

HOBBS OCD
APR 26 2017
RECEIVED

WESTERN DIVISION

PBNM

Dzurisin

Seawolf 1-12 Fed 83H

Wellbore #1

Plan: Plan 1

Standard Planning Report

29 August, 2016

Devon Energy

Planning Report

Database: EDM r5000 US Production
Company: WESTERN DIVISION
Project: PBNM
Site: Dzurisin
Well: Seawolf 1-12 Fed 83H
Wellbore: Wellbore #1
Design: Plan 1

Local Co-ordinate Reference: Well Seawolf 1-12 Fed 83H
TVD Reference: 1 @ 3340.20ft
MD Reference: 1 @ 3340.20ft
North Reference: Grid
Survey Calculation Method: 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	Dzurisin				
Site Position:		Northing:	429,922.27 usft	Latitude:	32.180535
From:	Map	Easting:	725,391.41 usft	Longitude:	-103.738424
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.32 °

Well	Seawolf 1-12 Fed 83H					
Well Position	+N/-S	-36,402.56 ft	Northing:	393,519.78 usft	Latitude:	32.079297
	+E/-W	65,813.20 ft	Easting:	791,204.48 usft	Longitude:	-103.526597
Position Uncertainty	0.00 ft		Wellhead Elevation:	0.00 ft	Ground Level:	3,316.70 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	7.72	60.11	48,711

Design	Plan 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	181.22	

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	
5,500.00	0.00	0.00	5,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
6,000.00	5.00	270.00	5,999.37	0.00	-21.80	1.00	1.00	0.00	270.00	
8,000.00	5.00	270.00	7,991.76	0.00	-196.11	0.00	0.00	0.00	0.00	
9,000.00	0.00	0.00	8,990.49	0.00	-239.72	0.50	-0.50	0.00	180.00	
12,153.10	0.00	0.00	12,143.59	0.00	-239.72	0.00	0.00	0.00	0.00	
12,903.35	90.03	179.86	12,621.05	-477.71	-238.52	12.00	12.00	0.00	179.86	Seawolf 1-12 Fed 83H
12,904.96	90.03	179.86	12,621.05	-479.33	-238.51	0.01	0.01	0.00	-3.05	
22,459.91	90.03	179.86	12,616.02	-10,034.24	-214.49	0.00	0.00	0.00	0.00	
22,500.51	90.03	179.86	12,616.00	-10,074.84	-214.39	0.01	0.00	0.01	92.27	Seawolf 1-12 Fed 83H

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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)
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	1.00	270.00	5,600.00	0.00	-0.87	0.02	1.00	1.00	0.00
5,700.00	2.00	270.00	5,699.96	0.00	-3.49	0.07	1.00	1.00	0.00
5,800.00	3.00	270.00	5,799.86	0.00	-7.85	0.17	1.00	1.00	0.00
5,900.00	4.00	270.00	5,899.68	0.00	-13.96	0.30	1.00	1.00	0.00
6,000.00	5.00	270.00	5,999.37	0.00	-21.80	0.46	1.00	1.00	0.00
6,100.00	5.00	270.00	6,098.99	0.00	-30.52	0.65	0.00	0.00	0.00
6,200.00	5.00	270.00	6,198.60	0.00	-39.23	0.83	0.00	0.00	0.00
6,300.00	5.00	270.00	6,298.22	0.00	-47.95	1.02	0.00	0.00	0.00
6,400.00	5.00	270.00	6,397.84	0.00	-56.67	1.21	0.00	0.00	0.00
6,500.00	5.00	270.00	6,497.46	0.00	-65.38	1.39	0.00	0.00	0.00
6,600.00	5.00	270.00	6,597.08	0.00	-74.10	1.58	0.00	0.00	0.00
6,700.00	5.00	270.00	6,696.70	0.00	-82.81	1.76	0.00	0.00	0.00
6,800.00	5.00	270.00	6,796.32	0.00	-91.53	1.95	0.00	0.00	0.00
6,900.00	5.00	270.00	6,895.94	0.00	-100.24	2.13	0.00	0.00	0.00
7,000.00	5.00	270.00	6,995.56	0.00	-108.96	2.32	0.00	0.00	0.00
7,100.00	5.00	270.00	7,095.18	0.00	-117.67	2.50	0.00	0.00	0.00
7,200.00	5.00	270.00	7,194.80	0.00	-126.39	2.69	0.00	0.00	0.00
7,300.00	5.00	270.00	7,294.42	0.00	-135.11	2.87	0.00	0.00	0.00
7,400.00	5.00	270.00	7,394.04	0.00	-143.82	3.06	0.00	0.00	0.00
7,500.00	5.00	270.00	7,493.66	0.00	-152.54	3.24	0.00	0.00	0.00
7,600.00	5.00	270.00	7,593.28	0.00	-161.25	3.43	0.00	0.00	0.00
7,700.00	5.00	270.00	7,692.90	0.00	-169.97	3.62	0.00	0.00	0.00
7,800.00	5.00	270.00	7,792.52	0.00	-178.68	3.80	0.00	0.00	0.00
7,900.00	5.00	270.00	7,892.14	0.00	-187.40	3.99	0.00	0.00	0.00
8,000.00	5.00	270.00	7,991.76	0.00	-196.11	4.17	0.00	0.00	0.00
8,100.00	4.50	270.00	8,091.41	0.00	-204.40	4.35	0.50	-0.50	0.00
8,200.00	4.00	270.00	8,191.14	0.00	-211.81	4.51	0.50	-0.50	0.00
8,300.00	3.50	270.00	8,290.92	0.00	-218.35	4.64	0.50	-0.50	0.00
8,400.00	3.00	270.00	8,390.76	0.00	-224.02	4.77	0.50	-0.50	0.00
8,500.00	2.50	270.00	8,490.65	0.00	-228.81	4.87	0.50	-0.50	0.00
8,600.00	2.00	270.00	8,590.57	0.00	-232.74	4.95	0.50	-0.50	0.00
8,700.00	1.50	270.00	8,690.52	0.00	-235.79	5.02	0.50	-0.50	0.00
8,800.00	1.00	270.00	8,790.50	0.00	-237.97	5.06	0.50	-0.50	0.00
8,900.00	0.50	270.00	8,890.49	0.00	-239.28	5.09	0.50	-0.50	0.00
9,000.00	0.00	0.00	8,990.49	0.00	-239.72	5.10	0.50	-0.50	0.00
9,100.00	0.00	0.00	9,090.49	0.00	-239.72	5.10	0.00	0.00	0.00
9,200.00	0.00	0.00	9,190.49	0.00	-239.72	5.10	0.00	0.00	0.00
9,300.00	0.00	0.00	9,290.49	0.00	-239.72	5.10	0.00	0.00	0.00
9,400.00	0.00	0.00	9,390.49	0.00	-239.72	5.10	0.00	0.00	0.00
9,500.00	0.00	0.00	9,490.49	0.00	-239.72	5.10	0.00	0.00	0.00
9,600.00	0.00	0.00	9,590.49	0.00	-239.72	5.10	0.00	0.00	0.00
9,700.00	0.00	0.00	9,690.49	0.00	-239.72	5.10	0.00	0.00	0.00
9,800.00	0.00	0.00	9,790.49	0.00	-239.72	5.10	0.00	0.00	0.00
9,900.00	0.00	0.00	9,890.49	0.00	-239.72	5.10	0.00	0.00	0.00
10,000.00	0.00	0.00	9,990.49	0.00	-239.72	5.10	0.00	0.00	0.00
10,100.00	0.00	0.00	10,090.49	0.00	-239.72	5.10	0.00	0.00	0.00
10,200.00	0.00	0.00	10,190.49	0.00	-239.72	5.10	0.00	0.00	0.00
10,300.00	0.00	0.00	10,290.49	0.00	-239.72	5.10	0.00	0.00	0.00
10,400.00	0.00	0.00	10,390.49	0.00	-239.72	5.10	0.00	0.00	0.00
10,500.00	0.00	0.00	10,490.49	0.00	-239.72	5.10	0.00	0.00	0.00
10,600.00	0.00	0.00	10,590.49	0.00	-239.72	5.10	0.00	0.00	0.00
10,700.00	0.00	0.00	10,690.49	0.00	-239.72	5.10	0.00	0.00	0.00

