

PETROLEUM DEVELOPMENT CORP DJ Basin

Well Name: **Corcilus 6J-203**

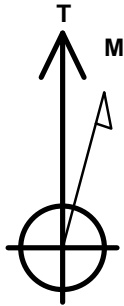
Surface Location: Corcilus 1S67W6J Pad Sec.6-T1S-R67W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 5060.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1242666.05	3157682.11	39.998130	-104.937170	
RKB - 13' WELL @ 5073.0ft (RKB - 13')						

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
50' E/W Hardline (6J-203)	1.0	-1903.5	252.2	Rectangle (Sides: L3770.0 W100.0)
SHL 807'FNL & 885'FWL	1.0	0.0	0.0	Point
BHL 500'FSL & 1114'FWL	7619.0	-3788.6	252.2	Point



Azimuths to True North
Magnetic North: 8.40°

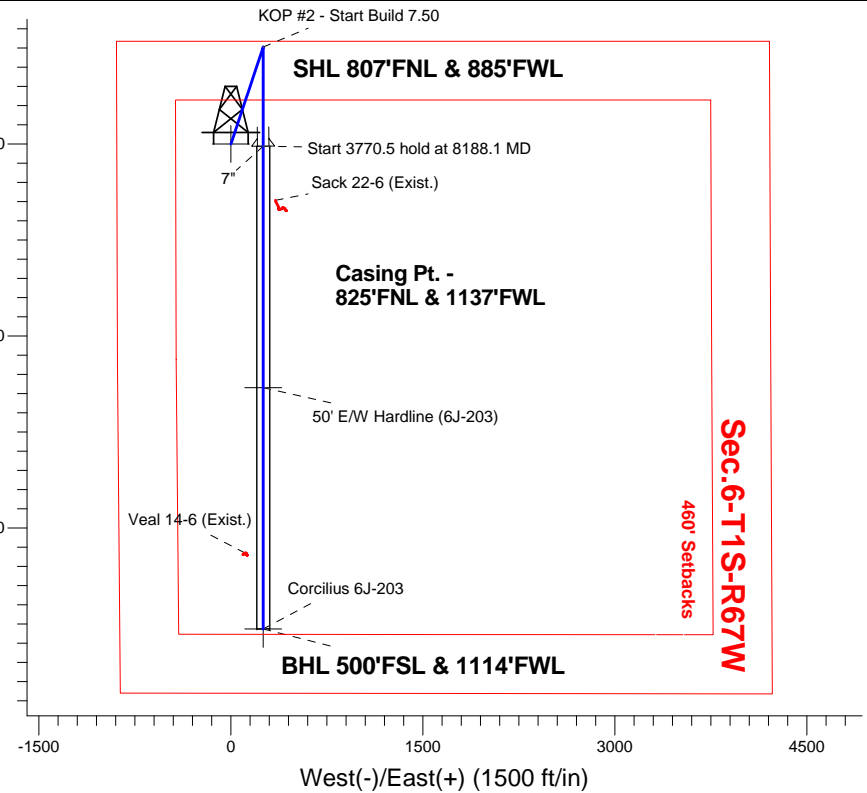
Magnetic Field
Strength: 52492.4snT
Dip Angle: 66.56°
Date: 4/29/2015
Model: IGRF2010

ANNOTATIONS

TVD	MD	Annotation
1200.0	1200.0	KOP - Start Build 1.50
6024.6	6086.5	Start Drop -2.00
6912.4	6976.5	KOP #2 - Start Build 7.50
7676.2	8188.1	Start 3770.5 hold at 8188.1 MD
7619.0	11958.5	TD at 11958.5

Corcilus 1S67W6J Pad Sec.6-T1S-R67W
Corcilus 6J-203
Plan #1 (4-29-15)
15:40, September 23 2015

