.00	0.00	0.00	9,209.78	185.23	320.82	0.00	0.00	0.00	0.00	
9,975.59	90.07	0.02	9,687.24	663.28	320.98	12.00	12.00	0.00	0.02	Thistle Unit 145H BHI
10,018.26	90.07	0.02	9,687.19	705.95	320.99	0.01	0.01	0.00	-0.06	
17,064.27	90.07	0.02	9,678.06	7,751.96	323.27	0.00	0.00	0.00	0.00	
17,109.50	90.07	0.02	9,678.00	7,797.19	323.28	0.01	-0.01	0.00	160.64	Thistle Unit 145H BHI

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Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Well Thistle Unit 145H
1 @ 3674.80ft
1 @ 3674.80ft
Grid
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)
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	1.00	60.00	3,600.00	0.44	0.76	0.47	1.00	1.00	0.00
3,700.00	2.00	60.00	3,699.96	1.75	3.02	1.87	1.00	1.00	0.00
3,800.00	3.00	60.00	3,799.86	3.93	6.80	4.20	1.00	1.00	0.00
3,900.00	4.00	60.00	3,899.68	6.98	12.09	7.47	1.00	1.00	0.00
4,000.00	5.00	60.00	3,999.37	10.90	18.88	11.67	1.00	1.00	0.00
4,100.00	5.00	60.00	4,098.99	15.26	26.43	16.34	0.00	0.00	0.00
4,200.00	5.00	60.00	4,198.60	19.62	33.98	21.01	0.00	0.00	0.00
4,300.00	5.00	60.00	4,298.22	23.97	41.53	25.67	0.00	0.00	0.00
4,400.00	5.00	60.00	4,397.84	28.33	49.07	30.34	0.00	0.00	0.00
4,500.00	5.00	60.00	4,497.46	32.69	56.62	35.01	0.00	0.00	0.00
4,600.00	5.00	60.00	4,597.08	37.05	64.17	39.67	0.00	0.00	0.00
4,700.00	5.00	60.00	4,696.70	41.41	71.72	44.34	0.00	0.00	0.00
4,800.00	5.00	60.00	4,796.32	45.76	79.27	49.01	0.00	0.00	0.00
4,900.00	5.00	60.00	4,895.94	50.12	86.81	53.67	0.00	0.00	0.00
5,000.00	5.00	60.00	4,995.56	54.48	94.36	58.34	0.00	0.00	0.00
5,100.00	5.00	60.00	5,095.18	58.84	101.91	63.01	0.00	0.00	0.00
5,200.00	5.00	60.00	5,194.80	63.19	109.46	67.67	0.00	0.00	0.00
5,300.00	5.00	60.00	5,294.42	67.55	117.00	72.34	0.00	0.00	0.00

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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	5.00	60.00	5,394.04	71.91	124.55	77.01	0.00	0.00	0.00
5,500.00	5.00	60.00	5,493.66	76.27	132.10	81.68	0.00	0.00	0.00
5,600.00	5.00	60.00	5,593.28	80.63	139.65	86.34	0.00	0.00	0.00
5,700.00	5.00	60.00	5,692.90	84.98	147.20	91.01	0.00	0.00	0.00
5,800.00	5.00	60.00	5,792.52	89.34	154.74	95.68	0.00	0.00	0.00
5,900.00	5.00	60.00	5,892.14	93.70	162.29	100.34	0.00	0.00	0.00
6,000.00	5.00	60.00	5,991.76	98.06	169.84	105.01	0.00	0.00	0.00
6,100.00	5.00	60.00	6,091.37	102.41	177.39	109.68	0.00	0.00	0.00
6,200.00	5.00	60.00	6,190.99	106.77	184.94	114.34	0.00	0.00	0.00
6,300.00	5.00	60.00	6,290.61	111.13	192.48	119.01	0.00	0.00	0.00
