

HOBBS OCD
APR 26 2017
RECEIVED

WESTERN DIVISION

PBNM

Dzurisin

Seawolf 1-12 Fed 84H

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 84H
 Wellbore: Wellbore #1
 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

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 84H					
Well Position	+N/-S	-36,402.21 ft	Northing:	393,520.13 usft	Latitude:	32.079297
	+E/-W	65,863.25 ft	Easting:	791,254.53 usft	Longitude:	-103.526435
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	3,317.30 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	176.33	

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	
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,000.00	5.00	90.00	3,999.37	0.00	21.80	1.00	1.00	0.00	90.00	
10,500.00	5.00	90.00	10,474.63	0.00	588.32	0.00	0.00	0.00	0.00	
11,500.00	0.00	0.00	11,473.36	0.00	631.92	0.50	-0.50	0.00	180.00	
12,190.20	0.00	0.00	12,163.56	0.00	631.92	0.00	0.00	0.00	0.00	
12,940.45	90.03	179.92	12,641.03	-477.72	632.55	12.00	12.00	0.00	179.92	Seawolf 1-12 Fed 84H
12,940.45	90.03	179.92	12,641.03	-477.72	632.55	0.01	0.00	0.00	0.00	
22,483.79	90.03	179.92	12,636.03	-10,021.04	645.07	0.00	0.00	0.00	0.00	
22,532.23	90.03	179.92	12,636.00	-10,069.48	645.13	0.01	0.00	-0.01	-90.42	Seawolf 1-12 Fed 84H

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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	1.00	90.00	3,600.00	0.00	0.87	0.06	1.00	1.00	0.00
3,700.00	2.00	90.00	3,699.96	0.00	3.49	0.22	1.00	1.00	0.00
3,800.00	3.00	90.00	3,799.86	0.00	7.85	0.50	1.00	1.00	0.00
3,900.00	4.00	90.00	3,899.68	0.00	13.96	0.89	1.00	1.00	0.00
4,000.00	5.00	90.00	3,999.37	0.00	21.80	1.39	1.00	1.00	0.00
4,100.00	5.00	90.00	4,098.99	0.00	30.52	1.95	0.00	0.00	0.00
4,200.00	5.00	90.00	4,198.60	0.00	39.23	2.51	0.00	0.00	0.00
4,300.00	5.00	90.00	4,298.22	0.00	47.95	3.07	0.00	0.00	0.00
4,400.00	5.00	90.00	4,397.84	0.00	56.67	3.62	0.00	0.00	0.00
4,500.00	5.00	90.00	4,497.46	0.00	65.38	4.18	0.00	0.00	0.00
4,600.00	5.00	90.00	4,597.08	0.00	74.10	4.74	0.00	0.00	0.00
4,700.00	5.00	90.00	4,696.70	0.00	82.81	5.29	0.00	0.00	0.00
4,800.00	5.00	90.00	4,796.32	0.00	91.53	5.85	0.00	0.00	0.00
4,900.00	5.00	90.00	4,895.94	0.00	100.24	6.41	0.00	0.00	0.00
5,000.00	5.00	90.00	4,995.56	0.00	108.96	6.97	0.00	0.00	0.00
5,100.00	5.00	90.00	5,095.18	0.00	117.67	7.52	0.00	0.00	0.00
5,200.00	5.00	90.00	5,194.80	0.00	126.39	8.08	0.00	0.00	0.00
5,300.00	5.00	90.00	5,294.42	0.00	135.11	8.64	0.00	0.00	0.00