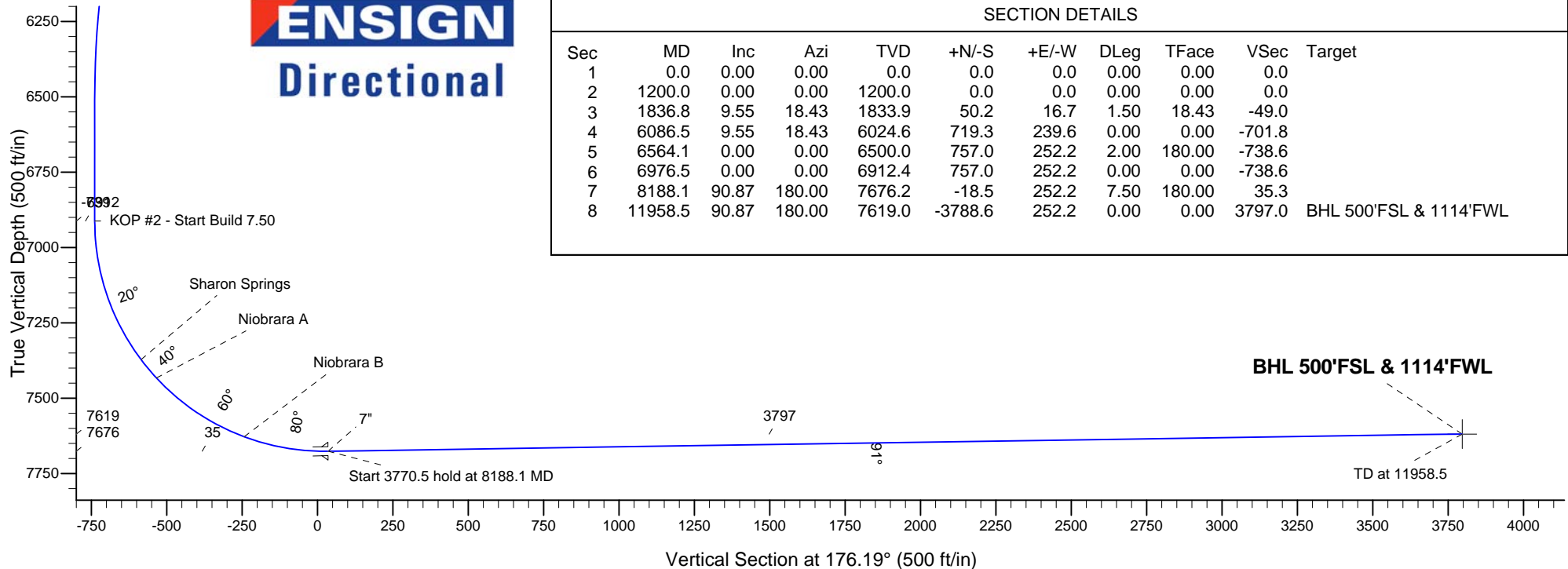
South(-)/North(+) (1500 ft/in)



ENSIGN
Directional

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1200.0	0.00	0.00	1200.0	0.0	0.0	0.00	0.00	0.0	
3	1836.8	9.55	18.43	1833.9	50.2	16.7	1.50	18.43	-49.0	
4	6086.5	9.55	18.43	6024.6	719.3	239.6	0.00	0.00	-701.8	
5	6564.1	0.00	0.00	6500.0	757.0	252.2	2.00	180.00	-738.6	
6	6976.5	0.00	0.00	6912.4	757.0	252.2	0.00	0.00	-738.6	
7	8188.1	90.87	180.00	7676.2	-18.5	252.2	7.50	180.00	35.3	
8	11958.5	90.87	180.00	7619.0	-3788.6	252.2	0.00	0.00	3797.0	BHL 500'FSL & 1114'FWL





Directional

PETROLEUM DEVELOPMENT CORP DJ Basin

SEC.6-T1S-R67W

Corcilus 1S67W6J Pad Sec.6-T1S-R67W

Corcilus 6J-203

Wellbore #1

Plan: Plan #1 (4-29-15)

Standard Planning Report

23 September, 2015

Database:	US_EDM	Local Co-ordinate Reference:	Well Corcilus 6J-203
Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	TVD Reference:	WELL @ 5073.0ft (RKB - 13')
Project:	SEC.6-T1S-R67W	MD Reference:	WELL @ 5073.0ft (RKB - 13')
Site:	Corcilus 1S67W6J Pad Sec.6-T1S-R67W	North Reference:	True
Well:	Corcilus 6J-203	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (4-29-15)		

Project	SEC.6-T1S-R67W, Adams County, CO		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	Corcilus 1S67W6J Pad Sec.6-T1S-R67W		
Site Position:		Northing:	1,242,661.65 usft
From:	Lat/Long	Easting:	3,157,561.67 usft
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "
		Latitude:	39.998120
		Longitude:	-104.937600
		Grid Convergence:	0.36 °

Well	Corcilus 6J-203		
Well Position	+N/-S	3.6 ft	Northing:
	+E/-W	120.5 ft	Easting:
Position Uncertainty		0.0 ft	Wellhead Elevation:
			Latitude:
			Longitude:
			Ground Level:

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/29/2015	8.40	66.56	52,492

Design	Plan #1 (4-29-15)			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	176.19

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
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,836.8	9.55	18.43	1,833.9	50.2	16.7	1.50	1.50	0.00	18.43	
6,086.5	9.55	18.43	6,024.6	719.3	239.6	0.00	0.00	0.00	0.00	
6,564.1	0.00	0.00	6,500.0	757.0	252.2	2.00	-2.00	0.00	180.00	
6,976.5	0.00	0.00	6,912.4	757.0	252.2	0.00	0.00	0.00	0.00	
8,188.1	90.87	180.00	7,676.2	-18.5	252.2	7.50	7.50	0.00	180.00	
11,958.5	90.87	180.00	7,619.0	-3,788.6	252.2	0.00	0.00	0.00	0.00	BHL 500'FSL & 1114'f

Database:	US_EDM	Local Co-ordinate Reference:	Well Corcilus 6J-203
Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	TVD Reference:	WELL @ 5073.0ft (RKB - 13')
Project:	SEC.6-T1S-R67W	MD Reference:	WELL @ 5073.0ft (RKB - 13')
Site:	Corcilus 1S67W6J Pad Sec.6-T1S-R67W	North Reference:	True
Well:	Corcilus 6J-203	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (4-29-15)		

