

WESTERN DIVISION

PBNM

Dzurisin

Thistle Unit 154H

Wellbore #1

Plan: Plan 1

HOBBS OCD
FEB 13 2017
RECEIVED

Standard Planning Report

12 July, 2016

Devon Energy

Planning Report

Database: EDM r5000 US Production
Company: WESTERN DIVISION
Project: PBNM
Site: Dzurisin
Well: Thistle Unit 154H
Wellbore: Wellbore #1
Design: Plan 1

Local Co-ordinate Reference: Well Thistle Unit 154H
TVD Reference: 1 @ 3712.60ft
MD Reference: 1 @ 3712.60ft
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 154H					
Well Position	+N/-S	37,245.27 ft	Northing:	467,167.46 usft	Latitude:	0.000000
	+E/-W	49,299.16 ft	Easting:	774,690.47 usft	Longitude:	0.000000
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	3,689.10 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	180.62

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	
9,163.54	0.00	0.00	9,163.54	0.00	0.00	0.00	0.00	0.00	0.00	
9,911.04	89.70	180.62	9,641.00	-474.94	-5.18	12.00	12.00	0.00	180.62	Thistle Unit 154H BHI
9,922.96	89.70	180.62	9,641.06	-486.86	-5.31	0.02	0.02	0.00	0.15	
19,323.19	89.70	180.62	9,689.86	-9,886.40	-107.84	0.00	0.00	0.00	0.00	
19,349.25	89.70	180.62	9,690.00	-9,912.46	-108.12	0.02	-0.01	-0.02	-117.22	Thistle Unit 154H 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	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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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
9,100.00	0.00	0.00	9,100.00	0.00	0.00	0.00	0.00	0.00	0.00
9,163.54	0.00	0.00	9,163.54	0.00	0.00	0.00	0.00	0.00	0.00
9,175.00	1.38	180.62	9,175.00	-0.14	0.00	0.14	12.00	12.00	0.00
9,200.00	4.38	180.62	9,199.96	-1.39	-0.02	1.39	12.00	12.00	0.00
9,225.00	7.38	180.62	9,224.83	-3.95	-0.04	3.95	12.00	12.00	0.00
9,250.00	10.38	180.62	9,249.53	-7.81	-0.09	7.81	12.00	12.00	0.00
9,275.00	13.38	180.62	9,273.99	-12.95	-0.14	12.95	12.00	12.00	0.00
9,300.00	16.38	180.62	9,298.15	-19.37	-0.21	19.37	12.00	12.00	0.00
9,325.00	19.38	180.62	9,321.94	-27.04	-0.29	27.04	12.00	12.00	0.00
9,350.00	22.38	180.62	9,345.30	-35.95	-0.39	35.95	12.00	12.00	0.00
9,375.00	25.38	180.62	9,368.15	-46.06	-0.50	46.07	12.00	12.00	0.00
9,400.00	28.38	180.62	9,390.45	-57.36	-0.63	57.37	12.00	12.00	0.00
9,425.00	31.38	180.62	9,412.13	-69.81	-0.76	69.82	12.00	12.00	0.00
9,450.00	34.38	180.62	9,433.12	-83.38	-0.91	83.39	12.00	12.00	0.00
9,475.00	37.38	180.62	9,453.38	-98.03	-1.07	98.03	12.00	12.00	0.00
9,500.00	40.38	180.62	9,472.84	-113.72	-1.24	113.72	12.00	12.00	0.00
9,525.00	43.38	180.62	9,491.45	-130.40	-1.42	130.41	12.00	12.00	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)
9,550.00	46.38	180.62	9,509.16	-148.04	-1.61	148.05	12.00	12.00	0.00
9,575.00	49.38	180.62	9,525.93	-166.58	-1.82	166.59	12.00	12.00	0.00
9,600.00	52.38	180.62	9,541.70	-185.97	-2.03	185.98	12.00	12.00	0.00
9,625.00	55.38	180.62	9,556.44	-206.16	-2.25	206.17	12.00	12.00	0.00
9,650.00	58.38	180.62	9,570.10	-227.09	-2.48	227.10	12.00	12.00	0.00
9,675.00	61.38	180.62	9,582.65	-248.71	-2.71	248.72	12.00	12.00	0.00
9,700.00	64.38	180.62	9,594.04	-270.96	-2.96	270.97	12.00	12.00	0.00
9,725.00	67.38	180.62	9,604.26	-293.77	-3.20	293.79	12.00	12.00	0.00
9,750.00	70.38	180.62	9,613.27	-317.08	-3.46	317.10	12.00	12.00	0.00
9,775.00	73.38	180.62	9,621.05	-340.84	-3.72	340.86	12.00	12.00	0.00
