

WESTERN DIVISION

PBNM

Dzurisin

Jayhawk 7-6 Fed 82H

Wellbore #1

Plan: Plan 1

Standard Planning Report

29 August, 2016

Devon Energy
Planning Report

Database:	EDM r5000 US Production	Local Co-ordinate Reference:	Well Jayhawk 7-6 Fed 82H
Company:	WESTERN DIVISION	TVD Reference:	1 @ 3393.50ft
Project:	PBNM	MD Reference:	1 @ 3393.50ft
Site:	Dzurisin	North Reference:	Grid
Well:	Jayhawk 7-6 Fed 82H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1		

Project	PBNM		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	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	Jayhawk 7-6 Fed 82H					
Well Position	+N/-S	-47,174.97 ft	Northing:	382,747.40 usft	Latitude:	32.049596
	+E/-W	70,206.17 ft	Easting:	795,597.44 usft	Longitude:	-103.512679
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	3,370.00 ft

Wellbore	Wellbore #1				
-----------------	-------------	--	--	--	--

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	7.71	60.09	48,694

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	358.38

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	
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,500.00	5.00	310.00	3,499.37	14.01	-16.70	1.00	1.00	0.00	310.00	
7,200.00	5.00	310.00	7,185.29	221.30	-263.73	0.00	0.00	0.00	0.00	
8,200.00	0.00	0.00	8,184.02	249.33	-297.14	0.50	-0.50	0.00	180.00	
12,292.60	0.00	0.00	12,276.62	249.33	-297.14	0.00	0.00	0.00	0.00	
13,040.69	89.77	359.98	12,754.08	724.88	-297.28	12.00	12.00	0.00	359.98	Jayhawk 7-6 Fed 82H
13,049.58	89.77	359.98	12,754.12	733.77	-297.29	0.01	-0.01	0.00	179.80	
22,921.85	89.77	359.98	12,793.90	10,605.96	-300.32	0.00	0.00	0.00	0.00	
22,947.23	89.77	359.98	12,794.00	10,631.34	-300.33	0.01	0.00	-0.01	-69.49	Jayhawk 7-6 Fed 82H

Devon Energy

Planning Report

Database:	EDM r5000 US Production	Local Co-ordinate Reference:	Well Jayhawk 7-6 Fed 82H
Company:	WESTERN DIVISION	TVD Reference:	1 @ 3393.50ft
Project:	PBNM	MD Reference:	1 @ 3393.50ft
Site:	Dzurisin	North Reference:	Grid
Well:	Jayhawk 7-6 Fed 82H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	1.00	310.00	3,099.99	0.56	-0.67	0.58	1.00	1.00	0.00
3,200.00	2.00	310.00	3,199.96	2.24	-2.67	2.32	1.00	1.00	0.00
3,300.00	3.00	310.00	3,299.86	5.05	-6.02	5.22	1.00	1.00	0.00
3,400.00	4.00	310.00	3,399.68	8.97	-10.69	9.27	1.00	1.00	0.00
3,500.00	5.00	310.00	3,499.37	14.01	-16.70	14.48	1.00	1.00	0.00
3,600.00	5.00	310.00	3,598.99	19.62	-23.38	20.27	0.00	0.00	0.00
3,700.00	5.00	310.00	3,698.60	25.22	-30.05	26.06	0.00	0.00	0.00
3,800.00	5.00	310.00	3,798.22	30.82	-36.73	31.85	0.00	0.00	0.00
3,900.00	5.00	310.00	3,897.84	36.42	-43.41	37.63	0.00	0.00	0.00
4,000.00	5.00	310.00	3,997.46	42.03	-50.08	43.42	0.00	0.00	0.00
4,100.00	5.00	310.00	4,097.08	47.63	-56.76	49.21	0.00	0.00	0.00
4,200.00	5.00	310.00	4,196.70	53.23	-63.44	55.00	0.00	0.00	0.00
4,300.00	5.00	310.00	4,296.32	58.83	-70.11	60.79	0.00	0.00	0.00
4,400.00	5.00	310.00	4,395.94	64.43	-76.79	66.58	0.00	0.00	0.00
4,500.00	5.00	310.00	4,495.56	70.04	-83.47	72.37	0.00	0.00	0.00
4,600.00	5.00	310.00	4,595.18	75.64	-90.14	78.15	0.00	0.00	0.00
4,700.00	5.00	310.00	4,694.80	81.24	-96.82	83.94	0.00	0.00	0.00
4,800.00	5.00	310.00	4,794.42	86.84	-103.50	89.73	0.00	0.00	0.00
4,900.00	5.00	310.00	4,894.04	92.45	-110.17	95.52	0.00	0.00	0.00
5,000.00	5.00	310.00	4,993.66	98.05	-116.85	101.31	0.00	0.00	0.00
5,100.00	5.00	310.00	5,093.28	103.65	-123.53	107.10	0.00	0.00	0.00
5,200.00	5.00	310.00	5,192.90	109.25	-130.20	112.89	0.00	0.00	0.00
5,300.00	5.00	310.00	5,292.52	114.86	-136.88	118.67	0.00	0.00	0.00

Devon Energy

Planning Report

Database:	EDM r5000 US Production	Local Co-ordinate Reference:	Well Jayhawk 7-6 Fed 82H
Company:	WESTERN DIVISION	TVD Reference:	1 @ 3393.50ft
Project:	PBNM	MD Reference:	1 @ 3393.50ft
Site:	Dzurisin	North Reference:	Grid
Well:	Jayhawk 7-6 Fed 82H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,400.00	5.00	310.00	5,392.14	120.46	-143.56	124.46	0.00	0.00	0.00
5,500.00	5.00	310.00	5,491.76	126.06	-150.23	130.25	0.00	0.00	0.00
5,600.00	5.00	310.00	5,591.37	131.66	-156.91	136.04	0.00	0.00	0.00
5,700.00	5.00	310.00	5,690.99	137.26	-163.59	141.83	0.00	0.00	0.00
5,800.00	5.00	310.00	5,790.61	142.87	-170.26	147.62	0.00	0.00	0.00
5,900.00	5.00	310.00	5,890.23	148.47	-176.94	153.41	0.00	0.00	0.00
6,000.00	5.00	310.00	5,989.85	154.07	-183.61	159.19	0.00	0.00	0.00
6,100.00	5.00	310.00	6,089.47	159.67	-190.29	164.98	0.00	0.00	0.00
6,200.00	5.00	310.00	6,189.09	165.28	-196.97	170.77	0.00	0.00	0.00
6,300.00	5.00	310.00	6,288.71	170.88	-203.64	176.56	0.00	0.00	0.00
6,400.00	5.00	310.00	6,388.33	176.48	-210.32	182.35	0.00	0.00	0.00
6,500.00	5.00	310.00	6,487.95	182.08	-217.00	188.14	0.00	0.00	0.00
6,600.00	5.00	310.00	6,587.57	187.68	-223.67	193.93	0.00	0.00	0.00
6,700.00	5.00	310.00	6,687.19	193.29	-230.35	199.71	0.00	0.00	0.00
6,800.00	5.00	310.00	6,786.81	198.89	-237.03	205.50	0.00	0.00	0.00
6,900.00	5.00	310.00	6,886.43	204.49	-243.70	211.29	0.00	0.00	0.00
7,000.00	5.00	310.00	6,986.05	210.09	-250.38	217.08	0.00	0.00	0.00
7,100.00	5.00	310.00	7,085.67	215.70	-257.06	222.87	0.00	0.00	0.00
7,200.00	5.00	310.00	7,185.29	221.30	-263.73	228.66	0.00	0.00	0.00
7,300.00	4.50	310.00	7,284.94	226.62	-270.08	234.16	0.50	-0.50	0.00
7,400.00	4.00	310.00	7,384.67	231.38	-275.75	239.08	0.50	-0.50	0.00
7,500.00	3.50	310.00	7,484.45	235.59	-280.76	243.42	0.50	-0.50	0.00
7,600.00	3.00	310.00	7,584.29	239.23	-285.11	247.19	0.50	-0.50	0.00
7,700.00	2.50	310.00	7,684.18	242.32	-288.78	250.37	0.50	-0.50	0.00
7,800.00	2.00	310.00	7,784.10	244.84	-291.79	252.98	0.50	-0.50	0.00
7,900.00	1.50	310.00	7,884.05	246.80	-294.13	255.01	0.50	-0.50	0.00
8,000.00	1.00	310.00	7,984.03	248.21	-295.80	256.46	0.50	-0.50	0.00
8,100.00	0.50	310.00	8,084.02	249.05	-296.80	257.33	0.50	-0.50	0.00
8,200.00	0.00	0.00	8,184.02	249.33	-297.14	257.62	0.50	-0.50	0.00
8,300.00	0.00	0.00	8,284.02	249.33	-297.14	257.62	0.00	0.00	0.00
8,400.00	0.00	0.00	8,384.02	249.33	-297.14	257.62	0.00	0.00	0.00
8,500.00	0.00	0.00	8,484.02	249.33	-297.14	257.62	0.00	0.00	0.00
8,600.00	0.00	0.00	8,584.02	249.33	-297.14	257.62	0.00	0.00	0.00
8,700.00	0.00	0.00	8,684.02	249.33	-297.14	257.62	0.00	0.00	0.00
8,800.00	0.00	0.00	8,784.02	249.33	-297.14	257.62	0.00	0.00	0.00
8,900.00	0.00	0.00	8,884.02	249.33	-297.14	257.62	0.00	0.00	0.00
9,000.00	0.00	0.00	8,984.02	249.33	-297.14	257.62	0.00	0.00	0.00
9,100.00	0.00	0.00	9,084.02	249.33	-297.14	257.62	0.00	0.00	0.00
9,200.00	0.00	0.00	9,184.02	249.33	-297.14	257.62	0.00	0.00	0.00
9,300.00	0.00	0.00	9,284.02	249.33	-297.14	257.62	0.00	0.00	0.00
9,400.00	0.00	0.00	9,384.02	249.33	-297.14	257.62	0.00	0.00	0.00
9,500.00	0.00	0.00	9,484.02	249.33	-297.14	257.62	0.00	0.00	0.00
9,600.00	0.00	0.00	9,584.02	249.33	-297.14	257.62	0.00	0.00	0.00
9,700.00	0.00	0.00	9,684.02	249.33	-297.14	257.62	0.00	0.00	0.00
9,800.00	0.00	0.00	9,784.02	249.33	-297.14	257.62	0.00	0.00	0.00
9,900.00	0.00	0.00	9,884.02	249.33	-297.14	257.62	0.00	0.00	0.00
10,000.00	0.00	0.00	9,984.02	249.33	-297.14	257.62	0.00	0.00	0.00
10,100.00	0.00	0.00	10,084.02	249.33	-297.14	257.62	0.00	0.00	0.00
10,200.00	0.00	0.00	10,184.02	249.33	-297.14	257.62	0.00	0.00	0.00
10,300.00	0.00	0.00	10,284.02	249.33	-297.14	257.62	0.00	0.00	0.00
10,400.00	0.00	0.00	10,384.02	249.33	-297.14	257.62	0.00	0.00	0.00
10,500.00	0.00	0.00	10,484.02	249.33	-297.14	257.62	0.00	0.00	0.00
10,600.00	0.00	0.00	10,584.02	249.33	-297.14	257.62	0.00	0.00	0.00
10,700.00	0.00	0.00	10,684.02	249.33	-297.14	257.62	0.00	0.00	0.00

Devon Energy
Planning Report

Database: EDM r5000 US Production
Company: WESTERN DIVISION
Project: PBNM
Site: Dzurisin
Well: Jayhawk 7-6 Fed 82H
Wellbore: Wellbore #1
Design: Plan 1

Local Co-ordinate Reference: Well Jayhawk 7-6 Fed 82H
TVD Reference: 1 @ 3393.50ft
MD Reference: 1 @ 3393.50ft
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)
10,800.00	0.00	0.00	10,784.02	249.33	-297.14	257.62	0.00	0.00	0.00
10,900.00	0.00	0.00	10,884.02	249.33	-297.14	257.62	0.00	0.00	0.00
11,000.00	0.00	0.00	10,984.02	249.33	-297.14	257.62	0.00	0.00	0.00
11,100.00	0.00	0.00	11,084.02	249.33	-297.14	257.62	0.00	0.00	0.00
11,200.00	0.00	0.00	11,184.02	249.33	-297.14	257.62	0.00	0.00	0.00
11,300.00	0.00	0.00	11,284.02	249.33	-297.14	257.62	0.00	0.00	0.00
11,400.00	0.00	0.00	11,384.02	249.33	-297.14	257.62	0.00	0.00	0.00
11,500.00	0.00	0.00	11,484.02	249.33	-297.14	257.62	0.00	0.00	0.00
11,600.00	0.00	0.00	11,584.02	249.33	-297.14	257.62	0.00	0.00	0.00
11,700.00	0.00	0.00	11,684.02	249.33	-297.14	257.62	0.00	0.00	0.00
11,800.00	0.00	0.00	11,784.02	249.33	-297.14	257.62	0.00	0.00	0.00
11,900.00	0.00	0.00	11,884.02	249.33	-297.14	257.62	0.00	0.00	0.00
12,000.00	0.00	0.00	11,984.02	249.33	-297.14	257.62	0.00	0.00	0.00
12,100.00	0.00	0.00	12,084.02	249.33	-297.14	257.62	0.00	0.00	0.00
12,200.00	0.00	0.00	12,184.02	249.33	-297.14	257.62	0.00	0.00	0.00
12,292.60	0.00	0.00	12,276.62	249.33	-297.14	257.62	0.00	0.00	0.00
12,300.00	0.89	359.98	12,284.02	249.38	-297.14	257.68	12.00	12.00	0.00
12,325.00	3.89	359.98	12,308.99	250.43	-297.14	258.72	12.00	12.00	0.00
12,350.00	6.89	359.98	12,333.88	252.77	-297.14	261.06	12.00	12.00	0.00
12,375.00	9.89	359.98	12,358.61	256.42	-297.14	264.71	12.00	12.00	0.00
12,400.00	12.89	359.98	12,383.11	261.36	-297.14	269.64	12.00	12.00	0.00
12,425.00	15.89	359.98	12,407.33	267.57	-297.14	275.85	12.00	12.00	0.00
12,450.00	18.89	359.98	12,431.18	275.04	-297.14	283.32	12.00	12.00	0.00
12,475.00	21.89	359.98	12,454.61	283.75	-297.15	292.02	12.00	12.00	0.00
12,500.00	24.89	359.98	12,477.56	293.67	-297.15	301.94	12.00	12.00	0.00
12,525.00	27.89	359.98	12,499.95	304.78	-297.15	313.05	12.00	12.00	0.00
12,550.00	30.89	359.98	12,521.73	317.04	-297.16	325.31	12.00	12.00	0.00
12,575.00	33.89	359.98	12,542.84	330.43	-297.16	338.69	12.00	12.00	0.00
12,600.00	36.89	359.98	12,563.22	344.91	-297.17	353.16	12.00	12.00	0.00
12,625.00	39.89	359.98	12,582.81	360.43	-297.17	368.68	12.00	12.00	0.00
12,650.00	42.89	359.98	12,601.56	376.96	-297.18	385.20	12.00	12.00	0.00
12,675.00	45.89	359.98	12,619.43	394.45	-297.18	402.68	12.00	12.00	0.00
12,700.00	48.89	359.98	12,636.35	412.84	-297.19	421.07	12.00	12.00	0.00
12,725.00	51.89	359.98	12,652.29	432.10	-297.19	440.32	12.00	12.00	0.00
12,750.00	54.89	359.98	12,667.20	452.17	-297.20	460.38	12.00	12.00	0.00
12,775.00	57.89	359.98	12,681.04	472.98	-297.21	481.19	12.00	12.00	0.00
12,800.00	60.89	359.98	12,693.76	494.50	-297.21	502.69	12.00	12.00	0.00
12,825.00	63.89	359.98	12,705.35	516.65	-297.22	524.83	12.00	12.00	0.00
12,850.00	66.89	359.98	12,715.76	539.37	-297.23	547.55	12.00	12.00	0.00
12,875.00	69.89	359.98	12,724.97	562.61	-297.23	570.78	12.00	12.00	0.00
12,900.00	72.89	359.98	12,732.95	586.30	-297.24	594.46	12.00	12.00	0.00
12,925.00	75.89	359.98	12,739.67	610.38	-297.25	618.53	12.00	12.00	0.00
12,950.00	78.89	359.98	12,745.13	634.77	-297.26	642.91	12.00	12.00	0.00
12,975.00	81.89	359.98	12,749.31	659.42	-297.26	667.55	12.00	12.00	0.00
13,000.00	84.89	359.98	12,752.18	684.25	-297.27	692.37	12.00	12.00	0.00
13,025.00	87.89	359.98	12,753.76	709.20	-297.28	717.31	12.00	12.00	0.00
13,040.69	89.77	359.98	12,754.08	724.88	-297.28	732.98	12.00	12.00	0.00
13,049.58	89.77	359.98	12,754.12	733.77	-297.29	741.87	0.01	-0.01	0.00
13,100.00	89.77	359.98	12,754.32	784.19	-297.30	792.27	0.00	0.00	0.00
13,200.00	89.77	359.98	12,754.72	884.19	-297.33	892.23	0.00	0.00	0.00
13,300.00	89.77	359.98	12,755.12	984.19	-297.36	992.19	0.00	0.00	0.00
13,400.00	89.77	359.98	12,755.53	1,084.19	-297.39	1,092.15	0.00	0.00	0.00
13,500.00	89.77	359.98	12,755.93	1,184.19	-297.42	1,192.11	0.00	0.00	0.00
13,600.00	89.77	359.98	12,756.33	1,284.19	-297.46	1,292.07	0.00	0.00	0.00

Devon Energy
Planning Report

Database:	EDM r5000 US Production	Local Co-ordinate Reference:	Well Jayhawk 7-6 Fed 82H
Company:	WESTERN DIVISION	TVD Reference:	1 @ 3393.50ft
Project:	PBNM	MD Reference:	1 @ 3393.50ft
Site:	Dzurisin	North Reference:	Grid
Well:	Jayhawk 7-6 Fed 82H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
13,700.00	89.77	359.98	12,756.74	1,384.19	-297.49	1,392.03	0.00	0.00	0.00	
13,800.00	89.77	359.98	12,757.14	1,484.19	-297.52	1,491.99	0.00	0.00	0.00	
13,900.00	89.77	359.98	12,757.54	1,584.18	-297.55	1,591.96	0.00	0.00	0.00	
14,000.00	89.77	359.98	12,757.95	1,684.18	-297.58	1,691.92	0.00	0.00	0.00	
14,100.00	89.77	359.98	12,758.35	1,784.18	-297.61	1,791.88	0.00	0.00	0.00	
14,200.00	89.77	359.98	12,758.75	1,884.18	-297.64	1,891.84	0.00	0.00	0.00	
14,300.00	89.77	359.98	12,759.15	1,984.18	-297.67	1,991.80	0.00	0.00	0.00	
14,400.00	89.77	359.98	12,759.56	2,084.18	-297.70	2,091.76	0.00	0.00	0.00	
14,500.00	89.77	359.98	12,759.96	2,184.18	-297.73	2,191.72	0.00	0.00	0.00	
14,600.00	89.77	359.98	12,760.36	2,284.18	-297.76	2,291.68	0.00	0.00	0.00	
14,700.00	89.77	359.98	12,760.77	2,384.18	-297.79	2,391.64	0.00	0.00	0.00	
14,800.00	89.77	359.98	12,761.17	2,484.18	-297.82	2,491.60	0.00	0.00	0.00	
14,900.00	89.77	359.98	12,761.57	2,584.18	-297.85	2,591.56	0.00	0.00	0.00	
15,000.00	89.77	359.98	12,761.97	2,684.18	-297.89	2,691.52	0.00	0.00	0.00	
15,100.00	89.77	359.98	12,762.38	2,784.17	-297.92	2,791.48	0.00	0.00	0.00	
15,200.00	89.77	359.98	12,762.78	2,884.17	-297.95	2,891.44	0.00	0.00	0.00	
15,300.00	89.77	359.98	12,763.18	2,984.17	-297.98	2,991.40	0.00	0.00	0.00	
15,400.00	89.77	359.98	12,763.59	3,084.17	-298.01	3,091.36	0.00	0.00	0.00	
15,500.00	89.77	359.98	12,763.99	3,184.17	-298.04	3,191.32	0.00	0.00	0.00	
15,600.00	89.77	359.98	12,764.39	3,284.17	-298.07	3,291.28	0.00	0.00	0.00	
15,700.00	89.77	359.98	12,764.80	3,384.17	-298.10	3,391.24	0.00	0.00	0.00	
15,800.00	89.77	359.98	12,765.20	3,484.17	-298.13	3,491.20	0.00	0.00	0.00	
15,900.00	89.77	359.98	12,765.60	3,584.17	-298.16	3,591.16	0.00	0.00	0.00	
16,000.00	89.77	359.98	12,766.00	3,684.17	-298.19	3,691.12	0.00	0.00	0.00	
16,100.00	89.77	359.98	12,766.41	3,784.17	-298.22	3,791.08	0.00	0.00	0.00	
16,200.00	89.77	359.98	12,766.81	3,884.17	-298.25	3,891.04	0.00	0.00	0.00	
16,300.00	89.77	359.98	12,767.21	3,984.17	-298.29	3,991.00	0.00	0.00	0.00	
16,400.00	89.77	359.98	12,767.62	4,084.16	-298.32	4,090.96	0.00	0.00	0.00	
16,500.00	89.77	359.98	12,768.02	4,184.16	-298.35	4,190.92	0.00	0.00	0.00	
16,600.00	89.77	359.98	12,768.42	4,284.16	-298.38	4,290.88	0.00	0.00	0.00	
16,700.00	89.77	359.98	12,768.83	4,384.16	-298.41	4,390.84	0.00	0.00	0.00	
16,800.00	89.77	359.98	12,769.23	4,484.16	-298.44	4,490.80	0.00	0.00	0.00	
16,900.00	89.77	359.98	12,769.63	4,584.16	-298.47	4,590.76	0.00	0.00	0.00	
17,000.00	89.77	359.98	12,770.03	4,684.16	-298.50	4,690.72	0.00	0.00	0.00	
17,100.00	89.77	359.98	12,770.44	4,784.16	-298.53	4,790.68	0.00	0.00	0.00	
17,200.00	89.77	359.98	12,770.84	4,884.16	-298.56	4,890.64	0.00	0.00	0.00	
17,300.00	89.77	359.98	12,771.24	4,984.16	-298.59	4,990.60	0.00	0.00	0.00	
17,400.00	89.77	359.98	12,771.65	5,084.16	-298.62	5,090.56	0.00	0.00	0.00	
17,500.00	89.77	359.98	12,772.05	5,184.16	-298.65	5,190.52	0.00	0.00	0.00	
17,600.00	89.77	359.98	12,772.45	5,284.15	-298.69	5,290.48	0.00	0.00	0.00	
17,700.00	89.77	359.98	12,772.86	5,384.15	-298.72	5,390.44	0.00	0.00	0.00	
17,800.00	89.77	359.98	12,773.26	5,484.15	-298.75	5,490.40	0.00	0.00	0.00	
17,900.00	89.77	359.98	12,773.66	5,584.15	-298.78	5,590.36	0.00	0.00	0.00	
18,000.00	89.77	359.98	12,774.06	5,684.15	-298.81	5,690.32	0.00	0.00	0.00	
18,100.00	89.77	359.98	12,774.47	5,784.15	-298.84	5,790.28	0.00	0.00	0.00	
18,200.00	89.77	359.98	12,774.87	5,884.15	-298.87	5,890.24	0.00	0.00	0.00	
18,300.00	89.77	359.98	12,775.27	5,984.15	-298.90	5,990.20	0.00	0.00	0.00	
18,400.00	89.77	359.98	12,775.68	6,084.15	-298.93	6,090.16	0.00	0.00	0.00	
18,500.00	89.77	359.98	12,776.08	6,184.15	-298.96	6,190.12	0.00	0.00	0.00	
18,600.00	89.77	359.98	12,776.48	6,284.15	-298.99	6,290.08	0.00	0.00	0.00	
18,700.00	89.77	359.98	12,776.89	6,384.15	-299.02	6,390.04	0.00	0.00	0.00	
18,800.00	89.77	359.98	12,777.29	6,484.14	-299.05	6,490.00	0.00	0.00	0.00	
18,900.00	89.77	359.98	12,777.69	6,584.14	-299.09	6,589.96	0.00	0.00	0.00	
19,000.00	89.77	359.98	12,778.09	6,684.14	-299.12	6,689.92	0.00	0.00	0.00	