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5,400.00	5.00	90.00	5,394.04	0.00	143.82	9.20	0.00	0.00	0.00
5,500.00	5.00	90.00	5,493.66	0.00	152.54	9.75	0.00	0.00	0.00
5,600.00	5.00	90.00	5,593.28	0.00	161.25	10.31	0.00	0.00	0.00
5,700.00	5.00	90.00	5,692.90	0.00	169.97	10.87	0.00	0.00	0.00
5,800.00	5.00	90.00	5,792.52	0.00	178.68	11.42	0.00	0.00	0.00
5,900.00	5.00	90.00	5,892.14	0.00	187.40	11.98	0.00	0.00	0.00
6,000.00	5.00	90.00	5,991.76	0.00	196.11	12.54	0.00	0.00	0.00
6,100.00	5.00	90.00	6,091.37	0.00	204.83	13.10	0.00	0.00	0.00
6,200.00	5.00	90.00	6,190.99	0.00	213.55	13.65	0.00	0.00	0.00
6,300.00	5.00	90.00	6,290.61	0.00	222.26	14.21	0.00	0.00	0.00
6,400.00	5.00	90.00	6,390.23	0.00	230.98	14.77	0.00	0.00	0.00
6,500.00	5.00	90.00	6,489.85	0.00	239.69	15.33	0.00	0.00	0.00
6,600.00	5.00	90.00	6,589.47	0.00	248.41	15.88	0.00	0.00	0.00
6,700.00	5.00	90.00	6,689.09	0.00	257.12	16.44	0.00	0.00	0.00
6,800.00	5.00	90.00	6,788.71	0.00	265.84	17.00	0.00	0.00	0.00
6,900.00	5.00	90.00	6,888.33	0.00	274.55	17.55	0.00	0.00	0.00
7,000.00	5.00	90.00	6,987.95	0.00	283.27	18.11	0.00	0.00	0.00
7,100.00	5.00	90.00	7,087.57	0.00	291.99	18.67	0.00	0.00	0.00
7,200.00	5.00	90.00	7,187.19	0.00	300.70	19.23	0.00	0.00	0.00
7,300.00	5.00	90.00	7,286.81	0.00	309.42	19.78	0.00	0.00	0.00
7,400.00	5.00	90.00	7,386.43	0.00	318.13	20.34	0.00	0.00	0.00
7,500.00	5.00	90.00	7,486.05	0.00	326.85	20.90	0.00	0.00	0.00
7,600.00	5.00	90.00	7,585.67	0.00	335.56	21.45	0.00	0.00	0.00
7,700.00	5.00	90.00	7,685.29	0.00	344.28	22.01	0.00	0.00	0.00
7,800.00	5.00	90.00	7,784.91	0.00	352.99	22.57	0.00	0.00	0.00
7,900.00	5.00	90.00	7,884.53	0.00	361.71	23.13	0.00	0.00	0.00
8,000.00	5.00	90.00	7,984.14	0.00	370.43	23.68	0.00	0.00	0.00
8,100.00	5.00	90.00	8,083.76	0.00	379.14	24.24	0.00	0.00	0.00
8,200.00	5.00	90.00	8,183.38	0.00	387.86	24.80	0.00	0.00	0.00
8,300.00	5.00	90.00	8,283.00	0.00	396.57	25.36	0.00	0.00	0.00
8,400.00	5.00	90.00	8,382.62	0.00	405.29	25.91	0.00	0.00	0.00
8,500.00	5.00	90.00	8,482.24	0.00	414.00	26.47	0.00	0.00	0.00
8,600.00	5.00	90.00	8,581.86	0.00	422.72	27.03	0.00	0.00	0.00
8,700.00	5.00	90.00	8,681.48	0.00	431.43	27.58	0.00	0.00	0.00
8,800.00	5.00	90.00	8,781.10	0.00	440.15	28.14	0.00	0.00	0.00
8,900.00	5.00	90.00	8,880.72	0.00	448.87	28.70	0.00	0.00	0.00
9,000.00	5.00	90.00	8,980.34	0.00	457.58	29.26	0.00	0.00	0.00
9,100.00	5.00	90.00	9,079.96	0.00	466.30	29.81	0.00	0.00	0.00
9,200.00	5.00	90.00	9,179.58	0.00	475.01	30.37	0.00	0.00	0.00
9,300.00	5.00	90.00	9,279.20	0.00	483.73	30.93	0.00	0.00	0.00
9,400.00	5.00	90.00	9,378.82	0.00	492.44	31.49	0.00	0.00	0.00
9,500.00	5.00	90.00	9,478.44	0.00	501.16	32.04	0.00	0.00	0.00
9,600.00	5.00	90.00	9,578.06	0.00	509.87	32.60	0.00	0.00	0.00
9,700.00	5.00	90.00	9,677.68	0.00	518.59	33.16	0.00	0.00	0.00
9,800.00	5.00	90.00	9,777.30	0.00	527.31	33.71	0.00	0.00	0.00
9,900.00	5.00	90.00	9,876.91	0.00	536.02	34.27	0.00	0.00	0.00
10,000.00	5.00	90.00	9,976.53	0.00	544.74	34.83	0.00	0.00	0.00
10,100.00	5.00	90.00	10,076.15	0.00	553.45	35.39	0.00	0.00	0.00
10,200.00	5.00	90.00	10,175.77	0.00	562.17	35.94	0.00	0.00	0.00
10,300.00	5.00	90.00	10,275.39	0.00	570.88	36.50	0.00	0.00	0.00
10,400.00	5.00	90.00	10,375.01	0.00	579.60	37.06	0.00	0.00	0.00
10,500.00	5.00	90.00	10,474.63	0.00	588.32	37.62	0.00	0.00	0.00
10,600.00	4.50	90.00	10,574.29	0.00	596.60	38.14	0.50	-0.50	0.00
10,700.00	4.00	90.00	10,674.01	0.00	604.01	38.62	0.50	-0.50	0.00

