

WESTERN DIVISION

PBNM

Dzurisin

Thistle Unit 105H

Wellbore #1

Plan: Plan 1

Standard Planning Report

12 July, 2016

HOBBS
MAR 22 2017
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Devon Energy

Planning Report

Database: EDM r5000 US Production
 Company: WESTERN DIVISION
 Project: PBNM
 Site: Dzurisin
 Well: Thistle Unit 105H
 Wellbore: Wellbore #1
 Design: Plan 1

Local Co-ordinate Reference: Well Thistle Unit 105H
 TVD Reference: 1 @ 3747.40ft
 MD Reference: 1 @ 3747.40ft
 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	Latitude:	0.000000
From:	Map	Easting:	725,391.41 usft	Longitude:	0.000000
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	

Well	Thistle Unit 105H					
Well Position	+N/-S	42,553.91 ft	Northing:	472,476.09 usft	Latitude:	0.000000
	+E/-W	51,342.07 ft	Easting:	776,733.38 usft	Longitude:	0.000000
Position Uncertainty	0.00 ft		Wellhead Elevation:	0.00 ft	Ground Level:	3,723.90 ft

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

Design	Plan 1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(ft)	(ft)	(ft)	(°)
	0.00	0.00	0.00	183.27

Plan Sections										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Dogleg Rate	Build Rate	Turn Rate	TFO	Target
(ft)	(°)	(°)	(ft)	(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	270.00	3,999.37	0.00	-21.80	1.00	1.00	0.00	270.00	
8,000.00	5.00	270.00	7,984.14	0.00	-370.43	0.00	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,982.88	0.00	-414.03	0.50	-0.50	0.00	180.00	
9,253.00	0.00	0.00	9,235.88	0.00	-414.03	0.00	0.00	0.00	0.00	
10,002.00	89.88	180.15	9,713.34	-476.46	-415.29	12.00	12.00	0.00	180.15	Thistle Unit 105H BHI
10,023.35	89.88	180.15	9,713.38	-497.82	-415.35	0.01	0.01	0.00	0.08	
17,101.35	89.88	180.15	9,727.95	-7,575.78	-434.07	0.00	0.00	0.00	0.00	
17,127.81	89.88	180.15	9,728.00	-7,602.24	-434.14	0.01	-0.01	-0.01	-143.80	Thistle Unit 105H BHI

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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)
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	270.00	3,600.00	0.00	-0.87	0.05	1.00	1.00	0.00
3,700.00	2.00	270.00	3,699.96	0.00	-3.49	0.20	1.00	1.00	0.00
3,800.00	3.00	270.00	3,799.86	0.00	-7.85	0.45	1.00	1.00	0.00
3,900.00	4.00	270.00	3,899.68	0.00	-13.96	0.80	1.00	1.00	0.00
4,000.00	5.00	270.00	3,999.37	0.00	-21.80	1.24	1.00	1.00	0.00
4,100.00	5.00	270.00	4,098.99	0.00	-30.52	1.74	0.00	0.00	0.00
4,200.00	5.00	270.00	4,198.60	0.00	-39.23	2.24	0.00	0.00	0.00
4,300.00	5.00	270.00	4,298.22	0.00	-47.95	2.73	0.00	0.00	0.00
4,400.00	5.00	270.00	4,397.84	0.00	-56.67	3.23	0.00	0.00	0.00
4,500.00	5.00	270.00	4,497.46	0.00	-65.38	3.73	0.00	0.00	0.00
4,600.00	5.00	270.00	4,597.08	0.00	-74.10	4.22	0.00	0.00	0.00
4,700.00	5.00	270.00	4,696.70	0.00	-82.81	4.72	0.00	0.00	0.00
4,800.00	5.00	270.00	4,796.32	0.00	-91.53	5.22	0.00	0.00	0.00
4,900.00	5.00	270.00	4,895.94	0.00	-100.24	5.72	0.00	0.00	0.00
5,000.00	5.00	270.00	4,995.56	0.00	-108.96	6.21	0.00	0.00	0.00
5,100.00	5.00	270.00	5,095.18	0.00	-117.67	6.71	0.00	0.00	0.00
5,200.00	5.00	270.00	5,194.80	0.00	-126.39	7.21	0.00	0.00	0.00
5,300.00	5.00	270.00	5,294.42	0.00	-135.11	7.70	0.00	0.00	0.00