Devon Energy

Planning Report

Database:	EDM r5000 US Production	Local Co-ordinate Reference:	Well Jayhawk 7-6 Fed 82H
Company:	WESTERN DIVISION	TVD Reference:	1 @ 3393.50ft
Project:	PBNM	MD Reference:	1 @ 3393.50ft
Site:	Dzurisin	North Reference:	Grid
Well:	Jayhawk 7-6 Fed 82H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan 1		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
19,100.00	89.77	359.98	12,778.50	6,784.14	-299.15	6,789.88	0.00	0.00	0.00
19,200.00	89.77	359.98	12,778.90	6,884.14	-299.18	6,889.84	0.00	0.00	0.00
19,300.00	89.77	359.98	12,779.30	6,984.14	-299.21	6,989.80	0.00	0.00	0.00
19,400.00	89.77	359.98	12,779.71	7,084.14	-299.24	7,089.76	0.00	0.00	0.00
19,500.00	89.77	359.98	12,780.11	7,184.14	-299.27	7,189.73	0.00	0.00	0.00
19,600.00	89.77	359.98	12,780.51	7,284.14	-299.30	7,289.69	0.00	0.00	0.00
19,700.00	89.77	359.98	12,780.91	7,384.14	-299.33	7,389.65	0.00	0.00	0.00
19,800.00	89.77	359.98	12,781.32	7,484.14	-299.36	7,489.61	0.00	0.00	0.00
19,900.00	89.77	359.98	12,781.72	7,584.14	-299.39	7,589.57	0.00	0.00	0.00
20,000.00	89.77	359.98	12,782.12	7,684.13	-299.42	7,689.53	0.00	0.00	0.00
20,100.00	89.77	359.98	12,782.53	7,784.13	-299.45	7,789.49	0.00	0.00	0.00
20,200.00	89.77	359.98	12,782.93	7,884.13	-299.49	7,889.45	0.00	0.00	0.00
20,300.00	89.77	359.98	12,783.33	7,984.13	-299.52	7,989.41	0.00	0.00	0.00
20,400.00	89.77	359.98	12,783.74	8,084.13	-299.55	8,089.37	0.00	0.00	0.00
20,500.00	89.77	359.98	12,784.14	8,184.13	-299.58	8,189.33	0.00	0.00	0.00
20,600.00	89.77	359.98	12,784.54	8,284.13	-299.61	8,289.29	0.00	0.00	0.00
20,700.00	89.77	359.98	12,784.94	8,384.13	-299.64	8,389.25	0.00	0.00	0.00
20,800.00	89.77	359.98	12,785.35	8,484.13	-299.67	8,489.21	0.00	0.00	0.00
20,900.00	89.77	359.98	12,785.75	8,584.13	-299.70	8,589.17	0.00	0.00	0.00
21,000.00	89.77	359.98	12,786.15	8,684.13	-299.73	8,689.13	0.00	0.00	0.00
21,100.00	89.77	359.98	12,786.56	8,784.13	-299.76	8,789.09	0.00	0.00	0.00
21,200.00	89.77	359.98	12,786.96	8,884.13	-299.79	8,889.05	0.00	0.00	0.00
21,300.00	89.77	359.98	12,787.36	8,984.12	-299.82	8,989.01	0.00	0.00	0.00
21,400.00	89.77	359.98	12,787.77	9,084.12	-299.85	9,088.97	0.00	0.00	0.00
21,500.00	89.77	359.98	12,788.17	9,184.12	-299.88	9,188.93	0.00	0.00	0.00
21,600.00	89.77	359.98	12,788.57	9,284.12	-299.92	9,288.89	0.00	0.00	0.00
21,700.00	89.77	359.98	12,788.97	9,384.12	-299.95	9,388.85	0.00	0.00	0.00
21,800.00	89.77	359.98	12,789.38	9,484.12	-299.98	9,488.81	0.00	0.00	0.00
21,900.00	89.77	359.98	12,789.78	9,584.12	-300.01	9,588.77	0.00	0.00	0.00
22,000.00	89.77	359.98	12,790.18	9,684.12	-300.04	9,688.73	0.00	0.00	0.00
22,100.00	89.77	359.98	12,790.59	9,784.12	-300.07	9,788.69	0.00	0.00	0.00
22,200.00	89.77	359.98	12,790.99	9,884.12	-300.10	9,888.65	0.00	0.00	0.00
22,300.00	89.77	359.98	12,791.39	9,984.12	-300.13	9,988.61	0.00	0.00	0.00
22,400.00	89.77	359.98	12,791.80	10,084.12	-300.16	10,088.57	0.00	0.00	0.00
22,500.00	89.77	359.98	12,792.20	10,184.11	-300.19	10,188.53	0.00	0.00	0.00
22,600.00	89.77	359.98	12,792.60	10,284.11	-300.22	10,288.49	0.00	0.00	0.00
22,700.00	89.77	359.98	12,793.00	10,384.11	-300.25	10,388.45	0.00	0.00	0.00
22,800.00	89.77	359.98	12,793.41	10,484.11	-300.28	10,488.41	0.00	0.00	0.00
22,900.00	89.77	359.98	12,793.81	10,584.11	-300.32	10,588.37	0.00	0.00	0.00
22,921.85	89.77	359.98	12,793.90	10,605.96	-300.32	10,610.21	0.00	0.00	0.00
22,947.23	89.77	359.98	12,794.00	10,631.34	-300.33	10,635.58	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									
Jayhawk 7-6 Fed 82H B	0.00	0.00	12,794.00	10,631.34	-300.33	393,378.72	795,297.11	32.078825	-103.513388
- plan hits target center									
- Point									

Devon Energy
Anticollision Risk Report

Company:	WESTERN DIVISION	Local Co-ordinate Reference:	Well Fighting Okra 18-19 Fed 82H
Project:	PBNM	TVD Reference:	1 @ 3393.10ft
Reference Site:	Dzurisin	MD Reference:	1 @ 3393.10ft
Site Error:	0.00	North Reference:	Grid
Reference Well:	Fighting Okra 18-19 Fed 82H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000 US Production
Reference Design:	Plan 1	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	8/29/2016		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	22,335.63	Plan 1 (Wellbore #1)	MWD	MWD - Standard	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance		Separation Factor	Warning
Offset Well - Wellbore - Design			Between Centres (ft)	Between Ellipses (ft)		
Dzurisin						
Fighting Okra 18-19 Fed 83H - Wellbore #1 - Plan 1	2,966.43	2,967.13	50.02	40.79	5.417 CC	
Fighting Okra 18-19 Fed 83H - Wellbore #1 - Plan 1	3,000.00	3,000.69	50.02	40.68	5.355 ES	
Fighting Okra 18-19 Fed 83H - Wellbore #1 - Plan 1	22,335.63	22,376.22	904.06	649.73	3.555 SF	
Jayhawk 7-6 Fed 81H - Wellbore #1 - Plan 1	1,958.95	1,977.75	58.23	52.17	9.608 CC	
Jayhawk 7-6 Fed 81H - Wellbore #1 - Plan 1	2,000.00	2,018.70	58.24	52.06	9.411 ES	
Jayhawk 7-6 Fed 81H - Wellbore #1 - Plan 1	2,200.00	2,217.54	60.49	53.70	8.906 SF	
Jayhawk 7-6 Fed 82H - Wellbore #1 - Plan 1	2,966.53	2,966.93	49.99	40.76	5.414 CC	
Jayhawk 7-6 Fed 82H - Wellbore #1 - Plan 1	3,000.00	3,000.40	49.99	40.65	5.352 ES	
Jayhawk 7-6 Fed 82H - Wellbore #1 - Plan 1	3,100.00	3,100.00	50.56	40.91	5.238 SF	
Jayhawk 7-6 Fed 83H - Wellbore #1 - Plan 1	2,966.30	2,967.40	58.29	49.05	6.312 CC	
Jayhawk 7-6 Fed 83H - Wellbore #1 - Plan 1	3,000.00	3,001.09	58.29	48.94	6.239 ES	
Jayhawk 7-6 Fed 83H - Wellbore #1 - Plan 1	3,100.00	3,100.00	59.02	49.37	6.116 SF	

Offset Design		Dzurisin - Fighting Okra 18-19 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							Risky 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							
0.00	0.00	0.70	0.70	0.00	0.00	89.56	50.02					0					
100.00	100.00	100.70	100.70	0.09	0.09	89.56	50.02	49.90	0.12	407.667	0						
200.00	200.00	200.70	200.70	0.31	0.31	89.56	50.02	49.58	0.44	113.539	0						
300.00	300.00	300.70	300.70	0.54	0.54	89.56	50.02	49.26	0.76	65.954	0						
400.00	400.00	400.70	400.70	0.76	0.76	89.56	50.02	48.95	1.08	46.476	0						
500.00	500.00	500.70	500.70	0.99	0.99	89.56	50.02	48.63	1.39	35.879	0						
600.00	600.00	600.70	600.70	1.21	1.21	89.56	50.02	48.31	1.71	29.218	0						
700.00	700.00	700.70	700.70	1.43	1.44	89.56	50.02	47.99	2.03	24.642	0						
800.00	800.00	800.70	800.70	1.66	1.66	89.56	50.02	47.67	2.35	21.306	0						
900.00	900.00	900.70	900.70	1.88	1.89	89.56	50.02	47.36	2.67	18.765	0						
1,000.00	1,000.00	1,000.70	1,000.70	2.11	2.11	89.56	50.02	47.04	2.98	16.766	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	Local Co-ordinate Reference:	Well Fighting Okra 18-19 Fed 82H
Project:	PBNM	TVD Reference:	1 @ 3393.10ft
Reference Site:	Dzurisin	MD Reference:	1 @ 3393.10ft
Site Error:	0.00	North Reference:	Grid
Reference Well:	Fighting Okra 18-19 Fed 82H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000 US Production
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft
Survey Program: 0-MWD Dzurisin - Fighting Okra 18-19 Fed 83H - Wellbore #1 - Plan 1													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				
1,100.00	1,100.00	1,100.70	1,100.70	2.33	2.34	89.56	50.02	46.72	3.30	15.152	0			
1,200.00	1,200.00	1,200.70	1,200.70	2.56	2.56	89.56	50.02	46.40	3.62	13.821	0			
1,300.00	1,300.00	1,300.70	1,300.70	2.78	2.78	89.56	50.02	46.08	3.94	12.705	0			
1,400.00	1,400.00	1,400.70	1,400.70	3.01	3.01	89.56	50.02	45.77	4.25	11.756	0			
1,500.00	1,500.00	1,500.70	1,500.70	3.23	3.23	89.56	50.02	45.45	4.57	10.939	0			
1,600.00	1,600.00	1,600.70	1,600.70	3.46	3.46	89.56	50.02	45.13	4.89	10.228	0			
1,700.00	1,700.00	1,700.70	1,700.70	3.68	3.68	89.56	50.02	44.81	5.21	9.604	0			
1,800.00	1,800.00	1,800.70	1,800.70	3.91	3.91	89.56	50.02	44.50	5.53	9.051	0			
1,900.00	1,900.00	1,900.70	1,900.70	4.13	4.13	89.56	50.02	44.18	5.84	8.559	0			
2,000.00	2,000.00	2,000.70	2,000.70	4.36	4.36	89.56	50.02	43.86	6.16	8.118	0			
2,100.00	2,100.00	2,100.70	2,100.70	4.58	4.58	89.56	50.02	43.54	6.48	7.719	0			
2,200.00	2,200.00	2,200.70	2,200.70	4.81	4.81	89.56	50.02	43.22	6.80	7.358	0			
2,300.00	2,300.00	2,300.70	2,300.70	5.03	5.03	89.56	50.02	42.91	7.12	7.030	0			
2,400.00	2,400.00	2,400.70	2,400.70	5.26	5.26	89.56	50.02	42.59	7.43	6.729	0			
2,500.00	2,500.00	2,500.70	2,500.70	5.48	5.48	89.56	50.02	42.27	7.75	6.453	0			
2,600.00	2,600.00	2,600.70	2,600.70	5.71	5.71	89.56	50.02	41.95	8.07	6.199	0			
2,700.00	2,700.00	2,700.70	2,700.70	5.93	5.93	89.56	50.02	41.63	8.39	5.964	0			
2,800.00	2,800.00	2,800.70	2,800.70	6.15	6.16	89.56	50.02	41.32	8.71	5.746	0			
2,900.00	2,900.00	2,900.70	2,900.70	6.38	6.38	89.56	50.02	41.00	9.02	5.544	0			
2,966.43	2,966.43	2,967.13	2,967.13	6.53	6.53	89.56	50.02	40.79	9.23	5.417	0		CC	
3,000.00	3,000.00	3,000.69	3,000.69	6.60	6.61	89.56	50.02	40.68	9.34	5.355	0		ES	
3,100.00	3,100.00	3,100.00	3,099.99	6.83	6.81	89.57	50.90	41.25	9.65	5.276	0			
3,200.00	3,200.00	3,198.88	3,198.84	7.05	7.01	89.59	53.51	43.57	9.94	5.383	0			
3,300.00	3,300.00	3,297.83	3,297.69	7.28	7.21	89.62	57.84	47.61	10.23	5.654	0			
3,400.00	3,400.00	3,396.60	3,396.28	7.50	7.41	89.66	63.89	53.37	10.52	6.074	0			
3,500.00	3,500.00	3,495.13	3,494.51	7.73	7.62	89.70	71.67	60.86	10.81	6.632	0			
3,600.00	3,600.00	3,594.69	3,593.69	7.95	7.83	89.73	80.38	69.27	11.11	7.236	0			
3,700.00	3,700.00	3,694.31	3,692.93	8.18	8.05	89.75	89.10	77.69	11.41	7.808	0			
3,800.00	3,800.00	3,793.93	3,792.18	8.40	8.27	89.78	97.81	86.10	11.72	8.349	0			
3,900.00	3,900.00	3,893.55	3,891.42	8.63	8.49	89.79	106.53	94.51	12.02	8.863	0			
4,000.00	4,000.00	3,993.17	3,990.66	8.85	8.72	89.81	115.24	102.92	12.33	9.350	0			
4,100.00	4,100.00	4,092.79	4,089.90	9.08	8.95	89.82	123.96	111.33	12.63	9.813	0			
4,200.00	4,200.00	4,192.41	4,189.14	9.30	9.18	89.84	132.68	119.74	12.94	10.253	0			
4,300.00	4,300.00	4,292.03	4,288.38	9.53	9.41	89.85	141.39	128.14	13.25	10.672	0			
4,400.00	4,400.00	4,391.64	4,387.62	9.75	9.65	89.85	150.11	136.55	13.56	11.072	0			
4,500.00	4,500.00	4,491.26	4,486.86	9.98	9.89	89.86	158.82	144.96	13.87	11.453	0			
4,600.00	4,600.00	4,590.88	4,586.10	10.20	10.13	89.87	167.54	153.36	14.18	11.818	0			
4,700.00	4,700.00	4,690.50	4,685.34	10.43	10.37	89.88	176.25	161.77	14.49	12.166	0			
4,800.00	4,800.00	4,790.12	4,784.58	10.65	10.61	89.88	184.97	170.17	14.80	12.499	0			
4,900.00	4,900.00	4,889.74	4,883.82	10.87	10.85	89.89	193.68	178.57	15.11	12.818	0			
5,000.00	5,000.00	4,989.36	4,983.06	11.10	11.10	89.89	202.40	186.98	15.42	13.123	0			
5,100.00	5,100.00	5,088.98	5,082.30	11.32	11.35	89.90	211.12	195.38	15.74	13.416	0			
5,200.00	5,200.00	5,188.60	5,181.54	11.55	11.59	89.90	219.83	203.78	16.05	13.698	0			
5,300.00	5,300.00	5,288.22	5,280.78	11.77	11.84	89.90	228.55	212.18	16.36	13.968	0			
5,400.00	5,400.00	5,387.84	5,380.02	12.00	12.09	89.91	237.26	220.59	16.68	14.228	0			
5,500.00	5,500.00	5,487.46	5,479.26	12.22	12.34	89.91	245.98	228.99	16.99	14.478	0			
5,600.00	5,600.00	5,587.08	5,578.50	12.45	12.59	89.91	254.69	237.39	17.30	14.718	0			
5,700.00	5,700.00	5,686.70	5,677.74	12.67	12.85	89.92	263.41	245.79	17.62	14.950	0			
5,800.00	5,800.00	5,786.32	5,776.98	12.90	13.10	89.92	272.12	254.19	17.93	15.173	0			
5,900.00	5,900.00	5,885.94	5,876.22	13.12	13.35	89.92	280.84	262.59	18.25	15.389	0			
6,000.00	6,000.00	5,985.56	5,975.46	13.35	13.61	89.92	289.56	270.99	18.57	15.597	0			
6,100.00	6,100.00	6,085.18	6,074.70	13.57	13.86	89.93	298.27	279.39	18.88	15.797	0			
6,200.00	6,200.00	6,184.80	6,173.94	13.80	14.12	89.93	306.99	287.79	19.20	15.991	0			
6,300.00	6,300.00	6,284.41	6,273.18	14.02	14.38	89.93	315.70	296.19	19.51	16.179	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	Local Co-ordinate Reference:	Well Fighting Okra 18-19 Fed 82H
Project:	PBNM	TVD Reference:	1 @ 3393.10ft
Reference Site:	Dzurisin	MD Reference:	1 @ 3393.10ft
Site Error:	0.00	North Reference:	Grid
Reference Well:	Fighting Okra 18-19 Fed 82H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000 US Production
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