9,800.00	76.38	180.62	9,627.57	-364.97	-3.98	364.99	12.00	12.00	0.00
9,825.00	79.38	180.62	9,632.82	-389.41	-4.25	389.43	12.00	12.00	0.00
9,850.00	82.38	180.62	9,636.78	-414.09	-4.52	414.11	12.00	12.00	0.00
9,875.00	85.38	180.62	9,639.45	-438.94	-4.79	438.97	12.00	12.00	0.00
9,900.00	88.38	180.62	9,640.81	-463.90	-5.06	463.93	12.00	12.00	0.00
9,911.04	89.70	180.62	9,641.00	-474.94	-5.18	474.97	12.00	12.00	0.00
9,922.96	89.70	180.62	9,641.06	-486.86	-5.31	486.89	0.02	0.02	0.00
10,000.00	89.70	180.62	9,641.46	-563.89	-6.15	563.92	0.00	0.00	0.00
10,100.00	89.70	180.62	9,641.98	-663.88	-7.24	663.92	0.00	0.00	0.00
10,200.00	89.70	180.62	9,642.50	-763.87	-8.33	763.92	0.00	0.00	0.00
10,300.00	89.70	180.62	9,643.02	-863.87	-9.42	863.92	0.00	0.00	0.00
10,400.00	89.70	180.62	9,643.54	-963.86	-10.51	963.92	0.00	0.00	0.00
10,500.00	89.70	180.62	9,644.06	-1,063.85	-11.60	1,063.92	0.00	0.00	0.00
10,600.00	89.70	180.62	9,644.58	-1,163.85	-12.69	1,163.92	0.00	0.00	0.00
10,700.00	89.70	180.62	9,645.10	-1,263.84	-13.79	1,263.91	0.00	0.00	0.00
10,800.00	89.70	180.62	9,645.61	-1,363.83	-14.88	1,363.91	0.00	0.00	0.00
10,900.00	89.70	180.62	9,646.13	-1,463.82	-15.97	1,463.91	0.00	0.00	0.00
11,000.00	89.70	180.62	9,646.65	-1,563.82	-17.06	1,563.91	0.00	0.00	0.00
11,100.00	89.70	180.62	9,647.17	-1,663.81	-18.15	1,663.91	0.00	0.00	0.00
11,200.00	89.70	180.62	9,647.69	-1,763.80	-19.24	1,763.91	0.00	0.00	0.00
11,300.00	89.70	180.62	9,648.21	-1,863.79	-20.33	1,863.91	0.00	0.00	0.00
11,400.00	89.70	180.62	9,648.73	-1,963.79	-21.42	1,963.90	0.00	0.00	0.00
11,500.00	89.70	180.62	9,649.25	-2,063.78	-22.51	2,063.90	0.00	0.00	0.00
11,600.00	89.70	180.62	9,649.77	-2,163.77	-23.60	2,163.90	0.00	0.00	0.00
11,700.00	89.70	180.62	9,650.29	-2,263.77	-24.69	2,263.90	0.00	0.00	0.00
11,800.00	89.70	180.62	9,650.81	-2,363.76	-25.78	2,363.90	0.00	0.00	0.00
11,900.00	89.70	180.62	9,651.33	-2,463.75	-26.87	2,463.90	0.00	0.00	0.00
12,000.00	89.70	180.62	9,651.84	-2,563.74	-27.96	2,563.90	0.00	0.00	0.00
12,100.00	89.70	180.62	9,652.36	-2,663.74	-29.05	2,663.89	0.00	0.00	0.00
12,200.00	89.70	180.62	9,652.88	-2,763.73	-30.15	2,763.89	0.00	0.00	0.00
12,300.00	89.70	180.62	9,653.40	-2,863.72	-31.24	2,863.89	0.00	0.00	0.00
12,400.00	89.70	180.62	9,653.92	-2,963.71	-32.33	2,963.89	0.00	0.00	0.00
12,500.00	89.70	180.62	9,654.44	-3,063.71	-33.42	3,063.89	0.00	0.00	0.00
12,600.00	89.70	180.62	9,654.96	-3,163.70	-34.51	3,163.89	0.00	0.00	0.00
12,700.00	89.70	180.62	9,655.48	-3,263.69	-35.60	3,263.89	0.00	0.00	0.00
12,800.00	89.70	180.62	9,656.00	-3,363.69	-36.69	3,363.89	0.00	0.00	0.00
12,900.00	89.70	180.62	9,656.52	-3,463.68	-37.78	3,463.88	0.00	0.00	0.00
13,000.00	89.70	180.62	9,657.04	-3,563.67	-38.87	3,563.88	0.00	0.00	0.00
13,100.00	89.70	180.62	9,657.56	-3,663.66	-39.96	3,663.88	0.00	0.00	0.00
13,200.00	89.70	180.62	9,658.07	-3,763.66	-41.05	3,763.88	0.00	0.00	0.00
13,300.00	89.70	180.62	9,658.59	-3,863.65	-42.14	3,863.88	0.00	0.00	0.00
13,400.00	89.70	180.62	9,659.11	-3,963.64	-43.23	3,963.88	0.00	0.00	0.00
13,500.00	89.70	180.62	9,659.63	-4,063.63	-44.32	4,063.88	0.00	0.00	0.00
13,600.00	89.70	180.62	9,660.15	-4,163.63	-45.42	4,163.87	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 154H
Wellbore #: Wellbore #1
Design: Plan 1