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10,800.00	0.00	0.00	10,790.49	0.00	-239.72	5.10	0.00	0.00	0.00
10,900.00	0.00	0.00	10,890.49	0.00	-239.72	5.10	0.00	0.00	0.00
11,000.00	0.00	0.00	10,990.49	0.00	-239.72	5.10	0.00	0.00	0.00
11,100.00	0.00	0.00	11,090.49	0.00	-239.72	5.10	0.00	0.00	0.00
11,200.00	0.00	0.00	11,190.49	0.00	-239.72	5.10	0.00	0.00	0.00
11,300.00	0.00	0.00	11,290.49	0.00	-239.72	5.10	0.00	0.00	0.00
11,400.00	0.00	0.00	11,390.49	0.00	-239.72	5.10	0.00	0.00	0.00
11,500.00	0.00	0.00	11,490.49	0.00	-239.72	5.10	0.00	0.00	0.00
11,600.00	0.00	0.00	11,590.49	0.00	-239.72	5.10	0.00	0.00	0.00
11,700.00	0.00	0.00	11,690.49	0.00	-239.72	5.10	0.00	0.00	0.00
11,800.00	0.00	0.00	11,790.49	0.00	-239.72	5.10	0.00	0.00	0.00
11,900.00	0.00	0.00	11,890.49	0.00	-239.72	5.10	0.00	0.00	0.00
12,000.00	0.00	0.00	11,990.49	0.00	-239.72	5.10	0.00	0.00	0.00
12,100.00	0.00	0.00	12,090.49	0.00	-239.72	5.10	0.00	0.00	0.00
12,153.10	0.00	0.00	12,143.59	0.00	-239.72	5.10	0.00	0.00	0.00
12,175.00	2.63	179.86	12,165.48	-0.50	-239.72	5.60	12.00	12.00	0.00
12,200.00	5.63	179.86	12,190.41	-2.30	-239.71	7.40	12.00	12.00	0.00
12,225.00	8.63	179.86	12,215.22	-5.40	-239.71	10.50	12.00	12.00	0.00
12,250.00	11.63	179.86	12,239.82	-9.80	-239.70	14.90	12.00	12.00	0.00
12,275.00	14.63	179.86	12,264.17	-15.48	-239.68	20.57	12.00	12.00	0.00
12,300.00	17.63	179.86	12,288.18	-22.42	-239.66	27.51	12.00	12.00	0.00
12,325.00	20.63	179.86	12,311.80	-30.61	-239.64	35.70	12.00	12.00	0.00
12,350.00	23.63	179.86	12,334.95	-40.03	-239.62	45.12	12.00	12.00	0.00
12,375.00	26.63	179.86	12,357.58	-50.64	-239.59	55.73	12.00	12.00	0.00
12,400.00	29.63	179.86	12,379.63	-62.43	-239.56	67.51	12.00	12.00	0.00
12,425.00	32.63	179.86	12,401.03	-75.35	-239.53	80.43	12.00	12.00	0.00
12,450.00	35.63	179.86	12,421.72	-89.37	-239.50	94.45	12.00	12.00	0.00
12,475.00	38.63	179.86	12,441.65	-104.46	-239.46	109.53	12.00	12.00	0.00
12,500.00	41.63	179.86	12,460.76	-120.57	-239.42	125.64	12.00	12.00	0.00
12,525.00	44.63	179.86	12,479.01	-137.66	-239.37	142.72	12.00	12.00	0.00
12,550.00	47.63	179.86	12,496.33	-155.68	-239.33	160.74	12.00	12.00	0.00
12,575.00	50.63	179.86	12,512.69	-174.58	-239.28	179.63	12.00	12.00	0.00
12,600.00	53.63	179.86	12,528.03	-194.32	-239.23	199.36	12.00	12.00	0.00
12,625.00	56.63	179.86	12,542.33	-214.82	-239.18	219.86	12.00	12.00	0.00
12,650.00	59.63	179.86	12,555.52	-236.05	-239.13	241.09	12.00	12.00	0.00
12,675.00	62.63	179.86	12,567.59	-257.94	-239.07	262.97	12.00	12.00	0.00
12,700.00	65.63	179.86	12,578.50	-280.43	-239.01	285.45	12.00	12.00	0.00
12,725.00	68.63	179.86	12,588.22	-303.46	-238.96	308.48	12.00	12.00	0.00
12,750.00	71.63	179.86	12,596.72	-326.97	-238.90	331.98	12.00	12.00	0.00
12,775.00	74.63	179.86	12,603.97	-350.89	-238.84	355.90	12.00	12.00	0.00
12,800.00	77.63	179.86	12,609.96	-375.16	-238.78	380.16	12.00	12.00	0.00
12,825.00	80.63	179.86	12,614.68	-399.71	-238.71	404.70	12.00	12.00	0.00
12,850.00	83.63	179.86	12,618.10	-424.47	-238.65	429.45	12.00	12.00	0.00
12,875.00	86.63	179.86	12,620.23	-449.38	-238.59	454.35	12.00	12.00	0.00
12,900.00	89.63	179.86	12,621.04	-474.36	-238.53	479.33	12.00	12.00	0.00
12,903.35	90.03	179.86	12,621.05	-477.71	-238.52	482.68	12.00	12.00	0.00
12,904.96	90.03	179.86	12,621.05	-479.33	-238.51	484.29	0.01	0.01	0.00
13,000.00	90.03	179.86	12,621.00	-574.36	-238.28	579.30	0.00	0.00	0.00
13,100.00	90.03	179.86	12,620.95	-674.36	-238.02	679.27	0.00	0.00	0.00
13,200.00	90.03	179.86	12,620.90	-774.36	-237.77	779.24	0.00	0.00	0.00
13,300.00	90.03	179.86	12,620.84	-874.36	-237.52	879.22	0.00	0.00	0.00
13,400.00	90.03	179.86	12,620.79	-974.36	-237.27	979.19	0.00	0.00	0.00
13,500.00	90.03	179.86	12,620.74	-1,074.36	-237.02	1,079.16	0.00	0.00	0.00
13,600.00	90.03	179.86	12,620.69	-1,174.36	-236.77	1,179.13	0.00	0.00	0.00

Devon Energy

Planning Report

Database: EDM r5000 US Production
Company: WESTERN DIVISION
Project: PBNM
Site: Dzurisin
Well: Seawolf 1-12 Fed 83H
Wellbore: Wellbore #1
Design: Plan 1

Local Co-ordinate Reference: Well Seawolf 1-12 Fed 83H
TVD Reference: 1 @ 3340.20ft
MD Reference: 1 @ 3340.20ft
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	90.03	179.86	12,620.63	-1,274.36	-236.52	1,279.10	0.00	0.00	0.00
13,800.00	90.03	179.86	12,620.58	-1,374.36	-236.26	1,379.07	0.00	0.00	0.00
13,900.00	90.03	179.86	12,620.53	-1,474.36	-236.01	1,479.05	0.00	0.00	0.00
14,000.00	90.03	179.86	12,620.47	-1,574.36	-235.76	1,579.02	0.00	0.00	0.00
14,100.00	90.03	179.86	12,620.42	-1,674.36	-235.51	1,678.99	0.00	0.00	0.00
14,200.00	90.03	179.86	12,620.37	-1,774.36	-235.26	1,778.96	0.00	0.00	0.00
14,300.00	90.03	179.86	12,620.32	-1,874.36	-235.01	1,878.93	0.00	0.00	0.00
14,400.00	90.03	179.86	12,620.26	-1,974.36	-234.76	1,978.91	0.00	0.00	0.00
14,500.00	90.03	179.86	12,620.21	-2,074.36	-234.50	2,078.88	0.00	0.00	0.00
14,600.00	90.03	179.86	12,620.16	-2,174.36	-234.25	2,178.85	0.00	0.00	0.00
14,700.00	90.03	179.86	12,620.11	-2,274.36	-234.00	2,278.82	0.00	0.00	0.00
14,800.00	90.03	179.86	12,620.05	-2,374.36	-233.75	2,378.79	0.00	0.00	0.00
14,900.00	90.03	179.86	12,620.00	-2,474.36	-233.50	2,478.76	0.00	0.00	0.00
15,000.00	90.03	179.86	12,619.95	-2,574.36	-233.25	2,578.74	0.00	0.00	0.00
15,100.00	90.03	179.86	12,619.90	-2,674.36	-233.00	2,678.71	0.00	0.00	0.00
15,200.00	90.03	179.86	12,619.84	-2,774.36	-232.74	2,778.68	0.00	0.00	0.00
15,300.00	90.03	179.86	12,619.79	-2,874.35	-232.49	2,878.65	0.00	0.00	0.00
15,400.00	90.03	179.86	12,619.74	-2,974.35	-232.24	2,978.62	0.00	0.00	0.00
15,500.00	90.03	179.86	12,619.69	-3,074.35	-231.99	3,078.59	0.00	0.00	0.00
15,600.00	90.03	179.86	12,619.63	-3,174.35	-231.74	3,178.57	0.00	0.00	0.00
15,700.00	90.03	179.86	12,619.58	-3,274.35	-231.49	3,278.54	0.00	0.00	0.00
15,800.00	90.03	179.86	12,619.53	-3,374.35	-231.24	3,378.51	0.00	0.00	0.00
15,900.00	90.03	179.86	12,619.47	-3,474.35	-230.98	3,478.48	0.00	0.00	0.00
16,000.00	90.03	179.86	12,619.42	-3,574.35	-230.73	3,578.45	0.00	0.00	0.00
16,100.00	90.03	179.86	12,619.37	-3,674.35	-230.48	3,678.42	0.00	0.00	0.00
16,200.00	90.03	179.86	12,619.32	-3,774.35	-230.23	3,778.40	0.00	0.00	0.00
16,300.00	90.03	179.86	12,619.26	-3,874.35	-229.98	3,878.37	0.00	0.00	0.00
16,400.00	90.03	179.86	12,619.21	-3,974.35	-229.73	3,978.34	0.00	0.00	0.00
16,500.00	90.03	179.86	12,619.16	-4,074.35	-229.48	4,078.31	0.00	0.00	0.00
16,600.00	90.03	179.86	12,619.11	-4,174.35	-229.22	4,178.28	0.00	0.00	0.00
16,700.00	90.03	179.86	12,619.05	-4,274.35	-228.97	4,278.25	0.00	0.00	0.00
16,800.00	90.03	179.86	12,619.00	-4,374.35	-228.72	4,378.23	0.00	0.00	0.00
16,900.00	90.03	179.86	12,618.95	-4,474.35	-228.47	4,478.20	0.00	0.00	0.00
17,000.00	90.03	179.86	12,618.90	-4,574.35	-228.22	4,578.17	0.00	0.00	0.00
17,100.00	90.03	179.86	12,618.84	-4,674.35	-227.97	4,678.14	0.00	0.00	0.00
17,200.00	90.03	179.86	12,618.79	-4,774.35	-227.72	4,778.11	0.00	0.00	0.00
17,300.00	90.03	179.86	12,618.74	-4,874.35	-227.46	4,878.08	0.00	0.00	0.00
17,400.00	90.03	179.86	12,618.69	-4,974.35	-227.21	4,978.06	0.00	0.00	0.00
17,500.00	90.03	179.86	12,618.63	-5,074.35	-226.96	5,078.03	0.00	0.00	0.00
17,600.00	90.03	179.86	12,618.58	-5,174.35	-226.71	5,178.00	0.00	0.00	0.00
17,700.00	90.03	179.86	12,618.53	-5,274.35	-226.46	5,277.97	0.00	0.00	0.00
17,800.00	90.03	179.86	12,618.47	-5,374.35	-226.21	5,377.94	0.00	0.00	0.00
17,900.00	90.03	179.86	12,618.42	-5,474.35	-225.96	5,477.91	0.00	0.00	0.00
18,000.00	90.03	179.86	12,618.37	-5,574.35	-225.70	5,577.89	0.00	0.00	0.00
18,100.00	90.03	179.86	12,618.32	-5,674.35	-225.45	5,677.86	0.00	0.00	0.00
18,200.00	90.03	179.86	12,618.26	-5,774.35	-225.20	5,777.83	0.00	0.00	0.00
18,300.00	90.03	179.86	12,618.21	-5,874.35	-224.95	5,877.80	0.00	0.00	0.00
18,400.00	90.03	179.86	12,618.16	-5,974.34	-224.70	5,977.77	0.00	0.00	0.00
18,500.00	90.03	179.86	12,618.11	-6,074.34	-224.45	6,077.74	0.00	0.00	0.00
18,600.00	90.03	179.86	12,618.05	-6,174.34	-224.20	6,177.72	0.00	0.00	0.00
18,700.00	90.03	179.86	12,618.00	-6,274.34	-223.94	6,277.69	0.00	0.00	0.00
18,800.00	90.03	179.86	12,617.95	-6,374.34	-223.69	6,377.66	0.00	0.00	0.00
18,900.00	90.03	179.86	12,617.90	-6,474.34	-223.44	6,477.63	0.00	0.00	0.00
19,000.00	90.03	179.86	12,617.84	-6,574.34	-223.19	6,577.60	0.00	0.00	0.00

