

Devon Energy
Planning Report

HOBBS OCD

OCT 03 2016

RECEIVED

Database: EDM r5000 US Production
Company: WESTERN DIVISION
Project: PBNM
Site: Norwalk
Well: Thistle Unit 147H
Wellbore: Wellbore #1
Design: Design #1

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

Well Thistle Unit 147H
RKB @ 3656.30ft
RKB @ 3656.30ft
Grid
Minimum Curvature

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 147H					
Well Position	+N/-S	457,118.29 ft	Northing:	457,117.38 usft	Latitude:	32.254366
	+E/-W	778,292.81 ft	Easting:	778,291.26 usft	Longitude:	-103.566823
Position Uncertainty	0.00 ft		Wellhead Elevation:	0.00 ft	Ground Level:	3,631.30 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	9/1/2016	6.94	60.08	48,112

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	358.50	

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	
9,102.04	0.00	0.00	9,102.04	0.00	0.00	0.00	0.00	0.00	0.00	
10,002.04	90.00	358.50	9,675.00	572.76	-14.95	10.00	10.00	0.00	358.50	
17,180.26	90.00	358.50	9,675.00	7,748.54	-202.27	0.00	0.00	0.00	0.00	Thistle Unit 147H

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Company:	WESTERN DIVISION	TVD Reference:	RKB @ 3656.30ft
Project:	PBNM	MD Reference:	RKB @ 3656.30ft
Site:	Norwalk	North Reference:	Grid
Well:	Thistle Unit 147H	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	0.00	0.00	5,300.00	0.00	0.00	0.00	0.00	0.00	0.00

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Well:	Thistle Unit 147H	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)
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
6,100.00	0.00	0.00	6,100.00	0.00	0.00	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,200.00	0.00	0.00	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,300.00	0.00	0.00	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,400.00	0.00	0.00	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,500.00	0.00	0.00	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,600.00	0.00	0.00	0.00	0.00	0.00	0.00
6,700.00	0.00	0.00	6,700.00	0.00	0.00	0.00	0.00	0.00	0.00
6,800.00	0.00	0.00	6,800.00	0.00	0.00	0.00	0.00	0.00	0.00
6,900.00	0.00	0.00	6,900.00	0.00	0.00	0.00	0.00	0.00	0.00
7,000.00	0.00	0.00	7,000.00	0.00	0.00	0.00	0.00	0.00	0.00
7,100.00	0.00	0.00	7,100.00	0.00	0.00	0.00	0.00	0.00	0.00
7,200.00	0.00	0.00	7,200.00	0.00	0.00	0.00	0.00	0.00	0.00
7,300.00	0.00	0.00	7,300.00	0.00	0.00	0.00	0.00	0.00	0.00
7,400.00	0.00	0.00	7,400.00	0.00	0.00	0.00	0.00	0.00	0.00
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
7,600.00	0.00	0.00	7,600.00	0.00	0.00	0.00	0.00	0.00	0.00
7,700.00	0.00	0.00	7,700.00	0.00	0.00	0.00	0.00	0.00	0.00
7,800.00	0.00	0.00	7,800.00	0.00	0.00	0.00	0.00	0.00	0.00
7,900.00	0.00	0.00	7,900.00	0.00	0.00	0.00	0.00	0.00	0.00
8,000.00	0.00	0.00	8,000.00	0.00	0.00	0.00	0.00	0.00	0.00
8,100.00	0.00	0.00	8,100.00	0.00	0.00	0.00	0.00	0.00	0.00
8,200.00	0.00	0.00	8,200.00	0.00	0.00	0.00	0.00	0.00	0.00
8,300.00	0.00	0.00	8,300.00	0.00	0.00	0.00	0.00	0.00	0.00
8,400.00	0.00	0.00	8,400.00	0.00	0.00	0.00	0.00	0.00	0.00
8,500.00	0.00	0.00	8,500.00	0.00	0.00	0.00	0.00	0.00	0.00
8,600.00	0.00	0.00	8,600.00	0.00	0.00	0.00	0.00	0.00	0.00
8,700.00	0.00	0.00	8,700.00	0.00	0.00	0.00	0.00	0.00	0.00
8,800.00	0.00	0.00	8,800.00	0.00	0.00	0.00	0.00	0.00	0.00
8,900.00	0.00	0.00	8,900.00	0.00	0.00	0.00	0.00	0.00	0.00
9,000.00	0.00	0.00	9,000.00	0.00	0.00	0.00	0.00	0.00	0.00
9,102.04	0.00	0.00	9,102.04	0.00	0.00	0.00	0.00	0.00	0.00
9,150.00	4.80	358.50	9,149.94	2.01	-0.05	2.01	10.00	10.00	0.00
9,200.00	9.80	358.50	9,199.52	8.35	-0.22	8.35	10.00	10.00	0.00
9,250.00	14.80	358.50	9,248.36	18.99	-0.50	19.00	10.00	10.00	0.00
9,300.00	19.80	358.50	9,296.09	33.85	-0.88	33.86	10.00	10.00	0.00
9,350.00	24.80	358.50	9,342.33	52.80	-1.38	52.82	10.00	10.00	0.00
9,400.00	29.80	358.50	9,386.75	75.72	-1.98	75.74	10.00	10.00	0.00
9,450.00	34.80	358.50	9,429.00	102.42	-2.67	102.45	10.00	10.00	0.00
9,500.00	39.80	358.50	9,468.77	132.69	-3.46	132.74	10.00	10.00	0.00
9,550.00	44.80	358.50	9,505.74	166.32	-4.34	166.37	10.00	10.00	0.00
9,600.00	49.80	358.50	9,539.64	203.04	-5.30	203.11	10.00	10.00	0.00
9,650.00	54.80	358.50	9,570.21	242.57	-6.33	242.65	10.00	10.00	0.00
9,700.00	59.80	358.50	9,597.21	284.62	-7.43	284.71	10.00	10.00	0.00
9,750.00	64.80	358.50	9,620.45	328.85	-8.58	328.97	10.00	10.00	0.00
9,800.00	69.80	358.50	9,639.74	374.95	-9.79	375.08	10.00	10.00	0.00
9,850.00	74.80	358.50	9,654.94	422.55	-11.03	422.69	10.00	10.00	0.00
9,900.00	79.80	358.50	9,665.94	471.29	-12.30	471.45	10.00	10.00	0.00