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10,800.00	3.50	90.00	10,773.80	0.00	610.55	39.04	0.50	-0.50	0.00
10,900.00	3.00	90.00	10,873.64	0.00	616.22	39.40	0.50	-0.50	0.00
11,000.00	2.50	90.00	10,973.52	0.00	621.01	39.71	0.50	-0.50	0.00
11,100.00	2.00	90.00	11,073.44	0.00	624.94	39.96	0.50	-0.50	0.00
11,200.00	1.50	90.00	11,173.40	0.00	627.99	40.15	0.50	-0.50	0.00
11,300.00	1.00	90.00	11,273.37	0.00	630.18	40.29	0.50	-0.50	0.00
11,400.00	0.50	90.00	11,373.36	0.00	631.48	40.38	0.50	-0.50	0.00
11,500.00	0.00	0.00	11,473.36	0.00	631.92	40.40	0.50	-0.50	0.00
11,600.00	0.00	0.00	11,573.36	0.00	631.92	40.40	0.00	0.00	0.00
11,700.00	0.00	0.00	11,673.36	0.00	631.92	40.40	0.00	0.00	0.00
11,800.00	0.00	0.00	11,773.36	0.00	631.92	40.40	0.00	0.00	0.00
11,900.00	0.00	0.00	11,873.36	0.00	631.92	40.40	0.00	0.00	0.00
12,000.00	0.00	0.00	11,973.36	0.00	631.92	40.40	0.00	0.00	0.00
12,100.00	0.00	0.00	12,073.36	0.00	631.92	40.40	0.00	0.00	0.00
12,190.20	0.00	0.00	12,163.56	0.00	631.92	40.40	0.00	0.00	0.00
12,200.00	1.18	179.92	12,173.36	-0.10	631.92	40.50	12.00	12.00	0.00
12,225.00	4.18	179.92	12,198.33	-1.27	631.92	41.67	12.00	12.00	0.00
12,250.00	7.18	179.92	12,223.21	-3.74	631.93	44.14	12.00	12.00	0.00
12,275.00	10.18	179.92	12,247.92	-7.51	631.93	47.90	12.00	12.00	0.00
12,300.00	13.18	179.92	12,272.40	-12.57	631.94	52.95	12.00	12.00	0.00
12,325.00	16.18	179.92	12,296.58	-18.90	631.95	59.27	12.00	12.00	0.00
12,350.00	19.18	179.92	12,320.40	-26.49	631.96	66.84	12.00	12.00	0.00
12,375.00	22.18	179.92	12,343.78	-35.32	631.97	75.65	12.00	12.00	0.00
12,400.00	25.18	179.92	12,366.68	-45.36	631.98	85.67	12.00	12.00	0.00
12,425.00	28.18	179.92	12,389.01	-56.58	631.99	96.87	12.00	12.00	0.00
12,450.00	31.18	179.92	12,410.73	-68.95	632.01	109.22	12.00	12.00	0.00
12,475.00	34.18	179.92	12,431.77	-82.45	632.03	122.69	12.00	12.00	0.00
12,500.00	37.18	179.92	12,452.08	-97.03	632.05	137.24	12.00	12.00	0.00
12,525.00	40.18	179.92	12,471.59	-112.65	632.07	152.83	12.00	12.00	0.00
12,550.00	43.18	179.92	12,490.26	-129.27	632.09	169.42	12.00	12.00	0.00
12,575.00	46.18	179.92	12,508.04	-146.85	632.11	186.96	12.00	12.00	0.00
12,600.00	49.18	179.92	12,524.87	-165.33	632.14	205.41	12.00	12.00	0.00
12,625.00	52.18	179.92	12,540.71	-184.66	632.16	224.71	12.00	12.00	0.00
12,650.00	55.18	179.92	12,555.52	-204.80	632.19	244.81	12.00	12.00	0.00
12,675.00	58.18	179.92	12,569.25	-225.69	632.22	265.65	12.00	12.00	0.00
12,700.00	61.18	179.92	12,581.87	-247.27	632.25	287.19	12.00	12.00	0.00
12,725.00	64.18	179.92	12,593.35	-269.48	632.27	309.35	12.00	12.00	0.00
12,750.00	67.18	179.92	12,603.64	-292.25	632.30	332.08	12.00	12.00	0.00
12,775.00	70.18	179.92	12,612.73	-315.54	632.33	355.32	12.00	12.00	0.00
12,800.00	73.18	179.92	12,620.59	-339.27	632.37	379.01	12.00	12.00	0.00
12,825.00	76.18	179.92	12,627.20	-363.38	632.40	403.07	12.00	12.00	0.00
12,850.00	79.18	179.92	12,632.53	-387.80	632.43	427.44	12.00	12.00	0.00
12,875.00	82.18	179.92	12,636.58	-412.47	632.46	452.06	12.00	12.00	0.00
12,900.00	85.18	179.92	12,639.34	-437.31	632.49	476.86	12.00	12.00	0.00
12,925.00	88.18	179.92	12,640.79	-462.27	632.53	501.76	12.00	12.00	0.00
12,940.45	90.03	179.92	12,641.03	-477.72	632.55	517.18	12.00	12.00	0.00
13,000.00	90.03	179.92	12,641.00	-537.26	632.63	576.61	0.00	0.00	0.00
13,100.00	90.03	179.92	12,640.94	-637.26	632.76	676.42	0.00	0.00	0.00
13,200.00	90.03	179.92	12,640.89	-737.26	632.89	776.22	0.00	0.00	0.00
13,300.00	90.03	179.92	12,640.84	-837.26	633.02	876.02	0.00	0.00	0.00
13,400.00	90.03	179.92	12,640.79	-937.26	633.15	975.83	0.00	0.00	0.00
13,500.00	90.03	179.92	12,640.74	-1,037.26	633.28	1,075.63	0.00	0.00	0.00
13,600.00	90.03	179.92	12,640.68	-1,137.26	633.41	1,175.43	0.00	0.00	0.00
13,700.00	90.03	179.92	12,640.63	-1,237.26	633.54	1,275.24	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 84H
 Wellbore #: Wellbore #1
 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