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5,400.00	5.00	270.00	5,394.04	0.00	-143.82	8.20	0.00	0.00	0.00
5,500.00	5.00	270.00	5,493.66	0.00	-152.54	8.70	0.00	0.00	0.00
5,600.00	5.00	270.00	5,593.28	0.00	-161.25	9.19	0.00	0.00	0.00
5,700.00	5.00	270.00	5,692.90	0.00	-169.97	9.69	0.00	0.00	0.00
5,800.00	5.00	270.00	5,792.52	0.00	-178.68	10.19	0.00	0.00	0.00
5,900.00	5.00	270.00	5,892.14	0.00	-187.40	10.68	0.00	0.00	0.00
6,000.00	5.00	270.00	5,991.76	0.00	-196.11	11.18	0.00	0.00	0.00
6,100.00	5.00	270.00	6,091.37	0.00	-204.83	11.68	0.00	0.00	0.00
6,200.00	5.00	270.00	6,190.99	0.00	-213.55	12.18	0.00	0.00	0.00
6,300.00	5.00	270.00	6,290.61	0.00	-222.26	12.67	0.00	0.00	0.00
6,400.00	5.00	270.00	6,390.23	0.00	-230.98	13.17	0.00	0.00	0.00
6,500.00	5.00	270.00	6,489.85	0.00	-239.69	13.67	0.00	0.00	0.00
6,600.00	5.00	270.00	6,589.47	0.00	-248.41	14.16	0.00	0.00	0.00
6,700.00	5.00	270.00	6,689.09	0.00	-257.12	14.66	0.00	0.00	0.00
6,800.00	5.00	270.00	6,788.71	0.00	-265.84	15.16	0.00	0.00	0.00
6,900.00	5.00	270.00	6,888.33	0.00	-274.55	15.65	0.00	0.00	0.00
7,000.00	5.00	270.00	6,987.95	0.00	-283.27	16.15	0.00	0.00	0.00
7,100.00	5.00	270.00	7,087.57	0.00	-291.99	16.65	0.00	0.00	0.00
7,200.00	5.00	270.00	7,187.19	0.00	-300.70	17.14	0.00	0.00	0.00
7,300.00	5.00	270.00	7,286.81	0.00	-309.42	17.64	0.00	0.00	0.00
7,400.00	5.00	270.00	7,386.43	0.00	-318.13	18.14	0.00	0.00	0.00
7,500.00	5.00	270.00	7,486.05	0.00	-326.85	18.63	0.00	0.00	0.00
7,600.00	5.00	270.00	7,585.67	0.00	-335.56	19.13	0.00	0.00	0.00
7,700.00	5.00	270.00	7,685.29	0.00	-344.28	19.63	0.00	0.00	0.00
7,800.00	5.00	270.00	7,784.91	0.00	-352.99	20.13	0.00	0.00	0.00
7,900.00	5.00	270.00	7,884.53	0.00	-361.71	20.62	0.00	0.00	0.00
8,000.00	5.00	270.00	7,984.14	0.00	-370.43	21.12	0.00	0.00	0.00
8,100.00	4.50	270.00	8,083.80	0.00	-378.71	21.59	0.50	-0.50	0.00
8,200.00	4.00	270.00	8,183.53	0.00	-386.12	22.01	0.50	-0.50	0.00
8,300.00	3.50	270.00	8,283.31	0.00	-392.66	22.39	0.50	-0.50	0.00
8,400.00	3.00	270.00	8,383.15	0.00	-398.33	22.71	0.50	-0.50	0.00
8,500.00	2.50	270.00	8,483.03	0.00	-403.12	22.98	0.50	-0.50	0.00
8,600.00	2.00	270.00	8,582.96	0.00	-407.05	23.21	0.50	-0.50	0.00
8,700.00	1.50	270.00	8,682.91	0.00	-410.10	23.38	0.50	-0.50	0.00
8,800.00	1.00	270.00	8,782.89	0.00	-412.29	23.51	0.50	-0.50	0.00
8,900.00	0.50	270.00	8,882.88	0.00	-413.59	23.58	0.50	-0.50	0.00
9,000.00	0.00	0.00	8,982.88	0.00	-414.03	23.61	0.50	-0.50	0.00
9,100.00	0.00	0.00	9,082.88	0.00	-414.03	23.61	0.00	0.00	0.00
9,200.00	0.00	0.00	9,182.88	0.00	-414.03	23.61	0.00	0.00	0.00