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)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
1.0	0.00	0.00	1.0	0.0	0.0	0.0	0.00	0.00	0.00
50' E/W Hardline (6J-203) - SHL 807'FNL & 885'FWL									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 1.50									
1,300.0	1.50	18.43	1,300.0	1.2	0.4	-1.2	1.50	1.50	0.00
1,400.0	3.00	18.43	1,399.9	5.0	1.7	-4.8	1.50	1.50	0.00
1,500.0	4.50	18.43	1,499.7	11.2	3.7	-10.9	1.50	1.50	0.00
1,600.0	6.00	18.43	1,599.3	19.9	6.6	-19.4	1.50	1.50	0.00
1,700.0	7.50	18.43	1,698.6	31.0	10.3	-30.2	1.50	1.50	0.00
1,800.0	9.00	18.43	1,797.5	44.6	14.9	-43.5	1.50	1.50	0.00
1,836.8	9.55	18.43	1,833.9	50.2	16.7	-49.0	1.50	1.50	0.00
1,900.0	9.55	18.43	1,896.2	60.2	20.1	-58.7	0.00	0.00	0.00
2,000.0	9.55	18.43	1,994.8	75.9	25.3	-74.1	0.00	0.00	0.00
2,100.0	9.55	18.43	2,093.4	91.7	30.5	-89.5	0.00	0.00	0.00
2,200.0	9.55	18.43	2,192.0	107.4	35.8	-104.8	0.00	0.00	0.00
2,300.0	9.55	18.43	2,290.6	123.2	41.0	-120.2	0.00	0.00	0.00
2,400.0	9.55	18.43	2,389.2	138.9	46.3	-135.5	0.00	0.00	0.00
2,500.0	9.55	18.43	2,487.9	154.7	51.5	-150.9	0.00	0.00	0.00
2,600.0	9.55	18.43	2,586.5	170.4	56.8	-166.3	0.00	0.00	0.00
2,700.0	9.55	18.43	2,685.1	186.1	62.0	-181.6	0.00	0.00	0.00
2,800.0	9.55	18.43	2,783.7	201.9	67.3	-197.0	0.00	0.00	0.00
2,900.0	9.55	18.43	2,882.3	217.6	72.5	-212.3	0.00	0.00	0.00
3,000.0	9.55	18.43	2,980.9	233.4	77.7	-227.7	0.00	0.00	0.00
3,100.0	9.55	18.43	3,079.5	249.1	83.0	-243.1	0.00	0.00	0.00
3,200.0	9.55	18.43	3,178.2	264.9	88.2	-258.4	0.00	0.00	0.00
3,300.0	9.55	18.43	3,276.8	280.6	93.5	-273.8	0.00	0.00	0.00
3,400.0	9.55	18.43	3,375.4	296.4	98.7	-289.1	0.00	0.00	0.00
3,500.0	9.55	18.43	3,474.0	312.1	104.0	-304.5	0.00	0.00	0.00
3,600.0	9.55	18.43	3,572.6	327.8	109.2	-319.9	0.00	0.00	0.00
3,700.0	9.55	18.43	3,671.2	343.6	114.5	-335.2	0.00	0.00	0.00
3,800.0	9.55	18.43	3,769.8	359.3	119.7	-350.6	0.00	0.00	0.00
3,900.0	9.55	18.43	3,868.4	375.1	125.0	-365.9	0.00	0.00	0.00
4,000.0	9.55	18.43	3,967.1	390.8	130.2	-381.3	0.00	0.00	0.00
4,100.0	9.55	18.43	4,065.7	406.6	135.4	-396.7	0.00	0.00	0.00
4,200.0	9.55	18.43	4,164.3	422.3	140.7	-412.0	0.00	0.00	0.00
4,300.0	9.55	18.43	4,262.9	438.1	145.9	-427.4	0.00	0.00	0.00
4,400.0	9.55	18.43	4,361.5	453.8	151.2	-442.8	0.00	0.00	0.00
4,469.4	9.55	18.43	4,430.0	464.7	154.8	-453.4	0.00	0.00	0.00
Parkman									
4,500.0	9.55	18.43	4,460.1	469.5	156.4	-458.1	0.00	0.00	0.00
4,600.0	9.55	18.43	4,558.7	485.3	161.7	-473.5	0.00	0.00	0.00

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Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	TVD Reference:	WELL @ 5073.0ft (RKB - 13')
Project:	SEC.6-T1S-R67W	MD Reference:	WELL @ 5073.0ft (RKB - 13')
Site:	Corcilus 1S67W6J Pad Sec.6-T1S-R67W	North Reference:	True
Well:	Corcilus 6J-203	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (4-29-15)		