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	Risked Separation Factor	Probability of Collision	Warning	
6,400.00	6,400.00	6,384.03	6,372.43	14.25	14.63	89.93	324.42	304.59	19.83	16.360	0			
6,500.00	6,500.00	6,483.65	6,471.67	14.47	14.89	89.93	333.13	312.99	20.15	16.535	0			
6,600.00	6,600.00	6,583.27	6,570.91	14.70	15.15	89.94	341.85	321.38	20.46	16.705	0			
6,700.00	6,700.00	6,682.89	6,670.15	14.92	15.41	89.94	350.56	329.78	20.78	16.869	0			
6,800.00	6,800.00	6,782.51	6,769.39	15.15	15.67	89.94	359.28	338.18	21.10	17.029	0			
6,900.00	6,900.00	6,882.13	6,868.63	15.37	15.93	89.94	368.00	346.58	21.42	17.183	0			
7,000.00	7,000.00	6,981.75	6,967.87	15.59	16.19	89.94	376.71	354.98	21.73	17.333	0			
7,100.00	7,100.00	7,081.37	7,067.11	15.82	16.45	89.94	385.43	363.38	22.05	17.478	0			
7,200.00	7,200.00	7,180.99	7,166.35	16.04	16.71	89.94	394.14	371.77	22.37	17.620	0			
7,300.00	7,300.00	7,280.61	7,265.59	16.27	16.97	89.95	402.86	380.17	22.69	17.757	0			
7,400.00	7,400.00	7,380.23	7,364.83	16.49	17.23	89.95	411.57	388.57	23.01	17.890	0			
7,500.00	7,500.00	7,479.85	7,464.07	16.72	17.50	89.95	420.29	396.96	23.32	18.019	0			
7,600.00	7,600.00	7,579.47	7,563.31	16.94	17.76	89.95	429.00	405.36	23.64	18.145	0			
7,700.00	7,700.00	7,679.09	7,662.55	17.17	18.02	89.95	437.72	413.76	23.96	18.267	0			
7,800.00	7,800.00	7,778.71	7,761.79	17.39	18.28	89.95	446.44	422.16	24.28	18.386	0			
7,900.00	7,900.00	7,878.33	7,861.03	17.62	18.55	89.95	455.15	430.55	24.60	18.502	0			
8,000.00	8,000.00	7,977.95	7,960.27	17.84	18.81	89.95	463.87	438.95	24.92	18.615	0			
8,100.00	8,100.00	8,077.57	8,059.51	18.07	19.07	89.95	472.58	447.34	25.24	18.725	0			
8,200.00	8,200.00	8,177.18	8,158.75	18.29	19.34	89.95	481.30	455.74	25.56	18.832	0			
8,300.00	8,300.00	8,276.80	8,257.99	18.52	19.60	89.96	490.01	464.14	25.88	18.937	0			
8,400.00	8,400.00	8,376.42	8,357.23	18.74	19.87	89.96	498.73	472.53	26.20	19.038	0			
8,500.00	8,500.00	8,476.04	8,456.47	18.97	20.13	89.96	507.44	480.93	26.52	19.138	0			
8,600.00	8,600.00	8,575.66	8,555.71	19.19	20.40	89.96	516.16	489.32	26.84	19.234	0			
8,700.00	8,700.00	8,675.28	8,654.95	19.42	20.66	89.96	524.88	497.72	27.16	19.329	0			
8,800.00	8,800.00	8,774.90	8,754.19	19.64	20.93	89.96	533.59	506.12	27.48	19.421	0			
8,900.00	8,900.00	8,874.52	8,853.44	19.87	21.19	89.96	542.31	514.51	27.80	19.511	0			
9,000.00	9,000.00	8,974.14	8,952.68	20.09	21.46	89.96	551.02	522.91	28.12	19.599	0			
9,100.00	9,100.00	9,073.76	9,051.92	20.31	21.72	89.96	559.74	531.30	28.44	19.685	0			
9,200.00	9,200.00	9,173.38	9,151.16	20.54	21.99	89.96	568.45	539.70	28.76	19.769	0			
9,300.00	9,300.00	9,273.00	9,250.40	20.76	22.26	89.96	577.17	548.09	29.08	19.851	0			
9,400.00	9,400.00	9,372.62	9,349.64	20.99	22.52	89.96	585.88	556.49	29.40	19.931	0			
9,500.00	9,500.00	9,472.24	9,448.88	21.21	22.79	89.96	594.60	564.88	29.72	20.009	0			
9,600.00	9,600.00	9,571.86	9,548.12	21.44	23.06	89.96	603.32	573.28	30.04	20.086	0			
9,700.00	9,700.00	9,671.48	9,647.36	21.66	23.32	89.96	612.03	581.67	30.36	20.161	0			
9,800.00	9,800.00	9,771.10	9,746.60	21.89	23.59	89.96	620.75	590.07	30.68	20.234	0			
9,900.00	9,900.00	9,870.72	9,845.84	22.11	23.86	89.97	629.46	598.46	31.00	20.306	0			
10,000.00	10,000.00	9,970.34	9,945.08	22.34	24.12	89.97	638.18	606.86	31.32	20.376	0			
10,100.00	10,100.00	10,069.95	10,044.32	22.56	24.39	89.97	646.89	615.25	31.64	20.445	0			
10,200.00	10,200.00	10,169.57	10,143.56	22.79	24.66	89.97	655.61	623.65	31.96	20.512	0			
10,300.00	10,300.00	10,269.19	10,242.80	23.01	24.93	89.97	664.33	632.04	32.28	20.578	0			
10,400.00	10,400.00	10,368.81	10,342.04	23.24	25.19	89.97	673.04	640.44	32.60	20.643	0			
10,500.00	10,500.00	10,468.43	10,441.28	23.46	25.46	89.97	681.76	648.83	32.92	20.707	0			
10,600.00	10,600.00	10,568.05	10,540.52	23.69	25.73	89.97	690.47	657.23	33.25	20.769	0			
10,700.00	10,700.00	10,667.67	10,639.76	23.91	26.00	89.97	699.19	665.62	33.57	20.830	0			
10,800.00	10,800.00	10,767.29	10,739.00	24.14	26.27	89.97	707.90	674.01	33.89	20.889	0			
10,900.00	10,900.00	10,871.37	10,842.71	24.36	26.52	89.97	716.61	682.20	34.21	20.940	0			
11,000.00	11,000.00	10,977.77	10,948.79	24.59	26.75	89.97	724.04	689.52	34.52	20.972	0			
11,100.00	11,100.00	11,084.31	11,055.09	24.81	26.97	89.97	730.75	695.92	34.83	20.980	0			
11,200.00	11,200.00	11,190.97	11,161.57	25.04	27.18	89.97	736.52	701.39	35.14	20.963	0			
11,300.00	11,300.00	11,297.74	11,268.22	25.26	27.39	89.97	741.37	705.93	35.44	20.920	0			
11,400.00	11,400.00	11,404.59	11,374.99	25.48	27.59	89.97	745.29	709.55	35.74	20.854	0			
11,500.00	11,500.00	11,511.52	11,481.86	25.71	27.78	89.97	748.27	712.23	36.04	20.764	0			
11,600.00	11,600.00	11,618.49	11,588.82	25.93	27.97	89.97	750.32	713.99	36.33	20.650	0			
11,700.00	11,700.00	11,725.50	11,695.81	26.16	28.15	89.97	751.44	714.81	36.63	20.514	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	Local Co-ordinate Reference:	Well Fighting Okra 18-19 Fed 82H
Project:	PBNM	TVD Reference:	1 @ 3393.10ft
Reference Site:	Dzurisin	MD Reference:	1 @ 3393.10ft
Site Error:	0.00	North Reference:	Grid
Reference Well:	Fighting Okra 18-19 Fed 82H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000 US Production
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Reference														
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	
11,800.00	11,800.00	11,830.38	11,800.70	26.38	28.34	89.97	751.67	714.74	36.93	20.355	0			
11,900.00	11,900.00	11,930.38	11,900.70	26.61	28.52	89.97	751.67	714.44	37.23	20.190	0			
12,000.00	12,000.00	12,030.38	12,000.70	26.83	28.71	89.97	751.67	714.13	37.53	20.026	0			
12,100.00	12,100.00	12,130.38	12,100.70	27.06	28.91	89.97	751.67	713.83	37.84	19.864	0			
12,200.00	12,200.00	12,230.38	12,200.70	27.28	29.10	89.97	751.67	713.52	38.15	19.705	0			
12,276.60	12,276.60	12,306.98	12,277.30	27.45	29.25	89.97	751.67	713.29	38.38	19.585	0			
12,300.00	12,299.99	12,330.38	12,300.70	27.50	29.29	-90.94	751.67	713.23	38.45	19.551	0			
12,325.00	12,324.92	12,355.42	12,325.72	27.54	29.34	-91.02	751.71	713.20	38.51	19.520	0			
12,350.00	12,349.71	12,380.52	12,350.72	27.58	29.38	-91.09	751.76	713.19	38.57	19.490	0			
12,375.00	12,374.31	12,405.67	12,375.62	27.63	29.43	-91.15	751.83	713.20	38.63	19.461	0			
12,400.00	12,398.63	12,430.87	12,400.35	27.67	29.47	-91.22	751.93	713.23	38.69	19.433	0			
12,425.00	12,422.62	12,456.12	12,424.85	27.71	29.52	-91.28	752.04	713.29	38.75	19.405	0			
12,450.00	12,446.21	12,481.43	12,449.03	27.75	29.56	-91.34	752.18	713.36	38.81	19.379	0			
12,475.00	12,469.34	12,506.79	12,472.84	27.79	29.61	-91.39	752.34	713.46	38.88	19.352	0			
12,500.00	12,491.94	12,532.20	12,496.20	27.83	29.66	-91.44	752.51	713.57	38.94	19.326	0			
12,525.00	12,513.95	12,557.66	12,519.03	27.87	29.70	-91.49	752.71	713.71	39.00	19.300	0			
12,550.00	12,535.30	12,583.17	12,541.28	27.90	29.75	-91.53	752.92	713.85	39.06	19.274	0			
12,575.00	12,555.95	12,608.73	12,562.86	27.94	29.80	-91.57	753.15	714.02	39.13	19.247	0			
12,600.00	12,575.83	12,634.34	12,583.73	27.98	29.85	-91.60	753.40	714.20	39.20	19.219	0			
12,625.00	12,594.90	12,659.99	12,603.80	28.02	29.90	-91.63	753.66	714.39	39.27	19.190	0			
12,650.00	12,613.09	12,685.68	12,623.01	28.07	29.95	-91.66	753.94	714.59	39.35	19.160	0			
12,675.00	12,630.35	12,711.42	12,641.31	28.12	30.01	-91.68	754.24	714.81	39.43	19.128	0			
12,700.00	12,646.65	12,737.19	12,658.64	28.17	30.07	-91.69	754.54	715.03	39.52	19.094	0			
12,725.00	12,661.94	12,763.00	12,674.93	28.23	30.13	-91.70	754.86	715.26	39.61	19.058	0			
12,750.00	12,676.16	12,788.85	12,690.14	28.30	30.19	-91.71	755.20	715.49	39.71	19.019	0			
12,775.00	12,689.29	12,814.73	12,704.21	28.36	30.26	-91.71	755.54	715.73	39.81	18.978	0			
12,800.00	12,701.30	12,840.64	12,717.10	28.44	30.33	-91.71	755.89	715.97	39.92	18.934	0			
12,825.00	12,712.13	12,866.58	12,728.76	28.51	30.41	-91.70	756.25	716.21	40.04	18.887	0			
12,850.00	12,721.78	12,892.54	12,739.16	28.60	30.49	-91.68	756.62	716.45	40.17	18.837	0			
12,875.00	12,730.20	12,918.52	12,748.25	28.69	30.58	-91.67	756.99	716.69	40.30	18.784	0			
12,900.00	12,737.38	12,944.53	12,756.01	28.78	30.68	-91.64	757.37	716.93	40.44	18.727	0			
12,925.00	12,743.30	12,970.54	12,762.42	28.88	30.78	-91.62	757.76	717.17	40.59	18.668	0			
12,950.00	12,747.93	12,996.58	12,767.44	28.98	30.88	-91.58	758.14	717.40	40.75	18.606	0			
12,975.00	12,751.28	13,022.62	12,771.07	29.10	31.00	-91.55	758.53	717.62	40.91	18.541	0			
13,000.00	12,753.33	13,048.66	12,773.28	29.21	31.12	-91.51	758.92	717.84	41.08	18.473	0			
13,025.00	12,754.06	13,074.71	12,774.08	29.33	31.24	-91.46	759.31	718.05	41.26	18.403	0			
13,027.60	12,754.07	13,077.42	12,774.08	29.34	31.26	-91.46	759.35	718.07	41.28	18.396	0			
13,062.84	12,753.99	13,112.66	12,774.01	29.52	31.44	-91.45	759.90	718.35	41.54	18.292	0			
13,100.00	12,753.91	13,149.81	12,773.93	29.73	31.64	-91.45	760.48	718.63	41.85	18.173	0			
13,200.00	12,753.69	13,249.80	12,773.71	30.34	32.26	-91.45	762.03	719.28	42.75	17.826	0			
13,300.00	12,753.48	13,349.79	12,773.50	31.05	32.96	-91.45	763.58	719.81	43.78	17.442	0			
13,400.00	12,753.26	13,449.78	12,773.28	31.85	33.75	-91.44	765.14	720.20	44.93	17.028	0			
13,500.00	12,753.05	13,549.76	12,773.06	32.73	34.62	-91.44	766.69	720.49	46.20	16.594	0			
13,600.00	12,752.83	13,649.75	12,772.85	33.69	35.56	-91.44	768.25	720.67	47.58	16.146	0			
13,700.00	12,752.62	13,749.74	12,772.63	34.71	36.57	-91.44	769.80	720.75	49.05	15.693	0			
13,800.00	12,752.40	13,849.73	12,772.42	35.80	37.63	-91.43	771.35	720.74	50.61	15.240	0			
13,900.00	12,752.19	13,949.71	12,772.20	36.95	38.76	-91.43	772.91	720.65	52.26	14.791	0			
14,000.00	12,751.97	14,049.70	12,771.98	38.15	39.93	-91.43	774.46	720.49	53.97	14.350	0			
14,100.00	12,751.75	14,149.69	12,771.77	39.39	41.16	-91.42	776.02	720.27	55.75	13.919	0			
14,200.00	12,751.54	14,249.68	12,771.55	40.68	42.42	-91.42	777.57	719.98	57.59	13.501	0			
14,300.00	12,751.32	14,349.67	12,771.34	42.01	43.73	-91.42	779.13	719.64	59.49	13.097	0			
14,400.00	12,751.11	14,449.65	12,771.12	43.37	45.07	-91.42	780.68	719.24	61.43	12.707	0			
14,500.00	12,750.89	14,549.64	12,770.90	44.77	46.44	-91.41	782.23	718.81	63.43	12.333	0			
14,600.00	12,750.68	14,649.63	12,770.69	46.20	47.85	-91.41	783.79	718.33	65.46	11.974	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	Local Co-ordinate Reference:	Well Fighting Okra 18-19 Fed 82H
Project:	PBNM	TVD Reference:	1 @ 3393.10ft
Reference Site:	Dzurisin	MD Reference:	1 @ 3393.10ft
Site Error:	0.00	North Reference:	Grid
Reference Well:	Fighting Okra 18-19 Fed 82H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000 US Production
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

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	Risked Separation Factor	Probability of Collision	Warning	
14,700.00	12,750.46	14,749.62	12,770.47	47.65	49.28	-91.41	785.34	717.82	67.53	11.630	0			
14,800.00	12,750.25	14,849.61	12,770.26	49.13	50.74	-91.40	786.90	717.27	69.63	11.301	0			
14,900.00	12,750.03	14,949.59	12,770.04	50.63	52.22	-91.40	788.45	716.69	71.76	10.987	0			
15,000.00	12,749.81	15,049.58	12,769.82	52.15	53.72	-91.40	790.00	716.08	73.92	10.687	0			
15,100.00	12,749.60	15,149.57	12,769.61	53.69	55.24	-91.40	791.56	715.45	76.11	10.400	0			
15,200.00	12,749.38	15,249.56	12,769.39	55.24	56.78	-91.39	793.11	714.79	78.32	10.126	0			
15,300.00	12,749.17	15,349.55	12,769.18	56.82	58.34	-91.39	794.67	714.11	80.56	9.865	0			
15,400.00	12,748.95	15,449.53	12,768.96	58.40	59.91	-91.39	796.22	713.41	82.81	9.615	0			
15,500.00	12,748.74	15,549.52	12,768.74	60.00	61.49	-91.39	797.78	712.70	85.08	9.377	0			
15,600.00	12,748.52	15,649.51	12,768.53	61.61	63.09	-91.38	799.33	711.96	87.37	9.149	0			
15,700.00	12,748.30	15,749.50	12,768.31	63.24	64.70	-91.38	800.88	711.21	89.67	8.931	0			
15,800.00	12,748.09	15,849.49	12,768.10	64.87	66.32	-91.38	802.44	710.45	91.99	8.723	0			
15,900.00	12,747.87	15,949.47	12,767.88	66.51	67.95	-91.37	803.99	709.67	94.32	8.524	0			
16,000.00	12,747.66	16,049.46	12,767.66	68.17	69.59	-91.37	805.55	708.88	96.67	8.333	0			
16,100.00	12,747.44	16,149.45	12,767.45	69.83	71.24	-91.37	807.10	708.08	99.02	8.151	0			
16,200.00	12,747.23	16,249.44	12,767.23	71.49	72.90	-91.37	808.66	707.27	101.39	7.976	0			
16,300.00	12,747.01	16,349.42	12,767.02	73.17	74.56	-91.36	810.21	706.44	103.77	7.808	0			
16,400.00	12,746.80	16,449.41	12,766.80	74.85	76.24	-91.36	811.76	705.61	106.15	7.647	0			
16,500.00	12,746.58	16,549.40	12,766.58	76.54	77.92	-91.36	813.32	704.77	108.55	7.493	0			
16,600.00	12,746.36	16,649.39	12,766.37	78.23	79.60	-91.36	814.87	703.92	110.95	7.345	0			
16,700.00	12,746.15	16,749.38	12,766.15	79.93	81.30	-91.35	816.43	703.07	113.36	7.202	0			
16,800.00	12,745.93	16,849.36	12,765.94	81.64	82.99	-91.35	817.98	702.20	115.78	7.065	0			
16,900.00	12,745.72	16,949.35	12,765.72	83.35	84.70	-91.35	819.54	701.33	118.20	6.933	0			
17,000.00	12,745.50	17,049.34	12,765.50	85.06	86.40	-91.35	821.09	700.46	120.63	6.807	0			
17,100.00	12,745.29	17,149.33	12,765.29	86.78	88.12	-91.34	822.64	699.57	123.07	6.684	0			
17,200.00	12,745.07	17,249.32	12,765.07	88.51	89.83	-91.34	824.20	698.69	125.51	6.567	0			
17,300.00	12,744.86	17,349.30	12,764.86	90.23	91.56	-91.34	825.75	697.79	127.96	6.453	0			
17,400.00	12,744.64	17,449.29	12,764.64	91.96	93.28	-91.34	827.31	696.90	130.41	6.344	0			
17,500.00	12,744.42	17,549.28	12,764.43	93.70	95.01	-91.33	828.86	695.99	132.87	6.238	0			
17,600.00	12,744.21	17,649.27	12,764.21	95.43	96.74	-91.33	830.41	695.08	135.33	6.136	0			
17,700.00	12,743.99	17,749.26	12,763.99	97.17	98.48	-91.33	831.97	694.17	137.80	6.038	0			
17,800.00	12,743.78	17,849.24	12,763.78	98.92	100.22	-91.33	833.52	693.26	140.27	5.942	0			
17,900.00	12,743.56	17,949.23	12,763.56	100.66	101.96	-91.32	835.08	692.34	142.74	5.850	0			
18,000.00	12,743.35	18,049.22	12,763.35	102.41	103.70	-91.32	836.63	691.42	145.22	5.761	0			
18,100.00	12,743.13	18,149.21	12,763.13	104.16	105.45	-91.32	838.19	690.49	147.70	5.675	0			
18,200.00	12,742.91	18,249.20	12,762.91	105.92	107.20	-91.32	839.74	689.56	150.18	5.592	0			
18,300.00	12,742.70	18,349.18	12,762.70	107.67	108.95	-91.31	841.29	688.63	152.67	5.511	0			
18,400.00	12,742.48	18,449.17	12,762.48	109.43	110.71	-91.31	842.85	687.69	155.16	5.432	0			
18,500.00	12,742.27	18,549.16	12,762.27	111.19	112.47	-91.31	844.40	686.75	157.65	5.356	0			
18,600.00	12,742.05	18,649.15	12,762.05	112.95	114.22	-91.31	845.96	685.81	160.15	5.282	0			
18,700.00	12,741.84	18,749.13	12,761.83	114.71	115.99	-91.30	847.51	684.87	162.64	5.211	0			
18,800.00	12,741.62	18,849.12	12,761.62	116.48	117.75	-91.30	849.07	683.92	165.14	5.141	0			
18,900.00	12,741.41	18,949.11	12,761.40	118.24	119.51	-91.30	850.62	682.97	167.65	5.074	0			
19,000.00	12,741.19	19,049.10	12,761.19	120.01	121.28	-91.30	852.17	682.02	170.15	5.008	0			
19,100.00	12,740.97	19,149.09	12,760.97	121.78	123.05	-91.29	853.73	681.07	172.66	4.945	0			
19,200.00	12,740.76	19,249.07	12,760.75	123.55	124.82	-91.29	855.28	680.12	175.17	4.883	0			
19,300.00	12,740.54	19,349.06	12,760.54	125.33	126.59	-91.29	856.84	679.16	177.68	4.822	0			
19,400.00	12,740.33	19,449.05	12,760.32	127.10	128.36	-91.29	858.39	678.20	180.19	4.764	0			
19,500.00	12,740.11	19,549.04	12,760.11	128.87	130.14	-91.28	859.95	677.24	182.70	4.707	0			
19,600.00	12,739.90	19,649.03	12,759.89	130.65	131.91	-91.28	861.50	676.28	185.22	4.651	0			
19,700.00	12,739.68	19,749.01	12,759.67	132.43	133.69	-91.28	863.05	675.32	187.74	4.597	0			
19,800.00	12,739.47	19,849.00	12,759.46	134.21	135.47	-91.28	864.61	674.35	190.26	4.544	0			
19,900.00	12,739.25	19,948.99	12,759.24	135.99	137.25	-91.27	866.16	673.38	192.78	4.493	0			
20,000.00	12,739.03	20,048.98	12,759.03	137.77	139.03	-91.27	867.72	672.42	195.30	4.443	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	Local Co-ordinate Reference:	Well Fighting Okra 18-19 Fed 82H
Project:	PBNM	TVD Reference:	1 @ 3393.10ft
Reference Site:	Dzurisin	MD Reference:	1 @ 3393.10ft
Site Error:	0.00	North Reference:	Grid
Reference Well:	Fighting Okra 18-19 Fed 82H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000 US Production
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Offset Design													Dzurisin - Fighting Okra 18-19 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			
20,100.00	12,738.82	20,148.97	12,758.81	139.55	140.81	-91.27	869.27	671.45	197.83	4.394	0					
20,200.00	12,738.60	20,248.95	12,758.59	141.33	142.60	-91.27	870.83	670.48	200.35	4.347	0					
20,300.00	12,738.39	20,348.94	12,758.38	143.12	144.38	-91.27	872.38	669.50	202.88	4.300	0					
20,400.00	12,738.17	20,448.93	12,758.16	144.90	146.16	-91.26	873.93	668.53	205.40	4.255	0					
20,500.00	12,737.96	20,548.92	12,757.95	146.69	147.95	-91.26	875.49	667.56	207.93	4.210	0					
20,600.00	12,737.74	20,648.91	12,757.73	148.47	149.74	-91.26	877.04	666.58	210.46	4.167	0					
20,700.00	12,737.53	20,748.89	12,757.51	150.26	151.53	-91.26	878.60	665.60	213.00	4.125	0					
20,800.00	12,737.31	20,848.88	12,757.30	152.05	153.31	-91.25	880.15	664.62	215.53	4.084	0					
20,900.00	12,737.09	20,948.87	12,757.08	153.84	155.10	-91.25	881.71	663.65	218.06	4.043	0					
21,000.00	12,736.88	21,048.86	12,756.87	155.63	156.89	-91.25	883.26	662.67	220.60	4.004	0					
21,100.00	12,736.66	21,148.84	12,756.65	157.42	158.68	-91.25	884.81	661.68	223.13	3.965	0					
21,200.00	12,736.45	21,248.83	12,756.43	159.21	160.48	-91.25	886.37	660.70	225.67	3.928	0					
21,300.00	12,736.23	21,348.82	12,756.22	161.00	162.27	-91.24	887.92	659.72	228.20	3.891	0					
21,400.00	12,736.02	21,448.81	12,756.00	162.79	164.06	-91.24	889.48	658.74	230.74	3.855	0					
21,500.00	12,735.80	21,548.80	12,755.79	164.59	165.86	-91.24	891.03	657.75	233.28	3.820	0					
21,600.00	12,735.58	21,648.78	12,755.57	166.38	167.65	-91.24	892.59	656.77	235.82	3.785	0					
21,700.00	12,735.37	21,748.77	12,755.35	168.17	169.45	-91.23	894.14	655.78	238.36	3.751	0					
21,800.00	12,735.15	21,848.76	12,755.14	169.97	171.24	-91.23	895.70	654.79	240.90	3.718	0					
21,900.00	12,734.94	21,948.75	12,754.92	171.76	173.04	-91.23	897.25	653.80	243.44	3.686	0					
22,000.00	12,734.72	22,048.74	12,754.71	173.56	174.84	-91.23	898.80	652.82	245.99	3.654	0					
22,100.00	12,734.51	22,148.72	12,754.49	175.35	176.63	-91.23	900.36	651.83	248.53	3.623	0					
22,200.00	12,734.29	22,248.71	12,754.27	177.15	178.43	-91.22	901.91	650.84	251.07	3.592	0					
22,294.10	12,734.09	22,342.79	12,754.07	178.84	180.11	-91.22	903.37	649.91	253.46	3.564	0					
22,300.00	12,734.08	22,348.69	12,754.06	178.94	180.21	-91.22	903.47	649.87	253.60	3.563	0					
22,335.63	12,734.00	22,376.22	12,754.00	179.46	180.65	-91.22	904.06	649.73	254.32	3.555	0	SF				