6,400.00	5.00	60.00	6,390.23	115.49	200.03	123.68	0.00	0.00	0.00
6,500.00	5.00	60.00	6,489.85	119.85	207.58	128.34	0.00	0.00	0.00
6,600.00	5.00	60.00	6,589.47	124.20	215.13	133.01	0.00	0.00	0.00
6,700.00	5.00	60.00	6,689.09	128.56	222.68	137.68	0.00	0.00	0.00
6,800.00	5.00	60.00	6,788.71	132.92	230.22	142.34	0.00	0.00	0.00
6,900.00	5.00	60.00	6,888.33	137.28	237.77	147.01	0.00	0.00	0.00
7,000.00	5.00	60.00	6,987.95	141.64	245.32	151.68	0.00	0.00	0.00
7,100.00	5.00	60.00	7,087.57	145.99	252.87	156.34	0.00	0.00	0.00
7,200.00	5.00	60.00	7,187.19	150.35	260.41	161.01	0.00	0.00	0.00
7,300.00	5.00	60.00	7,286.81	154.71	267.96	165.68	0.00	0.00	0.00
7,400.00	5.00	60.00	7,386.43	159.07	275.51	170.34	0.00	0.00	0.00
7,500.00	5.00	60.00	7,486.05	163.42	283.06	175.01	0.00	0.00	0.00
7,600.00	4.50	60.00	7,585.70	167.56	290.23	179.44	0.50	-0.50	0.00
7,700.00	4.00	60.00	7,685.43	171.27	296.65	183.41	0.50	-0.50	0.00
7,800.00	3.50	60.00	7,785.21	174.54	302.31	186.91	0.50	-0.50	0.00
7,900.00	3.00	60.00	7,885.05	177.37	307.22	189.95	0.50	-0.50	0.00
8,000.00	2.50	60.00	7,984.94	179.77	311.38	192.52	0.50	-0.50	0.00
8,100.00	2.00	60.00	8,084.86	181.74	314.78	194.62	0.50	-0.50	0.00
8,200.00	1.50	60.00	8,184.81	183.26	317.42	196.26	0.50	-0.50	0.00
8,300.00	1.00	60.00	8,284.79	184.35	319.31	197.42	0.50	-0.50	0.00
8,400.00	0.50	60.00	8,384.78	185.01	320.44	198.12	0.50	-0.50	0.00
8,500.00	0.00	0.00	8,484.78	185.23	320.82	198.36	0.50	-0.50	0.00
8,600.00	0.00	0.00	8,584.78	185.23	320.82	198.36	0.00	0.00	0.00
8,700.00	0.00	0.00	8,684.78	185.23	320.82	198.36	0.00	0.00	0.00
8,800.00	0.00	0.00	8,784.78	185.23	320.82	198.36	0.00	0.00	0.00
8,900.00	0.00	0.00	8,884.78	185.23	320.82	198.36	0.00	0.00	0.00
9,000.00	0.00	0.00	8,984.78	185.23	320.82	198.36	0.00	0.00	0.00
9,100.00	0.00	0.00	9,084.78	185.23	320.82	198.36	0.00	0.00	0.00
9,200.00	0.00	0.00	9,184.78	185.23	320.82	198.36	0.00	0.00	0.00
9,225.00	0.00	0.00	9,209.78	185.23	320.82	198.36	0.00	0.00	0.00
9,250.00	3.00	0.02	9,234.77	185.88	320.82	199.01	12.00	12.00	0.00
9,275.00	6.00	0.02	9,259.69	187.84	320.82	200.97	12.00	12.00	0.00
9,300.00	9.00	0.02	9,284.47	191.11	320.82	204.23	12.00	12.00	0.00
9,325.00	12.00	0.02	9,309.05	195.66	320.83	208.78	12.00	12.00	0.00
9,350.00	15.00	0.02	9,333.36	201.50	320.83	214.61	12.00	12.00	0.00
9,375.00	18.00	0.02	9,357.32	208.60	320.83	221.71	12.00	12.00	0.00
9,400.00	21.00	0.02	9,380.89	216.94	320.83	230.04	12.00	12.00	0.00