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)
13,800.00	90.03	179.92	12,640.58	-1,337.26	633.67	1,375.04	0.00	0.00	0.00
13,900.00	90.03	179.92	12,640.53	-1,437.26	633.81	1,474.84	0.00	0.00	0.00
14,000.00	90.03	179.92	12,640.47	-1,537.26	633.94	1,574.65	0.00	0.00	0.00
14,100.00	90.03	179.92	12,640.42	-1,637.26	634.07	1,674.45	0.00	0.00	0.00
14,200.00	90.03	179.92	12,640.37	-1,737.26	634.20	1,774.26	0.00	0.00	0.00
14,300.00	90.03	179.92	12,640.32	-1,837.26	634.33	1,874.06	0.00	0.00	0.00
14,400.00	90.03	179.92	12,640.26	-1,937.26	634.46	1,973.86	0.00	0.00	0.00
14,500.00	90.03	179.92	12,640.21	-2,037.26	634.59	2,073.67	0.00	0.00	0.00
14,600.00	90.03	179.92	12,640.16	-2,137.26	634.72	2,173.47	0.00	0.00	0.00
14,700.00	90.03	179.92	12,640.11	-2,237.26	634.86	2,273.27	0.00	0.00	0.00
14,800.00	90.03	179.92	12,640.05	-2,337.26	634.99	2,373.08	0.00	0.00	0.00
14,900.00	90.03	179.92	12,640.00	-2,437.26	635.12	2,472.88	0.00	0.00	0.00
15,000.00	90.03	179.92	12,639.95	-2,537.26	635.25	2,572.69	0.00	0.00	0.00
15,100.00	90.03	179.92	12,639.90	-2,637.26	635.38	2,672.49	0.00	0.00	0.00
15,200.00	90.03	179.92	12,639.84	-2,737.26	635.51	2,772.29	0.00	0.00	0.00
15,300.00	90.03	179.92	12,639.79	-2,837.26	635.64	2,872.10	0.00	0.00	0.00
15,400.00	90.03	179.92	12,639.74	-2,937.26	635.77	2,971.90	0.00	0.00	0.00
15,500.00	90.03	179.92	12,639.69	-3,037.26	635.90	3,071.70	0.00	0.00	0.00
15,600.00	90.03	179.92	12,639.63	-3,137.26	636.04	3,171.51	0.00	0.00	0.00
15,700.00	90.03	179.92	12,639.58	-3,237.26	636.17	3,271.31	0.00	0.00	0.00
15,800.00	90.03	179.92	12,639.53	-3,337.26	636.30	3,371.11	0.00	0.00	0.00
15,900.00	90.03	179.92	12,639.48	-3,437.26	636.43	3,470.92	0.00	0.00	0.00
16,000.00	90.03	179.92	12,639.42	-3,537.26	636.56	3,570.72	0.00	0.00	0.00
16,100.00	90.03	179.92	12,639.37	-3,637.26	636.69	3,670.53	0.00	0.00	0.00
16,200.00	90.03	179.92	12,639.32	-3,737.26	636.82	3,770.33	0.00	0.00	0.00
16,300.00	90.03	179.92	12,639.27	-3,837.26	636.95	3,870.13	0.00	0.00	0.00
16,400.00	90.03	179.92	12,639.21	-3,937.26	637.09	3,969.94	0.00	0.00	0.00
