

HOBBS OCD

DEC 05 2016

Devon Energy Planning Report

Database:	EDM r5000 US Production	Local Co-ordinate Reference:	Well Thistle Unit 130H
Company:	WESTERN DIVISION	TVD Reference:	RKB @ 3655.80ft
Project:	PBNM	MD Reference:	RKB @ 3655.80ft
Site:	Norwalk	North Reference:	Grid
Well:	Thistle Unit 130H	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
From:	Map	Easting:	0.00 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "
		Latitude:	30.988446
		Longitude:	-106.060830
		Grid Convergence:	-0.89 °

Well	Thistle Unit 130H					
Well Position	+N/-S	457,110.62 ft	Northing:	457,109.71 usft	Latitude:	32.254343
	+E/-W	778,352.91 ft	Easting:	778,351.36 usft	Longitude:	-103.566629
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	3,630.80 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)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.00	0.00	0.00	4.62	

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	
4,100.00	8.00	90.00	4,097.40	0.00	55.76	1.00	1.00	0.00	90.00	
8,100.00	8.00	90.00	8,058.48	0.00	612.45	0.00	0.00	0.00	0.00	
8,900.00	0.00	0.00	8,855.88	0.00	668.21	1.00	-1.00	0.00	180.00	
9,540.00	0.00	0.00	9,495.88	0.00	668.21	0.00	0.00	0.00	0.00	
10,441.11	90.11	359.70	10,068.84	574.05	665.20	10.00	10.00	-0.03	359.70	
17,628.14	90.11	359.70	10,055.00	7,760.98	627.44	0.00	0.00	0.00	0.00	Thistle Unit 130H_BH

Devon Energy

Planning Report

Database: EDM r5000 US Production
 Company: WESTERN DIVISION
 Project: PBNM
 Site: Norwalk
 Well: Thistle Unit 130H
 Wellbore: Wellbore #1
 Design: Design #1

Local Co-ordinate Reference: Well Thistle Unit 130H
 TVD Reference: RKB @ 3655.80ft
 MD Reference: RKB @ 3655.80ft
 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)
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	1.00	90.00	3,399.99	0.00	0.87	0.07	1.00	1.00	0.00
3,500.00	2.00	90.00	3,499.96	0.00	3.49	0.28	1.00	1.00	0.00
3,600.00	3.00	90.00	3,599.86	0.00	7.85	0.63	1.00	1.00	0.00
3,700.00	4.00	90.00	3,699.68	0.00	13.96	1.12	1.00	1.00	0.00
3,800.00	5.00	90.00	3,799.37	0.00	21.80	1.76	1.00	1.00	0.00
3,900.00	6.00	90.00	3,898.90	0.00	31.39	2.53	1.00	1.00	0.00
4,000.00	7.00	90.00	3,998.26	0.00	42.71	3.44	1.00	1.00	0.00
4,100.00	8.00	90.00	4,097.40	0.00	55.76	4.49	1.00	1.00	0.00
4,200.00	8.00	90.00	4,196.43	0.00	69.68	5.61	0.00	0.00	0.00
4,300.00	8.00	90.00	4,295.46	0.00	83.59	6.74	0.00	0.00	0.00
4,400.00	8.00	90.00	4,394.48	0.00	97.51	7.86	0.00	0.00	0.00
4,500.00	8.00	90.00	4,493.51	0.00	111.43	8.98	0.00	0.00	0.00
4,600.00	8.00	90.00	4,592.54	0.00	125.35	10.10	0.00	0.00	0.00
4,700.00	8.00	90.00	4,691.56	0.00	139.26	11.22	0.00	0.00	0.00
4,800.00	8.00	90.00	4,790.59	0.00	153.18	12.34	0.00	0.00	0.00
4,900.00	8.00	90.00	4,889.62	0.00	167.10	13.47	0.00	0.00	0.00
5,000.00	8.00	90.00	4,988.64	0.00	181.02	14.59	0.00	0.00	0.00
5,100.00	8.00	90.00	5,087.67	0.00	194.93	15.71	0.00	0.00	0.00
5,200.00	8.00	90.00	5,186.70	0.00	208.85	16.83	0.00	0.00	0.00
5,300.00	8.00	90.00	5,285.72	0.00	222.77	17.95	0.00	0.00	0.00