9,253.00	0.00	0.00	9,235.88	0.00	-414.03	23.61	0.00	0.00	0.00
9,275.00	2.64	180.15	9,257.87	-0.51	-414.03	24.11	12.00	12.00	0.00
9,300.00	5.64	180.15	9,282.80	-2.31	-414.04	25.91	12.00	12.00	0.00
9,325.00	8.64	180.15	9,307.60	-5.42	-414.05	29.02	12.00	12.00	0.00
9,350.00	11.64	180.15	9,332.21	-9.82	-414.06	33.41	12.00	12.00	0.00
9,375.00	14.64	180.15	9,356.55	-15.50	-414.07	39.08	12.00	12.00	0.00
9,400.00	17.64	180.15	9,380.56	-22.45	-414.09	46.02	12.00	12.00	0.00
9,425.00	20.64	180.15	9,404.18	-30.65	-414.11	54.21	12.00	12.00	0.00
9,450.00	23.64	180.15	9,427.33	-40.07	-414.14	63.61	12.00	12.00	0.00
9,475.00	26.64	180.15	9,449.96	-50.69	-414.17	74.22	12.00	12.00	0.00
9,500.00	29.64	180.15	9,472.01	-62.48	-414.20	85.99	12.00	12.00	0.00
9,525.00	32.64	180.15	9,493.40	-75.40	-414.23	98.90	12.00	12.00	0.00
9,550.00	35.64	180.15	9,514.09	-89.43	-414.27	112.91	12.00	12.00	0.00
9,575.00	38.64	180.15	9,534.02	-104.52	-414.31	127.98	12.00	12.00	0.00
9,600.00	41.64	180.15	9,553.13	-120.64	-414.35	144.07	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)
9,625.00	44.64	180.15	9,571.37	-137.73	-414.40	161.13	12.00	12.00	0.00
9,650.00	47.64	180.15	9,588.69	-155.75	-414.44	179.13	12.00	12.00	0.00
9,675.00	50.64	180.15	9,605.04	-174.66	-414.49	198.01	12.00	12.00	0.00
9,700.00	53.64	180.15	9,620.38	-194.40	-414.55	217.71	12.00	12.00	0.00
9,725.00	56.64	180.15	9,634.67	-214.91	-414.60	238.20	12.00	12.00	0.00
9,750.00	59.64	180.15	9,647.86	-236.14	-414.66	259.39	12.00	12.00	0.00
9,775.00	62.64	180.15	9,659.93	-258.03	-414.71	281.26	12.00	12.00	0.00
9,800.00	65.64	180.15	9,670.83	-280.52	-414.77	303.72	12.00	12.00	0.00
9,825.00	68.64	180.15	9,680.54	-303.56	-414.83	326.72	12.00	12.00	0.00
9,850.00	71.64	180.15	9,689.04	-327.07	-414.90	350.19	12.00	12.00	0.00
9,875.00	74.64	180.15	9,696.29	-350.99	-414.96	374.08	12.00	12.00	0.00
9,900.00	77.64	180.15	9,702.27	-375.26	-415.02	398.31	12.00	12.00	0.00
9,925.00	80.64	180.15	9,706.98	-399.81	-415.09	422.82	12.00	12.00	0.00
9,950.00	83.64	180.15	9,710.40	-424.57	-415.15	447.55	12.00	12.00	0.00
9,975.00	86.64	180.15	9,712.52	-449.48	-415.22	472.42	12.00	12.00	0.00
10,002.00	89.88	180.15	9,713.34	-476.46	-415.29	499.37	12.00	12.00	0.00
10,023.35	89.88	180.15	9,713.38	-497.82	-415.35	520.69	0.01	0.01	0.00
10,100.00	89.88	180.15	9,713.54	-574.46	-415.55	597.22	0.00	0.00	0.00
10,200.00	89.88	180.15	9,713.75	-674.46	-415.82	697.07	0.00	0.00	0.00
10,300.00	89.88	180.15	9,713.95	-774.46	-416.08	796.92	0.00	0.00	0.00
10,400.00	89.88	180.15	9,714.16	-874.46	-416.34	896.78	0.00	0.00	0.00