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)	
4,700.0	9.55	18.43	4,657.4	501.0	166.9	-488.8	0.00	0.00	0.00	
4,800.0	9.55	18.43	4,756.0	516.8	172.2	-504.2	0.00	0.00	0.00	
4,844.7	9.55	18.43	4,800.0	523.8	174.5	-511.1	0.00	0.00	0.00	
Sussex										
4,900.0	9.55	18.43	4,854.6	532.5	177.4	-519.6	0.00	0.00	0.00	
5,000.0	9.55	18.43	4,953.2	548.3	182.7	-534.9	0.00	0.00	0.00	
5,100.0	9.55	18.43	5,051.8	564.0	187.9	-550.3	0.00	0.00	0.00	
5,200.0	9.55	18.43	5,150.4	579.7	193.1	-565.6	0.00	0.00	0.00	
5,300.0	9.55	18.43	5,249.0	595.5	198.4	-581.0	0.00	0.00	0.00	
5,400.0	9.55	18.43	5,347.6	611.2	203.6	-596.4	0.00	0.00	0.00	
5,432.8	9.55	18.43	5,380.0	616.4	205.4	-601.4	0.00	0.00	0.00	
Shannon										
5,500.0	9.55	18.43	5,446.3	627.0	208.9	-611.7	0.00	0.00	0.00	
5,600.0	9.55	18.43	5,544.9	642.7	214.1	-627.1	0.00	0.00	0.00	
5,700.0	9.55	18.43	5,643.5	658.5	219.4	-642.4	0.00	0.00	0.00	
5,800.0	9.55	18.43	5,742.1	674.2	224.6	-657.8	0.00	0.00	0.00	
5,900.0	9.55	18.43	5,840.7	690.0	229.9	-673.2	0.00	0.00	0.00	
6,000.0	9.55	18.43	5,939.3	705.7	235.1	-688.5	0.00	0.00	0.00	
6,086.5	9.55	18.43	6,024.6	719.3	239.6	-701.8	0.00	0.00	0.00	
Start Drop -2.00										
6,100.0	9.28	18.43	6,037.9	721.4	240.3	-703.9	2.01	-2.01	0.00	
6,200.0	7.28	18.43	6,136.9	735.1	244.9	-717.2	2.00	-2.00	0.00	
6,300.0	5.28	18.43	6,236.3	745.5	248.3	-727.3	2.00	-2.00	0.00	
6,400.0	3.28	18.43	6,336.0	752.5	250.7	-734.2	2.00	-2.00	0.00	
6,500.0	1.28	18.43	6,435.9	756.3	252.0	-737.9	2.00	-2.00	0.00	
6,564.1	0.00	0.00	6,500.0	757.0	252.2	-738.6	2.00	-2.00	0.00	
6,600.0	0.00	0.00	6,535.9	757.0	252.2	-738.6	0.00	0.00	0.00	
6,700.0	0.00	0.00	6,635.9	757.0	252.2	-738.6	0.00	0.00	0.00	
6,800.0	0.00	0.00	6,735.9	757.0	252.2	-738.6	0.00	0.00	0.00	
6,900.0	0.00	0.00	6,835.9	757.0	252.2	-738.6	0.00	0.00	0.00	
6,976.5	0.00	0.00	6,912.4	757.0	252.2	-738.6	0.00	0.00	0.00	
KOP #2 - Start Build 7.50										
7,000.0	1.76	180.00	6,935.9	756.6	252.2	-738.2	7.51	7.51	0.00	
7,100.0	9.26	180.00	7,035.4	747.0	252.2	-728.6	7.50	7.50	0.00	
7,200.0	16.76	180.00	7,132.7	724.5	252.2	-706.2	7.50	7.50	0.00	
7,300.0	24.26	180.00	7,226.3	689.5	252.2	-671.2	7.50	7.50	0.00	
7,400.0	31.76	180.00	7,314.6	642.6	252.2	-624.4	7.50	7.50	0.00	
7,469.6	36.99	180.00	7,372.0	603.3	252.2	-585.2	7.50	7.50	0.00	
Sharon Springs										
7,500.0	39.26	180.00	7,395.9	584.5	252.2	-566.5	7.50	7.50	0.00	
7,549.3	42.96	180.00	7,433.0	552.1	252.2	-534.2	7.50	7.50	0.00	
Niobrara A										
7,600.0	46.76	180.00	7,469.0	516.4	252.2	-498.5	7.50	7.50	0.00	
7,700.0	54.26	180.00	7,532.5	439.2	252.2	-421.5	7.50	7.50	0.00	
7,800.0	61.76	180.00	7,585.4	354.5	252.2	-336.9	7.50	7.50	0.00	
7,900.0	69.26	180.00	7,626.9	263.5	252.2	-246.2	7.50	7.50	0.00	
7,903.3	69.51	180.00	7,628.0	260.5	252.2	-243.2	7.50	7.50	0.00	
Niobrara B										
8,000.0	76.76	180.00	7,656.0	168.0	252.2	-150.8	7.50	7.50	0.00	
8,100.0	84.26	180.00	7,672.5	69.4	252.2	-52.5	7.50	7.50	0.00	
8,188.1	90.87	180.00	7,676.2	-18.6	252.2	35.3	7.50	7.50	0.00	
Start 3770.5 hold at 8188.1 MD - 7"										

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Site:	Corcilus 1S67W6J Pad Sec.6-T1S-R67W	North Reference:	True
Well:	Corcilus 6J-203	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (4-29-15)		