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Project:	PBNM	MD Reference:	RKB @ 3655.80ft
Site:	Norwalk	North Reference:	Grid
Well:	Thistle Unit 130H	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	8.00	90.00	5,384.75	0.00	236.68	19.07	0.00	0.00	0.00
5,500.00	8.00	90.00	5,483.78	0.00	250.60	20.19	0.00	0.00	0.00
5,600.00	8.00	90.00	5,582.81	0.00	264.52	21.32	0.00	0.00	0.00
5,700.00	8.00	90.00	5,681.83	0.00	278.44	22.44	0.00	0.00	0.00
5,800.00	8.00	90.00	5,780.86	0.00	292.35	23.56	0.00	0.00	0.00
5,900.00	8.00	90.00	5,879.89	0.00	306.27	24.68	0.00	0.00	0.00
6,000.00	8.00	90.00	5,978.91	0.00	320.19	25.80	0.00	0.00	0.00
6,100.00	8.00	90.00	6,077.94	0.00	334.11	26.92	0.00	0.00	0.00
6,200.00	8.00	90.00	6,176.97	0.00	348.02	28.04	0.00	0.00	0.00
6,300.00	8.00	90.00	6,275.99	0.00	361.94	29.17	0.00	0.00	0.00
6,400.00	8.00	90.00	6,375.02	0.00	375.86	30.29	0.00	0.00	0.00
6,500.00	8.00	90.00	6,474.05	0.00	389.78	31.41	0.00	0.00	0.00
6,600.00	8.00	90.00	6,573.07	0.00	403.69	32.53	0.00	0.00	0.00
6,700.00	8.00	90.00	6,672.10	0.00	417.61	33.65	0.00	0.00	0.00
6,800.00	8.00	90.00	6,771.13	0.00	431.53	34.77	0.00	0.00	0.00
6,900.00	8.00	90.00	6,870.15	0.00	445.44	35.90	0.00	0.00	0.00
7,000.00	8.00	90.00	6,969.18	0.00	459.36	37.02	0.00	0.00	0.00
7,100.00	8.00	90.00	7,068.21	0.00	473.28	38.14	0.00	0.00	0.00
7,200.00	8.00	90.00	7,167.23	0.00	487.20	39.26	0.00	0.00	0.00
7,300.00	8.00	90.00	7,266.26	0.00	501.11	40.38	0.00	0.00	0.00
7,400.00	8.00	90.00	7,365.29	0.00	515.03	41.50	0.00	0.00	0.00
7,500.00	8.00	90.00	7,464.31	0.00	528.95	42.62	0.00	0.00	0.00
7,600.00	8.00	90.00	7,563.34	0.00	542.87	43.75	0.00	0.00	0.00
7,700.00	8.00	90.00	7,662.37	0.00	556.78	44.87	0.00	0.00	0.00
7,800.00	8.00	90.00	7,761.40	0.00	570.70	45.99	0.00	0.00	0.00
7,900.00	8.00	90.00	7,860.42	0.00	584.62	47.11	0.00	0.00	0.00
8,000.00	8.00	90.00	7,959.45	0.00	598.53	48.23	0.00	0.00	0.00
8,100.00	8.00	90.00	8,058.48	0.00	612.45	49.35	0.00	0.00	0.00
8,200.00	7.00	90.00	8,157.62	0.00	625.50	50.40	1.00	-1.00	0.00
8,300.00	6.00	90.00	8,256.97	0.00	636.82	51.32	1.00	-1.00	0.00
8,400.00	5.00	90.00	8,356.51	0.00	646.41	52.09	1.00	-1.00	0.00
8,500.00	4.00	90.00	8,456.20	0.00	654.26	52.72	1.00	-1.00	0.00
8,600.00	3.00	90.00	8,556.02	0.00	660.36	53.21	1.00	-1.00	0.00
8,700.00	2.00	90.00	8,655.92	0.00	664.72	53.57	1.00	-1.00	0.00
8,800.00	1.00	90.00	8,755.88	0.00	667.34	53.78	1.00	-1.00	0.00
8,900.00	0.00	0.00	8,855.88	0.00	668.21	53.85	1.00	-1.00	0.00
9,000.00	0.00	0.00	8,955.88	0.00	668.21	53.85	0.00	0.00	0.00
9,100.00	0.00	0.00	9,055.88	0.00	668.21	53.85	0.00	0.00	0.00
9,200.00	0.00	0.00	9,155.88	0.00	668.21	53.85	0.00	0.00	0.00
9,300.00	0.00	0.00	9,255.88	0.00	668.21	53.85	0.00	0.00	0.00
9,400.00	0.00	0.00	9,355.88	0.00	668.21	53.85	0.00	0.00	0.00
9,500.00	0.00	0.00	9,455.88	0.00	668.21	53.85	0.00	0.00	0.00
9,540.00	0.00	0.00	9,495.88	0.00	668.21	53.85	0.00	0.00	0.00
9,550.00	1.00	359.70	9,505.88	0.09	668.21	53.93	10.00	10.00	0.00
9,600.00	6.00	359.70	9,555.77	3.14	668.20	56.97	10.00	10.00	0.00
9,650.00	11.00	359.70	9,605.20	10.53	668.16	64.33	10.00	10.00	0.00
9,700.00	16.00	359.70	9,653.81	22.19	668.10	75.96	10.00	10.00	0.00
9,750.00	21.00	359.70	9,701.21	38.05	668.01	91.76	10.00	10.00	0.00
9,800.00	26.00	359.70	9,747.05	57.98	667.91	111.62	10.00	10.00	0.00
9,850.00	31.00	359.70	9,790.97	81.83	667.78	135.38	10.00	10.00	0.00
9,900.00	36.00	359.70	9,832.66	109.42	667.64	162.87	10.00	10.00	0.00
9,950.00	41.00	359.70	9,871.77	140.54	667.47	193.87	10.00	10.00	0.00
10,000.00	46.00	359.70	9,908.03	174.94	667.29	228.15	10.00	10.00	0.00
10,050.00	51.00	359.70	9,941.15	212.38	667.10	265.44	10.00	10.00	0.00