16,500.00	90.03	179.92	12,639.16	-4,037.26	637.22	4,069.74	0.00	0.00	0.00
16,600.00	90.03	179.92	12,639.11	-4,137.26	637.35	4,169.54	0.00	0.00	0.00
16,700.00	90.03	179.92	12,639.06	-4,237.26	637.48	4,269.35	0.00	0.00	0.00
16,800.00	90.03	179.92	12,639.01	-4,337.26	637.61	4,369.15	0.00	0.00	0.00
16,900.00	90.03	179.92	12,638.95	-4,437.26	637.74	4,468.96	0.00	0.00	0.00
17,000.00	90.03	179.92	12,638.90	-4,537.26	637.87	4,568.76	0.00	0.00	0.00
17,100.00	90.03	179.92	12,638.85	-4,637.26	638.00	4,668.56	0.00	0.00	0.00
17,200.00	90.03	179.92	12,638.80	-4,737.26	638.13	4,768.37	0.00	0.00	0.00
17,300.00	90.03	179.92	12,638.74	-4,837.26	638.27	4,868.17	0.00	0.00	0.00
17,400.00	90.03	179.92	12,638.69	-4,937.26	638.40	4,967.97	0.00	0.00	0.00
17,500.00	90.03	179.92	12,638.64	-5,037.26	638.53	5,067.78	0.00	0.00	0.00
17,600.00	90.03	179.92	12,638.59	-5,137.26	638.66	5,167.58	0.00	0.00	0.00
17,700.00	90.03	179.92	12,638.53	-5,237.26	638.79	5,267.38	0.00	0.00	0.00
17,800.00	90.03	179.92	12,638.48	-5,337.26	638.92	5,367.19	0.00	0.00	0.00
17,900.00	90.03	179.92	12,638.43	-5,437.26	639.05	5,466.99	0.00	0.00	0.00
18,000.00	90.03	179.92	12,638.38	-5,537.26	639.18	5,566.80	0.00	0.00	0.00
18,100.00	90.03	179.92	12,638.32	-5,637.26	639.32	5,666.60	0.00	0.00	0.00
18,200.00	90.03	179.92	12,638.27	-5,737.26	639.45	5,766.40	0.00	0.00	0.00
18,300.00	90.03	179.92	12,638.22	-5,837.26	639.58	5,866.21	0.00	0.00	0.00
18,400.00	90.03	179.92	12,638.17	-5,937.26	639.71	5,966.01	0.00	0.00	0.00
18,500.00	90.03	179.92	12,638.11	-6,037.26	639.84	6,065.81	0.00	0.00	0.00
18,600.00	90.03	179.92	12,638.06	-6,137.26	639.97	6,165.62	0.00	0.00	0.00
18,700.00	90.03	179.92	12,638.01	-6,237.26	640.10	6,265.42	0.00	0.00	0.00
18,800.00	90.03	179.92	12,637.96	-6,337.26	640.23	6,365.23	0.00	0.00	0.00
18,900.00	90.03	179.92	12,637.90	-6,437.26	640.36	6,465.03	0.00	0.00	0.00
19,000.00	90.03	179.92	12,637.85	-6,537.26	640.50	6,564.83	0.00	0.00	0.00
19,100.00	90.03	179.92	12,637.80	-6,637.26	640.63	6,664.64	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 84H
Wellbore: Wellbore #1
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