Devon Energy

Planning Report

Database: EDM r5000 US Production
 Company: WESTERN DIVISION
 Project: PBNM
 Site: Dzurisin
 Well: Seawolf 1-12 Fed 83H
 Wellbore: Wellbore #1
 Design: Plan 1

Local Co-ordinate Reference: Well Seawolf 1-12 Fed 83H
 TVD Reference: 1 @ 3340.20ft
 MD Reference: 1 @ 3340.20ft
 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	90.03	179.86	12,617.79	-6,674.34	-222.94	6,677.57	0.00	0.00	0.00
19,200.00	90.03	179.86	12,617.74	-6,774.34	-222.69	6,777.55	0.00	0.00	0.00
19,300.00	90.03	179.86	12,617.69	-6,874.34	-222.44	6,877.52	0.00	0.00	0.00
19,400.00	90.03	179.86	12,617.63	-6,974.34	-222.18	6,977.49	0.00	0.00	0.00
19,500.00	90.03	179.86	12,617.58	-7,074.34	-221.93	7,077.46	0.00	0.00	0.00
19,600.00	90.03	179.86	12,617.53	-7,174.34	-221.68	7,177.43	0.00	0.00	0.00
19,700.00	90.03	179.86	12,617.47	-7,274.34	-221.43	7,277.40	0.00	0.00	0.00
19,800.00	90.03	179.86	12,617.42	-7,374.34	-221.18	7,377.38	0.00	0.00	0.00
19,900.00	90.03	179.86	12,617.37	-7,474.34	-220.93	7,477.35	0.00	0.00	0.00
20,000.00	90.03	179.86	12,617.32	-7,574.34	-220.68	7,577.32	0.00	0.00	0.00
20,100.00	90.03	179.86	12,617.26	-7,674.34	-220.42	7,677.29	0.00	0.00	0.00
20,200.00	90.03	179.86	12,617.21	-7,774.34	-220.17	7,777.26	0.00	0.00	0.00
20,300.00	90.03	179.86	12,617.16	-7,874.34	-219.92	7,877.24	0.00	0.00	0.00
20,400.00	90.03	179.86	12,617.11	-7,974.34	-219.67	7,977.21	0.00	0.00	0.00
20,500.00	90.03	179.86	12,617.05	-8,074.34	-219.42	8,077.18	0.00	0.00	0.00
20,600.00	90.03	179.86	12,617.00	-8,174.34	-219.17	8,177.15	0.00	0.00	0.00
20,700.00	90.03	179.86	12,616.95	-8,274.34	-218.92	8,277.12	0.00	0.00	0.00
20,800.00	90.03	179.86	12,616.90	-8,374.34	-218.66	8,377.09	0.00	0.00	0.00
20,900.00	90.03	179.86	12,616.84	-8,474.34	-218.41	8,477.07	0.00	0.00	0.00
21,000.00	90.03	179.86	12,616.79	-8,574.34	-218.16	8,577.04	0.00	0.00	0.00
21,100.00	90.03	179.86	12,616.74	-8,674.34	-217.91	8,677.01	0.00	0.00	0.00
21,200.00	90.03	179.86	12,616.68	-8,774.34	-217.66	8,776.98	0.00	0.00	0.00
21,300.00	90.03	179.86	12,616.63	-8,874.34	-217.41	8,876.95	0.00	0.00	0.00
21,400.00	90.03	179.86	12,616.58	-8,974.33	-217.16	8,976.92	0.00	0.00	0.00
21,500.00	90.03	179.86	12,616.53	-9,074.33	-216.90	9,076.90	0.00	0.00	0.00
21,600.00	90.03	179.86	12,616.47	-9,174.33	-216.65	9,176.87	0.00	0.00	0.00
21,700.00	90.03	179.86	12,616.42	-9,274.33	-216.40	9,276.84	0.00	0.00	0.00
21,800.00	90.03	179.86	12,616.37	-9,374.33	-216.15	9,376.81	0.00	0.00	0.00
21,900.00	90.03	179.86	12,616.32	-9,474.33	-215.90	9,476.78	0.00	0.00	0.00
22,000.00	90.03	179.86	12,616.26	-9,574.33	-215.65	9,576.75	0.00	0.00	0.00
22,100.00	90.03	179.86	12,616.21	-9,674.33	-215.40	9,676.73	0.00	0.00	0.00
22,200.00	90.03	179.86	12,616.16	-9,774.33	-215.14	9,776.70	0.00	0.00	0.00
22,300.00	90.03	179.86	12,616.11	-9,874.33	-214.89	9,876.67	0.00	0.00	0.00
22,400.00	90.03	179.86	12,616.05	-9,974.33	-214.64	9,976.64	0.00	0.00	0.00
22,459.91	90.03	179.86	12,616.02	-10,034.24	-214.49	10,036.53	0.00	0.00	0.00
22,500.51	90.03	179.86	12,616.00	-10,074.84	-214.39	10,077.12	0.01	0.00	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									
Seawolf 1-12 Fed 83H B	0.00	0.00	12,616.00	-10,074.84	-214.39	383,444.96	790,990.09	32.051609	-103.527532
- plan hits target center									
- Point									

Devon Energy

Anticollision Risk Report

Company: WESTERN DIVISION
 Project: PBNM
 Reference Site: Dzurisin
 Site Error: 0.00
 Reference Well: Seawolf 1-12 Fed 84H
 Well Error: 0.00
 Reference Wellbore: Wellbore #1
 Reference Design: Plan 1

Local Co-ordinate Reference: Well Seawolf 1-12 Fed 84H
 TVD Reference: 1 @ 3340.80ft
 MD Reference: 1 @ 3340.80ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM r5000 US Production
 Offset TVD Reference: Offset Datum

Reference	Plan 1		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations Interval 100.00ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.00ft	Error Surface:	Combined Covariances
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Risk Settings	
Vertical Depth for Analysis:	ft (Below TVD Reference Datum)
Level of Acceptable Risk (1 in):	
Minimum Separation:	0 ft

Survey Tool Program	Date 8/26/2016	
From (ft)	To (ft)	Survey (Wellbore)
0.00	22,532.23	Plan 1 (Wellbore #1)
		Tool Name
		MWD
		Description
		MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Dzurisin						
Seawolf 1-12 Fed 83H - Wellbore #1 - Plan 1	3,500.00	3,499.40	50.05	39.12	4.580 CC, ES	
Seawolf 1-12 Fed 83H - Wellbore #1 - Plan 1	22,532.23	22,497.02	909.79	647.66	3.471 SF	