9,425.00	24.00	0.02	9,403.98	226.51	320.84	239.60	12.00	12.00	0.00
9,450.00	27.00	0.02	9,426.54	237.27	320.84	250.35	12.00	12.00	0.00
9,475.00	30.00	0.02	9,448.51	249.19	320.84	262.27	12.00	12.00	0.00
9,500.00	33.00	0.02	9,469.82	262.26	320.85	275.32	12.00	12.00	0.00
9,525.00	36.00	0.02	9,490.43	276.41	320.85	289.47	12.00	12.00	0.00
9,550.00	39.00	0.02	9,510.26	291.63	320.86	304.67	12.00	12.00	0.00
9,575.00	42.00	0.02	9,529.26	307.87	320.86	320.89	12.00	12.00	0.00

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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)
9,600.00	45.00	0.02	9,547.40	325.07	320.87	338.09	12.00	12.00	0.00
9,625.00	48.00	0.02	9,564.60	343.20	320.87	356.20	12.00	12.00	0.00
9,650.00	51.00	0.02	9,580.84	362.21	320.88	375.19	12.00	12.00	0.00
9,675.00	54.00	0.02	9,596.06	382.04	320.89	395.01	12.00	12.00	0.00
9,700.00	57.00	0.02	9,610.21	402.65	320.89	415.59	12.00	12.00	0.00
9,725.00	60.00	0.02	9,623.28	423.96	320.90	436.89	12.00	12.00	0.00
9,750.00	63.00	0.02	9,635.20	445.93	320.91	458.84	12.00	12.00	0.00
9,775.00	66.00	0.02	9,645.96	468.49	320.91	481.38	12.00	12.00	0.00
9,800.00	69.00	0.02	9,655.53	491.58	320.92	504.46	12.00	12.00	0.00
9,825.00	72.00	0.02	9,663.88	515.15	320.93	528.00	12.00	12.00	0.00
9,850.00	75.00	0.02	9,670.97	539.11	320.94	551.95	12.00	12.00	0.00
9,875.00	78.00	0.02	9,676.81	563.42	320.94	576.23	12.00	12.00	0.00
9,900.00	81.00	0.02	9,681.37	588.00	320.95	600.79	12.00	12.00	0.00
9,925.00	84.00	0.02	9,684.63	612.78	320.96	625.55	12.00	12.00	0.00
9,950.00	87.00	0.02	9,686.59	637.70	320.97	650.45	12.00	12.00	0.00
9,975.59	90.07	0.02	9,687.24	663.28	320.98	676.00	12.00	12.00	0.00
10,000.00	90.07	0.02	9,687.21	687.69	320.98	700.40	0.01	0.01	0.00
10,018.26	90.07	0.02	9,687.19	705.95	320.99	718.64	0.01	0.01	0.00
10,100.00	90.07	0.02	9,687.08	787.69	321.02	800.31	0.00	0.00	0.00
10,200.00	90.07	0.02	9,686.95	887.69	321.05	900.23	0.00	0.00	0.00
10,300.00	90.07	0.02	9,686.83	987.69	321.08	1,000.14	0.00	0.00	0.00
10,400.00	90.07	0.02	9,686.70	1,087.69	321.11	1,100.06	0.00	0.00	0.00
10,500.00	90.07	0.02	9,686.57	1,187.69	321.15	1,199.97	0.00	0.00	0.00
10,600.00	90.07	0.02	9,686.44	1,287.69	321.18	1,299.89	0.00	0.00	0.00
10,700.00	90.07	0.02	9,686.31	1,387.69	321.21	1,399.81	0.00	0.00	0.00
10,800.00	90.07	0.02	9,686.18	1,487.69	321.24	1,499.72	0.00	0.00	0.00
10,900.00	90.07	0.02	9,686.05	1,587.69	321.27	1,599.64	0.00	0.00	0.00
11,000.00	90.07	0.02	9,685.92	1,687.69	321.31	1,699.55	0.00	0.00	0.00