10,500.00	89.88	180.15	9,714.37	-974.46	-416.61	996.63	0.00	0.00	0.00
10,600.00	89.88	180.15	9,714.57	-1,074.46	-416.87	1,096.48	0.00	0.00	0.00
10,700.00	89.88	180.15	9,714.78	-1,174.46	-417.14	1,196.33	0.00	0.00	0.00
10,800.00	89.88	180.15	9,714.98	-1,274.46	-417.40	1,296.18	0.00	0.00	0.00
10,900.00	89.88	180.15	9,715.19	-1,374.46	-417.67	1,396.03	0.00	0.00	0.00
11,000.00	89.88	180.15	9,715.39	-1,474.46	-417.93	1,495.89	0.00	0.00	0.00
11,100.00	89.88	180.15	9,715.60	-1,574.46	-418.20	1,595.74	0.00	0.00	0.00
11,200.00	89.88	180.15	9,715.81	-1,674.46	-418.46	1,695.59	0.00	0.00	0.00
11,300.00	89.88	180.15	9,716.01	-1,774.46	-418.73	1,795.44	0.00	0.00	0.00
11,400.00	89.88	180.15	9,716.22	-1,874.45	-418.99	1,895.29	0.00	0.00	0.00
11,500.00	89.88	180.15	9,716.42	-1,974.45	-419.25	1,995.15	0.00	0.00	0.00
11,600.00	89.88	180.15	9,716.63	-2,074.45	-419.52	2,095.00	0.00	0.00	0.00
11,700.00	89.88	180.15	9,716.83	-2,174.45	-419.78	2,194.85	0.00	0.00	0.00
11,800.00	89.88	180.15	9,717.04	-2,274.45	-420.05	2,294.70	0.00	0.00	0.00
11,900.00	89.88	180.15	9,717.25	-2,374.45	-420.31	2,394.55	0.00	0.00	0.00
12,000.00	89.88	180.15	9,717.45	-2,474.45	-420.58	2,494.41	0.00	0.00	0.00
12,100.00	89.88	180.15	9,717.66	-2,574.45	-420.84	2,594.26	0.00	0.00	0.00
12,200.00	89.88	180.15	9,717.86	-2,674.45	-421.11	2,694.11	0.00	0.00	0.00
12,300.00	89.88	180.15	9,718.07	-2,774.45	-421.37	2,793.96	0.00	0.00	0.00
12,400.00	89.88	180.15	9,718.27	-2,874.45	-421.63	2,893.81	0.00	0.00	0.00
12,500.00	89.88	180.15	9,718.48	-2,974.45	-421.90	2,993.66	0.00	0.00	0.00
12,600.00	89.88	180.15	9,718.69	-3,074.45	-422.16	3,093.52	0.00	0.00	0.00
12,700.00	89.88	180.15	9,718.89	-3,174.45	-422.43	3,193.37	0.00	0.00	0.00
12,800.00	89.88	180.15	9,719.10	-3,274.45	-422.69	3,293.22	0.00	0.00	0.00
12,900.00	89.88	180.15	9,719.30	-3,374.45	-422.96	3,393.07	0.00	0.00	0.00
13,000.00	89.88	180.15	9,719.51	-3,474.45	-423.22	3,492.92	0.00	0.00	0.00
13,100.00	89.88	180.15	9,719.71	-3,574.45	-423.49	3,592.78	0.00	0.00	0.00
13,200.00	89.88	180.15	9,719.92	-3,674.44	-423.75	3,692.63	0.00	0.00	0.00
13,300.00	89.88	180.15	9,720.13	-3,774.44	-424.02	3,792.48	0.00	0.00	0.00
13,400.00	89.88	180.15	9,720.33	-3,874.44	-424.28	3,892.33	0.00	0.00	0.00
13,500.00	89.88	180.15	9,720.54	-3,974.44	-424.54	3,992.18	0.00	0.00	0.00
13,600.00	89.88	180.15	9,720.74	-4,074.44	-424.81	4,092.04	0.00	0.00	0.00
13,700.00	89.88	180.15	9,720.95	-4,174.44	-425.07	4,191.89	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 105H
 Wellbore: Wellbore #1
 Design: Plan 1