Offset Design													Offset Site Error: 0.00 ft		
Survey Program: 0-MWD													Offset Well Error: 0.00 ft		
Reference		Offset		Semi Major Axis		Distance					Minimum Separation	Separation Factor	Risked Separation Factor	Probability of Collision	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)							
0.00	0.00	0.00	0.00	0.00	0.00	-90.40	50.05								0
100.00	100.00	99.40	99.40	0.09	0.09	-90.40	50.05	49.93	0.12	412.896	0				
200.00	200.00	199.40	199.40	0.31	0.31	-90.40	50.05	49.61	0.44	114.142	0				
300.00	300.00	299.40	299.40	0.54	0.53	-90.40	50.05	49.29	0.76	66.173	0				
400.00	400.00	399.40	399.40	0.76	0.76	-90.40	50.05	48.98	1.07	46.593	0				
500.00	500.00	499.40	499.40	0.99	0.98	-90.40	50.05	48.66	1.39	35.954	0				
600.00	600.00	599.40	599.40	1.21	1.21	-90.40	50.05	48.34	1.71	29.270	0				
700.00	700.00	699.40	699.40	1.43	1.43	-90.40	50.05	48.02	2.03	24.682	0				
800.00	800.00	799.40	799.40	1.66	1.66	-90.40	50.05	47.71	2.35	21.337	0				
900.00	900.00	899.40	899.40	1.88	1.88	-90.40	50.05	47.39	2.66	18.791	0				
1,000.00	1,000.00	999.40	999.40	2.11	2.11	-90.40	50.05	47.07	2.98	16.788	0				
1,100.00	1,100.00	1,099.40	1,099.40	2.33	2.33	-90.40	50.05	46.75	3.30	15.170	0				
1,200.00	1,200.00	1,199.40	1,199.40	2.56	2.56	-90.40	50.05	46.43	3.62	13.837	0				
1,300.00	1,300.00	1,299.40	1,299.40	2.78	2.78	-90.40	50.05	46.12	3.94	12.719	0				
1,400.00	1,400.00	1,399.40	1,399.40	3.01	3.01	-90.40	50.05	45.80	4.25	11.769	0				
1,500.00	1,500.00	1,499.40	1,499.40	3.23	3.23	-90.40	50.05	45.48	4.57	10.950	0				
1,600.00	1,600.00	1,599.40	1,599.40	3.46	3.46	-90.40	50.05	45.16	4.89	10.238	0				
1,700.00	1,700.00	1,699.40	1,699.40	3.68	3.68	-90.40	50.05	44.84	5.21	9.613	0				
1,800.00	1,800.00	1,799.40	1,799.40	3.91	3.91	-90.40	50.05	44.53	5.52	9.060	0				
1,900.00	1,900.00	1,899.40	1,899.40	4.13	4.13	-90.40	50.05	44.21	5.84	8.567	0				
2,000.00	2,000.00	1,999.40	1,999.40	4.36	4.36	-90.40	50.05	43.89	6.16	8.125	0				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Devon Energy

Anticollision Risk Report

Company: WESTERN DIVISION
Project: PBNM
Reference Site: Dzurisin
Site Error: 0.00
Reference Well: Seawolf 1-12 Fed 84H
Well Error: 0.00
Reference Wellbore: Wellbore #1
Reference Design: Plan 1

Local Co-ordinate Reference: Well Seawolf 1-12 Fed 84H
TVD Reference: 1 @ 3340.80ft
MD Reference: 1 @ 3340.80ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM r5000 US Production
Offset TVD Reference: Offset Datum

Offset Design Dzurisin - Seawolf 1-12 Fed 83H - Wellbore #1 - Plan 1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toothface (")	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Risked Separation Factor	Probability of Collision	Warning	
2,100.00	2,100.00	2,099.40	2,099.40	4.58	4.58	-90.40	50.05	43.57	6.48	7.726	0			
2,200.00	2,200.00	2,199.40	2,199.40	4.81	4.80	-90.40	50.05	43.26	6.80	7.365	0			
2,300.00	2,300.00	2,299.40	2,299.40	5.03	5.03	-90.40	50.05	42.94	7.11	7.036	0			
2,400.00	2,400.00	2,399.40	2,399.40	5.26	5.25	-90.40	50.05	42.62	7.43	6.735	0			
2,500.00	2,500.00	2,499.40	2,499.40	5.48	5.48	-90.40	50.05	42.30	7.75	6.459	0			
2,600.00	2,600.00	2,599.40	2,599.40	5.71	5.70	-90.40	50.05	41.98	8.07	6.204	0			
2,700.00	2,700.00	2,699.40	2,699.40	5.93	5.93	-90.40	50.05	41.67	8.39	5.969	0			
2,800.00	2,800.00	2,799.40	2,799.40	6.15	6.15	-90.40	50.05	41.35	8.70	5.751	0			
2,900.00	2,900.00	2,899.40	2,899.40	6.38	6.38	-90.40	50.05	41.03	9.02	5.548	0			
3,000.00	3,000.00	2,999.40	2,999.40	6.60	6.60	-90.40	50.05	40.71	9.34	5.360	0			
3,100.00	3,100.00	3,099.40	3,099.40	6.83	6.83	-90.40	50.05	40.39	9.66	5.183	0			
3,200.00	3,200.00	3,199.40	3,199.40	7.05	7.05	-90.40	50.05	40.08	9.97	5.018	0			
3,300.00	3,300.00	3,299.40	3,299.40	7.28	7.28	-90.40	50.05	39.76	10.29	4.863	0			
3,400.00	3,400.00	3,399.40	3,399.40	7.50	7.50	-90.40	50.05	39.44	10.61	4.717	0			
3,500.00	3,500.00	3,499.40	3,499.40	7.73	7.73	-90.40	50.05	39.12	10.93	4.580	0		CC, ES	
3,600.00	3,600.00	3,599.40	3,599.40	7.94	7.95	179.61	50.92	39.69	11.24	4.532	0			
3,700.00	3,699.96	3,699.36	3,699.36	8.14	8.18	179.63	53.54	42.01	11.53	4.642	0			
3,800.00	3,799.86	3,799.26	3,799.26	8.34	8.40	179.65	57.90	46.07	11.83	4.893	0			
3,900.00	3,899.68	3,899.08	3,899.08	8.54	8.63	179.69	64.01	51.88	12.13	5.276	0			
4,000.00	3,999.37	3,998.77	3,998.77	8.75	8.85	179.72	71.85	59.42	12.43	5.779	0			
4,100.00	4,098.99	4,098.39	4,098.39	8.96	9.07	179.75	80.57	67.83	12.73	6.327	0			
4,200.00	4,198.60	4,198.00	4,198.00	9.18	9.30	179.77	89.28	76.25	13.04	6.849	0			
4,300.00	4,298.22	4,297.62	4,297.62	9.40	9.52	179.79	98.00	84.66	13.34	7.346	0			
4,400.00	4,397.84	4,397.24	4,397.24	9.62	9.74	179.81	106.72	93.07	13.64	7.822	0			
4,500.00	4,497.46	4,496.86	4,496.86	9.84	9.97	179.83	115.43	101.48	13.95	8.275	0			
4,600.00	4,597.08	4,596.48	4,596.48	10.07	10.19	179.84	124.15	109.89	14.25	8.710	0			
4,700.00	4,696.70	4,696.10	4,696.10	10.30	10.42	179.85	132.86	118.30	14.56	9.125	0			
4,800.00	4,796.32	4,795.72	4,795.72	10.53	10.64	179.86	141.58	126.71	14.87	9.523	0			
4,900.00	4,895.94	4,895.34	4,895.34	10.77	10.86	179.87	150.29	135.12	15.18	9.904	0			
5,000.00	4,995.56	4,994.96	4,994.96	11.00	11.09	179.87	159.01	143.53	15.48	10.270	0			
5,100.00	5,095.18	5,094.58	5,094.58	11.24	11.31	179.88	167.72	151.93	15.79	10.621	0			
5,200.00	5,194.80	5,194.20	5,194.20	11.48	11.54	179.89	176.44	160.34	16.10	10.958	0			
5,300.00	5,294.42	5,293.82	5,293.82	11.72	11.76	179.89	185.16	168.74	16.41	11.282	0			
5,400.00	5,394.04	5,393.44	5,393.44	11.96	11.98	179.90	193.87	177.15	16.72	11.594	0			
5,500.00	5,493.66	5,493.06	5,493.06	12.20	12.21	179.90	202.59	185.55	17.03	11.894	0			
5,600.00	5,593.28	5,589.37	5,589.37	12.44	12.41	179.90	212.03	194.70	17.33	12.238	0			
5,700.00	5,692.90	5,685.12	5,685.09	12.69	12.60	179.91	223.12	205.52	17.60	12.675	0			
5,800.00	5,792.52	5,780.49	5,780.37	12.94	12.79	179.91	235.88	218.00	17.88	13.194	0			
5,900.00	5,892.14	5,875.42	5,875.15	13.18	12.98	179.92	250.28	232.13	18.15	13.792	0			
6,000.00	5,991.76	5,969.87	5,969.34	13.43	13.18	179.92	266.31	247.90	18.41	14.464	0			
6,100.00	6,091.37	6,066.95	6,066.06	13.68	13.38	179.93	283.60	264.90	18.69	15.170	0			
6,200.00	6,190.99	6,165.43	6,164.16	13.93	13.58	179.93	300.96	281.97	18.99	15.850	0			
6,300.00	6,290.61	6,263.91	6,262.27	14.18	13.79	179.94	318.33	299.04	19.28	16.508	0			
6,400.00	6,390.23	6,362.39	6,360.38	14.44	14.00	179.94	335.69	316.11	19.58	17.146	0			
6,500.00	6,489.85	6,460.87	6,458.48	14.69	14.22	179.94	353.06	333.18	19.88	17.764	0			
6,600.00	6,589.47	6,559.35	6,556.59	14.94	14.43	179.95	370.42	350.25	20.17	18.362	0			
6,700.00	6,689.09	6,657.83	6,654.69	15.20	14.65	179.95	387.79	367.31	20.47	18.943	0			
6,800.00	6,788.71	6,756.31	6,752.80	15.45	14.87	179.95	405.15	384.38	20.77	19.506	0			
6,900.00	6,888.33	6,854.79	6,850.91	15.71	15.09	179.95	422.52	401.44	21.07	20.052	0			
7,000.00	6,987.95	6,953.27	6,949.01	15.96	15.31	179.95	439.88	418.51	21.37	20.582	0			
7,100.00	7,087.57	7,051.75	7,047.12	16.22	15.53	179.96	457.24	435.57	21.67	21.097	0			
7,200.00	7,187.19	7,150.24	7,145.22	16.48	15.76	179.96	474.61	452.63	21.98	21.597	0			
7,300.00	7,286.81	7,248.72	7,243.33	16.74	15.99	179.96	491.97	469.70	22.28	22.082	0			
7,400.00	7,386.43	7,347.20	7,341.44	16.99	16.21	179.96	509.34	486.76	22.58	22.554	0			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Devon Energy

