

Devon Energy
Planning Report

HOBBS OCD

DEC 05 2016

RECEIVED

Database:	EDM r5000 US Production	Local Co-ordinate Reference:	Well Thistle Unit 129H
Company:	WESTERN DIVISION	TVD Reference:	RKB @ 3656.00ft
Project:	PBNM	MD Reference:	RKB @ 3656.00ft
Site:	Norwalk	North Reference:	Grid
Well:	Thistle Unit 129H	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 129H					
Well Position	+N/-S	457,114.44 ft	Northing:	457,113.53 usft	Latitude:	32.254354
	+E/-W	778,322.88 ft	Easting:	778,321.33 usft	Longitude:	-103.566726
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	3,631.00 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	358.28	

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	
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,700.00	3.00	180.00	3,699.82	-10.47	0.00	0.75	0.75	0.00	180.00	
4,700.00	3.00	180.00	4,698.45	-62.81	0.00	0.00	0.00	0.00	0.00	
5,100.00	0.00	0.00	5,098.27	-73.28	0.00	0.75	-0.75	0.00	180.00	

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Project:	PBNM	MD Reference:	RKB @ 3656.00ft
Site:	Norwalk	North Reference:	Grid
Well:	Thistle Unit 129H	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	0.75	180.00	3,400.00	-0.65	0.00	-0.65	0.75	0.75	0.00
3,500.00	1.50	180.00	3,499.98	-2.62	0.00	-2.62	0.75	0.75	0.00
3,600.00	2.25	180.00	3,599.92	-5.89	0.00	-5.89	0.75	0.75	0.00
3,700.00	3.00	180.00	3,699.82	-10.47	0.00	-10.46	0.75	0.75	0.00
3,800.00	3.00	180.00	3,799.68	-15.70	0.00	-15.70	0.00	0.00	0.00
3,900.00	3.00	180.00	3,899.54	-20.94	0.00	-20.93	0.00	0.00	0.00
4,000.00	3.00	180.00	3,999.41	-26.17	0.00	-26.16	0.00	0.00	0.00
4,100.00	3.00	180.00	4,099.27	-31.40	0.00	-31.39	0.00	0.00	0.00
4,200.00	3.00	180.00	4,199.13	-36.64	0.00	-36.62	0.00	0.00	0.00
4,300.00	3.00	180.00	4,299.00	-41.87	0.00	-41.85	0.00	0.00	0.00
4,400.00	3.00	180.00	4,398.86	-47.10	0.00	-47.08	0.00	0.00	0.00
4,500.00	3.00	180.00	4,498.72	-52.34	0.00	-52.31	0.00	0.00	0.00
4,600.00	3.00	180.00	4,598.58	-57.57	0.00	-57.55	0.00	0.00	0.00
4,700.00	3.00	180.00	4,698.45	-62.81	0.00	-62.78	0.00	0.00	0.00
4,800.00	2.25	180.00	4,798.34	-67.39	0.00	-67.36	0.75	-0.75	0.00
4,900.00	1.50	180.00	4,898.29	-70.66	0.00	-70.63	0.75	-0.75	0.00
5,000.00	0.75	180.00	4,998.27	-72.62	0.00	-72.59	0.75	-0.75	0.00
5,100.00	0.00	0.00	5,098.27	-73.28	0.00	-73.24	0.75	-0.75	0.00
5,200.00	0.00	0.00	5,198.26	-73.28	0.00	-73.24	0.00	0.00	0.00
5,300.00	0.00	0.00	5,298.26	-73.28	0.00	-73.24	0.00	0.00	0.00

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Planning Report

Database: EDM r5000 US Production
Company: WESTERN DIVISION
Project: PBNM
Site: Norwalk
Well: Thistle Unit 129H
Wellbore: Wellbore #1
Design: Design #1