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)
8,200.0	90.87	180.00	7,676.1	-30.5	252.2	47.2	0.00	0.00	0.00
8,300.0	90.87	180.00	7,674.6	-130.5	252.2	146.9	0.00	0.00	0.00
8,400.0	90.87	180.00	7,673.0	-230.4	252.2	246.7	0.00	0.00	0.00
8,500.0	90.87	180.00	7,671.5	-330.4	252.2	346.5	0.00	0.00	0.00
8,600.0	90.87	180.00	7,670.0	-430.4	252.2	446.2	0.00	0.00	0.00
8,700.0	90.87	180.00	7,668.5	-530.4	252.2	546.0	0.00	0.00	0.00
8,800.0	90.87	180.00	7,667.0	-630.4	252.2	645.8	0.00	0.00	0.00
8,900.0	90.87	180.00	7,665.4	-730.4	252.2	745.5	0.00	0.00	0.00
9,000.0	90.87	180.00	7,663.9	-830.4	252.2	845.3	0.00	0.00	0.00
9,100.0	90.87	180.00	7,662.4	-930.4	252.2	945.1	0.00	0.00	0.00
9,200.0	90.87	180.00	7,660.9	-1,030.4	252.2	1,044.8	0.00	0.00	0.00
9,300.0	90.87	180.00	7,659.4	-1,130.3	252.2	1,144.6	0.00	0.00	0.00
9,400.0	90.87	180.00	7,657.8	-1,230.3	252.2	1,244.4	0.00	0.00	0.00
9,500.0	90.87	180.00	7,656.3	-1,330.3	252.2	1,344.1	0.00	0.00	0.00
9,600.0	90.87	180.00	7,654.8	-1,430.3	252.2	1,443.9	0.00	0.00	0.00
9,700.0	90.87	180.00	7,653.3	-1,530.3	252.2	1,543.7	0.00	0.00	0.00
9,800.0	90.87	180.00	7,651.8	-1,630.3	252.2	1,643.4	0.00	0.00	0.00
9,900.0	90.87	180.00	7,650.3	-1,730.3	252.2	1,743.2	0.00	0.00	0.00
10,000.0	90.87	180.00	7,648.7	-1,830.3	252.2	1,843.0	0.00	0.00	0.00
10,100.0	90.87	180.00	7,647.2	-1,930.3	252.2	1,942.7	0.00	0.00	0.00
10,200.0	90.87	180.00	7,645.7	-2,030.2	252.2	2,042.5	0.00	0.00	0.00
10,300.0	90.87	180.00	7,644.2	-2,130.2	252.2	2,142.3	0.00	0.00	0.00
10,400.0	90.87	180.00	7,642.7	-2,230.2	252.2	2,242.0	0.00	0.00	0.00
10,500.0	90.87	180.00	7,641.1	-2,330.2	252.2	2,341.8	0.00	0.00	0.00
10,600.0	90.87	180.00	7,639.6	-2,430.2	252.2	2,441.6	0.00	0.00	0.00
10,700.0	90.87	180.00	7,638.1	-2,530.2	252.2	2,541.3	0.00	0.00	0.00
10,800.0	90.87	180.00	7,636.6	-2,630.2	252.2	2,641.1	0.00	0.00	0.00
10,900.0	90.87	180.00	7,635.1	-2,730.2	252.2	2,740.9	0.00	0.00	0.00
11,000.0	90.87	180.00	7,633.6	-2,830.1	252.2	2,840.6	0.00	0.00	0.00
11,100.0	90.87	180.00	7,632.0	-2,930.1	252.2	2,940.4	0.00	0.00	0.00
11,200.0	90.87	180.00	7,630.5	-3,030.1	252.2	3,040.2	0.00	0.00	0.00
11,300.0	90.87	180.00	7,629.0	-3,130.1	252.2	3,140.0	0.00	0.00	0.00
11,400.0	90.87	180.00	7,627.5	-3,230.1	252.2	3,239.7	0.00	0.00	0.00
11,500.0	90.87	180.00	7,626.0	-3,330.1	252.2	3,339.5	0.00	0.00	0.00
11,600.0	90.87	180.00	7,624.4	-3,430.1	252.2	3,439.3	0.00	0.00	0.00
11,700.0	90.87	180.00	7,622.9	-3,530.1	252.2	3,539.0	0.00	0.00	0.00
11,800.0	90.87	180.00	7,621.4	-3,630.1	252.2	3,638.8	0.00	0.00	0.00
11,900.0	90.87	180.00	7,619.9	-3,730.0	252.2	3,738.6	0.00	0.00	0.00
11,958.5	90.87	180.00	7,619.0	-3,788.5	252.2	3,796.9	0.00	0.00	0.00
TD at 11958.5 - BHL 500'FSL & 1114'FWL									

Database:	US_EDM	Local Co-ordinate Reference:	Well Corcilus 6J-203
Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	TVD Reference:	WELL @ 5073.0ft (RKB - 13')
Project:	SEC.6-T1S-R67W	MD Reference:	WELL @ 5073.0ft (RKB - 13')
Site:	Corcilus 1S67W6J Pad Sec.6-T1S-R67W	North Reference:	True
Well:	Corcilus 6J-203	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (4-29-15)		