Anticollision Risk Report

Company: WESTERN DIVISION
Project: PBNM
Reference Site: Dzurisin
Site Error: 0.00
Reference Well: Seawolf 1-12 Fed 84H
Well Error: 0.00
Reference Wellbore: Wellbore #1
Reference Design: Plan 1

Local Co-ordinate Reference: Well Seawolf 1-12 Fed 84H
TVD Reference: 1 @ 3340.80ft
MD Reference: 1 @ 3340.80ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM r5000 US Production
Offset TVD Reference: Offset Datum

Offset Design												Dzurisin - Seawolf 1-12 Fed 83H - Wellbore #1 - Plan 1		Offset Site Error: 0.00 ft	
Survey Program: 0-MWD														Offset Well Error: 0.00 ft	
Reference		Offset		Semi Major Axis		Distance						Risked Separation Factor	Probability of Collision	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor					
7,500.00	7,486.05	7,445.68	7,439.54	17.25	16.44	179.96	526.70	503.82	22.89	23.013	0				
7,600.00	7,585.67	7,544.16	7,537.65	17.51	16.67	179.96	544.07	520.88	23.19	23.459	0				
7,700.00	7,685.29	7,642.64	7,635.75	17.77	16.90	179.96	561.43	537.94	23.50	23.893	0				
7,800.00	7,784.91	7,741.12	7,733.86	18.03	17.14	179.96	578.80	554.99	23.80	24.315	0				
7,900.00	7,884.53	7,839.60	7,831.97	18.29	17.37	179.97	596.16	572.05	24.11	24.726	0				
8,000.00	7,984.14	7,938.08	7,930.07	18.55	17.60	179.97	613.53	589.11	24.42	25.125	0				
8,100.00	8,083.76	8,038.69	8,030.31	18.81	17.84	179.97	630.83	606.10	24.73	25.506	0				
8,200.00	8,183.38	8,143.13	8,134.42	19.08	18.06	179.97	647.41	622.36	25.05	25.840	0				
8,300.00	8,283.00	8,247.89	8,238.91	19.34	18.28	179.97	663.10	637.72	25.37	26.135	0				
8,400.00	8,382.62	8,352.94	8,343.77	19.60	18.49	179.97	677.87	652.19	25.69	26.388	0				
8,500.00	8,482.24	8,458.26	8,448.95	19.86	18.71	179.97	691.74	665.74	26.01	26.600	0				
8,600.00	8,581.86	8,563.85	8,554.45	20.13	18.92	179.97	704.70	678.38	26.32	26.774	0				
8,700.00	8,681.48	8,669.69	8,660.22	20.39	19.13	179.97	716.74	690.11	26.64	26.909	0				
8,800.00	8,781.10	8,775.76	8,766.26	20.65	19.34	179.97	727.87	700.92	26.95	27.009	0				
8,900.00	8,880.72	8,882.03	8,872.52	20.92	19.55	179.97	738.07	710.81	27.26	27.073	0				
9,000.00	8,980.34	8,988.50	8,978.99	21.18	19.75	179.97	747.35	719.78	27.57	27.107	0				
9,100.00	9,079.96	9,088.87	9,079.36	21.44	19.95	179.97	756.07	728.19	27.87	27.124	0				
9,200.00	9,179.58	9,188.49	9,178.98	21.71	20.16	179.97	764.78	736.59	28.19	27.130	0				
9,300.00	9,279.20	9,288.11	9,278.60	21.97	20.38	179.97	773.50	744.99	28.51	27.135	0				
9,400.00	9,378.82	9,387.73	9,378.22	22.24	20.60	179.97	782.21	753.39	28.82	27.139	0				
9,500.00	9,478.44	9,487.35	9,477.84	22.50	20.81	179.97	790.93	761.79	29.14	27.143	0				
9,600.00	9,578.06	9,586.97	9,577.46	22.77	21.03	179.97	799.64	770.19	29.46	27.146	0				
9,700.00	9,677.68	9,686.59	9,677.08	23.03	21.25	179.98	808.36	778.59	29.77	27.150	0				
9,800.00	9,777.30	9,786.21	9,776.70	23.30	21.47	179.98	817.08	786.98	30.09	27.153	0				
9,900.00	9,876.91	9,885.83	9,876.31	23.57	21.68	179.98	825.79	795.38	30.41	27.156	0				
10,000.00	9,976.53	9,985.45	9,975.93	23.83	21.90	179.98	834.51	803.78	30.73	27.159	0				
10,100.00	10,076.15	10,085.07	10,075.55	24.10	22.12	179.98	843.22	812.18	31.04	27.162	0				
10,200.00	10,175.77	10,184.69	10,175.17	24.36	22.34	179.98	851.94	820.58	31.36	27.164	0				
10,300.00	10,275.39	10,284.31	10,274.79	24.63	22.56	179.98	860.65	828.97	31.68	27.167	0				
10,400.00	10,375.01	10,383.93	10,374.41	24.90	22.77	179.98	869.37	837.37	32.00	27.169	0				
10,500.00	10,474.63	10,483.55	10,474.03	25.16	22.99	179.98	878.09	845.77	32.32	27.171	0				
10,600.00	10,574.29	10,583.20	10,573.69	25.40	23.21	179.98	886.37	853.74	32.62	27.172	0				
10,700.00	10,674.01	10,682.93	10,673.41	25.61	23.43	179.98	893.78	860.87	32.91	27.158	0				
10,800.00	10,773.80	10,782.71	10,773.20	25.81	23.65	179.98	900.32	867.12	33.20	27.118	0				
10,900.00	10,873.64	10,882.55	10,873.04	26.01	23.87	179.98	905.99	872.50	33.49	27.053	0				
11,000.00	10,973.52	10,982.44	10,972.92	26.21	24.09	179.98	910.78	877.01	33.78	26.963	0				
11,100.00	11,073.44	11,082.36	11,072.84	26.40	24.31	179.98	914.71	880.64	34.07	26.850	0				
11,200.00	11,173.40	11,182.31	11,172.80	26.58	24.53	179.98	917.76	883.41	34.36	26.713	0				
11,300.00	11,273.37	11,282.29	11,272.77	26.76	24.75	179.98	919.95	885.30	34.64	26.554	0				
11,400.00	11,373.36	11,382.28	11,372.76	26.94	24.97	179.98	921.25	886.32	34.93	26.373	0				
11,500.00	11,473.36	11,482.28	11,472.76	27.12	25.19	-90.02	921.69	886.47	35.22	26.168	0				
11,600.00	11,573.36	11,582.28	11,572.76	27.30	25.41	-90.02	921.69	886.17	35.52	25.948	0				
11,700.00	11,673.36	11,682.28	11,672.76	27.50	25.63	-90.02	921.69	885.86	35.83	25.727	0				
11,800.00	11,773.36	11,782.28	11,772.76	27.69	25.85	-90.02	921.69	885.56	36.13	25.509	0				
11,900.00	11,873.36	11,882.28	11,872.76	27.89	26.07	-90.02	921.69	885.25	36.44	25.295	0				
12,000.00	11,973.36	11,982.28	11,972.76	28.09	26.29	-90.02	921.69	884.95	36.74	25.085	0				
12,100.00	12,073.36	12,082.28	12,072.76	28.28	26.51	-90.02	921.69	884.64	37.05	24.878	0				
12,190.20	12,163.56	12,172.55	12,163.03	28.46	26.70	-90.05	921.69	884.37	37.32	24.695	0				
12,200.00	12,173.36	12,182.37	12,172.83	28.48	26.72	90.00	921.69	884.34	37.35	24.678	0				
12,225.00	12,198.33	12,207.38	12,197.75	28.53	26.77	89.94	921.69	884.27	37.41	24.635	0				
12,250.00	12,223.21	12,232.34	12,222.46	28.57	26.81	89.88	921.68	884.21	37.48	24.593	0				
12,275.00	12,247.92	12,257.25	12,246.91	28.62	26.86	89.82	921.68	884.14	37.54	24.551	0				
12,300.00	12,272.40	12,282.10	12,271.03	28.66	26.90	89.75	921.68	884.07	37.60	24.510	0				
12,325.00	12,296.58	12,306.91	12,294.75	28.71	26.94	89.69	921.67	884.01	37.67	24.469	0				