Local Co-ordinate Reference:
TVD Reference: RKB @ 3656.00ft
MD Reference: RKB @ 3656.00ft
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)
5,400.00	0.00	0.00	5,398.26	-73.28	0.00	-73.24	0.00	0.00	0.00
5,500.00	0.00	0.00	5,498.26	-73.28	0.00	-73.24	0.00	0.00	0.00
5,600.00	0.00	0.00	5,598.26	-73.28	0.00	-73.24	0.00	0.00	0.00
5,700.00	0.00	0.00	5,698.26	-73.28	0.00	-73.24	0.00	0.00	0.00
5,800.00	0.00	0.00	5,798.26	-73.28	0.00	-73.24	0.00	0.00	0.00
5,900.00	0.00	0.00	5,898.26	-73.28	0.00	-73.24	0.00	0.00	0.00
6,000.00	0.00	0.00	5,998.26	-73.28	0.00	-73.24	0.00	0.00	0.00
6,100.00	0.00	0.00	6,098.26	-73.28	0.00	-73.24	0.00	0.00	0.00
6,200.00	0.00	0.00	6,198.26	-73.28	0.00	-73.24	0.00	0.00	0.00
6,300.00	0.00	0.00	6,298.26	-73.28	0.00	-73.24	0.00	0.00	0.00
6,400.00	0.00	0.00	6,398.26	-73.28	0.00	-73.24	0.00	0.00	0.00
6,500.00	0.00	0.00	6,498.26	-73.28	0.00	-73.24	0.00	0.00	0.00
6,600.00	0.00	0.00	6,598.26	-73.28	0.00	-73.24	0.00	0.00	0.00
6,700.00	0.00	0.00	6,698.26	-73.28	0.00	-73.24	0.00	0.00	0.00
6,800.00	0.00	0.00	6,798.26	-73.28	0.00	-73.24	0.00	0.00	0.00
6,900.00	0.00	0.00	6,898.26	-73.28	0.00	-73.24	0.00	0.00	0.00
7,000.00	0.00	0.00	6,998.26	-73.28	0.00	-73.24	0.00	0.00	0.00
7,100.00	0.00	0.00	7,098.26	-73.28	0.00	-73.24	0.00	0.00	0.00
7,200.00	0.00	0.00	7,198.26	-73.28	0.00	-73.24	0.00	0.00	0.00
7,300.00	0.00	0.00	7,298.26	-73.28	0.00	-73.24	0.00	0.00	0.00
7,400.00	0.00	0.00	7,398.26	-73.28	0.00	-73.24	0.00	0.00	0.00
7,500.00	0.00	0.00	7,498.26	-73.28	0.00	-73.24	0.00	0.00	0.00
7,600.00	0.00	0.00	7,598.26	-73.28	0.00	-73.24	0.00	0.00	0.00
7,700.00	0.00	0.00	7,698.26	-73.28	0.00	-73.24	0.00	0.00	0.00
7,800.00	0.00	0.00	7,798.26	-73.28	0.00	-73.24	0.00	0.00	0.00
7,900.00	0.00	0.00	7,898.26	-73.28	0.00	-73.24	0.00	0.00	0.00
8,000.00	0.00	0.00	7,998.26	-73.28	0.00	-73.24	0.00	0.00	0.00
8,100.00	0.00	0.00	8,098.26	-73.28	0.00	-73.24	0.00	0.00	0.00
8,200.00	0.00	0.00	8,198.26	-73.28	0.00	-73.24	0.00	0.00	0.00
8,300.00	0.00	0.00	8,298.26	-73.28	0.00	-73.24	0.00	0.00	0.00
8,400.00	0.00	0.00	8,398.26	-73.28	0.00	-73.24	0.00	0.00	0.00
8,500.00	0.00	0.00	8,498.26	-73.28	0.00	-73.24	0.00	0.00	0.00
8,600.00	0.00	0.00	8,598.26	-73.28	0.00	-73.24	0.00	0.00	0.00
8,700.00	0.00	0.00	8,698.26	-73.28	0.00	-73.24	0.00	0.00	0.00
8,800.00	0.00	0.00	8,798.26	-73.28	0.00	-73.24	0.00	0.00	0.00
8,900.00	0.00	0.00	8,898.26	-73.28	0.00	-73.24	0.00	0.00	0.00
9,000.00	0.00	0.00	8,998.26	-73.28	0.00	-73.24	0.00	0.00	0.00
9,100.00	0.00	0.00	9,098.26	-73.28	0.00	-73.24	0.00	0.00	0.00
9,200.00	0.00	0.00	9,198.26	-73.28	0.00	-73.24	0.00	0.00	0.00
9,300.00	0.00	0.00	9,298.26	-73.28	0.00	-73.24	0.00	0.00	0.00
9,400.00	0.00	0.00	9,398.26	-73.28	0.00	-73.24	0.00	0.00	0.00
9,488.00	0.00	0.00	9,486.27	-73.28	0.00	-73.24	0.00	0.00	0.00
9,500.00	1.20	358.30	9,498.26	-73.15	0.00	-73.12	10.00	10.00	0.00
9,550.00	6.20	358.30	9,548.14	-69.93	-0.10	-69.89	10.00	10.00	0.00
9,600.00	11.20	358.30	9,597.55	-62.37	-0.32	-62.33	10.00	10.00	0.00
9,650.00	16.20	358.30	9,646.11	-50.54	-0.68	-50.49	10.00	10.00	0.00
9,700.00	21.20	358.30	9,693.46	-34.52	-1.15	-34.47	10.00	10.00	0.00
9,750.00	26.20	358.30	9,739.23	-14.44	-1.75	-14.38	10.00	10.00	0.00
9,800.00	31.20	358.30	9,783.07	9.56	-2.46	9.63	10.00	10.00	0.00
9,850.00	36.20	358.30	9,824.66	37.28	-3.28	37.36	10.00	10.00	0.00
9,900.00	41.20	358.30	9,863.67	68.52	-4.21	68.61	10.00	10.00	0.00
9,950.00	46.20	358.30	9,899.80	103.03	-5.23	103.15	10.00	10.00	0.00
10,000.00	51.20	358.30	9,932.79	140.57	-6.35	140.70	10.00	10.00	0.00
10,050.00	56.20	358.30	9,962.38	180.83	-7.54	180.98	10.00	10.00	0.00