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

Devon Energy

Anticollision Risk Report

Company:	WESTERN DIVISION	Local Co-ordinate Reference:	Well Fighting Okra 18-19 Fed 82H
Project:	PBNM	TVD Reference:	1 @ 3393.10ft
Reference Site:	Dzurisin	MD Reference:	1 @ 3393.10ft
Site Error:	0.00	North Reference:	Grid
Reference Well:	Fighting Okra 18-19 Fed 82H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000 US Production
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Offset Design													Dzurisin - Jayhawk 7-6 Fed 81H - 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				
0.00	0.00	18.80	18.80	0.00	0.02	-31.35	58.23					0				
100.00	100.00	118.80	118.80	0.09	0.13	-31.35	58.23	58.07	0.15	377.170		0				
200.00	200.00	218.80	218.80	0.31	0.35	-31.35	58.23	57.76	0.47	123.817		0				
300.00	300.00	318.80	318.80	0.54	0.58	-31.35	58.23	57.44	0.79	73.916		0				
400.00	400.00	418.80	418.80	0.76	0.80	-31.35	58.23	57.12	1.11	52.673		0				
500.00	500.00	518.80	518.80	0.99	1.03	-31.35	58.23	56.81	1.42	40.913		0				
600.00	600.00	618.80	618.80	1.21	1.25	-31.35	58.23	56.49	1.74	33.444		0				
700.00	700.00	718.80	718.80	1.43	1.48	-31.35	58.23	56.17	2.06	28.282		0				
800.00	800.00	818.80	818.80	1.66	1.70	-31.35	58.23	55.85	2.38	24.500		0				
900.00	900.00	918.80	918.80	1.88	1.93	-31.35	58.23	55.53	2.69	21.610		0				
1,000.00	1,000.00	1,018.80	1,018.80	2.11	2.15	-31.35	58.23	55.22	3.01	19.330		0				
1,100.00	1,100.00	1,118.80	1,118.80	2.33	2.38	-31.35	58.23	54.90	3.33	17.485		0				
1,200.00	1,200.00	1,218.80	1,218.80	2.56	2.60	-31.35	58.23	54.58	3.65	15.961		0				
1,300.00	1,300.00	1,318.80	1,318.80	2.78	2.83	-31.35	58.23	54.26	3.97	14.682		0				
1,400.00	1,400.00	1,418.80	1,418.80	3.01	3.05	-31.35	58.23	53.94	4.28	13.593		0				
1,500.00	1,500.00	1,518.80	1,518.80	3.23	3.27	-31.35	58.23	53.63	4.60	12.654		0				
1,600.00	1,600.00	1,618.80	1,618.80	3.46	3.50	-31.35	58.23	53.31	4.92	11.836		0				
1,700.00	1,700.00	1,718.80	1,718.80	3.68	3.72	-31.35	58.23	52.99	5.24	11.118		0				
1,800.00	1,800.00	1,818.80	1,818.80	3.91	3.95	-31.35	58.23	52.67	5.56	10.482		0				
1,900.00	1,900.00	1,918.80	1,918.80	4.13	4.17	-31.35	58.23	52.36	5.87	9.914		0				
1,958.95	1,958.95	1,977.75	1,977.75	4.26	4.31	-31.35	58.23	52.17	6.06	9.608		0	CC			
2,000.00	2,000.00	2,018.70	2,018.70	4.36	4.40	-31.37	58.24	52.06	6.19	9.411		0	ES			
2,100.00	2,100.00	2,118.16	2,118.15	4.58	4.60	-32.36	58.88	52.38	6.49	9.066		0				
2,200.00	2,200.00	2,217.54	2,217.49	4.81	4.80	-34.69	60.49	53.70	6.79	8.906		0	SF			
2,300.00	2,300.00	2,316.80	2,316.64	5.03	5.01	-38.14	63.26	56.17	7.09	8.921		0				
2,400.00	2,400.00	2,415.87	2,415.50	5.26	5.21	-42.38	67.40	60.01	7.39	9.119		0				
2,500.00	2,500.00	2,514.82	2,514.13	5.48	5.43	-47.03	73.11	65.42	7.69	9.505		0				
2,600.00	2,600.00	2,614.44	2,613.37	5.71	5.65	-51.30	79.72	71.72	8.00	9.968		0				
2,700.00	2,700.00	2,714.06	2,712.61	5.93	5.87	-54.90	86.70	78.40	8.30	10.440		0				
2,800.00	2,800.00	2,813.68	2,811.85	6.15	6.10	-57.95	93.97	85.36	8.61	10.910		0				
2,900.00	2,900.00	2,913.30	2,911.09	6.38	6.33	-60.56	101.47	92.55	8.92	11.373		0				
3,000.00	3,000.00	3,012.92	3,010.33	6.60	6.57	-62.81	109.15	99.92	9.23	11.823		0				
3,100.00	3,100.00	3,112.54	3,109.57	6.83	6.81	-64.76	116.98	107.44	9.54	12.258		0				
3,200.00	3,200.00	3,212.16	3,208.81	7.05	7.05	-66.46	124.92	115.07	9.85	12.677		0				
3,300.00	3,300.00	3,311.78	3,308.05	7.28	7.29	-67.96	132.96	122.80	10.17	13.079		0				
3,400.00	3,400.00	3,411.40	3,407.29	7.50	7.54	-69.29	141.08	130.60	10.48	13.463		0				
3,500.00	3,500.00	3,511.02	3,506.53	7.73	7.79	-70.47	149.27	138.48	10.79	13.831		0				
3,600.00	3,600.00	3,610.63	3,605.77	7.95	8.04	-71.53	157.52	146.41	11.11	14.183		0				
3,700.00	3,700.00	3,710.25	3,705.01	8.18	8.29	-72.48	165.81	154.39	11.42	14.519		0				
3,800.00	3,800.00	3,809.87	3,804.25	8.40	8.54	-73.35	174.14	162.41	11.73	14.840		0				
3,900.00	3,900.00	3,909.49	3,903.49	8.63	8.79	-74.13	182.51	170.46	12.05	15.147		0				
4,000.00	4,000.00	4,009.11	4,002.74	8.85	9.05	-74.85	190.91	178.55	12.36	15.440		0				
4,100.00	4,100.00	4,108.73	4,101.98	9.08	9.30	-75.50	199.34	186.66	12.68	15.720		0				
4,200.00	4,200.00	4,208.35	4,201.22	9.30	9.56	-76.10	207.79	194.80	13.00	15.988		0				
4,300.00	4,300.00	4,307.97	4,300.46	9.53	9.82	-76.66	216.26	202.95	13.31	16.245		0				
4,400.00	4,400.00	4,407.59	4,399.70	9.75	10.08	-77.17	224.76	211.13	13.63	16.490		0				
4,500.00	4,500.00	4,507.21	4,498.94	9.98	10.33	-77.64	233.26	219.32	13.95	16.725		0				
4,600.00	4,600.00	4,606.83	4,598.18	10.20	10.59	-78.09	241.78	227.52	14.26	16.951		0				
4,700.00	4,700.00	4,706.45	4,697.42	10.43	10.86	-78.50	250.32	235.74	14.58	17.167		0				
4,800.00	4,800.00	4,806.07	4,796.66	10.65	11.12	-78.88	258.87	243.97	14.90	17.375		0				
4,900.00	4,900.00	4,905.69	4,895.90	10.87	11.38	-79.24	267.43	252.21	15.22	17.575		0				
5,000.00	5,000.00	5,005.31	4,995.14	11.10	11.64	-79.58	276.00	260.46	15.53	17.766		0				
5,100.00	5,100.00	5,104.93	5,094.38	11.32	11.90	-79.90	284.57	268.72	15.85	17.951		0				
5,200.00	5,200.00	5,204.55	5,193.62	11.55	12.17	-80.20	293.16	276.99	16.17	18.128		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	Local Co-ordinate Reference:	Well Fighting Okra 18-19 Fed 82H
Project:	PBNM	TVD Reference:	1 @ 3393.10ft
Reference Site:	Dzurisin	MD Reference:	1 @ 3393.10ft
Site Error:	0.00	North Reference:	Grid
Reference Well:	Fighting Okra 18-19 Fed 82H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000 US Production
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Offset Design													Dzurisin - Jayhawk 7-6 Fed 81H - Wellbore #1 - Plan 1		Offset Site Error:	0.00 ft
Reference		Offset		Semi Major Axis		Distance							Offset Well Error:	0.00 ft		
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	Riskd Separation Factor	Probability of Collision	Warning			
5,300.00	5,300.00	5,304.17	5,292.86	11.77	12.43	-80.48	301.75	285.26	16.49	18.299	0					
5,400.00	5,400.00	5,403.78	5,392.10	12.00	12.70	-80.74	310.35	293.54	16.81	18.464	0					
5,500.00	5,500.00	5,503.40	5,491.34	12.22	12.96	-81.00	318.96	301.83	17.13	18.622	0					
5,600.00	5,600.00	5,603.02	5,590.58	12.45	13.23	-81.23	327.57	310.12	17.45	18.775	0					
5,700.00	5,700.00	5,702.64	5,689.82	12.67	13.49	-81.46	336.19	318.42	17.77	18.923	0					
5,800.00	5,800.00	5,802.26	5,789.06	12.90	13.76	-81.68	344.81	326.72	18.09	19.066	0					
5,900.00	5,900.00	5,901.88	5,888.30	13.12	14.02	-81.88	353.43	335.03	18.40	19.203	0					
6,000.00	6,000.00	6,001.50	5,987.54	13.35	14.29	-82.08	362.07	343.34	18.72	19.337	0					
6,100.00	6,100.00	6,101.12	6,086.78	13.57	14.56	-82.26	370.70	351.66	19.04	19.465	0					
6,200.00	6,200.00	6,200.74	6,186.02	13.80	14.82	-82.44	379.34	359.97	19.36	19.590	0					
6,300.00	6,300.00	6,300.36	6,285.26	14.02	15.09	-82.61	387.98	368.30	19.68	19.711	0					
6,400.00	6,400.00	6,399.98	6,384.50	14.25	15.36	-82.77	396.63	376.62	20.00	19.827	0					
6,500.00	6,500.00	6,499.60	6,483.75	14.47	15.62	-82.92	405.27	384.95	20.32	19.941	0					
6,600.00	6,600.00	6,599.22	6,582.99	14.70	15.89	-83.07	413.93	393.28	20.64	20.050	0					
6,700.00	6,700.00	6,698.84	6,682.23	14.92	16.16	-83.22	422.58	401.61	20.96	20.157	0					
6,800.00	6,800.00	6,798.46	6,781.47	15.15	16.43	-83.35	431.24	409.95	21.28	20.260	0					
6,900.00	6,900.00	6,898.08	6,880.71	15.37	16.70	-83.48	439.89	418.29	21.61	20.360	0					
7,000.00	7,000.00	6,997.70	6,979.95	15.59	16.96	-83.61	448.55	426.63	21.93	20.458	0					
7,100.00	7,100.00	7,097.32	7,079.19	15.82	17.23	-83.73	457.22	434.97	22.25	20.552	0					
7,200.00	7,200.00	7,196.94	7,178.43	16.04	17.50	-83.85	465.88	443.31	22.57	20.644	0					
7,300.00	7,300.00	7,296.55	7,277.67	16.27	17.77	-83.96	474.55	451.66	22.89	20.733	0					
7,400.00	7,400.00	7,396.17	7,376.91	16.49	18.04	-84.07	483.22	460.01	23.21	20.820	0					
7,500.00	7,500.00	7,495.79	7,476.15	16.72	18.31	-84.18	491.89	468.36	23.53	20.905	0					
7,600.00	7,600.00	7,595.41	7,575.39	16.94	18.58	-84.28	500.56	476.71	23.85	20.987	0					
7,700.00	7,700.00	7,695.03	7,674.63	17.17	18.85	-84.37	509.23	485.06	24.17	21.067	0					
7,800.00	7,800.00	7,794.65	7,773.87	17.39	19.12	-84.47	517.91	493.41	24.49	21.145	0					
7,900.00	7,900.00	7,894.27	7,873.11	17.62	19.39	-84.56	526.58	501.77	24.81	21.221	0					
8,000.00	8,000.00	7,993.89	7,972.35	17.84	19.66	-84.65	535.26	510.12	25.14	21.295	0					
8,100.00	8,100.00	8,093.51	8,071.59	18.07	19.93	-84.73	543.94	518.48	25.46	21.367	0					
8,200.00	8,200.00	8,193.13	8,170.83	18.29	20.20	-84.82	552.62	526.84	25.78	21.437	0					
8,300.00	8,300.00	8,292.75	8,270.07	18.52	20.47	-84.90	561.30	535.20	26.10	21.506	0					
8,400.00	8,400.00	8,392.37	8,369.31	18.74	20.74	-84.98	569.98	543.56	26.42	21.573	0					
8,500.00	8,500.00	8,491.99	8,468.55	18.97	21.01	-85.05	578.66	551.92	26.74	21.638	0					
8,600.00	8,600.00	8,591.61	8,567.79	19.19	21.28	-85.12	587.35	560.28	27.06	21.702	0					
8,700.00	8,700.00	8,691.23	8,667.03	19.42	21.55	-85.20	596.03	568.65	27.39	21.764	0					
8,800.00	8,800.00	8,790.85	8,766.27	19.64	21.82	-85.26	604.72	577.01	27.71	21.825	0					
8,900.00	8,900.00	8,890.47	8,865.51	19.87	22.09	-85.33	613.40	585.38	28.03	21.885	0					
9,000.00	9,000.00	8,990.09	8,964.75	20.09	22.36	-85.40	622.09	593.74	28.35	21.943	0					
9,100.00	9,100.00	9,089.71	9,064.00	20.31	22.63	-85.46	630.78	602.11	28.67	21.999	0					
9,200.00	9,200.00	9,189.32	9,163.24	20.54	22.90	-85.52	639.47	610.47	28.99	22.055	0					
9,300.00	9,300.00	9,288.94	9,262.48	20.76	23.17	-85.58	648.16	618.84	29.32	22.109	0					
9,400.00	9,400.00	9,388.56	9,361.72	20.99	23.45	-85.64	656.85	627.21	29.64	22.162	0					
9,500.00	9,500.00	9,488.18	9,460.96	21.21	23.72	-85.70	665.54	635.58	29.96	22.214	0					
9,600.00	9,600.00	9,587.80	9,560.20	21.44	23.99	-85.75	674.23	643.95	30.28	22.265	0					
9,700.00	9,700.00	9,687.42	9,659.44	21.66	24.26	-85.81	682.92	652.32	30.60	22.315	0					
9,800.00	9,800.00	9,787.04	9,758.68	21.89	24.53	-85.86	691.62	660.69	30.93	22.363	0					
9,900.00	9,900.00	9,886.66	9,857.92	22.11	24.80	-85.91	700.31	669.06	31.25	22.411	0					
10,000.00	10,000.00	9,986.28	9,957.16	22.34	25.07	-85.96	709.00	677.43	31.57	22.458	0					
10,100.00	10,100.00	10,085.90	10,056.40	22.56	25.34	-86.01	717.70	685.80	31.89	22.504	0					
10,200.00	10,200.00	10,185.52	10,155.64	22.79	25.62	-86.06	726.39	694.18	32.21	22.548	0					
10,300.00	10,300.00	10,285.14	10,254.88	23.01	25.89	-86.11	735.09	702.55	32.54	22.592	0					
10,400.00	10,400.00	10,384.76	10,354.12	23.24	26.16	-86.15	743.78	710.92	32.86	22.635	0					
10,500.00	10,500.00	10,484.38	10,453.36	23.46	26.43	-86.20	752.48	719.30	33.18	22.678	0					
10,600.00	10,600.00	10,584.00	10,552.60	23.69	26.70	-86.24	761.18	727.67	33.50	22.719	0					