Devon Energy
Planning Report

Database:	EDM r5000 US Production	Local Co-ordinate Reference:	Well Thistle Unit 130H
Company:	WESTERN DIVISION	TVD Reference:	RKB @ 3655.80ft
Project:	PBNM	MD Reference:	RKB @ 3655.80ft
Site:	Norwalk	North Reference:	Grid
Well:	Thistle Unit 130H	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	56.00	359.70	9,970.88	252.56	666.89	305.48	10.00	10.00	0.00
10,150.00	61.00	359.70	9,997.00	295.18	666.66	347.94	10.00	10.00	0.00
10,200.00	66.00	359.70	10,019.30	339.91	666.43	392.50	10.00	10.00	0.00
10,250.00	71.00	359.70	10,037.62	386.41	666.18	438.84	10.00	10.00	0.00
10,300.00	76.00	359.70	10,051.82	434.34	665.93	486.59	10.00	10.00	0.00
10,350.00	81.00	359.70	10,061.79	483.32	665.67	535.39	10.00	10.00	0.00
10,400.00	86.00	359.70	10,067.44	532.98	665.41	584.87	10.00	10.00	0.00
10,441.11	90.11	359.70	10,068.84	574.05	665.20	625.79	10.00	10.00	0.00
10,500.00	90.11	359.70	10,068.73	632.95	664.89	684.47	0.00	0.00	0.00
10,600.00	90.11	359.70	10,068.53	732.94	664.36	784.10	0.00	0.00	0.00
10,700.00	90.11	359.70	10,068.34	832.94	663.84	883.73	0.00	0.00	0.00
10,800.00	90.11	359.70	10,068.15	932.94	663.31	983.36	0.00	0.00	0.00
10,900.00	90.11	359.70	10,067.96	1,032.94	662.79	1,082.99	0.00	0.00	0.00
11,000.00	90.11	359.70	10,067.76	1,132.94	662.26	1,182.62	0.00	0.00	0.00
11,100.00	90.11	359.70	10,067.57	1,232.94	661.74	1,282.25	0.00	0.00	0.00
11,200.00	90.11	359.70	10,067.38	1,332.93	661.21	1,381.88	0.00	0.00	0.00
11,300.00	90.11	359.70	10,067.19	1,432.93	660.68	1,481.51	0.00	0.00	0.00
11,400.00	90.11	359.70	10,066.99	1,532.93	660.16	1,581.14	0.00	0.00	0.00
11,500.00	90.11	359.70	10,066.80	1,632.93	659.63	1,680.77	0.00	0.00	0.00
11,600.00	90.11	359.70	10,066.61	1,732.93	659.11	1,780.41	0.00	0.00	0.00
11,700.00	90.11	359.70	10,066.42	1,832.93	658.58	1,880.04	0.00	0.00	0.00
11,800.00	90.11	359.70	10,066.22	1,932.92	658.06	1,979.67	0.00	0.00	0.00
11,900.00	90.11	359.70	10,066.03	2,032.92	657.53	2,079.30	0.00	0.00	0.00
12,000.00	90.11	359.70	10,065.84	2,132.92	657.01	2,178.93	0.00	0.00	0.00
12,100.00	90.11	359.70	10,065.65	2,232.92	656.48	2,278.56	0.00	0.00	0.00