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Company:	WESTERN DIVISION	TVD Reference:	RKB @ 3656.00ft
Project:	PBNM	MD Reference:	RKB @ 3656.00ft
Site:	Norwalk	North Reference:	Grid
Well:	Thistle Unit 129H	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	61.20	358.30	9,988.35	223.53	-8.81	223.69	10.00	10.00	0.00
10,150.00	66.20	358.30	10,010.50	268.32	-10.14	268.50	10.00	10.00	0.00
10,200.00	71.20	358.30	10,028.66	314.86	-11.52	315.07	10.00	10.00	0.00
10,250.00	76.20	358.30	10,042.69	362.82	-12.95	363.04	10.00	10.00	0.00
10,300.00	81.20	358.30	10,052.48	411.81	-14.40	412.06	10.00	10.00	0.00
10,350.00	86.20	358.30	10,057.96	461.47	-15.88	461.74	10.00	10.00	0.00
10,388.34	90.03	358.30	10,059.22	499.76	-17.01	500.05	10.00	10.00	0.00
10,400.00	90.03	358.30	10,059.22	511.42	-17.36	511.71	0.00	0.00	0.00
10,500.00	90.03	358.30	10,059.16	611.38	-20.33	611.71	0.00	0.00	0.00
10,600.00	90.03	358.30	10,059.10	711.33	-23.29	711.71	0.00	0.00	0.00
10,700.00	90.03	358.30	10,059.04	811.29	-26.26	811.71	0.00	0.00	0.00
10,800.00	90.03	358.30	10,058.99	911.25	-29.23	911.71	0.00	0.00	0.00
10,900.00	90.03	358.30	10,058.93	1,011.20	-32.20	1,011.71	0.00	0.00	0.00
11,000.00	90.03	358.30	10,058.87	1,111.16	-35.17	1,111.71	0.00	0.00	0.00
11,100.00	90.03	358.30	10,058.81	1,211.11	-38.13	1,211.71	0.00	0.00	0.00
11,200.00	90.03	358.30	10,058.75	1,311.07	-41.10	1,311.71	0.00	0.00	0.00
11,300.00	90.03	358.30	10,058.69	1,411.03	-44.07	1,411.71	0.00	0.00	0.00
11,400.00	90.03	358.30	10,058.64	1,510.98	-47.04	1,511.71	0.00	0.00	0.00
11,500.00	90.03	358.30	10,058.58	1,610.94	-50.00	1,611.71	0.00	0.00	0.00
11,600.00	90.03	358.30	10,058.52	1,710.89	-52.97	1,711.71	0.00	0.00	0.00
11,700.00	90.03	358.30	10,058.46	1,810.85	-55.94	1,811.71	0.00	0.00	0.00
11,800.00	90.03	358.30	10,058.40	1,910.81	-58.91	1,911.71	0.00	0.00	0.00
11,900.00	90.03	358.30	10,058.34	2,010.76	-61.87	2,011.71	0.00	0.00	0.00
12,000.00	90.03	358.30	10,058.29	2,110.72	-64.84	2,111.71	0.00	0.00	0.00
12,100.00	90.03	358.30	10,058.23	2,210.67	-67.81	2,211.71	0.00	0.00	0.00
12,200.00	90.03	358.30	10,058.17	2,310.63	-70.78	2,311.71	0.00	0.00	0.00