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

Devon Energy

Anticollision Risk Report

Company:	WESTERN DIVISION	Local Co-ordinate Reference:	Well Fighting Okra 18-19 Fed 82H
Project:	PBNM	TVD Reference:	1 @ 3393.10ft
Reference Site:	Dzurisin	MD Reference:	1 @ 3393.10ft
Site Error:	0.00	North Reference:	Grid
Reference Well:	Fighting Okra 18-19 Fed 82H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000 US Production
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Dzurisin - Jayhawk 7-6 Fed 81H - Wellbore #1 - Plan 1														
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				
10,700.00	10,700.00	10,683.62	10,651.84	23.91	26.97	-86.28	769.87	736.05	33.83	22.760	0			
10,800.00	10,800.00	10,783.24	10,751.08	24.14	27.24	-86.32	778.57	744.42	34.15	22.799	0			
10,900.00	10,900.00	10,882.86	10,850.32	24.36	27.52	-86.36	787.27	752.80	34.47	22.838	0			
11,000.00	11,000.00	10,982.48	10,949.56	24.59	27.79	-86.40	795.97	761.17	34.79	22.877	0			
11,100.00	11,100.00	11,082.09	11,048.80	24.81	28.06	-86.44	804.67	769.55	35.12	22.914	0			
11,200.00	11,200.00	11,181.71	11,148.04	25.04	28.33	-86.48	813.37	777.93	35.44	22.951	0			
11,300.00	11,300.00	11,281.33	11,247.28	25.26	28.60	-86.52	822.06	786.30	35.76	22.988	0			
11,400.00	11,400.00	11,380.95	11,346.52	25.48	28.88	-86.56	830.76	794.68	36.08	23.023	0			
11,500.00	11,500.00	11,480.57	11,445.76	25.71	29.15	-86.59	839.46	803.06	36.41	23.058	0			
11,600.00	11,600.00	11,580.19	11,545.00	25.93	29.42	-86.63	848.16	811.44	36.73	23.092	0			
11,700.00	11,700.00	11,679.81	11,644.25	26.16	29.69	-86.66	856.87	819.81	37.05	23.126	0			
11,800.00	11,800.00	11,779.43	11,743.49	26.38	29.96	-86.69	865.57	828.19	37.37	23.159	0			
11,900.00	11,900.00	11,879.05	11,842.73	26.61	30.24	-86.73	874.27	836.57	37.70	23.192	0			
12,000.00	12,000.00	11,978.67	11,941.97	26.83	30.51	-86.76	882.97	844.95	38.02	23.224	0			
12,100.00	12,100.00	12,078.29	12,041.21	27.06	30.78	-86.79	891.67	853.33	38.34	23.255	0			
12,200.00	12,200.00	12,177.91	12,140.45	27.28	31.05	-86.82	900.37	861.71	38.67	23.286	0			
12,276.60	12,276.60	12,254.22	12,216.47	27.45	31.26	-86.85	907.04	868.13	38.91	23.309	0			
12,300.00	12,299.99	12,277.52	12,239.68	27.50	31.33	92.06	909.10	870.11	38.98	23.320	0			
12,325.00	12,324.92	12,302.35	12,264.42	27.54	31.39	91.90	911.34	872.29	39.05	23.335	0			
12,350.00	12,349.71	12,325.40	12,287.38	27.58	31.46	91.80	913.64	874.52	39.12	23.354	0			
12,375.00	12,374.31	12,347.74	12,309.62	27.63	31.51	91.79	916.05	876.86	39.19	23.377	0			
12,400.00	12,398.63	12,367.91	12,329.66	27.67	31.56	91.84	918.63	879.39	39.24	23.409	0			
12,425.00	12,422.62	12,387.12	12,348.68	27.71	31.61	91.96	921.43	882.13	39.30	23.446	0			
12,450.00	12,446.21	12,405.18	12,366.47	27.75	31.66	92.11	924.48	885.13	39.35	23.492	0			
12,475.00	12,469.34	12,421.96	12,382.89	27.79	31.70	92.27	927.84	888.43	39.41	23.546	0			
12,500.00	12,491.94	12,437.36	12,397.87	27.83	31.73	92.40	931.56	892.10	39.46	23.610	0			
12,525.00	12,513.95	12,450.00	12,410.07	27.87	31.77	92.42	935.69	896.19	39.50	23.688	0			
12,550.00	12,535.30	12,463.91	12,423.40	27.90	31.80	92.48	940.27	900.71	39.55	23.773	0			
12,575.00	12,555.95	12,475.00	12,433.93	27.94	31.83	92.39	945.34	905.74	39.60	23.874	0			
12,600.00	12,575.83	12,484.83	12,443.22	27.98	31.85	92.21	950.93	911.29	39.64	23.989	0			
12,625.00	12,594.90	12,493.29	12,451.14	28.02	31.87	91.90	957.06	917.38	39.68	24.117	0			
12,650.00	12,613.09	12,500.00	12,457.40	28.07	31.88	91.43	963.76	924.03	39.73	24.260	0			
12,675.00	12,630.35	12,506.52	12,463.44	28.12	31.90	90.89	971.01	931.23	39.77	24.414	0			
12,700.00	12,646.65	12,511.44	12,467.99	28.17	31.91	90.19	978.81	938.99	39.82	24.583	0			
12,725.00	12,661.94	12,515.34	12,471.57	28.23	31.92	89.36	987.16	947.29	39.86	24.763	0			
12,750.00	12,676.16	12,518.28	12,474.26	28.30	31.93	88.40	996.03	956.12	39.91	24.954	0			
12,775.00	12,689.29	12,525.00	12,480.39	28.36	31.94	87.60	1,005.42	965.43	39.99	25.143	0			
12,800.00	12,701.30	12,525.00	12,480.39	28.44	31.94	86.32	1,015.25	975.21	40.04	25.357	0			
12,825.00	12,712.13	12,525.00	12,480.39	28.51	31.94	84.97	1,025.52	985.43	40.10	25.577	0			
12,850.00	12,721.78	12,525.00	12,480.39	28.60	31.94	83.56	1,036.19	996.03	40.16	25.801	0			
12,875.00	12,730.20	12,525.00	12,480.39	28.69	31.94	82.10	1,047.22	1,006.98	40.23	26.029	0			
12,900.00	12,737.38	12,525.00	12,480.39	28.78	31.94	80.59	1,058.56	1,018.25	40.31	26.260	0			
12,925.00	12,743.30	12,517.60	12,473.64	28.88	31.93	78.60	1,070.12	1,029.76	40.36	26.514	0			
12,950.00	12,747.93	12,515.13	12,471.37	28.98	31.92	76.89	1,081.93	1,041.49	40.44	26.754	0			
12,975.00	12,751.28	12,512.20	12,468.68	29.10	31.91	75.13	1,093.91	1,053.39	40.52	26.995	0			
13,000.00	12,753.33	12,508.84	12,465.59	29.21	31.91	73.34	1,106.01	1,065.40	40.61	27.235	0			
13,025.00	12,754.06	12,500.00	12,457.40	29.33	31.88	71.27	1,118.22	1,077.55	40.68	27.491	0			
13,027.60	12,754.07	12,500.00	12,457.40	29.34	31.88	71.11	1,119.49	1,078.80	40.69	27.515	0			
13,062.84	12,753.99	12,500.00	12,457.40	29.52	31.88	71.11	1,137.06	1,096.22	40.85	27.838	0			
13,100.00	12,753.91	12,500.00	12,457.40	29.73	31.88	71.11	1,156.47	1,115.45	41.01	28.197	0			
13,200.00	12,753.69	12,475.00	12,433.93	30.34	31.83	69.77	1,212.44	1,171.09	41.35	29.324	0			
13,300.00	12,753.48	12,475.00	12,433.93	31.05	31.83	69.77	1,273.51	1,231.73	41.78	30.483	0			
13,400.00	12,753.26	12,459.81	12,419.48	31.85	31.79	68.95	1,339.00	1,296.88	42.12	31.792	0			
13,500.00	12,753.05	12,450.00	12,410.07	32.73	31.77	68.43	1,408.41	1,365.96	42.45	33.176	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	Local Co-ordinate Reference:	Well Fighting Okra 18-19 Fed 82H
Project:	PBNM	TVD Reference:	1 @ 3393.10ft
Reference Site:	Dzurisin	MD Reference:	1 @ 3393.10ft
Site Error:	0.00	North Reference:	Grid
Reference Well:	Fighting Okra 18-19 Fed 82H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000 US Production
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft
Dzurisin - Jayhawk 7-6 Fed 81H - Wellbore #1 - Plan 1													Offset Well Error:	0.00 ft
Survey Program: 0-MWD														
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	
13,600.00	12,752.83	12,450.00	12,410.07	33.69	31.77	68.43	1,481.22	1,438.42	42.79	34.613	0			
13,700.00	12,752.62	12,436.98	12,397.49	34.71	31.73	67.73	1,556.85	1,513.80	43.05	36.160	0			
13,800.00	12,752.40	12,425.00	12,385.86	35.80	31.70	67.08	1,635.09	1,591.80	43.29	37.769	0			
13,900.00	12,752.19	12,425.00	12,385.86	36.95	31.70	67.08	1,715.45	1,671.90	43.54	39.396	0			
14,000.00	12,751.97	12,425.00	12,385.86	38.15	31.70	67.08	1,797.77	1,754.00	43.77	41.075	0			
14,100.00	12,751.75	12,425.00	12,385.86	39.39	31.70	67.08	1,881.81	1,837.84	43.97	42.798	0			
14,200.00	12,751.54	12,412.18	12,373.33	40.68	31.67	66.40	1,967.15	1,923.03	44.12	44.591	0			
14,300.00	12,751.32	12,400.00	12,361.38	42.01	31.64	65.75	2,053.94	2,009.70	44.25	46.419	0			
14,400.00	12,751.11	12,400.00	12,361.38	43.37	31.64	65.75	2,141.73	2,097.33	44.40	48.238	0			
14,500.00	12,750.89	12,400.00	12,361.38	44.77	31.64	65.75	2,230.54	2,186.01	44.54	50.084	0			
14,600.00	12,750.68	12,400.00	12,361.38	46.20	31.64	65.75	2,320.27	2,275.60	44.66	51.953	0			
14,700.00	12,750.46	12,400.00	12,361.38	47.65	31.64	65.75	2,410.80	2,366.02	44.78	53.842	0			
14,800.00	12,750.25	12,400.00	12,361.38	49.13	31.64	65.75	2,502.05	2,457.17	44.88	55.749	0			
14,900.00	12,750.03	12,400.00	12,361.38	50.63	31.64	65.75	2,593.95	2,548.97	44.98	57.672	0			
15,000.00	12,749.81	12,389.26	12,350.80	52.15	31.62	65.17	2,686.29	2,641.25	45.05	59.634	0			
15,100.00	12,749.60	12,387.22	12,348.78	53.69	31.61	65.07	2,779.24	2,734.11	45.13	61.587	0			
15,200.00	12,749.38	12,375.00	12,336.69	55.24	31.58	64.42	2,872.77	2,827.58	45.18	63.582	0			
15,300.00	12,749.17	12,375.00	12,336.69	56.82	31.58	64.42	2,966.56	2,921.30	45.26	65.548	0			
15,400.00	12,748.95	12,375.00	12,336.69	58.40	31.58	64.42	3,060.74	3,015.41	45.33	67.522	0			
15,500.00	12,748.74	12,375.00	12,336.69	60.00	31.58	64.42	3,155.28	3,109.88	45.40	69.503	0			
15,600.00	12,748.52	12,375.00	12,336.69	61.61	31.58	64.42	3,250.15	3,204.68	45.46	71.490	0			
15,700.00	12,748.30	12,375.00	12,336.69	63.24	31.58	64.42	3,345.31	3,299.79	45.52	73.483	0			
15,800.00	12,748.09	12,375.00	12,336.69	64.87	31.58	64.42	3,440.75	3,395.17	45.58	75.481	0			
15,900.00	12,747.87	12,375.00	12,336.69	66.51	31.58	64.42	3,536.45	3,490.80	45.64	77.482	0			
16,000.00	12,747.66	12,375.00	12,336.69	68.17	31.58	64.42	3,632.37	3,586.67	45.70	79.487	0			
16,100.00	12,747.44	12,375.00	12,336.69	69.83	31.58	64.42	3,728.51	3,682.76	45.75	81.495	0			
16,200.00	12,747.23	12,375.00	12,336.69	71.49	31.58	64.42	3,824.85	3,779.04	45.80	83.504	0			
16,300.00	12,747.01	12,375.00	12,336.69	73.17	31.58	64.42	3,921.37	3,875.51	45.86	85.516	0			
16,400.00	12,746.80	12,375.00	12,336.69	74.85	31.58	64.42	4,018.06	3,972.15	45.91	87.528	0			
16,500.00	12,746.58	12,375.00	12,336.69	76.54	31.58	64.42	4,114.90	4,068.95	45.96	89.542	0			
16,600.00	12,746.36	12,375.00	12,336.69	78.23	31.58	64.42	4,211.90	4,165.90	46.00	91.555	0			
16,700.00	12,746.15	12,375.00	12,336.69	79.93	31.58	64.42	4,309.03	4,262.98	46.05	93.569	0			
16,800.00	12,745.93	12,375.00	12,336.69	81.64	31.58	64.42	4,406.29	4,360.20	46.10	95.582	0			
16,900.00	12,745.72	12,375.00	12,336.69	83.35	31.58	64.42	4,503.68	4,457.53	46.15	97.595	0			
17,000.00	12,745.50	12,375.00	12,336.69	85.06	31.58	64.42	4,601.17	4,554.98	46.19	99.607	0			
17,100.00	12,745.29	12,362.96	12,324.75	86.78	31.55	63.79	4,698.60	4,652.38	46.22	101.654	0			
17,200.00	12,745.07	12,362.23	12,324.03	88.51	31.55	63.75	4,796.28	4,750.01	46.27	103.665	0			
17,300.00	12,744.86	12,361.53	12,323.33	90.23	31.55	63.71	4,894.05	4,847.74	46.31	105.675	0			
17,400.00	12,744.64	12,350.00	12,311.87	91.96	31.52	63.11	4,992.04	4,945.70	46.34	107.723	0			
17,500.00	12,744.42	12,350.00	12,311.87	93.70	31.52	63.11	5,089.97	5,043.58	46.39	109.727	0			
17,600.00	12,744.21	12,350.00	12,311.87	95.43	31.52	63.11	5,187.97	5,141.54	46.43	111.728	0			
17,700.00	12,743.99	12,350.00	12,311.87	97.17	31.52	63.11	5,286.05	5,239.57	46.48	113.727	0			
17,800.00	12,743.78	12,350.00	12,311.87	98.92	31.52	63.11	5,384.20	5,337.67	46.53	115.723	0			
17,900.00	12,743.56	12,350.00	12,311.87	100.66	31.52	63.11	5,482.41	5,435.84	46.57	117.717	0			
18,000.00	12,743.35	12,350.00	12,311.87	102.41	31.52	63.11	5,580.69	5,534.07	46.62	119.707	0			
18,100.00	12,743.13	12,350.00	12,311.87	104.16	31.52	63.11	5,679.03	5,632.37	46.67	121.694	0			
18,200.00	12,742.91	12,350.00	12,311.87	105.92	31.52	63.11	5,777.43	5,730.71	46.71	123.678	0			
18,300.00	12,742.70	12,350.00	12,311.87	107.67	31.52	63.11	5,875.88	5,829.12	46.76	125.659	0			
18,400.00	12,742.48	12,350.00	12,311.87	109.43	31.52	63.11	5,974.38	5,927.57	46.81	127.636	0			
18,500.00	12,742.27	12,350.00	12,311.87	111.19	31.52	63.11	6,072.93	6,026.08	46.86	129.609	0			
18,600.00	12,742.05	12,350.00	12,311.87	112.95	31.52	63.11	6,171.53	6,124.63	46.90	131.578	0			
18,700.00	12,741.84	12,350.00	12,311.87	114.71	31.52	63.11	6,270.17	6,223.22	46.95	133.543	0			
18,800.00	12,741.62	12,350.00	12,311.87	116.48	31.52	63.11	6,368.86	6,321.85	47.00	135.504	0			
18,900.00	12,741.41	12,350.00	12,311.87	118.24	31.52	63.11	6,467.58	6,420.53	47.05	137.461	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	Local Co-ordinate Reference:	Well Fighting Okra 18-19 Fed 82H
Project:	PBNM	TVD Reference:	1 @ 3393.10ft
Reference Site:	Dzurisin	MD Reference:	1 @ 3393.10ft
Site Error:	0.00	North Reference:	Grid
Reference Well:	Fighting Okra 18-19 Fed 82H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000 US Production
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Offset Design													Dzurisin - Jayhawk 7-6 Fed 81H - 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	Riskd Separation Factor	Probability of Collision				
19,000.00	12,741.19	12,350.00	12,311.87	120.01	31.52	63.11	6,566.34	6,519.24	47.10	139.414	0					
19,100.00	12,740.97	12,350.00	12,311.87	121.78	31.52	63.11	6,665.14	6,617.99	47.15	141.362	0					
19,200.00	12,740.76	12,350.00	12,311.87	123.55	31.52	63.11	6,763.98	6,716.78	47.20	143.306	0					
19,300.00	12,740.54	12,350.00	12,311.87	125.33	31.52	63.11	6,862.85	6,815.60	47.25	145.245	0					
19,400.00	12,740.33	12,350.00	12,311.87	127.10	31.52	63.11	6,961.75	6,914.45	47.30	147.179	0					
19,500.00	12,740.11	12,350.00	12,311.87	128.87	31.52	63.11	7,060.68	7,013.33	47.35	149.108	0					
19,600.00	12,739.90	12,350.00	12,311.87	130.65	31.52	63.11	7,159.64	7,112.24	47.40	151.033	0					
19,700.00	12,739.68	12,350.00	12,311.87	132.43	31.52	63.11	7,258.63	7,211.18	47.46	152.952	0					
19,800.00	12,739.47	12,350.00	12,311.87	134.21	31.52	63.11	7,357.65	7,310.14	47.51	154.867	0					
19,900.00	12,739.25	12,350.00	12,311.87	135.99	31.52	63.11	7,456.70	7,409.13	47.56	156.776	0					
20,000.00	12,739.03	12,350.00	12,311.87	137.77	31.52	63.11	7,555.77	7,508.15	47.62	158.680	0					
20,100.00	12,738.82	12,350.00	12,311.87	139.55	31.52	63.11	7,654.86	7,607.19	47.67	160.579	0					
20,200.00	12,738.60	12,350.00	12,311.87	141.33	31.52	63.11	7,753.98	7,706.25	47.73	162.472	0					
20,300.00	12,738.39	12,350.00	12,311.87	143.12	31.52	63.11	7,853.11	7,805.33	47.78	164.360	0					
20,400.00	12,738.17	12,350.00	12,311.87	144.90	31.52	63.11	7,952.28	7,904.44	47.84	166.242	0					
20,500.00	12,737.96	12,350.00	12,311.87	146.69	31.52	63.11	8,051.46	8,003.57	47.89	168.119	0					
20,600.00	12,737.74	12,350.00	12,311.87	148.47	31.52	63.11	8,150.66	8,102.71	47.95	169.990	0					
20,700.00	12,737.53	12,350.00	12,311.87	150.26	31.52	63.11	8,249.88	8,201.87	48.00	171.855	0					
20,800.00	12,737.31	12,350.00	12,311.87	152.05	31.52	63.11	8,349.12	8,301.06	48.06	173.714	0					
20,900.00	12,737.09	12,350.00	12,311.87	153.84	31.52	63.11	8,448.38	8,400.26	48.12	175.568	0					
21,000.00	12,736.88	12,350.00	12,311.87	155.63	31.52	63.11	8,547.65	8,499.47	48.18	177.415	0					
21,100.00	12,736.66	12,350.00	12,311.87	157.42	31.52	63.11	8,646.94	8,598.70	48.24	179.257	0					
21,200.00	12,736.45	12,350.00	12,311.87	159.21	31.52	63.11	8,746.25	8,697.95	48.30	181.093	0					
21,300.00	12,736.23	12,350.00	12,311.87	161.00	31.52	63.11	8,845.57	8,797.22	48.36	182.923	0					
21,400.00	12,736.02	12,350.00	12,311.87	162.79	31.52	63.11	8,944.91	8,896.49	48.42	184.746	0					
21,500.00	12,735.80	12,350.00	12,311.87	164.59	31.52	63.11	9,044.26	8,995.78	48.48	186.563	0					
21,600.00	12,735.58	12,350.00	12,311.87	166.38	31.52	63.11	9,143.63	9,095.09	48.54	188.375	0					
21,700.00	12,735.37	12,350.00	12,311.87	168.17	31.52	63.11	9,243.01	9,194.41	48.60	190.180	0					
21,800.00	12,735.15	12,350.00	12,311.87	169.97	31.52	63.11	9,342.40	9,293.74	48.66	191.978	0					
21,900.00	12,734.94	12,350.00	12,311.87	171.76	31.52	63.11	9,441.81	9,393.08	48.73	193.770	0					
22,000.00	12,734.72	12,350.00	12,311.87	173.56	31.52	63.11	9,541.23	9,492.44	48.79	195.556	0					
22,100.00	12,734.51	12,350.00	12,311.87	175.35	31.52	63.11	9,640.66	9,591.81	48.85	197.336	0					
22,200.00	12,734.29	12,350.00	12,311.87	177.15	31.52	63.11	9,740.10	9,691.18	48.92	199.109	0					
22,294.10	12,734.09	12,350.00	12,311.87	178.84	31.52	63.11	9,833.69	9,784.71	48.98	200.771	0					
22,300.00	12,734.08	12,350.00	12,311.87	178.94	31.52	63.11	9,839.56	9,790.57	48.98	200.877	0					
22,335.63	12,734.00	12,350.00	12,311.87	179.46	31.52	63.13	9,875.00	9,825.99	49.00	201.522	0					