12,200.00	90.11	359.70	10,065.45	2,332.92	655.96	2,378.19	0.00	0.00	0.00
12,300.00	90.11	359.70	10,065.26	2,432.92	655.43	2,477.82	0.00	0.00	0.00
12,400.00	90.11	359.70	10,065.07	2,532.92	654.91	2,577.45	0.00	0.00	0.00
12,500.00	90.11	359.70	10,064.88	2,632.91	654.38	2,677.08	0.00	0.00	0.00
12,600.00	90.11	359.70	10,064.68	2,732.91	653.86	2,776.71	0.00	0.00	0.00
12,700.00	90.11	359.70	10,064.49	2,832.91	653.33	2,876.35	0.00	0.00	0.00
12,800.00	90.11	359.70	10,064.30	2,932.91	652.80	2,975.98	0.00	0.00	0.00
12,900.00	90.11	359.70	10,064.10	3,032.91	652.28	3,075.61	0.00	0.00	0.00
13,000.00	90.11	359.70	10,063.91	3,132.91	651.75	3,175.24	0.00	0.00	0.00
13,100.00	90.11	359.70	10,063.72	3,232.90	651.23	3,274.87	0.00	0.00	0.00
13,200.00	90.11	359.70	10,063.53	3,332.90	650.70	3,374.50	0.00	0.00	0.00
13,300.00	90.11	359.70	10,063.33	3,432.90	650.18	3,474.13	0.00	0.00	0.00
13,400.00	90.11	359.70	10,063.14	3,532.90	649.65	3,573.76	0.00	0.00	0.00
13,500.00	90.11	359.70	10,062.95	3,632.90	649.13	3,673.39	0.00	0.00	0.00
13,600.00	90.11	359.70	10,062.76	3,732.90	648.60	3,773.02	0.00	0.00	0.00
13,700.00	90.11	359.70	10,062.56	3,832.90	648.08	3,872.65	0.00	0.00	0.00
13,800.00	90.11	359.70	10,062.37	3,932.89	647.55	3,972.28	0.00	0.00	0.00
13,900.00	90.11	359.70	10,062.18	4,032.89	647.03	4,071.92	0.00	0.00	0.00
14,000.00	90.11	359.70	10,061.99	4,132.89	646.50	4,171.55	0.00	0.00	0.00
14,100.00	90.11	359.70	10,061.79	4,232.89	645.98	4,271.18	0.00	0.00	0.00
14,200.00	90.11	359.70	10,061.60	4,332.89	645.45	4,370.81	0.00	0.00	0.00
14,300.00	90.11	359.70	10,061.41	4,432.89	644.92	4,470.44	0.00	0.00	0.00
14,400.00	90.11	359.70	10,061.22	4,532.88	644.40	4,570.07	0.00	0.00	0.00
14,500.00	90.11	359.70	10,061.02	4,632.88	643.87	4,669.70	0.00	0.00	0.00
14,600.00	90.11	359.70	10,060.83	4,732.88	643.35	4,769.33	0.00	0.00	0.00
14,700.00	90.11	359.70	10,060.64	4,832.88	642.82	4,868.96	0.00	0.00	0.00
14,800.00	90.11	359.70	10,060.45	4,932.88	642.30	4,968.59	0.00	0.00	0.00
14,900.00	90.11	359.70	10,060.25	5,032.88	641.77	5,068.22	0.00	0.00	0.00
15,000.00	90.11	359.70	10,060.06	5,132.87	641.25	5,167.86	0.00	0.00	0.00