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
50' E/W Hardline (6J-20: - plan misses target center by 1920.2ft at 1.0ft MD (1.0 TVD, 0.0 N, 0.0 E) - Rectangle (sides W100.0 H3,770.0 D0.0)	0.00	0.00	1.0	-1,903.5	252.2	1,240,764.20	3,157,946.38	39.992905	-104.936270
SHL 807'FNL & 885'FWL - plan hits target center - Point	0.00	0.00	1.0	0.0	0.0	1,242,666.05	3,157,682.11	39.998130	-104.937170
BHL 500'FSL & 1114'FW - plan hits target center - Point	0.00	0.00	7,619.0	-3,788.6	252.2	1,238,879.28	3,157,958.34	39.987730	-104.936270

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
8,188.1	7,676.2	7"	7	7-1/2	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,469.4	4,431.0	Parkman		0.00	
4,844.7	4,801.0	Sussex		0.00	
5,432.8	5,381.0	Shannon		0.00	
7,469.6	7,373.0	Sharon Springs		0.00	
7,549.3	7,434.0	Niobrara A		0.00	
7,903.3	7,629.0	Niobrara B		0.00	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,200.0	1,200.0	0.0	0.0	KOP - Start Build 1.50	
6,086.5	6,024.6	719.3	239.6	Start Drop -2.00	
6,976.5	6,912.4	757.0	252.2	KOP #2 - Start Build 7.50	
8,188.1	7,676.2	-18.6	252.2	Start 3770.5 hold at 8188.1 MD	
11,958.5	7,619.0	-3,788.5	252.2	TD at 11958.5	



Directional

PETROLEUM DEVELOPMENT CORP DJ Basin

SEC.6-T1S-R67W

Corcilus 1S67W6J Pad Sec.6-T1S-R67W

Corcilus 6J-203

Wellbore #1

Plan #1 (4-29-15)

Anticollision Report

23 September, 2015



Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Corcilius 6J-203
Project:	SEC.6-T1S-R67W	TVD Reference:	WELL @ 5073.0ft (RKB - 13')
Reference Site:	Corcilius 1S67W6J Pad Sec.6-T1S-R67W	MD Reference:	WELL @ 5073.0ft (RKB - 13')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Corcilius 6J-203	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (4-29-15)	Offset TVD Reference:	Offset Datum

Reference	Plan #1 (4-29-15)		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,000.0 ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date 5/5/2015			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	11,958.5	Plan #1 (4-29-15) (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Corcilius 1S67W6J Pad Sec.6-T1S-R67W						
Corcilius 6J-303 - Wellbore #1 - Plan #1 (4-29-15)	800.0	799.0	30.8	27.4	9.147	CC, ES
Corcilius 6J-303 - Wellbore #1 - Plan #1 (4-29-15)	11,958.5	12,052.2	352.0	202.3	2.351	SF
Corcilius 6J-443 - Wellbore #1 - Plan #1 (4-29-15)	1,200.0	1,200.0	31.0	25.9	6.003	CC, ES
Corcilius 6J-443 - Wellbore #1 - Plan #1 (4-29-15)	11,958.5	12,139.6	421.3	288.5	3.174	SF
Corcilius 6M-243 - Wellbore #1 - Plan #1 (4-29-15)	400.0	398.0	58.8	57.3	37.502	CC, ES
Corcilius 6M-243 - Wellbore #1 - Plan #1 (4-29-15)	800.0	791.5	76.9	73.5	22.981	SF
Corcilius 6M-343 - Wellbore #1 - Plan #1 (4-29-15)	200.0	198.0	89.7	89.0	133.853	CC, ES
Corcilius 6M-343 - Wellbore #1 - Plan #1 (4-29-15)	5,200.0	5,070.0	985.8	953.4	30.433	SF
Existing Wells Sec.6-T1S-R67W						
Sack 22-6 (Exist.) - Wellbore #1 - Wellbore #1	8,646.1	7,655.8	112.3	73.2	2.872	CC, ES, SF
Veal 14-6 (Exist.) - Wellbore #1 - Wellbore #1	11,368.6	7,653.7	146.0	65.1	1.804	CC, ES, SF