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Company: WESTERN DIVISION
Project: PBNM
Site: Norwalk
Well: Thistle Unit 147H
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference: Well Thistle Unit 147H
TVD Reference: RKB @ 3656.30ft
MD Reference: RKB @ 3656.30ft
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)
9,950.00	84.80	358.50	9,672.64	520.81	-13.60	520.99	10.00	10.00	0.00
10,002.04	90.00	358.50	9,675.00	572.76	-14.95	572.96	10.00	10.00	0.00
10,100.00	90.00	358.50	9,675.00	670.69	-17.51	670.92	0.00	0.00	0.00
10,200.00	90.00	358.50	9,675.00	770.65	-20.12	770.92	0.00	0.00	0.00
10,300.00	90.00	358.50	9,675.00	870.62	-22.73	870.92	0.00	0.00	0.00
10,400.00	90.00	358.50	9,675.00	970.59	-25.34	970.92	0.00	0.00	0.00
10,500.00	90.00	358.50	9,675.00	1,070.55	-27.95	1,070.92	0.00	0.00	0.00
10,600.00	90.00	358.50	9,675.00	1,170.52	-30.56	1,170.92	0.00	0.00	0.00
10,700.00	90.00	358.50	9,675.00	1,270.48	-33.17	1,270.92	0.00	0.00	0.00
10,800.00	90.00	358.50	9,675.00	1,370.45	-35.77	1,370.92	0.00	0.00	0.00
10,900.00	90.00	358.50	9,675.00	1,470.42	-38.38	1,470.92	0.00	0.00	0.00
11,000.00	90.00	358.50	9,675.00	1,570.38	-40.99	1,570.92	0.00	0.00	0.00
11,100.00	90.00	358.50	9,675.00	1,670.35	-43.60	1,670.92	0.00	0.00	0.00
11,200.00	90.00	358.50	9,675.00	1,770.31	-46.21	1,770.92	0.00	0.00	0.00
11,300.00	90.00	358.50	9,675.00	1,870.28	-48.82	1,870.92	0.00	0.00	0.00
11,400.00	90.00	358.50	9,675.00	1,970.24	-51.43	1,970.92	0.00	0.00	0.00
11,500.00	90.00	358.50	9,675.00	2,070.21	-54.04	2,070.92	0.00	0.00	0.00
11,600.00	90.00	358.50	9,675.00	2,170.18	-56.65	2,170.92	0.00	0.00	0.00
11,700.00	90.00	358.50	9,675.00	2,270.14	-59.26	2,270.92	0.00	0.00	0.00
11,800.00	90.00	358.50	9,675.00	2,370.11	-61.87	2,370.92	0.00	0.00	0.00
11,900.00	90.00	358.50	9,675.00	2,470.07	-64.48	2,470.92	0.00	0.00	0.00
12,000.00	90.00	358.50	9,675.00	2,570.04	-67.09	2,570.92	0.00	0.00	0.00
12,100.00	90.00	358.50	9,675.00	2,670.01	-69.70	2,670.92	0.00	0.00	0.00
12,200.00	90.00	358.50	9,675.00	2,769.97	-72.31	2,770.92	0.00	0.00	0.00
12,300.00	90.00	358.50	9,675.00	2,869.94	-74.92	2,870.92	0.00	0.00	0.00