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)
19,200.00	90.03	179.92	12,637.75	-6,737.26	640.76	6,764.44	0.00	0.00	0.00
19,300.00	90.03	179.92	12,637.69	-6,837.26	640.89	6,864.24	0.00	0.00	0.00
19,400.00	90.03	179.92	12,637.64	-6,937.26	641.02	6,964.05	0.00	0.00	0.00
19,500.00	90.03	179.92	12,637.59	-7,037.26	641.15	7,063.85	0.00	0.00	0.00
19,600.00	90.03	179.92	12,637.54	-7,137.26	641.28	7,163.65	0.00	0.00	0.00
19,700.00	90.03	179.92	12,637.48	-7,237.26	641.41	7,263.46	0.00	0.00	0.00
19,800.00	90.03	179.92	12,637.43	-7,337.26	641.55	7,363.26	0.00	0.00	0.00
19,900.00	90.03	179.92	12,637.38	-7,437.26	641.68	7,463.07	0.00	0.00	0.00
20,000.00	90.03	179.92	12,637.33	-7,537.26	641.81	7,562.87	0.00	0.00	0.00
20,100.00	90.03	179.92	12,637.28	-7,637.26	641.94	7,662.67	0.00	0.00	0.00
20,200.00	90.03	179.92	12,637.22	-7,737.26	642.07	7,762.48	0.00	0.00	0.00
20,300.00	90.03	179.92	12,637.17	-7,837.26	642.20	7,862.28	0.00	0.00	0.00
20,400.00	90.03	179.92	12,637.12	-7,937.26	642.33	7,962.08	0.00	0.00	0.00
20,500.00	90.03	179.92	12,637.07	-8,037.26	642.46	8,061.89	0.00	0.00	0.00
20,600.00	90.03	179.92	12,637.01	-8,137.26	642.59	8,161.69	0.00	0.00	0.00
20,700.00	90.03	179.92	12,636.96	-8,237.26	642.73	8,261.50	0.00	0.00	0.00
20,800.00	90.03	179.92	12,636.91	-8,337.26	642.86	8,361.30	0.00	0.00	0.00
20,900.00	90.03	179.92	12,636.86	-8,437.26	642.99	8,461.10	0.00	0.00	0.00
21,000.00	90.03	179.92	12,636.80	-8,537.26	643.12	8,560.91	0.00	0.00	0.00
21,100.00	90.03	179.92	12,636.75	-8,637.25	643.25	8,660.71	0.00	0.00	0.00
21,200.00	90.03	179.92	12,636.70	-8,737.25	643.38	8,760.51	0.00	0.00	0.00
21,300.00	90.03	179.92	12,636.65	-8,837.25	643.51	8,860.32	0.00	0.00	0.00
21,400.00	90.03	179.92	12,636.59	-8,937.25	643.64	8,960.12	0.00	0.00	0.00
21,500.00	90.03	179.92	12,636.54	-9,037.25	643.78	9,059.92	0.00	0.00	0.00
21,600.00	90.03	179.92	12,636.49	-9,137.25	643.91	9,159.73	0.00	0.00	0.00
21,700.00	90.03	179.92	12,636.44	-9,237.25	644.04	9,259.53	0.00	0.00	0.00
21,800.00	90.03	179.92	12,636.38	-9,337.25	644.17	9,359.34	0.00	0.00	0.00
21,900.00	90.03	179.92	12,636.33	-9,437.25	644.30	9,459.14	0.00	0.00	0.00
22,000.00	90.03	179.92	12,636.28	-9,537.25	644.43	9,558.94	0.00	0.00	0.00
22,100.00	90.03	179.92	12,636.23	-9,637.25	644.56	9,658.75	0.00	0.00	0.00
22,200.00	90.03	179.92	12,636.17	-9,737.25	644.69	9,758.55	0.00	0.00	0.00
22,300.00	90.03	179.92	12,636.12	-9,837.25	644.82	9,858.35	0.00	0.00	0.00
22,400.00	90.03	179.92	12,636.07	-9,937.25	644.96	9,958.16	0.00	0.00	0.00
22,483.79	90.03	179.92	12,636.03	-10,021.04	645.07	10,041.78	0.00	0.00	0.00
22,500.00	90.03	179.92	12,636.02	-10,037.25	645.09	10,057.96	0.01	0.00	-0.01
22,532.23	90.03	179.92	12,636.00	-10,069.48	645.13	10,090.13	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
Seawolf 1-12 Fed 84H B	0.00	0.00	12,636.00	-10,069.48	645.13	383,450.67	791,899.66	32.051606	-103.524596
- hit/miss target									
- Shape									
- plan hits target center									
- Point									