Offset Design	Corcilius 1S67W6J Pad Sec.6-T1S-R67W - Corcilius 6J-303 - Wellbore #1 - Plan #1 (4-29-15)												Offset Site Error:	0.0 ft
Survey Program:	0-MWD												Offset Well Error:	0.0 ft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		Separation Factor		Warning				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	90.00	0.0	30.8	30.8					
100.0	100.0	99.0	99.0	0.1	0.1	90.00	0.0	30.8	30.8	30.6	0.22	137.803		
200.0	200.0	199.0	199.0	0.3	0.3	90.00	0.0	30.8	30.8	30.1	0.67	45.858		
300.0	300.0	299.0	299.0	0.6	0.6	90.00	0.0	30.8	30.8	29.7	1.12	27.478		
400.0	400.0	399.0	399.0	0.8	0.8	90.00	0.0	30.8	30.8	29.2	1.57	19.616		
500.0	500.0	499.0	499.0	1.0	1.0	90.00	0.0	30.8	30.8	28.8	2.02	15.252		
600.0	600.0	599.0	599.0	1.2	1.2	90.00	0.0	30.8	30.8	28.3	2.47	12.476		
700.0	700.0	699.0	699.0	1.5	1.5	90.00	0.0	30.8	30.8	27.9	2.92	10.555		
800.0	800.0	799.0	799.0	1.7	1.7	90.00	0.0	30.8	30.8	27.4	3.37	9.147	CC, ES	
900.0	900.0	898.5	898.5	1.9	1.9	88.14	1.0	31.6	31.6	27.8	3.81	8.282		
1,000.0	1,000.0	997.9	997.8	2.1	2.1	83.05	4.1	33.9	34.1	29.9	4.26	8.012		
1,100.0	1,100.0	1,097.0	1,096.7	2.4	2.4	76.14	9.3	37.7	38.9	34.2	4.71	8.256		
1,200.0	1,200.0	1,195.7	1,195.0	2.6	2.6	69.01	16.5	43.0	46.2	41.0	5.16	8.959		
1,300.0	1,300.0	1,294.0	1,292.6	2.8	2.8	45.10	25.7	49.7	55.4	49.8	5.60	9.887		
1,400.0	1,399.9	1,392.0	1,389.7	3.0	3.1	41.80	36.9	58.0	65.4	59.3	6.05	10.799		