12,400.00	90.00	358.50	9,675.00	2,969.90	-77.53	2,970.92	0.00	0.00	0.00
12,500.00	90.00	358.50	9,675.00	3,069.87	-80.14	3,070.92	0.00	0.00	0.00
12,600.00	90.00	358.50	9,675.00	3,169.84	-82.75	3,170.92	0.00	0.00	0.00
12,700.00	90.00	358.50	9,675.00	3,269.80	-85.36	3,270.92	0.00	0.00	0.00
12,800.00	90.00	358.50	9,675.00	3,369.77	-87.97	3,370.92	0.00	0.00	0.00
12,900.00	90.00	358.50	9,675.00	3,469.73	-90.58	3,470.92	0.00	0.00	0.00
13,000.00	90.00	358.50	9,675.00	3,569.70	-93.18	3,570.92	0.00	0.00	0.00
13,100.00	90.00	358.50	9,675.00	3,669.67	-95.79	3,670.92	0.00	0.00	0.00
13,200.00	90.00	358.50	9,675.00	3,769.63	-98.40	3,770.92	0.00	0.00	0.00
13,300.00	90.00	358.50	9,675.00	3,869.60	-101.01	3,870.92	0.00	0.00	0.00
13,400.00	90.00	358.50	9,675.00	3,969.56	-103.62	3,970.92	0.00	0.00	0.00
13,500.00	90.00	358.50	9,675.00	4,069.53	-106.23	4,070.92	0.00	0.00	0.00
13,600.00	90.00	358.50	9,675.00	4,169.50	-108.84	4,170.92	0.00	0.00	0.00
13,700.00	90.00	358.50	9,675.00	4,269.46	-111.45	4,270.92	0.00	0.00	0.00
13,800.00	90.00	358.50	9,675.00	4,369.43	-114.06	4,370.92	0.00	0.00	0.00
13,900.00	90.00	358.50	9,675.00	4,469.39	-116.67	4,470.92	0.00	0.00	0.00
14,000.00	90.00	358.50	9,675.00	4,569.36	-119.28	4,570.92	0.00	0.00	0.00
14,100.00	90.00	358.50	9,675.00	4,669.33	-121.89	4,670.92	0.00	0.00	0.00
14,200.00	90.00	358.50	9,675.00	4,769.29	-124.50	4,770.92	0.00	0.00	0.00
14,300.00	90.00	358.50	9,675.00	4,869.26	-127.11	4,870.92	0.00	0.00	0.00
14,400.00	90.00	358.50	9,675.00	4,969.22	-129.72	4,970.92	0.00	0.00	0.00
14,500.00	90.00	358.50	9,675.00	5,069.19	-132.33	5,070.92	0.00	0.00	0.00
14,600.00	90.00	358.50	9,675.00	5,169.16	-134.94	5,170.92	0.00	0.00	0.00
14,700.00	90.00	358.50	9,675.00	5,269.12	-137.55	5,270.92	0.00	0.00	0.00
14,800.00	90.00	358.50	9,675.00	5,369.09	-140.16	5,370.92	0.00	0.00	0.00
14,900.00	90.00	358.50	9,675.00	5,469.05	-142.77	5,470.92	0.00	0.00	0.00
15,000.00	90.00	358.50	9,675.00	5,569.02	-145.38	5,570.92	0.00	0.00	0.00
15,100.00	90.00	358.50	9,675.00	5,668.99	-147.99	5,670.92	0.00	0.00	0.00
15,200.00	90.00	358.50	9,675.00	5,768.95	-150.59	5,770.92	0.00	0.00	0.00