Local Co-ordinate Reference: Well Thistle Unit 154H
TVD Reference: 1 @ 3712.60ft
MD Reference: 1 @ 3712.60ft
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	89.70	180.62	9,660.67	-4,263.62	-46.51	4,263.87	0.00	0.00	0.00
13,800.00	89.70	180.62	9,661.19	-4,363.61	-47.60	4,363.87	0.00	0.00	0.00
13,900.00	89.70	180.62	9,661.71	-4,463.61	-48.69	4,463.87	0.00	0.00	0.00
14,000.00	89.70	180.62	9,662.23	-4,563.60	-49.78	4,563.87	0.00	0.00	0.00
14,100.00	89.70	180.62	9,662.75	-4,663.59	-50.87	4,663.87	0.00	0.00	0.00
14,200.00	89.70	180.62	9,663.27	-4,763.58	-51.96	4,763.87	0.00	0.00	0.00
14,300.00	89.70	180.62	9,663.79	-4,863.58	-53.05	4,863.87	0.00	0.00	0.00
14,400.00	89.70	180.62	9,664.30	-4,963.57	-54.14	4,963.86	0.00	0.00	0.00
14,500.00	89.70	180.62	9,664.82	-5,063.56	-55.23	5,063.86	0.00	0.00	0.00
14,600.00	89.70	180.62	9,665.34	-5,163.55	-56.32	5,163.86	0.00	0.00	0.00
14,700.00	89.70	180.62	9,665.86	-5,263.55	-57.41	5,263.86	0.00	0.00	0.00
14,800.00	89.70	180.62	9,666.38	-5,363.54	-58.50	5,363.86	0.00	0.00	0.00
14,900.00	89.70	180.62	9,666.90	-5,463.53	-59.59	5,463.86	0.00	0.00	0.00
15,000.00	89.70	180.62	9,667.42	-5,563.52	-60.68	5,563.86	0.00	0.00	0.00
15,100.00	89.70	180.62	9,667.94	-5,663.52	-61.78	5,663.85	0.00	0.00	0.00
15,200.00	89.70	180.62	9,668.46	-5,763.51	-62.87	5,763.85	0.00	0.00	0.00
15,300.00	89.70	180.62	9,668.98	-5,863.50	-63.96	5,863.85	0.00	0.00	0.00
15,400.00	89.70	180.62	9,669.50	-5,963.50	-65.05	5,963.85	0.00	0.00	0.00
15,500.00	89.70	180.62	9,670.02	-6,063.49	-66.14	6,063.85	0.00	0.00	0.00
15,600.00	89.70	180.62	9,670.53	-6,163.48	-67.23	6,163.85	0.00	0.00	0.00
15,700.00	89.70	180.62	9,671.05	-6,263.47	-68.32	6,263.85	0.00	0.00	0.00
15,800.00	89.70	180.62	9,671.57	-6,363.47	-69.41	6,363.85	0.00	0.00	0.00
15,900.00	89.70	180.62	9,672.09	-6,463.46	-70.50	6,463.84	0.00	0.00	0.00
16,000.00	89.70	180.62	9,672.61	-6,563.45	-71.59	6,563.84	0.00	0.00	0.00
16,100.00	89.70	180.62	9,673.13	-6,663.44	-72.68	6,663.84	0.00	0.00	0.00
16,200.00	89.70	180.62	9,673.65	-6,763.44	-73.77	6,763.84	0.00	0.00	0.00
16,300.00	89.70	180.62	9,674.17	-6,863.43	-74.86	6,863.84	0.00	0.00	0.00
16,400.00	89.70	180.62	9,674.69	-6,963.42	-75.95	6,963.84	0.00	0.00	0.00
16,500.00	89.70	180.62	9,675.21	-7,063.42	-77.05	7,063.84	0.00	0.00	0.00
16,600.00	89.70	180.62	9,675.73	-7,163.41	-78.14	7,163.83	0.00	0.00	0.00
16,700.00	89.70	180.62	9,676.25	-7,263.40	-79.23	7,263.83	0.00	0.00	0.00
16,800.00	89.70	180.62	9,676.76	-7,363.39	-80.32	7,363.83	0.00	0.00	0.00