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

Devon Energy

Anticollision Risk Report

Company:	WESTERN DIVISION	Local Co-ordinate Reference:	Well Fighting Okra 18-19 Fed 82H
Project:	PBNM	TVD Reference:	1 @ 3393.10ft
Reference Site:	Dzurisin	MD Reference:	1 @ 3393.10ft
Site Error:	0.00	North Reference:	Grid
Reference Well:	Fighting Okra 18-19 Fed 82H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000 US Production
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Dzurisin - Jayhawk 7-6 Fed 82H - Wellbore #1 - Plan 1														
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	
0.00	0.00	0.40	0.40	0.00	0.00	-0.39	49.99							
100.00	100.00	100.40	100.40	0.09	0.09	-0.39	49.99	49.87	0.12	409.021	0			
200.00	200.00	200.40	200.40	0.31	0.31	-0.39	49.99	49.55	0.44	113.594	0			
300.00	300.00	300.40	300.40	0.54	0.54	-0.39	49.99	49.23	0.76	65.955	0			
400.00	400.00	400.40	400.40	0.76	0.76	-0.39	49.99	48.92	1.08	46.468	0			
500.00	500.00	500.40	500.40	0.99	0.99	-0.39	49.99	48.60	1.39	35.870	0			
600.00	600.00	600.40	600.40	1.21	1.21	-0.39	49.99	48.28	1.71	29.208	0			
700.00	700.00	700.40	700.40	1.43	1.44	-0.39	49.99	47.96	2.03	24.633	0			
800.00	800.00	800.40	800.40	1.66	1.66	-0.39	49.99	47.64	2.35	21.297	0			
900.00	900.00	900.40	900.40	1.88	1.89	-0.39	49.99	47.33	2.67	18.757	0			
1,000.00	1,000.00	1,000.40	1,000.40	2.11	2.11	-0.39	49.99	47.01	2.98	16.759	0			
1,100.00	1,100.00	1,100.40	1,100.40	2.33	2.33	-0.39	49.99	46.69	3.30	15.145	0			
1,200.00	1,200.00	1,200.40	1,200.40	2.56	2.56	-0.39	49.99	46.37	3.62	13.814	0			
1,300.00	1,300.00	1,300.40	1,300.40	2.78	2.78	-0.39	49.99	46.05	3.94	12.699	0			
1,400.00	1,400.00	1,400.40	1,400.40	3.01	3.01	-0.39	49.99	45.74	4.25	11.750	0			
1,500.00	1,500.00	1,500.40	1,500.40	3.23	3.23	-0.39	49.99	45.42	4.57	10.933	0			
1,600.00	1,600.00	1,600.40	1,600.40	3.46	3.46	-0.39	49.99	45.10	4.89	10.223	0			
1,700.00	1,700.00	1,700.40	1,700.40	3.68	3.68	-0.39	49.99	44.78	5.21	9.599	0			
1,800.00	1,800.00	1,800.40	1,800.40	3.91	3.91	-0.39	49.99	44.47	5.53	9.047	0			
1,900.00	1,900.00	1,900.40	1,900.40	4.13	4.13	-0.39	49.99	44.15	5.84	8.555	0			
2,000.00	2,000.00	2,000.40	2,000.40	4.36	4.36	-0.39	49.99	43.83	6.16	8.113	0			
2,100.00	2,100.00	2,100.40	2,100.40	4.58	4.58	-0.39	49.99	43.51	6.48	7.715	0			
2,200.00	2,200.00	2,200.40	2,200.40	4.81	4.81	-0.39	49.99	43.19	6.80	7.354	0			
2,300.00	2,300.00	2,300.40	2,300.40	5.03	5.03	-0.39	49.99	42.88	7.12	7.026	0			
2,400.00	2,400.00	2,400.40	2,400.40	5.26	5.26	-0.39	49.99	42.56	7.43	6.725	0			
2,500.00	2,500.00	2,500.40	2,500.40	5.48	5.48	-0.39	49.99	42.24	7.75	6.450	0			
2,600.00	2,600.00	2,600.40	2,600.40	5.71	5.71	-0.39	49.99	41.92	8.07	6.196	0			
2,700.00	2,700.00	2,700.40	2,700.40	5.93	5.93	-0.39	49.99	41.60	8.39	5.961	0			
2,800.00	2,800.00	2,800.40	2,800.40	6.15	6.16	-0.39	49.99	41.29	8.70	5.743	0			
2,900.00	2,900.00	2,900.40	2,900.40	6.38	6.38	-0.39	49.99	40.97	9.02	5.541	0			
2,966.53	2,966.53	2,966.93	2,966.93	6.53	6.53	-0.39	49.99	40.76	9.23	5.414	0		CC	
3,000.00	3,000.00	3,000.40	3,000.40	6.60	6.61	-0.39	49.99	40.65	9.34	5.352	0		ES	
3,100.00	3,100.00	3,100.00	3,099.99	6.83	6.82	-1.14	50.56	40.91	9.65	5.238	0		SF	
3,200.00	3,200.00	3,199.19	3,199.15	7.05	7.04	-3.28	52.32	42.35	9.96	5.252	0			
3,300.00	3,300.00	3,298.44	3,298.31	7.28	7.25	-6.53	55.38	45.11	10.27	5.393	0			
3,400.00	3,400.00	3,397.51	3,397.19	7.50	7.47	-10.49	59.94	49.36	10.58	5.668	0			
3,500.00	3,500.00	3,496.34	3,495.72	7.73	7.69	-14.75	66.14	55.26	10.88	6.080	0			
3,600.00	3,600.00	3,595.93	3,594.93	7.95	7.92	-18.67	73.44	62.25	11.19	6.563	0			
3,700.00	3,700.00	3,695.55	3,694.17	8.18	8.14	-21.88	81.02	69.51	11.50	7.044	0			
3,800.00	3,800.00	3,795.17	3,793.41	8.40	8.38	-24.53	88.80	76.99	11.82	7.516	0			
3,900.00	3,900.00	3,894.78	3,892.65	8.63	8.61	-26.75	96.75	84.62	12.13	7.977	0			
4,000.00	4,000.00	3,994.40	3,991.89	8.85	8.84	-28.63	104.82	92.37	12.44	8.424	0			
4,100.00	4,100.00	4,094.02	4,091.13	9.08	9.08	-30.24	112.98	100.22	12.76	8.856	0			
4,200.00	4,200.00	4,193.64	4,190.37	9.30	9.32	-31.63	121.22	108.15	13.07	9.273	0			
4,300.00	4,300.00	4,293.26	4,289.61	9.53	9.56	-32.84	129.53	116.14	13.39	9.675	0			
4,400.00	4,400.00	4,392.88	4,388.85	9.75	9.80	-33.91	137.88	124.18	13.70	10.061	0			
4,500.00	4,500.00	4,492.50	4,488.09	9.98	10.05	-34.86	146.28	132.26	14.02	10.434	0			
4,600.00	4,600.00	4,592.12	4,587.33	10.20	10.29	-35.70	154.71	140.37	14.34	10.792	0			
4,700.00	4,700.00	4,691.74	4,686.57	10.43	10.54	-36.46	163.17	148.52	14.65	11.136	0			
4,800.00	4,800.00	4,791.36	4,785.81	10.65	10.79	-37.14	171.66	156.69	14.97	11.467	0			
4,900.00	4,900.00	4,890.98	4,885.05	10.87	11.03	-37.75	180.17	164.88	15.29	11.786	0			
5,000.00	5,000.00	4,990.60	4,984.29	11.10	11.28	-38.32	188.70	173.09	15.60	12.093	0			
5,100.00	5,100.00	5,090.22	5,083.53	11.32	11.53	-38.83	197.24	181.32	15.92	12.389	0			
5,200.00	5,200.00	5,189.84	5,182.77	11.55	11.79	-39.30	205.80	189.56	16.24	12.673	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	Local Co-ordinate Reference:	Well Fighting Okra 18-19 Fed 82H
Project:	PBNM	TVD Reference:	1 @ 3393.10ft
Reference Site:	Dzurisin	MD Reference:	1 @ 3393.10ft
Site Error:	0.00	North Reference:	Grid
Reference Well:	Fighting Okra 18-19 Fed 82H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000 US Production
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Offset Design Dzurisin - Jayhawk 7-6 Fed 82H - 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		
5,300.00	5,300.00	5,289.46	5,282.01	11.77	12.04	-39.73	214.37	197.81	16.56	12.948	0			
5,400.00	5,400.00	5,389.08	5,381.25	12.00	12.29	-40.13	222.95	206.08	16.87	13.212	0			
5,500.00	5,500.00	5,488.70	5,480.49	12.22	12.55	-40.50	231.54	214.35	17.19	13.467	0			
5,600.00	5,600.00	5,588.32	5,579.73	12.45	12.80	-40.84	240.15	222.63	17.51	13.714	0			
5,700.00	5,700.00	5,687.94	5,678.98	12.67	13.06	-41.16	248.75	230.92	17.83	13.952	0			
5,800.00	5,800.00	5,787.55	5,778.22	12.90	13.31	-41.46	257.37	239.22	18.15	14.181	0			
5,900.00	5,900.00	5,887.17	5,877.46	13.12	13.57	-41.74	265.99	247.53	18.47	14.403	0			
6,000.00	6,000.00	5,986.79	5,976.70	13.35	13.83	-42.00	274.62	255.84	18.79	14.618	0			
6,100.00	6,100.00	6,086.41	6,075.94	13.57	14.08	-42.25	283.26	264.15	19.11	14.826	0			
6,200.00	6,200.00	6,186.03	6,175.18	13.80	14.34	-42.48	291.89	272.47	19.42	15.027	0			
6,300.00	6,300.00	6,285.65	6,274.42	14.02	14.60	-42.69	300.54	280.79	19.74	15.222	0			
6,400.00	6,400.00	6,385.27	6,373.66	14.25	14.86	-42.90	309.19	289.12	20.06	15.410	0			
6,500.00	6,500.00	6,484.89	6,472.90	14.47	15.12	-43.09	317.84	297.45	20.38	15.593	0			
6,600.00	6,600.00	6,584.51	6,572.14	14.70	15.38	-43.28	326.49	305.79	20.70	15.770	0			
6,700.00	6,700.00	6,684.13	6,671.38	14.92	15.64	-43.45	335.15	314.13	21.02	15.942	0			
6,800.00	6,800.00	6,783.75	6,770.62	15.15	15.90	-43.62	343.81	322.47	21.34	16.109	0			
6,900.00	6,900.00	6,883.37	6,869.86	15.37	16.16	-43.77	352.47	330.81	21.66	16.271	0			
7,000.00	7,000.00	6,982.99	6,969.10	15.59	16.42	-43.92	361.14	339.16	21.98	16.428	0			
7,100.00	7,100.00	7,082.61	7,068.34	15.82	16.69	-44.07	369.81	347.50	22.30	16.581	0			
7,200.00	7,200.00	7,182.23	7,167.58	16.04	16.95	-44.20	378.48	355.85	22.62	16.729	0			
7,300.00	7,300.00	7,284.69	7,269.68	16.27	17.19	-44.33	386.85	363.91	22.94	16.863	0			
7,400.00	7,400.00	7,387.91	7,372.61	16.49	17.41	-44.45	394.34	371.10	23.24	16.968	0			
7,500.00	7,500.00	7,491.26	7,475.73	16.72	17.61	-44.54	400.94	377.41	23.54	17.035	0			
7,600.00	7,600.00	7,594.73	7,579.03	16.94	17.81	-44.62	406.65	382.82	23.83	17.063	0			
7,700.00	7,700.00	7,698.29	7,682.47	17.17	18.01	-44.69	411.45	387.33	24.13	17.054	0			
7,800.00	7,800.00	7,801.94	7,786.04	17.39	18.21	-44.74	415.36	390.94	24.42	17.009	0			
7,900.00	7,900.00	7,905.65	7,889.70	17.62	18.40	-44.78	418.37	393.66	24.71	16.930	0			
8,000.00	8,000.00	8,009.41	7,993.44	17.84	18.59	-44.80	420.48	395.48	25.00	16.817	0			
8,100.00	8,100.00	8,113.20	8,097.22	18.07	18.77	-44.82	421.68	396.39	25.29	16.672	0			
8,200.00	8,200.00	8,216.38	8,200.40	18.29	18.95	-44.82	422.00	396.42	25.58	16.495	0			
8,300.00	8,300.00	8,316.38	8,300.40	18.52	19.14	-44.82	422.00	396.11	25.89	16.303	0			
8,400.00	8,400.00	8,416.38	8,400.40	18.74	19.35	-44.82	422.00	395.80	26.20	16.108	0			
8,500.00	8,500.00	8,516.38	8,500.40	18.97	19.56	-44.82	422.00	395.49	26.51	15.917	0			
8,600.00	8,600.00	8,616.38	8,600.40	19.19	19.76	-44.82	422.00	395.17	26.83	15.731	0			
8,700.00	8,700.00	8,716.38	8,700.40	19.42	19.97	-44.82	422.00	394.86	27.14	15.549	0			
8,800.00	8,800.00	8,816.38	8,800.40	19.64	20.18	-44.82	422.00	394.55	27.45	15.372	0			
8,900.00	8,900.00	8,916.38	8,900.40	19.87	20.39	-44.82	422.00	394.23	27.77	15.198	0			
9,000.00	9,000.00	9,016.38	9,000.40	20.09	20.60	-44.82	422.00	393.92	28.08	15.028	0			
9,100.00	9,100.00	9,116.38	9,100.40	20.31	20.81	-44.82	422.00	393.60	28.39	14.862	0			
9,200.00	9,200.00	9,216.38	9,200.40	20.54	21.02	-44.82	422.00	393.29	28.71	14.699	0			
9,300.00	9,300.00	9,316.38	9,300.40	20.76	21.23	-44.82	422.00	392.98	29.02	14.540	0			
9,400.00	9,400.00	9,416.38	9,400.40	20.99	21.44	-44.82	422.00	392.66	29.34	14.384	0			
9,500.00	9,500.00	9,516.38	9,500.40	21.21	21.65	-44.82	422.00	392.35	29.65	14.232	0			
9,600.00	9,600.00	9,616.38	9,600.40	21.44	21.86	-44.82	422.00	392.03	29.97	14.083	0			
9,700.00	9,700.00	9,716.38	9,700.40	21.66	22.07	-44.82	422.00	391.72	30.28	13.936	0			
9,800.00	9,800.00	9,816.38	9,800.40	21.89	22.29	-44.82	422.00	391.40	30.59	13.793	0			
9,900.00	9,900.00	9,916.38	9,900.40	22.11	22.50	-44.82	422.00	391.09	30.91	13.653	0			
10,000.00	10,000.00	10,016.38	10,000.40	22.34	22.71	-44.82	422.00	390.78	31.22	13.515	0			
10,100.00	10,100.00	10,116.38	10,100.40	22.56	22.92	-44.82	422.00	390.46	31.54	13.380	0			
10,200.00	10,200.00	10,216.38	10,200.40	22.79	23.13	-44.82	422.00	390.15	31.85	13.248	0			
10,300.00	10,300.00	10,316.38	10,300.40	23.01	23.35	-44.82	422.00	389.83	32.17	13.118	0			
10,400.00	10,400.00	10,416.38	10,400.40	23.24	23.56	-44.82	422.00	389.52	32.48	12.991	0			
10,500.00	10,500.00	10,516.38	10,500.40	23.46	23.77	-44.82	422.00	389.20	32.80	12.866	0			
10,600.00	10,600.00	10,616.38	10,600.40	23.69	23.99	-44.82	422.00	388.89	33.11	12.744	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	Local Co-ordinate Reference:	Well Fighting Okra 18-19 Fed 82H
Project:	PBNM	TVD Reference:	1 @ 3393.10ft
Reference Site:	Dzurisin	MD Reference:	1 @ 3393.10ft
Site Error:	0.00	North Reference:	Grid
Reference Well:	Fighting Okra 18-19 Fed 82H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000 US Production
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Offset Design Dzurisin - Jayhawk 7-6 Fed 82H - 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				
10,700.00	10,700.00	10,716.38	10,700.40	23.91	24.20	-44.82	422.00	388.57	33.43	12.624	0			
10,800.00	10,800.00	10,816.38	10,800.40	24.14	24.42	-44.82	422.00	388.26	33.74	12.506	0			
10,900.00	10,900.00	10,916.38	10,900.40	24.36	24.63	-44.82	422.00	387.94	34.06	12.390	0			
11,000.00	11,000.00	11,016.38	11,000.40	24.59	24.84	-44.82	422.00	387.63	34.37	12.277	0			
11,100.00	11,100.00	11,116.38	11,100.40	24.81	25.06	-44.82	422.00	387.31	34.69	12.165	0			
11,200.00	11,200.00	11,216.38	11,200.40	25.04	25.27	-44.82	422.00	386.99	35.00	12.056	0			
11,300.00	11,300.00	11,316.38	11,300.40	25.26	25.49	-44.82	422.00	386.68	35.32	11.948	0			
11,400.00	11,400.00	11,416.38	11,400.40	25.48	25.70	-44.82	422.00	386.36	35.64	11.842	0			
11,500.00	11,500.00	11,516.38	11,500.40	25.71	25.92	-44.82	422.00	386.05	35.95	11.738	0			
11,600.00	11,600.00	11,616.38	11,600.40	25.93	26.13	-44.82	422.00	385.73	36.27	11.636	0			
11,700.00	11,700.00	11,716.38	11,700.40	26.16	26.35	-44.82	422.00	385.42	36.58	11.536	0			
11,800.00	11,800.00	11,816.38	11,800.40	26.38	26.57	-44.82	422.00	385.10	36.90	11.437	0			
11,900.00	11,900.00	11,916.38	11,900.40	26.61	26.78	-44.82	422.00	384.79	37.21	11.340	0			
12,000.00	12,000.00	12,016.38	12,000.40	26.83	27.00	-44.82	422.00	384.47	37.53	11.245	0			
12,100.00	12,100.00	12,116.38	12,100.40	27.06	27.21	-44.82	422.00	384.15	37.84	11.151	0			
12,200.00	12,200.00	12,216.38	12,200.40	27.28	27.43	-44.82	422.00	383.84	38.16	11.059	0			
12,250.94	12,250.94	12,267.32	12,251.34	27.40	27.54	-44.82	422.00	383.68	38.32	11.012	0			
12,276.60	12,276.60	12,292.60	12,276.62	27.45	27.59	-44.82	422.00	383.60	38.40	10.989	0			
12,300.00	12,299.99	12,307.20	12,291.21	27.50	27.63	134.30	422.66	384.20	38.46	10.990	0			
12,325.00	12,324.92	12,325.00	12,308.99	27.54	27.67	134.34	424.81	386.30	38.51	11.030	0			
12,350.00	12,349.71	12,337.31	12,321.27	27.58	27.70	134.28	428.42	389.87	38.55	11.114	0			
12,375.00	12,374.31	12,350.00	12,333.88	27.63	27.73	134.17	433.54	394.96	38.58	11.238	0			
12,400.00	12,398.63	12,365.75	12,349.48	27.67	27.77	134.13	440.11	401.50	38.61	11.399	0			
12,425.00	12,422.62	12,375.00	12,358.61	27.71	27.79	133.78	448.18	409.57	38.61	11.609	0			
12,450.00	12,446.21	12,391.61	12,374.92	27.75	27.83	133.70	457.62	418.98	38.64	11.843	0			
12,475.00	12,469.34	12,400.00	12,383.11	27.79	27.86	133.11	468.52	429.90	38.62	12.130	0			
12,500.00	12,491.94	12,414.26	12,396.97	27.83	27.90	132.77	480.74	442.10	38.65	12.440	0			
12,525.00	12,513.95	12,425.00	12,407.33	27.87	27.92	132.11	494.29	455.65	38.65	12.790	0			
12,550.00	12,535.30	12,433.39	12,415.38	27.90	27.95	131.12	509.08	470.44	38.64	13.176	0			
12,575.00	12,555.95	12,441.60	12,423.21	27.94	27.97	129.93	525.03	486.41	38.63	13.592	0			
12,600.00	12,575.83	12,450.00	12,431.18	27.98	28.00	128.55	542.07	503.45	38.63	14.034	0			
12,625.00	12,594.90	12,450.00	12,431.18	28.02	28.00	126.05	560.15	521.59	38.56	14.525	0			
12,650.00	12,613.09	12,460.94	12,441.49	28.07	28.03	124.41	579.03	540.43	38.60	15.001	0			
12,675.00	12,630.35	12,465.70	12,445.95	28.12	28.04	121.75	598.77	560.18	38.59	15.515	0			
12,700.00	12,646.65	12,475.00	12,454.61	28.17	28.07	119.32	619.27	580.64	38.63	16.031	0			
12,725.00	12,661.94	12,475.00	12,454.61	28.23	28.07	115.17	640.30	601.69	38.60	16.586	0			
12,750.00	12,676.16	12,475.00	12,454.61	28.30	28.07	110.44	661.88	623.29	38.59	17.153	0			
12,775.00	12,689.29	12,475.00	12,454.61	28.36	28.07	105.11	683.91	645.33	38.58	17.729	0			
12,800.00	12,701.30	12,475.00	12,454.61	28.44	28.07	99.22	706.29	667.71	38.58	18.309	0			
12,825.00	12,712.13	12,475.00	12,454.61	28.51	28.07	92.86	728.93	690.34	38.58	18.892	0			
12,850.00	12,721.78	12,475.00	12,454.61	28.60	28.07	86.17	751.74	713.14	38.60	19.475	0			
12,875.00	12,730.20	12,475.00	12,454.61	28.69	28.07	79.35	774.65	736.03	38.62	20.057	0			
12,900.00	12,737.38	12,475.00	12,454.61	28.78	28.07	72.62	797.60	758.95	38.65	20.635	0			
12,925.00	12,743.30	12,475.00	12,454.61	28.88	28.07	66.19	820.52	781.83	38.69	21.209	0			
12,950.00	12,747.93	12,475.00	12,454.61	28.98	28.07	60.20	843.34	804.62	38.73	21.777	0			
12,975.00	12,751.28	12,475.00	12,454.61	29.10	28.07	54.74	866.03	827.26	38.77	22.337	0			
13,000.00	12,753.33	12,475.00	12,454.61	29.21	28.07	49.85	888.52	849.70	38.82	22.889	0			
13,025.00	12,754.06	12,466.60	12,446.79	29.33	28.04	44.76	910.67	871.85	38.82	23.460	0			
13,027.60	12,754.07	12,466.27	12,446.48	29.34	28.04	44.33	912.96	874.14	38.82	23.518	0			
13,062.84	12,753.99	12,461.90	12,442.39	29.52	28.03	43.95	944.10	905.23	38.87	24.289	0			
13,100.00	12,753.91	12,450.00	12,431.18	29.73	28.00	42.94	977.27	938.40	38.88	25.137	0			
13,200.00	12,753.69	12,450.00	12,431.18	30.34	28.00	42.94	1,067.33	1,028.27	39.06	27.324	0			
13,300.00	12,753.48	12,437.18	12,419.00	31.05	27.96	41.88	1,158.78	1,119.62	39.16	29.592	0			
13,400.00	12,753.26	12,425.00	12,407.33	31.85	27.92	40.91	1,251.35	1,212.11	39.24	31.887	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	Local Co-ordinate Reference:	Well Fighting Okra 18-19 Fed 82H
Project:	PBNM	TVD Reference:	1 @ 3393.10ft
Reference Site:	Dzurisin	MD Reference:	1 @ 3393.10ft
Site Error:	0.00	North Reference:	Grid
Reference Well:	Fighting Okra 18-19 Fed 82H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000 US Production
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Offset Design													Dzurisin - Jayhawk 7-6 Fed 82H - 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						
13,500.00	12,753.05	12,425.00	12,407.33	32.73	27.92	40.91	1,344.81	1,305.45	39.36	34.167	0							
13,600.00	12,752.83	12,414.40	12,397.10	33.69	27.90	40.09	1,438.99	1,399.56	39.43	36.498	0							
13,700.00	12,752.62	12,400.00	12,383.11	34.71	27.86	39.01	1,533.91	1,494.43	39.47	38.859	0							
13,800.00	12,752.40	12,400.00	12,383.11	35.80	27.86	39.01	1,629.18	1,589.63	39.56	41.186	0							
13,900.00	12,752.19	12,400.00	12,383.11	36.95	27.86	39.01	1,724.99	1,685.36	39.63	43.527	0							
14,000.00	12,751.97	12,400.00	12,383.11	38.15	27.86	39.01	1,821.26	1,781.56	39.70	45.880	0							
14,100.00	12,751.75	12,388.83	12,372.19	39.39	27.83	38.20	1,917.74	1,878.01	39.73	48.267	0							
14,200.00	12,751.54	12,375.00	12,358.61	40.68	27.79	37.23	2,014.71	1,974.95	39.76	50.671	0							
14,300.00	12,751.32	12,375.00	12,358.61	42.01	27.79	37.23	2,111.73	2,071.92	39.81	53.039	0							
14,400.00	12,751.11	12,375.00	12,358.61	43.37	27.79	37.23	2,209.02	2,169.16	39.86	55.413	0							
14,500.00	12,750.89	12,375.00	12,358.61	44.77	27.79	37.23	2,306.55	2,266.63	39.91	57.791	0							
14,600.00	12,750.68	12,375.00	12,358.61	46.20	27.79	37.23	2,404.27	2,364.32	39.96	60.171	0							
14,700.00	12,750.46	12,375.00	12,358.61	47.65	27.79	37.23	2,502.18	2,462.18	40.00	62.555	0							
14,800.00	12,750.25	12,375.00	12,358.61	49.13	27.79	37.23	2,600.24	2,560.20	40.04	64.939	0							
14,900.00	12,750.03	12,375.00	12,358.61	50.63	27.79	37.23	2,698.45	2,658.37	40.08	67.325	0							
15,000.00	12,749.81	12,362.17	12,345.94	52.15	27.76	36.37	2,796.59	2,756.48	40.10	69.735	0							
15,100.00	12,749.60	12,350.00	12,333.88	53.69	27.73	35.58	2,895.09	2,854.96	40.13	72.149	0							
15,200.00	12,749.38	12,350.00	12,333.88	55.24	27.73	35.58	2,993.52	2,953.35	40.17	74.530	0							
15,300.00	12,749.17	12,350.00	12,333.88	56.82	27.73	35.58	3,092.05	3,051.85	40.20	76.911	0							
15,400.00	12,748.95	12,350.00	12,333.88	58.40	27.73	35.58	3,190.68	3,150.44	40.24	79.290	0							
15,500.00	12,748.74	12,350.00	12,333.88	60.00	27.73	35.58	3,289.39	3,249.11	40.28	81.668	0							
15,600.00	12,748.52	12,350.00	12,333.88	61.61	27.73	35.58	3,388.17	3,347.85	40.31	84.043	0							
15,700.00	12,748.30	12,350.00	12,333.88	63.24	27.73	35.58	3,487.02	3,446.67	40.35	86.416	0							
15,800.00	12,748.09	12,350.00	12,333.88	64.87	27.73	35.58	3,585.94	3,545.55	40.39	88.787	0							
15,900.00	12,747.87	12,350.00	12,333.88	66.51	27.73	35.58	3,684.91	3,644.49	40.42	91.155	0							
16,000.00	12,747.66	12,350.00	12,333.88	68.17	27.73	35.58	3,783.94	3,743.48	40.46	93.519	0							
16,100.00	12,747.44	12,350.00	12,333.88	69.83	27.73	35.58	3,883.02	3,842.52	40.50	95.880	0							
16,200.00	12,747.23	12,350.00	12,333.88	71.49	27.73	35.58	3,982.14	3,941.61	40.54	98.238	0							
16,300.00	12,747.01	12,350.00	12,333.88	73.17	27.73	35.58	4,081.31	4,040.74	40.57	100.591	0							
16,400.00	12,746.80	12,350.00	12,333.88	74.85	27.73	35.58	4,180.52	4,139.91	40.61	102.940	0							
16,500.00	12,746.58	12,350.00	12,333.88	76.54	27.73	35.58	4,279.76	4,239.11	40.65	105.285	0							
16,600.00	12,746.36	12,350.00	12,333.88	78.23	27.73	35.58	4,379.04	4,338.35	40.69	107.626	0							
16,700.00	12,746.15	12,338.00	12,321.95	79.93	27.70	34.82	4,478.18	4,437.47	40.72	109.981	0							
16,800.00	12,745.93	12,337.08	12,321.04	81.64	27.70	34.77	4,577.50	4,536.74	40.76	112.313	0							
16,900.00	12,745.72	12,325.00	12,308.99	83.35	27.67	34.04	4,676.99	4,636.20	40.79	114.666	0							
17,000.00	12,745.50	12,325.00	12,308.99	85.06	27.67	34.04	4,776.33	4,735.50	40.83	116.985	0							
17,100.00	12,745.29	12,325.00	12,308.99	86.78	27.67	34.04	4,875.70	4,834.84	40.87	119.299	0							
17,200.00	12,745.07	12,325.00	12,308.99	88.51	27.67	34.04	4,975.10	4,934.19	40.91	121.608	0							
17,300.00	12,744.86	12,325.00	12,308.99	90.23	27.67	34.04	5,074.52	5,033.57	40.95	123.911	0							
17,400.00	12,744.64	12,325.00	12,308.99	91.96	27.67	34.04	5,173.97	5,132.97	41.00	126.208	0							
17,500.00	12,744.42	12,325.00	12,308.99	93.70	27.67	34.04	5,273.43	5,232.40	41.04	128.500	0							
17,600.00	12,744.21	12,325.00	12,308.99	95.43	27.67	34.04	5,372.92	5,331.84	41.08	130.786	0							
17,700.00	12,743.99	12,325.00	12,308.99	97.17	27.67	34.04	5,472.42	5,431.30	41.13	133.065	0							
17,800.00	12,743.78	12,325.00	12,308.99	98.92	27.67	34.04	5,571.94	5,530.77	41.17	135.338	0							
17,900.00	12,743.56	12,325.00	12,308.99	100.66	27.67	34.04	5,671.48	5,630.27	41.22	137.605	0							
18,000.00	12,743.35	12,325.00	12,308.99	102.41	27.67	34.04	5,771.04	5,729.77	41.26	139.865	0							
18,100.00	12,743.13	12,325.00	12,308.99	104.16	27.67	34.04	5,870.61	5,829.30	41.31	142.119	0							
18,200.00	12,742.91	12,325.00	12,308.99	105.92	27.67	34.04	5,970.19	5,928.83	41.35	144.366	0							
18,300.00	12,742.70	12,325.00	12,308.99	107.67	27.67	34.04	6,069.79	6,028.38	41.40	146.606	0							
18,400.00	12,742.48	12,325.00	12,308.99	109.43	27.67	34.04	6,169.40	6,127.95	41.45	148.840	0							
18,500.00	12,742.27	12,325.00	12,308.99	111.19	27.67	34.04	6,269.02	6,227.52	41.50	151.066	0							
18,600.00	12,742.05	12,325.00	12,308.99	112.95	27.67	34.04	6,368.65	6,327.11	41.55	153.285	0							
18,700.00	12,741.84	12,325.00	12,308.99	114.71	27.67	34.04	6,468.30	6,426.70	41.60	155.497	0							
18,800.00	12,741.62	12,325.00	12,308.99	116.48	27.67	34.04	6,567.96	6,526.31	41.65	157.701	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	Local Co-ordinate Reference:	Well Fighting Okra 18-19 Fed 82H
Project:	PBNM	TVD Reference:	1 @ 3393.10ft
Reference Site:	Dzurisin	MD Reference:	1 @ 3393.10ft
Site Error:	0.00	North Reference:	Grid
Reference Well:	Fighting Okra 18-19 Fed 82H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000 US Production
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Dzurisin - Jayhawk 7-6 Fed 82H - Wellbore #1 - Plan 1														
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	Riskd Separation Factor	Probability of Collision	Warning	
18,900.00	12,741.41	12,325.00	12,308.99	118.24	27.67	34.04	6,667.62	6,625.93	41.70	159.899	0			
19,000.00	12,741.19	12,325.00	12,308.99	120.01	27.67	34.04	6,767.30	6,725.55	41.75	162.088	0			
19,100.00	12,740.97	12,325.00	12,308.99	121.78	27.67	34.04	6,866.99	6,825.18	41.80	164.270	0			
19,200.00	12,740.76	12,325.00	12,308.99	123.55	27.67	34.04	6,966.68	6,924.83	41.86	166.445	0			
19,300.00	12,740.54	12,325.00	12,308.99	125.33	27.67	34.04	7,066.39	7,024.48	41.91	168.612	0			
19,400.00	12,740.33	12,325.00	12,308.99	127.10	27.67	34.04	7,166.10	7,124.14	41.96	170.771	0			
19,500.00	12,740.11	12,325.00	12,308.99	128.87	27.67	34.04	7,265.82	7,223.80	42.02	172.922	0			
19,600.00	12,739.90	12,325.00	12,308.99	130.65	27.67	34.04	7,365.55	7,323.47	42.07	175.065	0			
19,700.00	12,739.68	12,325.00	12,308.99	132.43	27.67	34.04	7,465.28	7,423.15	42.13	177.200	0			
19,800.00	12,739.47	12,325.00	12,308.99	134.21	27.67	34.04	7,565.02	7,522.84	42.19	179.327	0			
19,900.00	12,739.25	12,325.00	12,308.99	135.99	27.67	34.04	7,664.77	7,622.53	42.24	181.445	0			
20,000.00	12,739.03	12,325.00	12,308.99	137.77	27.67	34.04	7,764.53	7,722.23	42.30	183.556	0			
20,100.00	12,738.82	12,325.00	12,308.99	139.55	27.67	34.04	7,864.29	7,821.93	42.36	185.658	0			
20,200.00	12,738.60	12,325.00	12,308.99	141.33	27.67	34.04	7,964.06	7,921.64	42.42	187.752	0			
20,300.00	12,738.39	12,325.00	12,308.99	143.12	27.67	34.04	8,063.83	8,021.35	42.48	189.837	0			
20,400.00	12,738.17	12,325.00	12,308.99	144.90	27.67	34.04	8,163.61	8,121.07	42.54	191.914	0			
20,500.00	12,737.96	12,325.00	12,308.99	146.69	27.67	34.04	8,263.39	8,220.79	42.60	193.983	0			
20,600.00	12,737.74	12,325.00	12,308.99	148.47	27.67	34.04	8,363.18	8,320.52	42.66	196.043	0			
20,700.00	12,737.53	12,325.00	12,308.99	150.26	27.67	34.04	8,462.97	8,420.25	42.72	198.094	0			
20,800.00	12,737.31	12,325.00	12,308.99	152.05	27.67	34.04	8,562.77	8,519.99	42.78	200.137	0			
20,900.00	12,737.09	12,325.00	12,308.99	153.84	27.67	34.04	8,662.58	8,619.73	42.85	202.171	0			
21,000.00	12,736.88	12,325.00	12,308.99	155.63	27.67	34.04	8,762.38	8,719.47	42.91	204.196	0			
21,100.00	12,736.66	12,325.00	12,308.99	157.42	27.67	34.04	8,862.20	8,819.22	42.98	206.212	0			
21,200.00	12,736.45	12,325.00	12,308.99	159.21	27.67	34.04	8,962.01	8,918.97	43.04	208.220	0			
21,300.00	12,736.23	12,325.00	12,308.99	161.00	27.67	34.04	9,061.83	9,018.73	43.11	210.218	0			
21,400.00	12,736.02	12,325.00	12,308.99	162.79	27.67	34.04	9,161.66	9,118.49	43.17	212.208	0			
21,500.00	12,735.80	12,325.00	12,308.99	164.59	27.67	34.04	9,261.49	9,218.25	43.24	214.189	0			
21,600.00	12,735.58	12,325.00	12,308.99	166.38	27.67	34.04	9,361.32	9,318.01	43.31	216.161	0			
21,700.00	12,735.37	12,325.00	12,308.99	168.17	27.67	34.04	9,461.15	9,417.78	43.38	218.123	0			
21,800.00	12,735.15	12,325.00	12,308.99	169.97	27.67	34.04	9,560.99	9,517.55	43.44	220.077	0			
21,900.00	12,734.94	12,325.00	12,308.99	171.76	27.67	34.04	9,660.84	9,617.32	43.51	222.022	0			
22,000.00	12,734.72	12,325.00	12,308.99	173.56	27.67	34.04	9,760.68	9,717.10	43.58	223.957	0			
22,100.00	12,734.51	12,325.00	12,308.99	175.35	27.67	34.04	9,860.53	9,816.88	43.65	225.884	0			
22,200.00	12,734.29	12,325.00	12,308.99	177.15	27.67	34.04	9,960.38	9,916.66	43.72	227.801	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	Local Co-ordinate Reference:	Well Fighting Okra 18-19 Fed 82H
Project:	PBNM	TVD Reference:	1 @ 3393.10ft
Reference Site:	Dzurisin	MD Reference:	1 @ 3393.10ft
Site Error:	0.00	North Reference:	Grid
Reference Well:	Fighting Okra 18-19 Fed 82H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000 US Production
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.00 ft
Dzurisin - Jayhawk 7-6 Fed 83H - Wellbore #1 - Plan 1												Offset Well Error:	0.00 ft
Survey Program: 0-MWD													
Reference		Offset		Semi Major Axis		Distance				Minimum Separation (ft)	Separation Factor	Risked Separation Factor	Probability of Collision
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	1.10	1.10	0.00	0.00	30.58	58.29					0	
100.00	100.00	101.10	101.10	0.09	0.09	30.58	58.29	58.16	0.12	472.538	0		
200.00	200.00	201.10	201.10	0.31	0.31	30.58	58.29	57.84	0.44	132.105	0		
300.00	300.00	301.10	301.10	0.54	0.54	30.58	58.29	57.53	0.76	76.785	0		
400.00	400.00	401.10	401.10	0.76	0.76	30.58	58.29	57.21	1.08	54.121	0		
500.00	500.00	501.10	501.10	0.99	0.99	30.58	58.29	56.89	1.39	41.787	0		
600.00	600.00	601.10	601.10	1.21	1.21	30.58	58.29	56.57	1.71	34.032	0		
700.00	700.00	701.10	701.10	1.43	1.44	30.58	58.29	56.25	2.03	28.704	0		
800.00	800.00	801.10	801.10	1.66	1.66	30.58	58.29	55.94	2.35	24.819	0		
900.00	900.00	901.10	901.10	1.88	1.89	30.58	58.29	55.62	2.67	21.860	0		
1,000.00	1,000.00	1,001.10	1,001.10	2.11	2.11	30.58	58.29	55.30	2.98	19.532	0		
1,100.00	1,100.00	1,101.10	1,101.10	2.33	2.34	30.58	58.29	54.98	3.30	17.651	0		
1,200.00	1,200.00	1,201.10	1,201.10	2.56	2.56	30.58	58.29	54.67	3.62	16.101	0		
1,300.00	1,300.00	1,301.10	1,301.10	2.78	2.79	30.58	58.29	54.35	3.94	14.802	0		
1,400.00	1,400.00	1,401.10	1,401.10	3.01	3.01	30.58	58.29	54.03	4.26	13.696	0		
1,500.00	1,500.00	1,501.10	1,501.10	3.23	3.24	30.58	58.29	53.71	4.57	12.744	0		
1,600.00	1,600.00	1,601.10	1,601.10	3.46	3.46	30.58	58.29	53.39	4.89	11.916	0		
1,700.00	1,700.00	1,701.10	1,701.10	3.68	3.68	30.58	58.29	53.08	5.21	11.189	0		
1,800.00	1,800.00	1,801.10	1,801.10	3.91	3.91	30.58	58.29	52.76	5.53	10.545	0		
1,900.00	1,900.00	1,901.10	1,901.10	4.13	4.13	30.58	58.29	52.44	5.84	9.972	0		
2,000.00	2,000.00	2,001.10	2,001.10	4.36	4.36	30.58	58.29	52.12	6.16	9.458	0		
2,100.00	2,100.00	2,101.10	2,101.10	4.58	4.58	30.58	58.29	51.80	6.48	8.994	0		
2,200.00	2,200.00	2,201.10	2,201.10	4.81	4.81	30.58	58.29	51.49	6.80	8.573	0		
2,300.00	2,300.00	2,301.10	2,301.10	5.03	5.03	30.58	58.29	51.17	7.12	8.190	0		
2,400.00	2,400.00	2,401.10	2,401.10	5.26	5.26	30.58	58.29	50.85	7.43	7.840	0		
2,500.00	2,500.00	2,501.10	2,501.10	5.48	5.48	30.58	58.29	50.53	7.75	7.519	0		
2,600.00	2,600.00	2,601.10	2,601.10	5.71	5.71	30.58	58.29	50.22	8.07	7.222	0		
2,700.00	2,700.00	2,701.10	2,701.10	5.93	5.93	30.58	58.29	49.90	8.39	6.949	0		
2,800.00	2,800.00	2,801.10	2,801.10	6.15	6.16	30.58	58.29	49.58	8.71	6.695	0		
2,900.00	2,900.00	2,901.10	2,901.10	6.38	6.38	30.58	58.29	49.26	9.02	6.459	0		
2,966.30	2,966.30	2,967.40	2,967.40	6.53	6.53	30.58	58.29	49.05	9.23	6.312	0		CC
3,000.00	3,000.00	3,001.09	3,001.09	6.60	6.61	30.58	58.29	48.94	9.34	6.239	0		ES
3,100.00	3,100.00	3,100.00	3,099.99	6.83	6.82	31.06	59.02	49.37	9.65	6.116	0		SF
3,200.00	3,200.00	3,199.35	3,199.31	7.05	7.03	32.41	61.20	51.25	9.95	6.148	0		
3,300.00	3,300.00	3,298.32	3,298.19	7.28	7.24	34.46	64.90	54.65	10.26	6.328	0		
3,400.00	3,400.00	3,397.13	3,396.81	7.50	7.45	36.95	70.20	59.64	10.56	6.650	0		
3,500.00	3,500.00	3,495.69	3,495.07	7.73	7.67	39.64	77.16	66.30	10.85	7.110	0		
3,600.00	3,600.00	3,595.26	3,594.26	7.95	7.89	42.15	85.12	73.96	11.16	7.627	0		
3,700.00	3,700.00	3,694.88	3,693.50	8.18	8.11	44.23	93.22	81.75	11.47	8.127	0		
3,800.00	3,800.00	3,794.50	3,792.74	8.40	8.34	45.97	101.42	89.63	11.78	8.609	0		
3,900.00	3,900.00	3,894.12	3,891.98	8.63	8.57	47.46	109.69	97.60	12.09	9.072	0		
4,000.00	4,000.00	3,993.73	3,991.22	8.85	8.80	48.73	118.04	105.63	12.40	9.517	0		
4,100.00	4,100.00	4,093.35	4,090.46	9.08	9.03	49.84	126.43	113.71	12.72	9.943	0		
4,200.00	4,200.00	4,192.97	4,189.70	9.30	9.27	50.81	134.86	121.84	13.03	10.352	0		
4,300.00	4,300.00	4,292.59	4,288.94	9.53	9.51	51.66	143.33	129.99	13.34	10.744	0		
4,400.00	4,400.00	4,392.21	4,388.18	9.75	9.75	52.42	151.83	138.17	13.65	11.119	0		
4,500.00	4,500.00	4,491.83	4,487.42	9.98	9.99	53.10	160.34	146.38	13.97	11.479	0		
4,600.00	4,600.00	4,491.45	4,486.66	10.20	10.23	53.71	168.88	154.60	14.28	11.825	0		
4,700.00	4,700.00	4,491.07	4,485.90	10.43	10.48	54.26	177.44	162.84	14.60	12.156	0		
4,800.00	4,800.00	4,790.69	4,785.14	10.65	10.72	54.76	186.01	171.10	14.91	12.474	0		
4,900.00	4,900.00	4,890.31	4,884.38	10.87	10.97	55.22	194.59	179.37	15.23	12.780	0		
5,000.00	5,000.00	4,989.93	4,983.63	11.10	11.22	55.63	203.19	187.65	15.54	13.073	0		
5,100.00	5,100.00	5,089.55	5,082.87	11.32	11.47	56.02	211.79	195.94	15.86	13.355	0		
5,200.00	5,200.00	5,189.17	5,182.11	11.55	11.72	56.37	220.41	204.23	16.17	13.627	0		