Devon Energy

Planning Report

Database:	EDM r5000 US Production	Local Co-ordinate Reference:	Well Thistle Unit 147H
Company:	WESTERN DIVISION	TVD Reference:	RKB @ 3656.30ft
Project:	PBNM	MD Reference:	RKB @ 3656.30ft
Site:	Norwalk	North Reference:	Grid
Well:	Thistle Unit 147H	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)
15,300.00	90.00	358.50	9,675.00	5,868.92	-153.20	5,870.92	0.00	0.00	0.00
15,400.00	90.00	358.50	9,675.00	5,968.88	-155.81	5,970.92	0.00	0.00	0.00
15,500.00	90.00	358.50	9,675.00	6,068.85	-158.42	6,070.92	0.00	0.00	0.00
15,600.00	90.00	358.50	9,675.00	6,168.81	-161.03	6,170.92	0.00	0.00	0.00
15,700.00	90.00	358.50	9,675.00	6,268.78	-163.64	6,270.92	0.00	0.00	0.00
15,800.00	90.00	358.50	9,675.00	6,368.75	-166.25	6,370.92	0.00	0.00	0.00
15,900.00	90.00	358.50	9,675.00	6,468.71	-168.86	6,470.92	0.00	0.00	0.00
16,000.00	90.00	358.50	9,675.00	6,568.68	-171.47	6,570.92	0.00	0.00	0.00
16,100.00	90.00	358.50	9,675.00	6,668.64	-174.08	6,670.92	0.00	0.00	0.00
16,200.00	90.00	358.50	9,675.00	6,768.61	-176.69	6,770.92	0.00	0.00	0.00
16,300.00	90.00	358.50	9,675.00	6,868.58	-179.30	6,870.92	0.00	0.00	0.00
16,400.00	90.00	358.50	9,675.00	6,968.54	-181.91	6,970.92	0.00	0.00	0.00
16,500.00	90.00	358.50	9,675.00	7,068.51	-184.52	7,070.92	0.00	0.00	0.00
16,600.00	90.00	358.50	9,675.00	7,168.47	-187.13	7,170.92	0.00	0.00	0.00
16,700.00	90.00	358.50	9,675.00	7,268.44	-189.74	7,270.92	0.00	0.00	0.00
16,800.00	90.00	358.50	9,675.00	7,368.41	-192.35	7,370.92	0.00	0.00	0.00
16,900.00	90.00	358.50	9,675.00	7,468.37	-194.96	7,470.92	0.00	0.00	0.00
17,000.00	90.00	358.50	9,675.00	7,568.34	-197.57	7,570.92	0.00	0.00	0.00
17,100.00	90.00	358.50	9,675.00	7,668.30	-200.18	7,670.92	0.00	0.00	0.00
17,180.26	90.00	358.50	9,675.00	7,748.54	-202.27	7,751.18	0.00	0.00	0.00

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 147H	0.00	0.00	9,675.00	7,748.54	-202.27	464,865.90	778,088.99	32.275668	-103.567299
- plan hits target center									
- Point									