16,900.00	89.70	180.62	9,677.28	-7,463.39	-81.41	7,463.83	0.00	0.00	0.00
17,000.00	89.70	180.62	9,677.80	-7,563.38	-82.50	7,563.83	0.00	0.00	0.00
17,100.00	89.70	180.62	9,678.32	-7,663.37	-83.59	7,663.83	0.00	0.00	0.00
17,200.00	89.70	180.62	9,678.84	-7,763.36	-84.68	7,763.83	0.00	0.00	0.00
17,300.00	89.70	180.62	9,679.36	-7,863.36	-85.77	7,863.82	0.00	0.00	0.00
17,400.00	89.70	180.62	9,679.88	-7,963.35	-86.86	7,963.82	0.00	0.00	0.00
17,500.00	89.70	180.62	9,680.40	-8,063.34	-87.95	8,063.82	0.00	0.00	0.00
17,600.00	89.70	180.62	9,680.92	-8,163.34	-89.04	8,163.82	0.00	0.00	0.00
17,700.00	89.70	180.62	9,681.44	-8,263.33	-90.13	8,263.82	0.00	0.00	0.00
17,800.00	89.70	180.62	9,681.96	-8,363.32	-91.22	8,363.82	0.00	0.00	0.00
17,900.00	89.70	180.62	9,682.48	-8,463.31	-92.31	8,463.82	0.00	0.00	0.00
18,000.00	89.70	180.62	9,682.99	-8,563.31	-93.41	8,563.82	0.00	0.00	0.00
18,100.00	89.70	180.62	9,683.51	-8,663.30	-94.50	8,663.81	0.00	0.00	0.00
18,200.00	89.70	180.62	9,684.03	-8,763.29	-95.59	8,763.81	0.00	0.00	0.00
18,300.00	89.70	180.62	9,684.55	-8,863.28	-96.68	8,863.81	0.00	0.00	0.00
18,400.00	89.70	180.62	9,685.07	-8,963.28	-97.77	8,963.81	0.00	0.00	0.00
18,500.00	89.70	180.62	9,685.59	-9,063.27	-98.86	9,063.81	0.00	0.00	0.00
18,600.00	89.70	180.62	9,686.11	-9,163.26	-99.95	9,163.81	0.00	0.00	0.00
18,700.00	89.70	180.62	9,686.63	-9,263.26	-101.04	9,263.81	0.00	0.00	0.00
18,800.00	89.70	180.62	9,687.15	-9,363.25	-102.13	9,363.80	0.00	0.00	0.00
18,900.00	89.70	180.62	9,687.67	-9,463.24	-103.22	9,463.80	0.00	0.00	0.00
19,000.00	89.70	180.62	9,688.19	-9,563.23	-104.31	9,563.80	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 154H
Wellbore: Wellbore #1
Design: Plan 1

Local Co-ordinate Reference: Well Thistle Unit 154H
TVD Reference: 1 @ 3712.60ft
MD Reference: 1 @ 3712.60ft
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)
19,100.00	89.70	180.62	9,688.71	-9,663.23	-105.40	9,663.80	0.00	0.00	0.00
19,200.00	89.70	180.62	9,689.22	-9,763.22	-106.49	9,763.80	0.00	0.00	0.00
19,300.00	89.70	180.62	9,689.74	-9,863.21	-107.58	9,863.80	0.00	0.00	0.00
19,323.19	89.70	180.62	9,689.86	-9,886.40	-107.84	9,886.99	0.00	0.00	0.00
19,349.25	89.70	180.62	9,690.00	-9,912.46	-108.12	9,913.05	0.02	-0.01	-0.02

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Thistle Unit 154H BHL - hit/miss target - Shape - plan hits target center - Point	0.00	0.00	9,690.00	-9,912.46	-108.12	457,255.02	774,582.35	0.000000	0.000000