12,300.00	90.03	358.30	10,058.11	2,410.59	-73.74	2,411.71	0.00	0.00	0.00
12,400.00	90.03	358.30	10,058.05	2,510.54	-76.71	2,511.71	0.00	0.00	0.00
12,500.00	90.03	358.30	10,058.00	2,610.50	-79.68	2,611.71	0.00	0.00	0.00
12,600.00	90.03	358.30	10,057.94	2,710.45	-82.65	2,711.71	0.00	0.00	0.00
12,700.00	90.03	358.30	10,057.88	2,810.41	-85.62	2,811.71	0.00	0.00	0.00
12,800.00	90.03	358.30	10,057.82	2,910.37	-88.58	2,911.71	0.00	0.00	0.00
12,900.00	90.03	358.30	10,057.76	3,010.32	-91.55	3,011.71	0.00	0.00	0.00
13,000.00	90.03	358.30	10,057.70	3,110.28	-94.52	3,111.71	0.00	0.00	0.00
13,100.00	90.03	358.30	10,057.65	3,210.23	-97.49	3,211.71	0.00	0.00	0.00
13,200.00	90.03	358.30	10,057.59	3,310.19	-100.45	3,311.71	0.00	0.00	0.00
13,300.00	90.03	358.30	10,057.53	3,410.15	-103.42	3,411.71	0.00	0.00	0.00
13,400.00	90.03	358.30	10,057.47	3,510.10	-106.39	3,511.71	0.00	0.00	0.00
13,500.00	90.03	358.30	10,057.41	3,610.06	-109.36	3,611.71	0.00	0.00	0.00
13,600.00	90.03	358.30	10,057.35	3,710.01	-112.32	3,711.71	0.00	0.00	0.00
13,700.00	90.03	358.30	10,057.30	3,809.97	-115.29	3,811.71	0.00	0.00	0.00
13,800.00	90.03	358.30	10,057.24	3,909.92	-118.26	3,911.71	0.00	0.00	0.00
13,900.00	90.03	358.30	10,057.18	4,009.88	-121.23	4,011.71	0.00	0.00	0.00
14,000.00	90.03	358.30	10,057.12	4,109.84	-124.19	4,111.71	0.00	0.00	0.00
14,100.00	90.03	358.30	10,057.06	4,209.79	-127.16	4,211.71	0.00	0.00	0.00
14,200.00	90.03	358.30	10,057.01	4,309.75	-130.13	4,311.71	0.00	0.00	0.00
14,300.00	90.03	358.30	10,056.95	4,409.70	-133.10	4,411.71	0.00	0.00	0.00
14,400.00	90.03	358.30	10,056.89	4,509.66	-136.07	4,511.71	0.00	0.00	0.00
14,500.00	90.03	358.30	10,056.83	4,609.62	-139.03	4,611.71	0.00	0.00	0.00
14,600.00	90.03	358.30	10,056.77	4,709.57	-142.00	4,711.71	0.00	0.00	0.00
14,700.00	90.03	358.30	10,056.71	4,809.53	-144.97	4,811.71	0.00	0.00	0.00
14,800.00	90.03	358.30	10,056.66	4,909.48	-147.94	4,911.71	0.00	0.00	0.00
14,900.00	90.03	358.30	10,056.60	5,009.44	-150.90	5,011.71	0.00	0.00	0.00
15,000.00	90.03	358.30	10,056.54	5,109.40	-153.87	5,111.71	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 129H
 Wellbore: Wellbore #1
 Design: Design #1