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

Devon Energy

Anticollision Risk Report

Company:	WESTERN DIVISION	Local Co-ordinate Reference:	Well Fighting Okra 18-19 Fed 82H
Project:	PBNM	TVD Reference:	1 @ 3393.10ft
Reference Site:	Dzurisin	MD Reference:	1 @ 3393.10ft
Site Error:	0.00	North Reference:	Grid
Reference Well:	Fighting Okra 18-19 Fed 82H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000 US Production
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Offset Design													Dzurisin - Jayhawk 7-6 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				
5,300.00	5,300.00	5,288.79	5,281.35	11.77	11.97	56.70	229.03	212.54	16.49	13.888	0					
5,400.00	5,400.00	5,388.41	5,380.59	12.00	12.22	57.00	237.66	220.85	16.81	14.140	0					
5,500.00	5,500.00	5,488.03	5,479.83	12.22	12.47	57.28	246.29	229.17	17.12	14.382	0					
5,600.00	5,600.00	5,587.65	5,579.07	12.45	12.73	57.55	254.93	237.49	17.44	14.616	0					
5,700.00	5,700.00	5,687.27	5,678.31	12.67	12.98	57.79	263.58	245.82	17.76	14.842	0					
5,800.00	5,800.00	5,786.89	5,777.55	12.90	13.23	58.02	272.23	254.15	18.08	15.060	0					
5,900.00	5,900.00	5,886.50	5,876.79	13.12	13.49	58.24	280.88	262.49	18.39	15.270	0					
6,000.00	6,000.00	5,986.12	5,976.03	13.35	13.75	58.44	289.54	270.83	18.71	15.473	0					
6,100.00	6,100.00	6,085.74	6,075.27	13.57	14.00	58.63	298.20	279.17	19.03	15.670	0					
6,200.00	6,200.00	6,185.36	6,174.51	13.80	14.26	58.81	306.86	287.51	19.35	15.860	0					
6,300.00	6,300.00	6,284.98	6,273.75	14.02	14.52	58.98	315.53	295.86	19.67	16.044	0					
6,400.00	6,400.00	6,384.60	6,372.99	14.25	14.78	59.14	324.20	304.21	19.99	16.222	0					
6,500.00	6,500.00	6,484.22	6,472.23	14.47	15.03	59.30	332.87	312.57	20.30	16.394	0					
6,600.00	6,600.00	6,583.84	6,571.47	14.70	15.29	59.44	341.54	320.92	20.62	16.561	0					
6,700.00	6,700.00	6,683.46	6,670.71	14.92	15.55	59.58	350.22	329.28	20.94	16.724	0					
6,800.00	6,800.00	6,783.08	6,769.95	15.15	15.81	59.71	358.90	337.64	21.26	16.881	0					
6,900.00	6,900.00	6,882.70	6,869.19	15.37	16.07	59.84	367.58	346.00	21.58	17.033	0					
7,000.00	7,000.00	6,982.32	6,968.43	15.59	16.33	59.96	376.26	354.36	21.90	17.181	0					
7,100.00	7,100.00	7,081.94	7,067.67	15.82	16.60	60.07	384.94	362.72	22.22	17.325	0					
7,200.00	7,200.00	7,181.56	7,166.91	16.04	16.86	60.18	393.62	371.09	22.54	17.465	0					
7,300.00	7,300.00	7,281.18	7,266.15	16.27	17.12	60.28	402.31	379.45	22.86	17.600	0					
7,400.00	7,400.00	7,380.80	7,365.39	16.49	17.38	60.38	411.00	387.82	23.18	17.732	0					
7,500.00	7,500.00	7,480.42	7,464.64	16.72	17.64	60.48	419.69	396.19	23.50	17.861	0					
7,600.00	7,600.00	7,580.04	7,563.88	16.94	17.91	60.57	428.37	404.56	23.82	17.986	0					
7,700.00	7,700.00	7,679.66	7,663.12	17.17	18.17	60.66	437.06	412.93	24.14	18.107	0					
7,800.00	7,800.00	7,779.27	7,762.36	17.39	18.43	60.74	445.76	421.30	24.46	18.226	0					
7,900.00	7,900.00	7,878.89	7,861.60	17.62	18.69	60.83	454.45	429.67	24.78	18.341	0					
8,000.00	8,000.00	7,978.51	7,960.84	17.84	18.96	60.90	463.14	438.04	25.10	18.453	0					
8,100.00	8,100.00	8,078.13	8,060.08	18.07	19.22	60.98	471.84	446.42	25.42	18.563	0					
8,200.00	8,200.00	8,177.75	8,159.32	18.29	19.49	61.05	480.53	454.79	25.74	18.669	0					
8,300.00	8,300.00	8,277.37	8,258.56	18.52	19.75	61.12	489.23	463.17	26.06	18.773	0					
8,400.00	8,400.00	8,376.99	8,357.80	18.74	20.01	61.19	497.92	471.54	26.38	18.875	0					
8,500.00	8,500.00	8,476.61	8,457.04	18.97	20.28	61.26	506.62	479.92	26.70	18.974	0					
8,600.00	8,600.00	8,576.23	8,556.28	19.19	20.54	61.32	515.32	488.29	27.02	19.071	0					
8,700.00	8,700.00	8,675.85	8,655.52	19.42	20.81	61.38	524.01	496.67	27.34	19.165	0					
8,800.00	8,800.00	8,775.47	8,754.76	19.64	21.07	61.44	532.71	505.05	27.66	19.257	0					
8,900.00	8,900.00	8,875.09	8,854.00	19.87	21.34	61.50	541.41	513.43	27.98	19.347	0					
9,000.00	9,000.00	8,974.71	8,953.24	20.09	21.60	61.55	550.11	521.81	28.30	19.435	0					
9,100.00	9,100.00	9,074.33	9,052.48	20.31	21.87	61.61	558.81	530.19	28.63	19.521	0					
9,200.00	9,200.00	9,173.95	9,151.72	20.54	22.14	61.66	567.51	538.57	28.95	19.605	0					
9,300.00	9,300.00	9,273.57	9,250.96	20.76	22.40	61.71	576.21	546.94	29.27	19.687	0					
9,400.00	9,400.00	9,373.19	9,350.20	20.99	22.67	61.76	584.91	555.33	29.59	19.768	0					
9,500.00	9,500.00	9,472.81	9,449.44	21.21	22.93	61.81	593.62	563.71	29.91	19.846	0					
9,600.00	9,600.00	9,572.43	9,548.68	21.44	23.20	61.85	602.32	572.09	30.23	19.923	0					
9,700.00	9,700.00	9,672.04	9,647.92	21.66	23.47	61.90	611.02	580.47	30.55	19.998	0					
9,800.00	9,800.00	9,771.66	9,747.16	21.89	23.73	61.94	619.72	588.85	30.87	20.072	0					
9,900.00	9,900.00	9,871.28	9,846.40	22.11	24.00	61.98	628.43	597.23	31.20	20.144	0					
10,000.00	10,000.00	9,970.90	9,945.64	22.34	24.27	62.02	637.13	605.61	31.52	20.215	0					
10,100.00	10,100.00	10,074.73	10,049.10	22.56	24.52	62.07	645.61	613.77	31.84	20.276	0					
10,200.00	10,200.00	10,180.42	10,154.48	22.79	24.75	62.10	653.20	621.06	32.15	20.319	0					
10,300.00	10,300.00	10,286.25	10,260.08	23.01	24.96	62.13	659.88	627.43	32.45	20.336	0					
10,400.00	10,400.00	10,392.21	10,365.85	23.24	25.17	62.16	665.64	632.89	32.75	20.326	0					
10,500.00	10,500.00	10,498.27	10,471.79	23.46	25.37	62.18	670.47	637.42	33.05	20.289	0					
10,600.00	10,600.00	10,604.41	10,577.85	23.69	25.57	62.20	674.38	641.04	33.34	20.226	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	Local Co-ordinate Reference:	Well Fighting Okra 18-19 Fed 82H
Project:	PBNM	TVD Reference:	1 @ 3393.10ft
Reference Site:	Dzurisin	MD Reference:	1 @ 3393.10ft
Site Error:	0.00	North Reference:	Grid
Reference Well:	Fighting Okra 18-19 Fed 82H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000 US Production
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Offset Design Dzurisin - Jayhawk 7-6 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	
10,700.00	10,700.00	10,710.62	10,684.02	23.91	25.76	62.21	677.36	643.73	33.64	20.137	0		
10,800.00	10,800.00	10,816.89	10,790.26	24.14	25.95	62.22	679.42	645.49	33.93	20.024	0		
10,900.00	10,900.00	10,923.18	10,896.54	24.36	26.13	62.22	680.56	646.33	34.22	19.887	0		
11,000.00	11,000.00	11,027.74	11,001.10	24.59	26.31	62.23	680.80	646.28	34.51	19.725	0		
11,100.00	11,100.00	11,127.74	11,101.10	24.81	26.50	62.23	680.80	645.98	34.82	19.554	0		
11,200.00	11,200.00	11,227.74	11,201.10	25.04	26.70	62.23	680.80	645.67	35.13	19.382	0		
11,300.00	11,300.00	11,327.74	11,301.10	25.26	26.89	62.23	680.80	645.36	35.44	19.212	0		
11,400.00	11,400.00	11,427.74	11,401.10	25.48	27.09	62.23	680.80	645.05	35.75	19.046	0		
11,500.00	11,500.00	11,527.74	11,501.10	25.71	27.29	62.23	680.80	644.74	36.06	18.882	0		
11,600.00	11,600.00	11,627.74	11,601.10	25.93	27.49	62.23	680.80	644.43	36.37	18.721	0		
11,700.00	11,700.00	11,727.74	11,701.10	26.16	27.69	62.23	680.80	644.12	36.68	18.563	0		
11,800.00	11,800.00	11,827.74	11,801.10	26.38	27.89	62.23	680.80	643.81	36.99	18.407	0		
11,900.00	11,900.00	11,927.74	11,901.10	26.61	28.09	62.23	680.80	643.50	37.30	18.253	0		
12,000.00	12,000.00	12,027.74	12,001.10	26.83	28.30	62.23	680.80	643.19	37.61	18.103	0		
12,100.00	12,100.00	12,127.74	12,101.10	27.06	28.50	62.23	680.80	642.88	37.92	17.954	0		
12,200.00	12,200.00	12,227.74	12,201.10	27.28	28.70	62.23	680.80	642.57	38.23	17.808	0		
12,276.60	12,276.60	12,304.34	12,277.70	27.45	28.85	62.23	680.80	642.33	38.47	17.698	0		
12,300.00	12,299.99	12,324.20	12,297.56	27.50	28.89	-118.65	681.08	642.55	38.53	17.676	0		
12,325.00	12,324.92	12,341.24	12,314.59	27.54	28.93	-118.64	682.21	643.62	38.59	17.679	0		
12,350.00	12,349.71	12,355.92	12,329.26	27.58	28.96	-118.61	684.35	645.71	38.64	17.710	0		
12,375.00	12,374.31	12,375.00	12,348.27	27.63	29.00	-118.65	687.53	648.83	38.70	17.765	0		
12,400.00	12,398.63	12,384.06	12,357.27	27.67	29.03	-118.45	691.67	652.93	38.74	17.856	0		
12,425.00	12,422.62	12,400.00	12,373.04	27.71	29.06	-118.38	696.87	658.09	38.79	17.967	0		
12,450.00	12,446.21	12,409.84	12,382.75	27.75	29.09	-118.06	703.10	664.28	38.82	18.113	0		
12,475.00	12,469.34	12,425.00	12,397.62	27.79	29.13	-117.89	710.40	671.53	38.86	18.280	0		
12,500.00	12,491.94	12,432.61	12,405.05	27.83	29.15	-117.31	718.71	679.83	38.88	18.484	0		
12,525.00	12,513.95	12,442.74	12,414.89	27.87	29.17	-116.74	728.08	689.16	38.91	18.711	0		
12,550.00	12,535.30	12,450.00	12,421.91	27.90	29.19	-115.91	738.47	699.54	38.93	18.970	0		
12,575.00	12,555.95	12,460.38	12,431.90	27.94	29.22	-115.14	749.86	710.90	38.96	19.247	0		
12,600.00	12,575.83	12,467.89	12,439.09	27.98	29.24	-114.07	762.23	723.25	38.98	19.554	0		
12,625.00	12,594.90	12,475.00	12,445.87	28.02	29.26	-112.83	775.53	736.52	39.00	19.883	0		
12,650.00	12,613.09	12,475.00	12,445.87	28.07	29.26	-110.91	789.75	750.75	39.00	20.252	0		
12,675.00	12,630.35	12,485.33	12,455.66	28.12	29.29	-109.58	804.72	765.68	39.04	20.612	0		
12,700.00	12,646.65	12,489.55	12,459.62	28.17	29.30	-107.60	820.51	781.45	39.06	21.006	0		
12,725.00	12,661.94	12,493.01	12,462.88	28.23	29.31	-105.37	837.00	797.92	39.08	21.417	0		
12,750.00	12,676.16	12,500.00	12,469.42	28.30	29.33	-103.25	854.15	815.03	39.13	21.831	0		
12,775.00	12,689.29	12,500.00	12,469.42	28.36	29.33	-100.31	871.84	832.70	39.14	22.276	0		
12,800.00	12,701.30	12,500.00	12,469.42	28.44	29.33	-97.16	890.03	850.87	39.16	22.730	0		
12,825.00	12,712.13	12,500.00	12,469.42	28.51	29.33	-93.83	908.65	869.47	39.18	23.192	0		
12,850.00	12,721.78	12,500.00	12,469.42	28.60	29.33	-90.33	927.64	888.43	39.21	23.659	0		
12,875.00	12,730.20	12,500.00	12,469.42	28.69	29.33	-86.70	946.90	907.66	39.24	24.130	0		
12,900.00	12,737.38	12,500.00	12,469.42	28.78	29.33	-82.99	966.38	927.10	39.28	24.602	0		
12,925.00	12,743.30	12,500.00	12,469.42	28.88	29.33	-79.23	986.01	946.69	39.32	25.075	0		
12,950.00	12,747.93	12,500.00	12,469.42	28.98	29.33	-75.47	1,005.74	966.37	39.37	25.546	0		
12,975.00	12,751.28	12,500.00	12,469.42	29.10	29.33	-71.76	1,025.49	986.07	39.42	26.015	0		
13,000.00	12,753.33	12,500.00	12,469.42	29.21	29.33	-68.14	1,045.23	1,005.75	39.47	26.480	0		
13,025.00	12,754.06	12,489.26	12,459.35	29.33	29.30	-63.86	1,064.73	1,025.26	39.48	26.970	0		
13,027.60	12,754.07	12,488.95	12,459.06	29.34	29.30	-63.49	1,066.76	1,027.28	39.48	27.019	0		
13,062.84	12,753.99	12,484.82	12,455.17	29.52	29.28	-63.19	1,094.46	1,054.91	39.55	27.675	0		
13,100.00	12,753.91	12,475.00	12,445.87	29.73	29.26	-62.48	1,124.12	1,084.53	39.59	28.395	0		
13,200.00	12,753.69	12,475.00	12,445.87	30.34	29.26	-62.48	1,205.69	1,165.88	39.81	30.287	0		
13,300.00	12,753.48	12,461.48	12,432.95	31.05	29.22	-61.52	1,289.61	1,249.65	39.96	32.275	0		
13,400.00	12,753.26	12,450.00	12,421.91	31.85	29.19	-60.71	1,375.55	1,335.45	40.10	34.303	0		
13,500.00	12,753.05	12,450.00	12,421.91	32.73	29.19	-60.71	1,463.13	1,422.86	40.27	36.337	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	Local Co-ordinate Reference:	Well Fighting Okra 18-19 Fed 82H
Project:	PBNM	TVD Reference:	1 @ 3393.10ft
Reference Site:	Dzurisin	MD Reference:	1 @ 3393.10ft
Site Error:	0.00	North Reference:	Grid
Reference Well:	Fighting Okra 18-19 Fed 82H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000 US Production
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