A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested.

Devon proposes using a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 3000 (3M) psi.

- Wellhead will be installed by wellhead representatives.
- If the welding is performed by a third party, the wellhead representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
- Wellhead representative will install the test plug for the initial BOP test.
- Wellhead company will install a solid steel body pack-off to completely isolate the lower head after cementing intermediate casing. After installation of the pack-off, the pack-off and the lower flange will be tested to 3M, as shown on the attached schematic. Everything above the pack-off will not have been altered whatsoever from the initial nipple up. Therefore the BOP components will not be retested at that time.
- If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head will be cut and top out operations will be conducted.
- Devon will pressure test all seals above and below the mandrel (but still above the casing) to full working pressure rating.
- Devon will test the casing to 0.22 psi/ft or 1500 psi, whichever is greater, as per Onshore Order #2.

After running the 13-3/8" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 3M will be installed on the wellhead system and will undergo a 250 psi low pressure test followed by a 3,000 psi high pressure test. The 3,000 psi high and 250 psi low test will cover testing requirements a maximum of 30 days, as per Onshore Order #2. If the well is not complete within 30 days of this BOP test, another full BOP test will be conducted, as per Onshore Order #2.

After running the 9-5/8' intermediate casing with a mandrel hanger, the 13-5/8" BOP/BOPE system with a minimum rating of 3M will already be installed on the wellhead.

The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at 3,000 psi WP.

Devon's proposed wellhead manufactures will be FMC Technologies, Cactus Wellhead, or Cameron.

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
Depth Range:	Unlimited
Results Limited by:	Maximum center-center distance of 10,000.00ft
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	ISCWSA
Scan Method:	Closest Approach 3D
Error Surface:	Combined Covariances
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)	Tool Name	Description	
0.00	22,532.23	Plan 1 (Wellbore #1)	MWD	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									
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	Risk Factor	Probability of Collision	Warning
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	24.662	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
Reference	Offset	Semi Major Axis		Distance				Minimum		Separation	Risk	Probability	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	Separation Factor	of Collision	
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									
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	Warning		
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	8,242.89	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	10,574.25	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							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		
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
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Tooface (")	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Risked Separation Factor	Probability of Collision	Warning
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

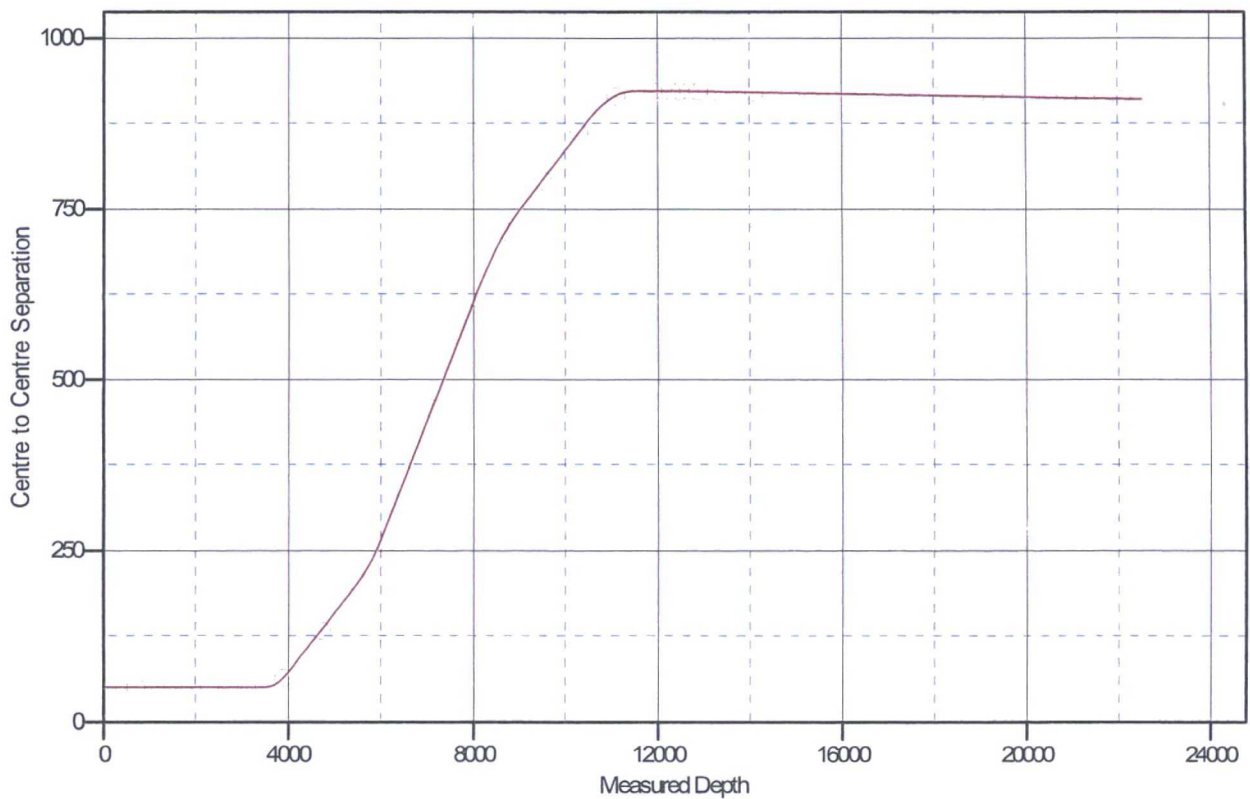
Company: WESTERN DIVISION
Project: PBNM
Reference Site: Dzurisin
Site Error: 0.00
Reference Well: Seawolf 1-12 Fed 84H
Well Error: 0.00
Reference Wellbore: Wellbore #1
Reference Design: Plan 1