Local Co-ordinate Reference: Well Thistle Unit 105H
 TVD Reference: 1 @ 3747.40ft
 MD Reference: 1 @ 3747.40ft
 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)
13,800.00	89.88	180.15	9,721.15	-4,274.44	-425.34	4,291.74	0.00	0.00	0.00
13,900.00	89.88	180.15	9,721.36	-4,374.44	-425.60	4,391.59	0.00	0.00	0.00
14,000.00	89.88	180.15	9,721.57	-4,474.44	-425.87	4,491.44	0.00	0.00	0.00
14,100.00	89.88	180.15	9,721.77	-4,574.44	-426.13	4,591.29	0.00	0.00	0.00
14,200.00	89.88	180.15	9,721.98	-4,674.44	-426.40	4,691.15	0.00	0.00	0.00
14,300.00	89.88	180.15	9,722.18	-4,774.44	-426.66	4,791.00	0.00	0.00	0.00
14,400.00	89.88	180.15	9,722.39	-4,874.44	-426.93	4,890.85	0.00	0.00	0.00
14,500.00	89.88	180.15	9,722.59	-4,974.44	-427.19	4,990.70	0.00	0.00	0.00
14,600.00	89.88	180.15	9,722.80	-5,074.44	-427.45	5,090.55	0.00	0.00	0.00
14,700.00	89.88	180.15	9,723.01	-5,174.44	-427.72	5,190.41	0.00	0.00	0.00
14,800.00	89.88	180.15	9,723.21	-5,274.44	-427.98	5,290.26	0.00	0.00	0.00
14,900.00	89.88	180.15	9,723.42	-5,374.44	-428.25	5,390.11	0.00	0.00	0.00
15,000.00	89.88	180.15	9,723.62	-5,474.43	-428.51	5,489.96	0.00	0.00	0.00
15,100.00	89.88	180.15	9,723.83	-5,574.43	-428.78	5,589.81	0.00	0.00	0.00
15,200.00	89.88	180.15	9,724.03	-5,674.43	-429.04	5,689.66	0.00	0.00	0.00
15,300.00	89.88	180.15	9,724.24	-5,774.43	-429.31	5,789.52	0.00	0.00	0.00
15,400.00	89.88	180.15	9,724.45	-5,874.43	-429.57	5,889.37	0.00	0.00	0.00
15,500.00	89.88	180.15	9,724.65	-5,974.43	-429.84	5,989.22	0.00	0.00	0.00
15,600.00	89.88	180.15	9,724.86	-6,074.43	-430.10	6,089.07	0.00	0.00	0.00
15,700.00	89.88	180.15	9,725.06	-6,174.43	-430.36	6,188.92	0.00	0.00	0.00
15,800.00	89.88	180.15	9,725.27	-6,274.43	-430.63	6,288.78	0.00	0.00	0.00
15,900.00	89.88	180.15	9,725.47	-6,374.43	-430.89	6,388.63	0.00	0.00	0.00
16,000.00	89.88	180.15	9,725.68	-6,474.43	-431.16	6,488.48	0.00	0.00	0.00
16,100.00	89.88	180.15	9,725.89	-6,574.43	-431.42	6,588.33	0.00	0.00	0.00
16,200.00	89.88	180.15	9,726.09	-6,674.43	-431.69	6,688.18	0.00	0.00	0.00
16,300.00	89.88	180.15	9,726.30	-6,774.43	-431.95	6,788.04	0.00	0.00	0.00
16,400.00	89.88	180.15	9,726.50	-6,874.43	-432.22	6,887.89	0.00	0.00	0.00
16,500.00	89.88	180.15	9,726.71	-6,974.43	-432.48	6,987.74	0.00	0.00	0.00
16,600.00	89.88	180.15	9,726.91	-7,074.43	-432.75	7,087.59	0.00	0.00	0.00
16,700.00	89.88	180.15	9,727.12	-7,174.43	-433.01	7,187.44	0.00	0.00	0.00
16,800.00	89.88	180.15	9,727.33	-7,274.42	-433.27	7,287.29	0.00	0.00	0.00
16,900.00	89.88	180.15	9,727.53	-7,374.42	-433.54	7,387.15	0.00	0.00	0.00
17,000.00	89.88	180.15	9,727.74	-7,474.42	-433.80	7,487.00	0.00	0.00	0.00
17,101.35	89.88	180.15	9,727.95	-7,575.78	-434.07	7,588.20	0.00	0.00	0.00
17,127.81	89.88	180.15	9,728.00	-7,602.24	-434.14	7,614.62	0.01	-0.01	-0.01

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Thistle Unit 105H BHL	0.00	0.00	9,728.00	-7,602.24	-434.14	464,873.87	776,299.24	0.000000	0.000000
- plan hits target center									
- Point									