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Devon Energy

Anticollision Risk Report

Company: WESTERN DIVISION
Project: PBNM
Reference Site: Dzurisin
Site Error: 0.00
Reference Well: Seawolf 1-12 Fed 84H
Well Error: 0.00
Reference Wellbore: Wellbore #1
Reference Design: Plan 1

Local Co-ordinate Reference: Well Seawolf 1-12 Fed 84H
TVD Reference: 1 @ 3340.80ft
MD Reference: 1 @ 3340.80ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: EDM r5000 US Production
Offset TVD Reference: Offset Datum

Offset Design Dzurisin - Seawolf 1-12 Fed 83H - Wellbore #1 - Plan 1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Distance		Between		Minimum		Risked Separation Factor	Probability of Collision	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Separation (ft)	Factor				
12,350.00	12,320.40	12,331.66	12,318.01	28.75	26.99	89.63	921.67	883.94	37.73	24.428	0			
12,375.00	12,343.78	12,356.36	12,340.77	28.80	27.03	89.57	921.66	883.87	37.79	24.387	0			
12,400.00	12,366.68	12,381.02	12,362.95	28.84	27.08	89.51	921.66	883.80	37.86	24.346	0			
12,425.00	12,389.01	12,405.63	12,384.50	28.89	27.12	89.46	921.65	883.73	37.92	24.304	0			
12,450.00	12,410.73	12,430.19	12,405.38	28.94	27.16	89.40	921.65	883.66	37.99	24.261	0			
12,475.00	12,431.77	12,454.70	12,425.53	28.99	27.21	89.35	921.64	883.58	38.06	24.217	0			
12,500.00	12,452.08	12,479.18	12,444.90	29.04	27.25	89.30	921.63	883.50	38.13	24.171	0			
12,525.00	12,471.59	12,503.61	12,463.45	29.09	27.30	89.25	921.62	883.42	38.20	24.123	0			
12,550.00	12,490.26	12,528.00	12,481.13	29.14	27.34	89.20	921.61	883.33	38.28	24.073	0			
12,575.00	12,508.04	12,552.35	12,497.91	29.19	27.39	89.15	921.60	883.24	38.37	24.021	0			
12,600.00	12,524.87	12,576.67	12,513.74	29.25	27.44	89.11	921.59	883.14	38.45	23.966	0			
12,625.00	12,540.71	12,600.95	12,528.59	29.31	27.50	89.07	921.58	883.03	38.55	23.907	0			
12,650.00	12,555.52	12,625.00	12,542.33	29.37	27.55	89.03	921.56	882.92	38.65	23.846	0			
12,675.00	12,569.25	12,649.41	12,555.23	29.44	27.62	89.00	921.55	882.80	38.75	23.780	0			
12,700.00	12,581.87	12,673.60	12,566.95	29.51	27.69	88.96	921.53	882.67	38.87	23.711	0			
12,725.00	12,593.35	12,697.77	12,577.58	29.58	27.76	88.93	921.52	882.53	38.98	23.638	0			
12,750.00	12,603.64	12,721.91	12,587.08	29.66	27.84	88.90	921.50	882.39	39.11	23.561	0			
12,775.00	12,612.73	12,746.02	12,595.45	29.75	27.92	88.88	921.48	882.23	39.24	23.480	0			
12,800.00	12,620.59	12,770.12	12,602.65	29.84	28.02	88.86	921.46	882.07	39.39	23.396	0			
12,825.00	12,627.20	12,794.20	12,608.69	29.93	28.11	88.84	921.44	881.90	39.53	23.307	0			
12,850.00	12,632.53	12,818.26	12,613.53	30.04	28.22	88.82	921.41	881.72	39.69	23.215	0			
12,875.00	12,636.58	12,842.31	12,617.19	30.15	28.33	88.81	921.39	881.53	39.85	23.120	0			
12,900.00	12,639.34	12,866.35	12,619.64	30.26	28.44	88.80	921.36	881.34	40.02	23.021	0			
12,925.00	12,640.79	12,890.38	12,620.88	30.38	28.56	88.80	921.34	881.14	40.20	22.919	0			
12,940.45	12,641.03	12,905.31	12,621.05	30.46	28.64	88.79	921.32	881.01	40.31	22.855	0			
12,940.45	12,641.03	12,905.31	12,621.05	30.46	28.64	88.79	921.32	881.01	40.31	22.855	0			
12,945.49	12,641.03	12,910.35	12,621.05	30.48	28.67	88.79	921.31	880.96	40.35	22.832	0			
13,000.00	12,641.00	12,964.86	12,621.02	30.78	28.98	88.79	921.25	880.45	40.79	22.583	0			
13,100.00	12,640.94	13,064.86	12,620.97	31.39	29.61	88.79	921.13	879.42	41.71	22.085	0			
13,200.00	12,640.89	13,164.86	12,620.91	32.10	30.34	88.79	921.01	878.25	42.76	21.540	0			
13,300.00	12,640.84	13,264.86	12,620.86	32.89	31.17	88.79	920.89	876.95	43.93	20.961	0			
13,400.00	12,640.79	13,364.86	12,620.81	33.76	32.07	88.79	920.77	875.54	45.23	20.359	0			
13,500.00	12,640.74	13,464.86	12,620.76	34.71	33.05	88.79	920.65	874.02	46.63	19.745	0			
13,600.00	12,640.68	13,564.86	12,620.70	35.73	34.10	88.79	920.53	872.40	48.12	19.128	0			
13,700.00	12,640.63	13,664.86	12,620.65	36.80	35.22	88.79	920.40	870.69	49.71	18.515	0			
13,800.00	12,640.58	13,764.86	12,620.60	37.94	36.39	88.79	920.28	868.90	51.38	17.911	0			
13,900.00	12,640.53	13,864.86	12,620.55	39.13	37.61	88.79	920.16	867.04	53.12	17.322	0			
14,000.00	12,640.47	13,964.86	12,620.49	40.36	38.88	88.79	920.04	865.12	54.93	16.750	0			
14,100.00	12,640.42	14,064.86	12,620.44	41.64	40.20	88.79	919.92	863.13	56.79	16.197	0			
14,200.00	12,640.37	14,164.86	12,620.39	42.96	41.55	88.79	919.80	861.09	58.72	15.665	0			
14,300.00	12,640.32	14,264.86	12,620.34	44.31	42.94	88.79	919.68	859.00	60.69	15.155	0			
14,400.00	12,640.26	14,364.86	12,620.28	45.70	44.35	88.79	919.56	856.86	62.70	14.666	0			
14,500.00	12,640.21	14,464.86	12,620.23	47.12	45.80	88.79	919.44	854.69	64.76	14.199	0			
14,600.00	12,640.16	14,564.85	12,620.18	48.56	47.28	88.79	919.32	852.48	66.85	13.753	0			
14,700.00	12,640.11	14,664.85	12,620.12	50.03	48.77	88.79	919.20	850.23	68.97	13.327	0			
14,800.00	12,640.05	14,764.85	12,620.07	51.52	50.29	88.79	919.08	847.96	71.13	12.922	0			
14,900.00	12,640.00	14,864.85	12,620.02	53.04	51.83	88.79	918.96	845.65	73.31	12.536	0			
15,000.00	12,639.95	14,964.85	12,619.97	54.57	53.39	88.79	918.84	843.33	75.52	12.168	0			
15,100.00	12,639.90	15,064.85	12,619.91	56.12	54.97	88.79	918.72	840.98	77.75	11.817	0			
15,200.00	12,639.84	15,164.85	12,619.86	57.68	56.55	88.79	918.60	838.60	80.00	11.483	0			
15,300.00	12,639.79	15,264.85	12,619.81	59.26	58.16	88.79	918.48	836.21	82.27	11.164	0			
15,400.00	12,639.74	15,364.85	12,619.76	60.86	59.77	88.79	918.36	833.80	84.56	10.861	0			
15,500.00	12,639.69	15,464.85	12,619.70	62.46	61.40	88.79	918.24	831.38	86.86	10.571	0			
15,600.00	12,639.63	15,564.85	12,619.65	64.08	63.04	88.79	918.12	828.94	89.18	10.295	0			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Devon Energy

Anticollision Risk Report

Company: WESTERN DIVISION
 Project: PBNM
 Reference Site: Dzurisin
 Site Error: 0.00
 Reference Well: Seawolf 1-12 Fed 84H
 Well Error: 0.00
 Reference Wellbore: Wellbore #1
 Reference Design: Plan 1

Local Co-ordinate Reference: Well Seawolf 1-12 Fed 84H
 TVD Reference: 1 @ 3340.80ft
 MD Reference: 1 @ 3340.80ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at: 2.00 sigma
 Database: EDM r5000 US Production
 Offset TVD Reference: Offset Datum