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

Well Thistle Unit 129H
 RKB @ 3656.00ft
 RKB @ 3656.00ft
 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)
15,100.00	90.03	358.30	10,056.48	5,209.35	-156.84	5,211.71	0.00	0.00	0.00
15,200.00	90.03	358.30	10,056.42	5,309.31	-159.81	5,311.71	0.00	0.00	0.00
15,300.00	90.03	358.30	10,056.37	5,409.26	-162.77	5,411.71	0.00	0.00	0.00
15,400.00	90.03	358.30	10,056.31	5,509.22	-165.74	5,511.71	0.00	0.00	0.00
15,500.00	90.03	358.30	10,056.25	5,609.18	-168.71	5,611.71	0.00	0.00	0.00
15,600.00	90.03	358.30	10,056.19	5,709.13	-171.68	5,711.71	0.00	0.00	0.00
15,700.00	90.03	358.30	10,056.13	5,809.09	-174.64	5,811.71	0.00	0.00	0.00
15,800.00	90.03	358.30	10,056.07	5,909.04	-177.61	5,911.71	0.00	0.00	0.00
15,900.00	90.03	358.30	10,056.02	6,009.00	-180.58	6,011.71	0.00	0.00	0.00
16,000.00	90.03	358.30	10,055.96	6,108.96	-183.55	6,111.71	0.00	0.00	0.00
16,100.00	90.03	358.30	10,055.90	6,208.91	-186.52	6,211.71	0.00	0.00	0.00
16,200.00	90.03	358.30	10,055.84	6,308.87	-189.48	6,311.71	0.00	0.00	0.00
16,300.00	90.03	358.30	10,055.78	6,408.82	-192.45	6,411.71	0.00	0.00	0.00
16,400.00	90.03	358.30	10,055.72	6,508.78	-195.42	6,511.71	0.00	0.00	0.00
16,500.00	90.03	358.30	10,055.67	6,608.74	-198.39	6,611.71	0.00	0.00	0.00
16,600.00	90.03	358.30	10,055.61	6,708.69	-201.35	6,711.71	0.00	0.00	0.00
16,700.00	90.03	358.30	10,055.55	6,808.65	-204.32	6,811.71	0.00	0.00	0.00
16,800.00	90.03	358.30	10,055.49	6,908.60	-207.29	6,911.71	0.00	0.00	0.00
16,900.00	90.03	358.30	10,055.43	7,008.56	-210.26	7,011.71	0.00	0.00	0.00
17,000.00	90.03	358.30	10,055.38	7,108.51	-213.22	7,111.71	0.00	0.00	0.00
17,100.00	90.03	358.30	10,055.32	7,208.47	-216.19	7,211.71	0.00	0.00	0.00
17,200.00	90.03	358.30	10,055.26	7,308.43	-219.16	7,311.71	0.00	0.00	0.00
17,300.00	90.03	358.30	10,055.20	7,408.38	-222.13	7,411.71	0.00	0.00	0.00
17,400.00	90.03	358.30	10,055.14	7,508.34	-225.09	7,511.71	0.00	0.00	0.00
17,500.00	90.03	358.30	10,055.08	7,608.29	-228.06	7,611.71	0.00	0.00	0.00
17,600.00	90.03	358.30	10,055.03	7,708.25	-231.03	7,711.71	0.00	0.00	0.00
17,644.16	90.03	358.30	10,055.00	7,752.39	-232.34	7,755.87	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 129H - plan hits target center - Point	0.00	0.00	10,055.00	7,752.39	-232.34	464,865.90	778,088.99	32.275668	-103.567299