11,100.00	90.07	0.02	9,685.79	1,787.69	321.34	1,799.47	0.00	0.00	0.00
11,200.00	90.07	0.02	9,685.66	1,887.69	321.37	1,899.38	0.00	0.00	0.00
11,300.00	90.07	0.02	9,685.53	1,987.69	321.40	1,999.30	0.00	0.00	0.00
11,400.00	90.07	0.02	9,685.40	2,087.69	321.44	2,099.21	0.00	0.00	0.00
11,500.00	90.07	0.02	9,685.27	2,187.69	321.47	2,199.13	0.00	0.00	0.00
11,600.00	90.07	0.02	9,685.14	2,287.69	321.50	2,299.04	0.00	0.00	0.00
11,700.00	90.07	0.02	9,685.01	2,387.69	321.53	2,398.96	0.00	0.00	0.00
11,800.00	90.07	0.02	9,684.88	2,487.69	321.57	2,498.87	0.00	0.00	0.00
11,900.00	90.07	0.02	9,684.75	2,587.69	321.60	2,598.79	0.00	0.00	0.00
12,000.00	90.07	0.02	9,684.62	2,687.69	321.63	2,698.71	0.00	0.00	0.00
12,100.00	90.07	0.02	9,684.49	2,787.69	321.66	2,798.62	0.00	0.00	0.00
12,200.00	90.07	0.02	9,684.36	2,887.69	321.69	2,898.54	0.00	0.00	0.00
12,300.00	90.07	0.02	9,684.23	2,987.69	321.73	2,998.45	0.00	0.00	0.00
12,400.00	90.07	0.02	9,684.10	3,087.69	321.76	3,098.37	0.00	0.00	0.00
12,500.00	90.07	0.02	9,683.97	3,187.69	321.79	3,198.28	0.00	0.00	0.00
12,600.00	90.07	0.02	9,683.84	3,287.69	321.82	3,298.20	0.00	0.00	0.00
12,700.00	90.07	0.02	9,683.71	3,387.69	321.86	3,398.11	0.00	0.00	0.00
12,800.00	90.07	0.02	9,683.58	3,487.69	321.89	3,498.03	0.00	0.00	0.00
12,900.00	90.07	0.02	9,683.45	3,587.69	321.92	3,597.94	0.00	0.00	0.00
13,000.00	90.07	0.02	9,683.33	3,687.69	321.95	3,697.86	0.00	0.00	0.00
13,100.00	90.07	0.02	9,683.20	3,787.69	321.99	3,797.78	0.00	0.00	0.00
13,200.00	90.07	0.02	9,683.07	3,887.69	322.02	3,897.69	0.00	0.00	0.00
13,300.00	90.07	0.02	9,682.94	3,987.69	322.05	3,997.61	0.00	0.00	0.00
13,400.00	90.07	0.02	9,682.81	4,087.69	322.08	4,097.52	0.00	0.00	0.00
13,500.00	90.07	0.02	9,682.68	4,187.69	322.11	4,197.44	0.00	0.00	0.00
13,600.00	90.07	0.02	9,682.55	4,287.69	322.15	4,297.35	0.00	0.00	0.00

Devon Energy

Planning Report

Database: EDM r5000 US Production
 Company: WESTERN DIVISION
 Project: PBNM
 Site: Dzurisin
 Well: Thistle Unit 145H
 Wellbore: Wellbore #1
 Design: Plan 1

Local Co-ordinate Reference: Well Thistle Unit 145H
 TVD Reference: 1 @ 3674.80ft
 MD Reference: 1 @ 3674.80ft
 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)
13,700.00	90.07	0.02	9,682.42	4,387.69	322.18	4,397.27	0.00	0.00	0.00
13,800.00	90.07	0.02	9,682.29	4,487.69	322.21	4,497.18	0.00	0.00	0.00
13,900.00	90.07	0.02	9,682.16	4,587.69	322.24	4,597.10	0.00	0.00	0.00
14,000.00	90.07	0.02	9,682.03	4,687.69	322.28	4,697.01	0.00	0.00	0.00