Offset Design Dzurisin - Seawolf 1-12 Fed 83H - Wellbore #1 - Plan 1													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Distance					Risked Separation Factor	Probability of Collision	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor				
15,700.00	12,639.58	15,664.85	12,619.60	65.71	64.69	88.79	918.00	826.48	91.52	10.031	0			
15,800.00	12,639.53	15,764.85	12,619.55	67.35	66.35	88.79	917.88	824.01	93.87	9.779	0			
15,900.00	12,639.48	15,864.85	12,619.49	69.00	68.01	88.79	917.76	821.54	96.22	9.538	0			
16,000.00	12,639.42	15,964.85	12,619.44	70.66	69.69	88.79	917.64	819.04	98.59	9.307	0			
16,100.00	12,639.37	16,064.85	12,619.39	72.32	71.37	88.79	917.52	816.54	100.98	9.087	0			
16,200.00	12,639.32	16,164.85	12,619.34	74.00	73.06	88.79	917.40	814.03	103.37	8.875	0			
16,300.00	12,639.27	16,264.85	12,619.28	75.68	74.75	88.79	917.28	811.51	105.77	8.673	0			
16,400.00	12,639.21	16,364.85	12,619.23	77.36	76.45	88.79	917.16	808.99	108.17	8.479	0			
16,500.00	12,639.16	16,464.85	12,619.18	79.06	78.16	88.79	917.04	806.45	110.59	8.292	0			
16,600.00	12,639.11	16,564.85	12,619.12	80.75	79.87	88.79	916.92	803.91	113.01	8.113	0			
16,700.00	12,639.06	16,664.85	12,619.07	82.46	81.59	88.79	916.80	801.36	115.44	7.942	0			
16,800.00	12,639.01	16,764.85	12,619.02	84.17	83.31	88.79	916.68	798.80	117.88	7.777	0			
16,900.00	12,638.95	16,864.85	12,618.97	85.88	85.04	88.79	916.56	796.24	120.32	7.618	0			
17,000.00	12,638.90	16,964.85	12,618.91	87.60	86.77	88.79	916.44	793.67	122.77	7.465	0			
17,100.00	12,638.85	17,064.85	12,618.86	89.32	88.50	88.79	916.32	791.10	125.22	7.318	0			
17,200.00	12,638.80	17,164.85	12,618.81	91.05	90.24	88.79	916.20	788.52	127.68	7.176	0			
17,300.00	12,638.74	17,264.85	12,618.76	92.78	91.98	88.79	916.08	785.93	130.14	7.039	0			
17,400.00	12,638.69	17,364.85	12,618.70	94.51	93.72	88.79	915.96	783.35	132.61	6.907	0			
17,500.00	12,638.64	17,464.85	12,618.65	96.25	95.47	88.79	915.84	780.75	135.08	6.780	0			
17,600.00	12,638.59	17,564.85	12,618.60	97.99	97.22	88.79	915.72	778.16	137.56	6.657	0			
17,700.00	12,638.53	17,664.85	12,618.55	99.74	98.97	88.79	915.60	775.56	140.04	6.538	0			
17,800.00	12,638.48	17,764.85	12,618.49	101.48	100.73	88.79	915.48	772.95	142.52	6.423	0			
17,900.00	12,638.43	17,864.85	12,618.44	103.23	102.49	88.79	915.36	770.35	145.01	6.312	0			
18,000.00	12,638.38	17,964.85	12,618.39	104.98	104.25	88.79	915.24	767.74	147.50	6.205	0			
18,100.00	12,638.32	18,064.85	12,618.34	106.74	106.01	88.79	915.12	765.12	149.99	6.101	0			
18,200.00	12,638.27	18,164.85	12,618.28	108.49	107.77	88.79	914.99	762.51	152.49	6.000	0			
18,300.00	12,638.22	18,264.85	12,618.23	110.25	109.54	88.79	914.87	759.89	154.99	5.903	0			
18,400.00	12,638.17	18,364.85	12,618.18	112.01	111.31	88.79	914.75	757.27	157.49	5.808	0			
18,500.00	12,638.11	18,464.85	12,618.12	113.78	113.08	88.79	914.63	754.64	159.99	5.717	0			
18,600.00	12,638.06	18,564.85	12,618.07	115.54	114.85	88.79	914.51	752.02	162.50	5.628	0			
18,700.00	12,638.01	18,664.85	12,618.02	117.31	116.63	88.78	914.39	749.39	165.01	5.542	0			
18,800.00	12,637.96	18,764.85	12,617.97	119.08	118.40	88.78	914.27	746.76	167.52	5.458	0			
18,900.00	12,637.90	18,864.85	12,617.91	120.85	120.18	88.78	914.15	744.12	170.03	5.376	0			
19,000.00	12,637.85	18,964.85	12,617.86	122.62	121.96	88.78	914.03	741.49	172.54	5.297	0			
19,100.00	12,637.80	19,064.85	12,617.81	124.39	123.74	88.78	913.91	738.85	175.06	5.221	0			
19,200.00	12,637.75	19,164.85	12,617.76	126.17	125.52	88.78	913.79	736.21	177.58	5.146	0			
19,300.00	12,637.69	19,264.85	12,617.70	127.94	127.30	88.78	913.67	733.57	180.10	5.073	0			
19,400.00	12,637.64	19,364.85	12,617.65	129.72	129.08	88.78	913.55	730.93	182.62	5.002	0			
19,500.00	12,637.59	19,464.85	12,617.60	131.50	130.87	88.78	913.43	728.28	185.15	4.934	0			
19,600.00	12,637.54	19,564.85	12,617.55	133.28	132.65	88.78	913.31	725.64	187.67	4.867	0			
19,700.00	12,637.48	19,664.85	12,617.49	135.06	134.44	88.78	913.19	722.99	190.20	4.801	0			
19,800.00	12,637.43	19,764.85	12,617.44	136.85	136.23	88.78	913.07	720.34	192.73	4.738	0			
19,900.00	12,637.38	19,864.85	12,617.39	138.63	138.02	88.78	912.95	717.69	195.26	4.676	0			
20,000.00	12,637.33	19,964.85	12,617.34	140.41	139.81	88.78	912.83	715.04	197.79	4.615	0			
20,100.00	12,637.28	20,064.85	12,617.28	142.20	141.60	88.78	912.71	712.39	200.32	4.556	0			
20,200.00	12,637.22	20,164.85	12,617.23	143.99	143.39	88.78	912.59	709.74	202.86	4.499	0			
20,300.00	12,637.17	20,264.85	12,617.18	145.77	145.18	88.78	912.47	707.08	205.39	4.443	0			
20,400.00	12,637.12	20,364.85	12,617.12	147.56	146.97	88.78	912.35	704.42	207.93	4.388	0			
20,500.00	12,637.07	20,464.85	12,617.07	149.35	148.77	88.78	912.23	701.77	210.46	4.334	0			
20,600.00	12,637.01	20,564.85	12,617.02	151.14	150.56	88.78	912.11	699.11	213.00	4.282	0			
20,700.00	12,636.96	20,664.85	12,616.97	152.94	152.36	88.78	911.99	696.45	215.54	4.231	0			
20,800.00	12,636.91	20,764.85	12,616.91	154.73	154.15	88.78	911.87	693.79	218.08	4.181	0			
20,900.00	12,636.86	20,864.85	12,616.86	156.52	155.95	88.78	911.75	691.13	220.62	4.133	0			
21,000.00	12,636.80	20,964.85	12,616.81	158.31	157.75	88.78	911.63	688.47	223.16	4.085	0			

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Devon Energy

Anticollision Risk Report

Company: WESTERN DIVISION
 Project: PBNM
 Reference Site: Dzurisin
 Site Error: 0.00
 Reference Well: Seawolf 1-12 Fed 84H
 Well Error: 0.00
 Reference Wellbore: Wellbore #1
 Reference Design: Plan 1

Local Co-ordinate Reference: Well Seawolf 1-12 Fed 84H
 TVD Reference: 1 @ 3340.80ft
 MD Reference: 1 @ 3340.80ft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Output errors are at 2.00 sigma
 Database: EDM r5000 US Production
 Offset TVD Reference: Offset Datum

Offset Design Dzurisin - Seawolf 1-12 Fed 83H - Wellbore #1 - Plan 1													Offset Site Error: 0.00 ft
Survey Program: 0-MWD													Offset Well Error: 0.00 ft
Reference		Offset		Semi Major Axis		Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Risked Separation Factor	Probability of Collision	
21,100.00	12,636.75	21,064.85	12,616.76	160.11	159.55	88.78	911.51	685.80	225.71	4.038	0		
21,200.00	12,636.70	21,164.85	12,616.70	161.90	161.35	88.78	911.39	683.14	228.25	3.993	0		
21,300.00	12,636.65	21,264.85	12,616.65	163.70	163.15	88.78	911.27	680.47	230.79	3.948	0		
21,400.00	12,636.59	21,364.85	12,616.60	165.50	164.95	88.78	911.15	677.81	233.34	3.905	0		
21,500.00	12,636.54	21,464.85	12,616.55	167.29	166.75	88.78	911.03	675.14	235.89	3.862	0		
21,600.00	12,636.49	21,564.85	12,616.49	169.09	168.55	88.78	910.91	672.47	238.43	3.820	0		
21,700.00	12,636.44	21,664.85	12,616.44	170.89	170.35	88.78	910.79	669.81	240.98	3.779	0		
21,800.00	12,636.38	21,764.85	12,616.39	172.69	172.15	88.78	910.67	667.14	243.53	3.739	0		
21,900.00	12,636.33	21,864.85	12,616.33	174.49	173.95	88.78	910.55	664.47	246.08	3.700	0		
22,000.00	12,636.28	21,964.85	12,616.28	176.29	175.76	88.78	910.43	661.80	248.63	3.662	0		
22,100.00	12,636.23	22,064.85	12,616.23	178.09	177.56	88.78	910.31	659.13	251.18	3.624	0		
22,200.00	12,636.17	22,164.85	12,616.18	179.89	179.37	88.78	910.19	656.46	253.73	3.587	0		
22,300.00	12,636.12	22,264.85	12,616.12	181.69	181.17	88.78	910.07	653.78	256.28	3.551	0		
22,400.00	12,636.07	22,364.85	12,616.07	183.49	182.97	88.78	909.95	651.11	258.83	3.516	0		
22,483.79	12,636.03	22,448.64	12,616.03	185.00	184.49	88.78	909.84	648.87	260.97	3.486	0		
22,500.00	12,636.02	22,464.84	12,616.02	185.28	184.78	88.78	909.83	648.45	261.37	3.481	0		
22,532.23	12,636.00	22,497.02	12,616.00	185.80	185.33	88.78	909.79	647.66	262.13	3.471	0	SF	