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	Risked Separation Factor	Probability of Collision	Warning	
13,600.00	12,752.83	12,439.95	12,412.18	33.69	29.16	-60.01	1,552.07	1,511.69	40.39	38.432	0			
13,700.00	12,752.62	12,425.00	12,397.62	34.71	29.13	-58.97	1,642.33	1,601.84	40.48	40.569	0			
13,800.00	12,752.40	12,425.00	12,397.62	35.80	29.13	-58.97	1,733.39	1,692.79	40.61	42.687	0			
13,900.00	12,752.19	12,425.00	12,397.62	36.95	29.13	-58.97	1,825.39	1,784.67	40.72	44.827	0			
14,000.00	12,751.97	12,425.00	12,397.62	38.15	29.13	-58.97	1,918.20	1,877.37	40.82	46.986	0			
14,100.00	12,751.75	12,425.00	12,397.62	39.39	29.13	-58.97	2,011.69	1,970.77	40.92	49.162	0			
14,200.00	12,751.54	12,412.05	12,384.92	40.68	29.09	-58.09	2,105.57	2,064.59	40.98	51.376	0			
14,300.00	12,751.32	12,400.00	12,373.04	42.01	29.06	-57.28	2,200.15	2,159.11	41.04	53.603	0			
14,400.00	12,751.11	12,400.00	12,373.04	43.37	29.06	-57.28	2,295.03	2,253.90	41.12	55.809	0			
14,500.00	12,750.89	12,400.00	12,373.04	44.77	29.06	-57.28	2,390.32	2,349.12	41.20	58.023	0			
14,600.00	12,750.68	12,400.00	12,373.04	46.20	29.06	-57.28	2,485.98	2,444.72	41.26	60.245	0			
14,700.00	12,750.46	12,400.00	12,373.04	47.65	29.06	-57.28	2,581.98	2,540.65	41.33	62.473	0			
14,800.00	12,750.25	12,400.00	12,373.04	49.13	29.06	-57.28	2,678.26	2,636.87	41.39	64.706	0			
14,900.00	12,750.03	12,400.00	12,373.04	50.63	29.06	-57.28	2,774.81	2,733.36	41.45	66.943	0			
15,000.00	12,749.81	12,400.00	12,373.04	52.15	29.06	-57.28	2,871.59	2,830.09	41.51	69.184	0			
15,100.00	12,749.60	12,388.48	12,361.65	53.69	29.04	-56.51	2,968.43	2,926.88	41.55	71.445	0			
15,200.00	12,749.38	12,386.61	12,359.79	55.24	29.03	-56.39	3,065.57	3,023.97	41.60	73.692	0			
15,300.00	12,749.17	12,375.00	12,348.27	56.82	29.00	-55.63	3,162.99	3,121.35	41.64	75.962	0			
15,400.00	12,748.95	12,375.00	12,348.27	58.40	29.00	-55.63	3,260.42	3,218.73	41.69	78.207	0			
15,500.00	12,748.74	12,375.00	12,348.27	60.00	29.00	-55.63	3,357.99	3,316.26	41.74	80.451	0			
15,600.00	12,748.52	12,375.00	12,348.27	61.61	29.00	-55.63	3,455.71	3,413.92	41.79	82.696	0			
15,700.00	12,748.30	12,375.00	12,348.27	63.24	29.00	-55.63	3,553.55	3,511.72	41.84	84.940	0			
15,800.00	12,748.09	12,375.00	12,348.27	64.87	29.00	-55.63	3,651.52	3,609.63	41.88	87.184	0			
15,900.00	12,747.87	12,375.00	12,348.27	66.51	29.00	-55.63	3,749.58	3,707.65	41.93	89.426	0			
16,000.00	12,747.66	12,375.00	12,348.27	68.17	29.00	-55.63	3,847.75	3,805.78	41.98	91.667	0			
16,100.00	12,747.44	12,375.00	12,348.27	69.83	29.00	-55.63	3,946.01	3,903.99	42.02	93.906	0			
16,200.00	12,747.23	12,375.00	12,348.27	71.49	29.00	-55.63	4,044.36	4,002.29	42.07	96.143	0			
16,300.00	12,747.01	12,375.00	12,348.27	73.17	29.00	-55.63	4,142.78	4,100.67	42.11	98.378	0			
16,400.00	12,746.80	12,375.00	12,348.27	74.85	29.00	-55.63	4,241.28	4,199.12	42.16	100.610	0			
16,500.00	12,746.58	12,375.00	12,348.27	76.54	29.00	-55.63	4,339.84	4,297.64	42.20	102.839	0			
16,600.00	12,746.36	12,375.00	12,348.27	78.23	29.00	-55.63	4,438.47	4,396.23	42.25	105.065	0			
16,700.00	12,746.15	12,375.00	12,348.27	79.93	29.00	-55.63	4,537.17	4,494.88	42.29	107.287	0			
16,800.00	12,745.93	12,375.00	12,348.27	81.64	29.00	-55.63	4,635.91	4,593.58	42.33	109.506	0			
16,900.00	12,745.72	12,375.00	12,348.27	83.35	29.00	-55.63	4,734.71	4,692.33	42.38	111.722	0			
17,000.00	12,745.50	12,375.00	12,348.27	85.06	29.00	-55.63	4,833.56	4,791.14	42.42	113.933	0			
17,100.00	12,745.29	12,375.00	12,348.27	86.78	29.00	-55.63	4,932.46	4,889.99	42.47	116.141	0			
17,200.00	12,745.07	12,363.45	12,336.77	88.51	28.98	-54.88	5,031.24	4,988.73	42.51	118.359	0			
17,300.00	12,744.86	12,362.73	12,336.05	90.23	28.98	-54.84	5,130.20	5,087.65	42.55	120.559	0			
17,400.00	12,744.64	12,362.03	12,335.35	91.96	28.98	-54.79	5,229.20	5,186.60	42.60	122.753	0			
17,500.00	12,744.42	12,350.00	12,323.35	93.70	28.95	-54.03	5,328.38	5,285.74	42.64	124.966	0			
17,600.00	12,744.21	12,350.00	12,323.35	95.43	28.95	-54.03	5,427.44	5,384.75	42.69	127.149	0			
17,700.00	12,743.99	12,350.00	12,323.35	97.17	28.95	-54.03	5,526.52	5,483.79	42.73	129.328	0			
17,800.00	12,743.78	12,350.00	12,323.35	98.92	28.95	-54.03	5,625.64	5,582.86	42.78	131.501	0			
17,900.00	12,743.56	12,350.00	12,323.35	100.66	28.95	-54.03	5,724.79	5,681.97	42.83	133.669	0			
18,000.00	12,743.35	12,350.00	12,323.35	102.41	28.95	-54.03	5,823.97	5,781.10	42.88	135.832	0			
18,100.00	12,743.13	12,350.00	12,323.35	104.16	28.95	-54.03	5,923.18	5,880.26	42.92	137.989	0			
18,200.00	12,742.91	12,350.00	12,323.35	105.92	28.95	-54.03	6,022.41	5,979.44	42.97	140.141	0			
18,300.00	12,742.70	12,350.00	12,323.35	107.67	28.95	-54.03	6,121.67	6,078.65	43.02	142.287	0			
18,400.00	12,742.48	12,350.00	12,323.35	109.43	28.95	-54.03	6,220.95	6,177.88	43.07	144.427	0			
18,500.00	12,742.27	12,350.00	12,323.35	111.19	28.95	-54.03	6,320.26	6,277.14	43.12	146.561	0			
18,600.00	12,742.05	12,350.00	12,323.35	112.95	28.95	-54.03	6,419.59	6,376.41	43.17	148.689	0			
18,700.00	12,741.84	12,350.00	12,323.35	114.71	28.95	-54.03	6,518.93	6,475.71	43.23	150.811	0			
18,800.00	12,741.62	12,350.00	12,323.35	116.48	28.95	-54.03	6,618.30	6,575.02	43.28	152.927	0			
18,900.00	12,741.41	12,350.00	12,323.35	118.24	28.95	-54.03	6,717.68	6,674.35	43.33	155.037	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	Local Co-ordinate Reference:	Well Fighting Okra 18-19 Fed 82H
Project:	PBNM	TVD Reference:	1 @ 3393.10ft
Reference Site:	Dzurisin	MD Reference:	1 @ 3393.10ft
Site Error:	0.00	North Reference:	Grid
Reference Well:	Fighting Okra 18-19 Fed 82H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000 US Production
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Dzurisin - Jayhawk 7-6 Fed 83H - Wellbore #1 - Plan 1														
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 Separation Factor	Probability of Collision	Warning	
19,000.00	12,741.19	12,350.00	12,323.35	120.01	28.95	-54.03	6,817.09	6,773.70	43.38	157.140	0			
19,100.00	12,740.97	12,350.00	12,323.35	121.78	28.95	-54.03	6,916.51	6,873.07	43.44	159.236	0			
19,200.00	12,740.76	12,350.00	12,323.35	123.55	28.95	-54.03	7,015.94	6,972.46	43.49	161.326	0			
19,300.00	12,740.54	12,350.00	12,323.35	125.33	28.95	-54.03	7,115.40	7,071.85	43.54	163.409	0			
19,400.00	12,740.33	12,350.00	12,323.35	127.10	28.95	-54.03	7,214.87	7,171.27	43.60	165.486	0			
19,500.00	12,740.11	12,350.00	12,323.35	128.87	28.95	-54.03	7,314.35	7,270.69	43.65	167.555	0			
19,600.00	12,739.90	12,350.00	12,323.35	130.65	28.95	-54.03	7,413.84	7,370.13	43.71	169.618	0			
19,700.00	12,739.68	12,350.00	12,323.35	132.43	28.95	-54.03	7,513.35	7,469.59	43.77	171.674	0			
19,800.00	12,739.47	12,350.00	12,323.35	134.21	28.95	-54.03	7,612.88	7,569.05	43.82	173.723	0			
19,900.00	12,739.25	12,350.00	12,323.35	135.99	28.95	-54.03	7,712.41	7,668.53	43.88	175.764	0			
20,000.00	12,739.03	12,350.00	12,323.35	137.77	28.95	-54.03	7,811.96	7,768.02	43.94	177.798	0			
20,100.00	12,738.82	12,350.00	12,323.35	139.55	28.95	-54.03	7,911.52	7,867.52	44.00	179.826	0			
20,200.00	12,738.60	12,350.00	12,323.35	141.33	28.95	-54.03	8,011.09	7,967.03	44.05	181.845	0			
20,300.00	12,738.39	12,350.00	12,323.35	143.12	28.95	-54.03	8,110.66	8,066.55	44.11	183.858	0			
20,400.00	12,738.17	12,350.00	12,323.35	144.90	28.95	-54.03	8,210.25	8,166.08	44.17	185.863	0			
20,500.00	12,737.96	12,350.00	12,323.35	146.69	28.95	-54.03	8,309.85	8,265.62	44.23	187.860	0			
20,600.00	12,737.74	12,350.00	12,323.35	148.47	28.95	-54.03	8,409.46	8,365.17	44.30	189.850	0			
20,700.00	12,737.53	12,350.00	12,323.35	150.26	28.95	-54.03	8,509.08	8,464.73	44.36	191.833	0			
20,800.00	12,737.31	12,350.00	12,323.35	152.05	28.95	-54.03	8,608.71	8,564.29	44.42	193.807	0			
20,900.00	12,737.09	12,350.00	12,323.35	153.84	28.95	-54.03	8,708.35	8,663.86	44.48	195.774	0			
21,000.00	12,736.88	12,350.00	12,323.35	155.63	28.95	-54.03	8,807.99	8,763.45	44.54	197.733	0			
21,100.00	12,736.66	12,350.00	12,323.35	157.42	28.95	-54.03	8,907.64	8,863.03	44.61	199.685	0			
21,200.00	12,736.45	12,350.00	12,323.35	159.21	28.95	-54.03	9,007.30	8,962.63	44.67	201.628	0			
21,300.00	12,736.23	12,350.00	12,323.35	161.00	28.95	-54.03	9,106.97	9,062.23	44.74	203.564	0			
21,400.00	12,736.02	12,350.00	12,323.35	162.79	28.95	-54.03	9,206.64	9,161.84	44.80	205.492	0			
21,500.00	12,735.80	12,350.00	12,323.35	164.59	28.95	-54.03	9,306.33	9,261.46	44.87	207.412	0			
21,600.00	12,735.58	12,350.00	12,323.35	166.38	28.95	-54.03	9,406.01	9,361.08	44.94	209.324	0			
21,700.00	12,735.37	12,350.00	12,323.35	168.17	28.95	-54.03	9,505.71	9,460.71	45.00	211.227	0			
21,800.00	12,735.15	12,350.00	12,323.35	169.97	28.95	-54.03	9,605.41	9,560.34	45.07	213.123	0			
21,900.00	12,734.94	12,350.00	12,323.35	171.76	28.95	-54.03	9,705.12	9,659.98	45.14	215.011	0			
22,000.00	12,734.72	12,350.00	12,323.35	173.56	28.95	-54.03	9,804.83	9,759.62	45.21	216.890	0			
22,100.00	12,734.51	12,350.00	12,323.35	175.35	28.95	-54.03	9,904.55	9,859.27	45.28	218.762	0			

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

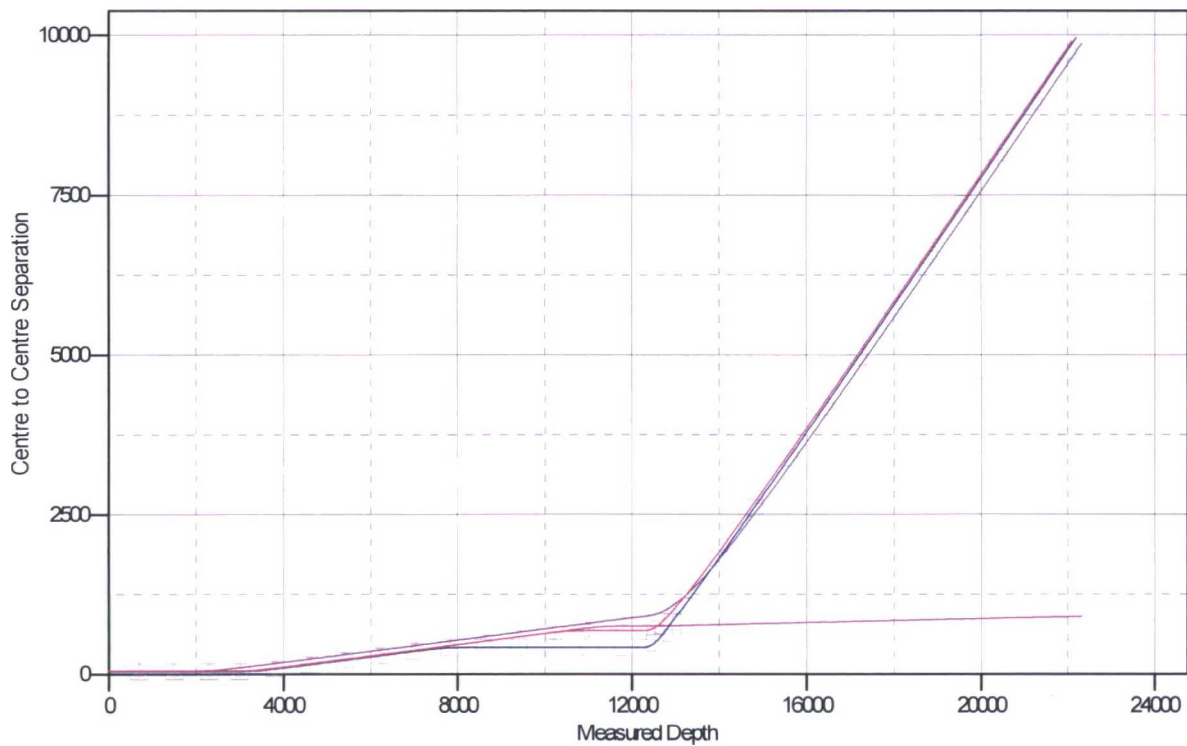
Devon Energy
Anticollision Risk Report

Company:	WESTERN DIVISION	Local Co-ordinate Reference:	Well Fighting Okra 18-19 Fed 82H
Project:	PBNM	TVD Reference:	1 @ 3393.10ft
Reference Site:	Dzurisin	MD Reference:	1 @ 3393.10ft
Site Error:	0.00	North Reference:	Grid
Reference Well:	Fighting Okra 18-19 Fed 82H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000 US Production
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to 1 @ 3393.10ft
Offset Depths are relative to Offset Datum
Central Meridian is -104.333334 °

Coordinates are relative to: Fighting Okra 18-19 Fed 82H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.44°

Ladder Plot



LEGEND

Fighting Okra 18-19 Fed 83H, Wellbore #1, Plan 1 V0 Jayhawk 7-6 Fed 82H, Wellbore #1, Plan 1 V0
Jayhawk 7-6 Fed 81H, Wellbore #1, Plan 1 V0 Jayhawk 7-6 Fed 83H, Wellbore #1, Plan 1 V0

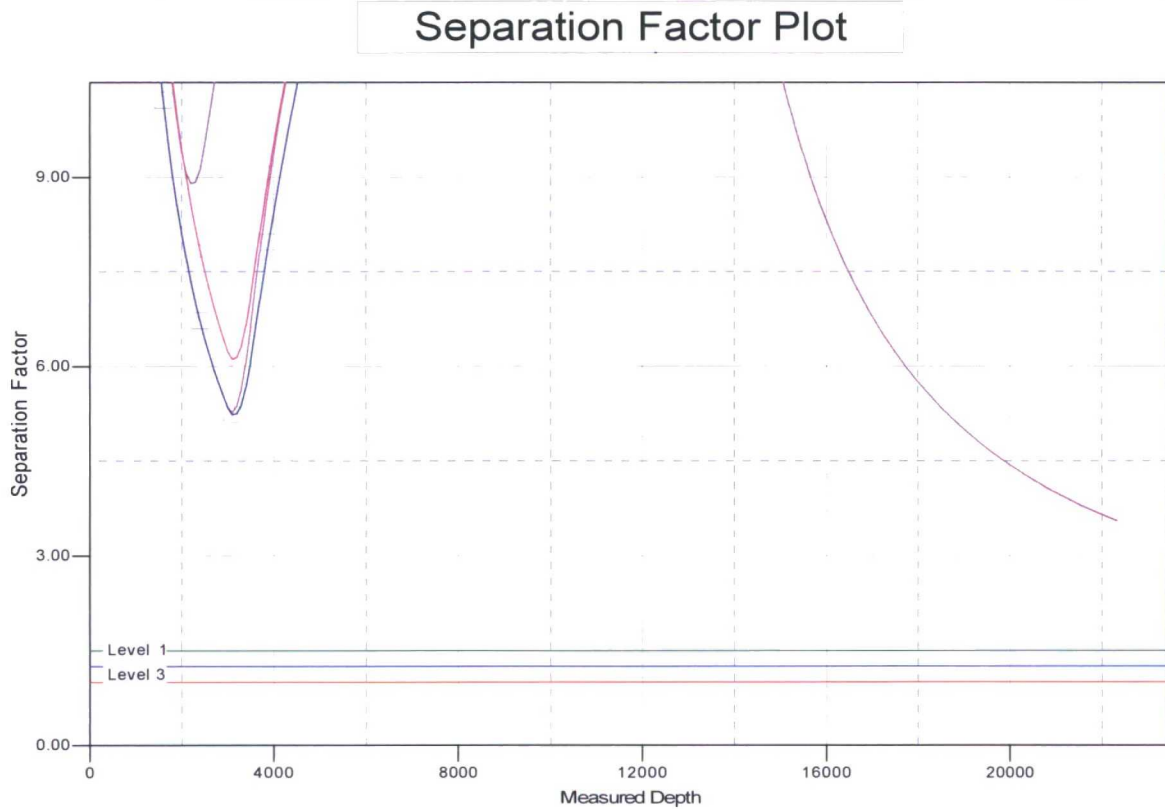
CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

Devon Energy
Anticollision Risk Report

Company:	WESTERN DIVISION	Local Co-ordinate Reference:	Well Fighting Okra 18-19 Fed 82H
Project:	PBNM	TVD Reference:	1 @ 3393.10ft
Reference Site:	Dzurisin	MD Reference:	1 @ 3393.10ft
Site Error:	0.00	North Reference:	Grid
Reference Well:	Fighting Okra 18-19 Fed 82H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	EDM r5000 US Production
Reference Design:	Plan 1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to 1 @ 3393.10ft
Offset Depths are relative to Offset Datum
Central Meridian is -104.333334 °

Coordinates are relative to: Fighting Okra 18-19 Fed 82H
Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Grid Convergence at Surface is: 0.44°



LEGEND

Fighting Okra 18-19 Fed 83H, Wellbore #1, Plan 1 V0 Jayhawk 7-6 Fed 82H, Wellbore #1, Plan 1 V0
Jayhawk 7-6 Fed 81H, Wellbore #1, Plan 1 V0 Jayhawk 7-6 Fed 83H, Wellbore #1, Plan 1 V0