14,100.00	90.07	0.02	9,681.90	4,787.69	322.31	4,796.93	0.00	0.00	0.00
14,200.00	90.07	0.02	9,681.77	4,887.69	322.34	4,896.84	0.00	0.00	0.00
14,300.00	90.07	0.02	9,681.64	4,987.69	322.37	4,996.76	0.00	0.00	0.00
14,400.00	90.07	0.02	9,681.51	5,087.69	322.41	5,096.68	0.00	0.00	0.00
14,500.00	90.07	0.02	9,681.38	5,187.69	322.44	5,196.59	0.00	0.00	0.00
14,600.00	90.07	0.02	9,681.25	5,287.69	322.47	5,296.51	0.00	0.00	0.00
14,700.00	90.07	0.02	9,681.12	5,387.69	322.50	5,396.42	0.00	0.00	0.00
14,800.00	90.07	0.02	9,680.99	5,487.69	322.53	5,496.34	0.00	0.00	0.00
14,900.00	90.07	0.02	9,680.86	5,587.69	322.57	5,596.25	0.00	0.00	0.00
15,000.00	90.07	0.02	9,680.73	5,687.69	322.60	5,696.17	0.00	0.00	0.00
15,100.00	90.07	0.02	9,680.60	5,787.69	322.63	5,796.08	0.00	0.00	0.00
15,200.00	90.07	0.02	9,680.47	5,887.69	322.66	5,896.00	0.00	0.00	0.00
15,300.00	90.07	0.02	9,680.34	5,987.69	322.70	5,995.91	0.00	0.00	0.00
15,400.00	90.07	0.02	9,680.21	6,087.69	322.73	6,095.83	0.00	0.00	0.00
15,500.00	90.07	0.02	9,680.08	6,187.69	322.76	6,195.75	0.00	0.00	0.00
15,600.00	90.07	0.02	9,679.96	6,287.69	322.79	6,295.66	0.00	0.00	0.00
15,700.00	90.07	0.02	9,679.83	6,387.69	322.82	6,395.58	0.00	0.00	0.00
15,800.00	90.07	0.02	9,679.70	6,487.69	322.86	6,495.49	0.00	0.00	0.00
15,900.00	90.07	0.02	9,679.57	6,587.69	322.89	6,595.41	0.00	0.00	0.00
16,000.00	90.07	0.02	9,679.44	6,687.69	322.92	6,695.32	0.00	0.00	0.00
16,100.00	90.07	0.02	9,679.31	6,787.69	322.95	6,795.24	0.00	0.00	0.00
16,200.00	90.07	0.02	9,679.18	6,887.69	322.99	6,895.15	0.00	0.00	0.00
16,300.00	90.07	0.02	9,679.05	6,987.69	323.02	6,995.07	0.00	0.00	0.00
16,400.00	90.07	0.02	9,678.92	7,087.69	323.05	7,094.98	0.00	0.00	0.00
16,500.00	90.07	0.02	9,678.79	7,187.69	323.08	7,194.90	0.00	0.00	0.00
16,600.00	90.07	0.02	9,678.66	7,287.69	323.12	7,294.81	0.00	0.00	0.00
16,700.00	90.07	0.02	9,678.53	7,387.69	323.15	7,394.73	0.00	0.00	0.00
16,800.00	90.07	0.02	9,678.40	7,487.69	323.18	7,494.65	0.00	0.00	0.00
16,900.00	90.07	0.02	9,678.27	7,587.68	323.21	7,594.56	0.00	0.00	0.00
17,000.00	90.07	0.02	9,678.14	7,687.68	323.24	7,694.48	0.00	0.00	0.00
17,064.27	90.07	0.02	9,678.06	7,751.96	323.27	7,758.69	0.00	0.00	0.00
17,109.50	90.07	0.02	9,678.00	7,797.19	323.28	7,803.88	0.01	-0.01	0.00

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Thistle Unit 145H BHL	0.00	0.00	9,678.00	7,797.19	323.28	464,860.84	777,189.18	0.000000	0.000000
- hit/miss target									
- Shape									
- plan hits target center									
- Point									