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Devon Energy
Anticollision Risk Report

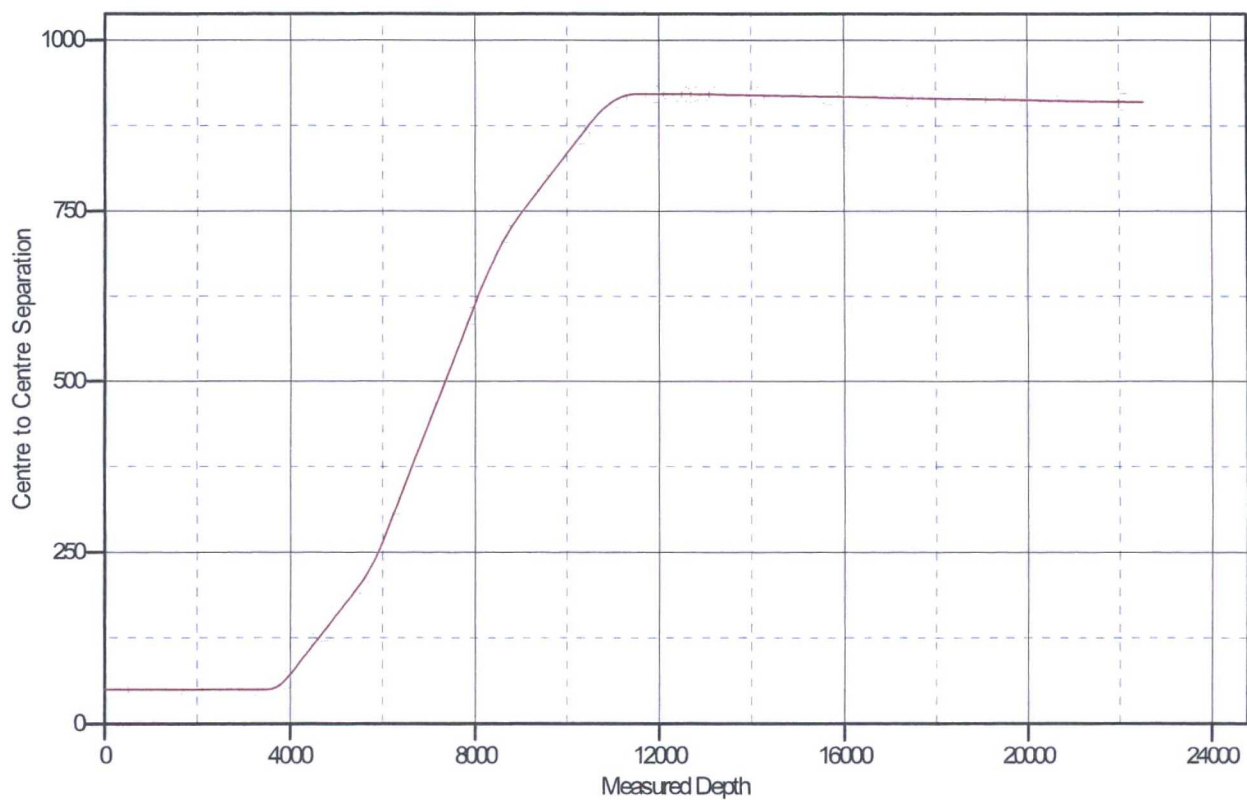
Company: WESTERN DIVISION
Project: PBNM
Reference Site: Dzurisin
Site Error: 0.00
Reference Well: Seawolf 1-12 Fed 84H
Well Error: 0.00
Reference Wellbore: Wellbore #1
Reference Design: Plan 1

Local Co-ordinate Reference: Well Seawolf 1-12 Fed 84H
TVD Reference: 1 @ 3340.80ft
MD Reference: 1 @ 3340.80ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM r5000 US Production
Offset TVD Reference: Offset Datum

Reference Depths are relative to 1 @ 3340.80ft
Offset Depths are relative to Offset Datum
Central Meridian is -104.333334 °

Coordinates are relative to: Seawolf 1-12 Fed 84H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.43°

Ladder Plot



LEGEND

Seawolf 1-12 Fed 83H, Wellbore #1, Plan 1 V0

Devon Energy
Anticollision Risk Report

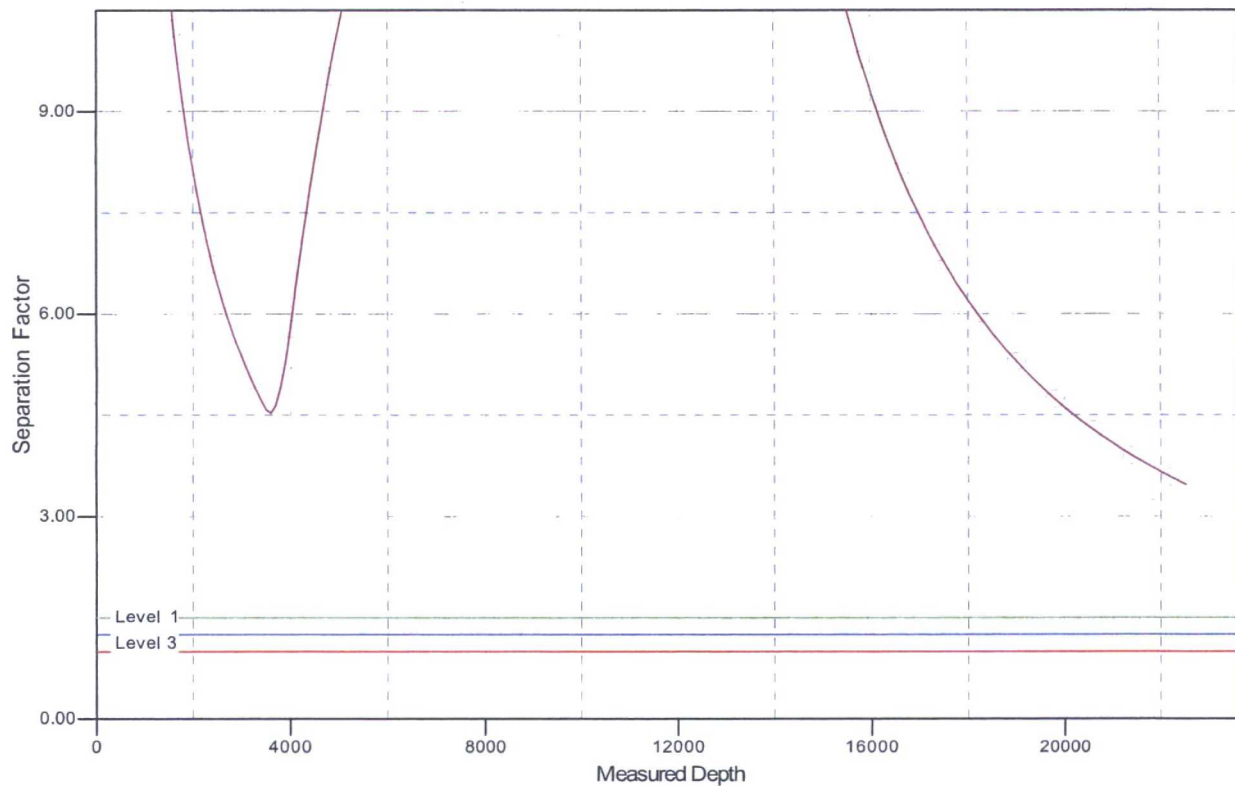
Company: WESTERN DIVISION
Project: PBNM
Reference Site: Dzurisin
Site Error: 0.00
Reference Well: Seawolf 1-12 Fed 84H
Well Error: 0.00
Reference Wellbore: Wellbore #1
Reference Design: Plan 1

Local Co-ordinate Reference: Well Seawolf 1-12 Fed 84H
TVD Reference: 1 @ 3340.80ft
MD Reference: 1 @ 3340.80ft
North Reference: Grid
Survey Calculation Method: Minimum Curvature
Output errors are at: 2.00 sigma
Database: EDM r5000 US Production
Offset TVD Reference: Offset Datum

Reference Depths are relative to 1 @ 3340.80ft
Offset Depths are relative to Offset Datum
Central Meridian is -104.333334 °

Coordinates are relative to: Seawolf 1-12 Fed 84H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.43°

Separation Factor Plot



LEGEND

Seawolf 1-12 Fed 83H, Wellbore #1, Plan 1 V0