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

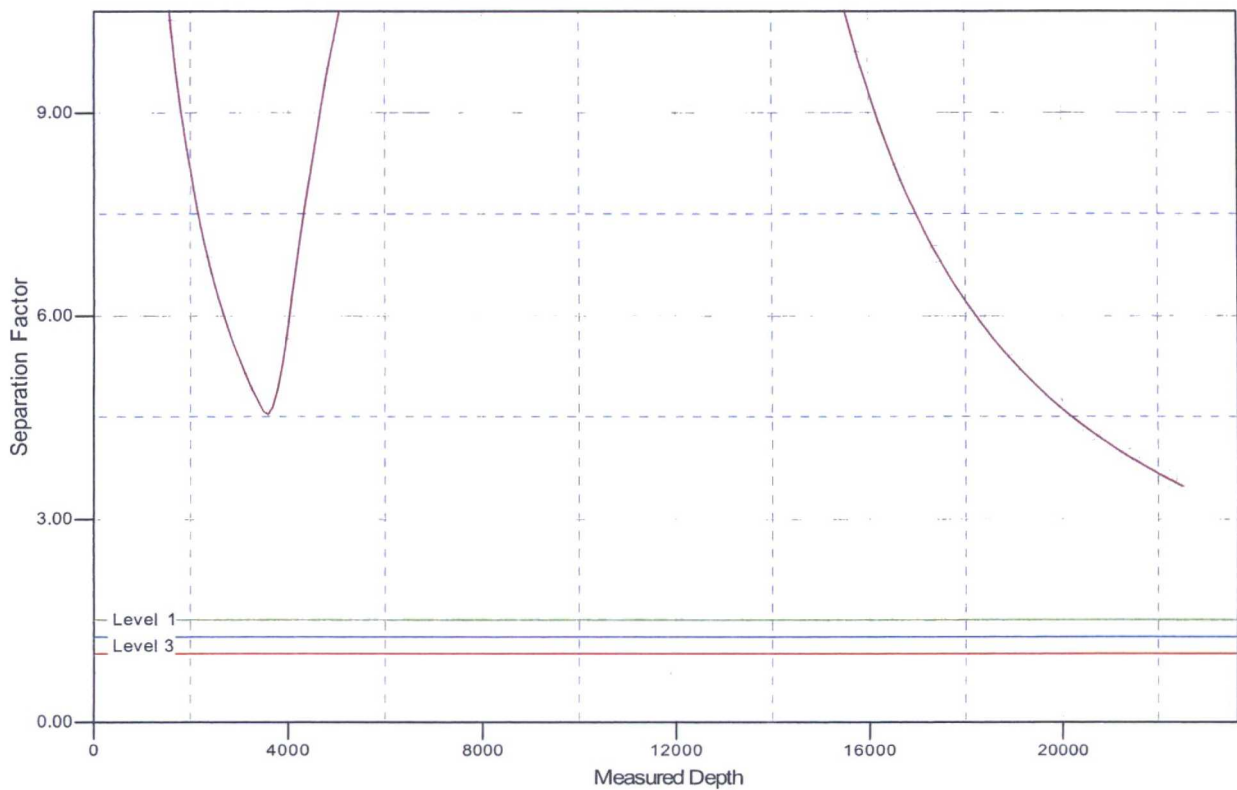
Company: WESTERN DIVISION
Project: PBNM
Reference Site: Dzurisin
Site Error: 0.00
Reference Well: Seawolf 1-12 Fed 84H
Well Error: 0.00
Reference Wellbore: Wellbore #1
Reference Design: Plan 1

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