Devon Energy
Planning Report

Database:	EDM r5000 US Production	Local Co-ordinate Reference:	Well Thistle Unit 130H
Company:	WESTERN DIVISION	TVD Reference:	RKB @ 3655.80ft
Project:	PBNM	MD Reference:	RKB @ 3655.80ft
Site:	Norwalk	North Reference:	Grid
Well:	Thistle Unit 130H	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)	
15,100.00	90.11	359.70	10,059.87	5,232.87	640.72	5,267.49	0.00	0.00	0.00	
15,200.00	90.11	359.70	10,059.68	5,332.87	640.20	5,367.12	0.00	0.00	0.00	
15,300.00	90.11	359.70	10,059.48	5,432.87	639.67	5,466.75	0.00	0.00	0.00	
15,400.00	90.11	359.70	10,059.29	5,532.87	639.15	5,566.38	0.00	0.00	0.00	
15,500.00	90.11	359.70	10,059.10	5,632.87	638.62	5,666.01	0.00	0.00	0.00	
15,600.00	90.11	359.70	10,058.91	5,732.87	638.10	5,765.64	0.00	0.00	0.00	
15,700.00	90.11	359.70	10,058.71	5,832.86	637.57	5,865.27	0.00	0.00	0.00	
15,800.00	90.11	359.70	10,058.52	5,932.86	637.04	5,964.90	0.00	0.00	0.00	
15,900.00	90.11	359.70	10,058.33	6,032.86	636.52	6,064.53	0.00	0.00	0.00	
16,000.00	90.11	359.70	10,058.14	6,132.86	635.99	6,164.16	0.00	0.00	0.00	
16,100.00	90.11	359.70	10,057.94	6,232.86	635.47	6,263.80	0.00	0.00	0.00	
16,200.00	90.11	359.70	10,057.75	6,332.86	634.94	6,363.43	0.00	0.00	0.00	
16,300.00	90.11	359.70	10,057.56	6,432.85	634.42	6,463.06	0.00	0.00	0.00	
16,400.00	90.11	359.70	10,057.37	6,532.85	633.89	6,562.69	0.00	0.00	0.00	
16,500.00	90.11	359.70	10,057.17	6,632.85	633.37	6,662.32	0.00	0.00	0.00	
16,600.00	90.11	359.70	10,056.98	6,732.85	632.84	6,761.95	0.00	0.00	0.00	
16,700.00	90.11	359.70	10,056.79	6,832.85	632.32	6,861.58	0.00	0.00	0.00	
16,800.00	90.11	359.70	10,056.59	6,932.85	631.79	6,961.21	0.00	0.00	0.00	
16,900.00	90.11	359.70	10,056.40	7,032.85	631.27	7,060.84	0.00	0.00	0.00	
17,000.00	90.11	359.70	10,056.21	7,132.84	630.74	7,160.47	0.00	0.00	0.00	
17,100.00	90.11	359.70	10,056.02	7,232.84	630.22	7,260.10	0.00	0.00	0.00	
17,200.00	90.11	359.70	10,055.82	7,332.84	629.69	7,359.74	0.00	0.00	0.00	
17,300.00	90.11	359.70	10,055.63	7,432.84	629.17	7,459.37	0.00	0.00	0.00	
17,400.00	90.11	359.70	10,055.44	7,532.84	628.64	7,559.00	0.00	0.00	0.00	
17,500.00	90.11	359.70	10,055.25	7,632.84	628.11	7,658.63	0.00	0.00	0.00	
17,600.00	90.11	359.70	10,055.05	7,732.83	627.59	7,758.26	0.00	0.00	0.00	
17,628.14	90.11	359.70	10,055.00	7,760.98	627.44	7,786.30	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 130H_BHL	0.00	0.00	10,055.00	7,760.98	627.44	464,870.67	778,978.80	32.275663	-103.564420
- plan hits target center									
- Point									