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

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Corcilius 6J-203
Project:	SEC.6-T1S-R67W	TVD Reference:	WELL @ 5073.0ft (RKB - 13')
Reference Site:	Corcilius 1S67W6J Pad Sec.6-T1S-R67W	MD Reference:	WELL @ 5073.0ft (RKB - 13')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Corcilius 6J-203	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (4-29-15)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Corcilius 1S67W6J Pad Sec.6-T1S-R67W - Corcilius 6J-303 - Wellbore #1 - Plan #1 (4-29-15)												Offset Well Error:	0.0 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 (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
1,500.0	1,499.7	1,489.8	1,486.1	3.3	3.4	39.90	50.0	67.7	75.9	69.4	6.51	11.655	
1,600.0	1,599.3	1,587.3	1,581.8	3.5	3.7	38.91	65.1	78.8	86.8	79.8	6.97	12.444	
1,700.0	1,698.6	1,686.8	1,679.2	3.7	4.1	38.83	81.4	90.8	96.8	89.3	7.45	12.987	
1,800.0	1,797.5	1,786.5	1,776.7	4.0	4.4	39.66	97.8	102.9	104.7	96.8	7.94	13.183	
1,836.8	1,833.9	1,823.2	1,812.7	4.1	4.6	40.17	103.9	107.3	107.2	99.0	8.13	13.179	
1,900.0	1,896.2	1,886.2	1,874.4	4.3	4.8	41.12	114.2	114.9	111.2	102.7	8.47	13.122	
2,000.0	1,994.8	1,986.0	1,972.0	4.6	5.2	42.50	130.6	127.0	117.5	108.5	9.02	13.025	
2,100.0	2,093.4	2,085.8	2,069.7	4.9	5.6	43.74	147.0	139.1	123.9	114.3	9.59	12.923	
2,200.0	2,192.0	2,185.5	2,167.4	5.2	6.0	44.86	163.4	151.2	130.4	120.2	10.17	12.819	
2,300.0	2,290.6	2,285.3	2,265.0	5.5	6.4	45.87	179.8	163.2	136.9	126.1	10.77	12.714	
2,400.0	2,389.2	2,385.0	2,362.7	5.9	6.9	46.79	196.2	175.3	143.5	132.1	11.38	12.611	
2,500.0	2,487.9	2,484.8	2,460.3	6.2	7.3	47.63	212.5	187.4	150.0	138.0	11.99	12.509	
2,600.0	2,586.5	2,584.6	2,558.0	6.5	7.7	48.39	228.9	199.5	156.7	144.0	12.62	12.411	
2,700.0	2,685.1	2,684.3	2,655.7	6.9	8.1	49.10	245.3	211.5	163.3	150.0	13.26	12.315	
2,800.0	2,783.7	2,784.1	2,753.3	7.2	8.5	49.75	261.7	223.6	170.0	156.1	13.90	12.224	
2,900.0	2,882.3	2,883.8	2,851.0	7.6	9.0	50.35	278.1	235.7	176.6	162.1	14.55	12.136	
3,000.0	2,980.9	2,983.6	2,948.7	7.9	9.4	50.91	294.5	247.7	183.3	168.1	15.21	12.053	
3,100.0	3,079.5	3,083.4	3,046.3	8.3	9.8	51.42	310.9	259.8	190.1	174.2	15.87	11.973	
3,200.0	3,178.2	3,183.1	3,144.0	8.6	10.2	51.91	327.3	271.9	196.8	180.2	16.54	11.897	
3,300.0	3,276.8	3,282.9	3,241.6	9.0	10.7	52.36	343.7	284.0	203.5	186.3	17.21	11.825	
3,400.0	3,375.4	3,382.6	3,339.3	9.4	11.1	52.78	360.1	296.0	210.3	192.4	17.89	11.756	
3,500.0	3,474.0	3,482.4	3,437.0	9.7	11.5	53.17	376.4	308.1	217.1	198.5	18.57	11.691	
3,600.0	3,572.6	3,582.2	3,534.6	10.1	12.0	53.54	392.8	320.2	223.8	204.6	19.25	11.628	
3,700.0	3,671.2	3,681.9	3,632.3	10.4	12.4	53.89	409.2	332.3	230.6	210.7	19.93	11.569	
3,800.0	3,769.8	3,781.7	3,729.9	10.8	12.8	54.22	425.6	344.3	237.4	216.8	20.62	11.513	
3,900.0	3,868.4	3,881.4	3,827.6	11.2	13.3	54.53	442.0	356.4	244.2	222.9	21.31	11.459	
4,000.0	3,967.1	3,981.2	3,925.3	11.5	13.7	54.83	458.4	368.5	251.0	229.0	22.00	11.408	
4,100.0	4,065.7	4,081.0	4,022.9	11.9	14.1	55.11	474.8	380.6	257.8	235.1	22.70	11.359	
4,200.0	4,164.3	4,180.7	4,120.6	12.3	14.6	55.37	491.2	392.6	264.6	241.2	23.39	11.312	
4,300.0	4,262.9	4,280.5	4,218.2	12.6	15.0	55.62	507.6	404.7	271.5	247.4	24.09	11.268	
4,400.0	4,361.5	4,380.2	4,315.9	13.0	15.4	55.86	523.9	416.8	278.3	253.5	24.79	11.226	
4,500.0	4,460.1	4,480.0	4,413.6	13.4	15.9	56.09	540.3	428.8	285.1	259.6	25.49	11.185	
4,600.0	4,558.7	4,579.8	4,511.2	13.8	16.3	56.31	556.7	440.9	292.0	265.8	26.19	11.146	
4,700.0	4,657.4	4,679.5	4,608.9	14.1	16.7	56.51	573.1	453.0	298.8	271.9	26.90	11.109	
4,800.0	4,756.0	4,779.3	4,706.6	14.5	17.2	56.71	589.5	465.1	305.7	278.1	27.60	11.073	
4,900.0	4,854.6	4,879.0	4,804.2	14.9	17.6	56.90	605.9	477.1	312.5	284.2	28.31	11.039	
5,000.0	4,953.2	4,978.8	4,901.9	15.2	18.1	57.08	622.3	489.2	319.4	290.3	29.02	11.007	
5,100.0	5,051.8	5,078.6	4,999.5	15.6	18.5	57.25	638.7	501.3	326.2	296.5	29.72	10.975	
5,200.0	5,150.4	5,178.3	5,097.2	16.0	18.9	57.42	655.1	513.4	333.1	302.6	30.43	10.945	
5,300.0	5,249.0	5,278.1	5,194.9	16.4	19.4	57.58	671.5	525.4	339.9	308.8	31.14	10.916	
5,400.0	5,347.6	5,377.8	5,292.5	16.7	19.8	57.73	687.8	537.5	346.8	314.9	31.85	10.888	
5,500.0	5,446.3	5,477.6	5,390.2	17.1	20.2	57.88	704.2	549.6	353.7	321.1	32.56	10.861	
5,600.0	5,544.9	5,585.2	5,495.7	17.5	20.7	58.15	721.0	561.9	359.7	326.4	33.29	10.806	
5,700.0	5,643.5	5,695.6	5,604.8	17.8	21.0	58.84	734.9	572.2	363.0	328.9	34.04	10.664	
5,800.0	5,742.1	5,805.8	5,714.2	18.2	21.3	59.96	745.5	580.0	363.4	328.6	34.83	10.434	
5,900.0	5,840.7	5,915.6	5,823.6	18.6	21.5	61.53	752.6	585.2	361.2	325.5	35.68	10.124	
6,000.0	5,939.3	6,024.5	5,932.4	19.0	21.7	63.58	756.4	588.0	356.5	320.0	36.58	9.747	
6,086.5	6,024.6	6,115.7	6,023.6	19.3	21.8	65.71	757.0	588.4	350.8	313.4	37.39	9.382	
6,100.0	6,037.9	6,129.0	6,036.9	19.3	21.8	66.02	757.0	588.4	349.9	312.4	37.51	9.329	
6,200.0	6,136.9	6,228.0	6,135.9	19.6	21.9	68.09	757.0	588.4	344.3	306.0	38.26	8.997	
6,300.0	6,236.3	6,327.4	6,235.3	19.9	22.0	69.71	757.0	588.4	340.3	301.4	38.90	8.748	

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

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Corcilus 6J-203
Project:	SEC.6-T1S-R67W	TVD Reference:	WELL @ 5073.0ft (RKB - 13')
Reference Site:	Corcilus 1S67W6J Pad Sec.6-T1S-R67W	MD Reference:	WELL @ 5073.0ft (RKB - 13')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Corcilus 6J-203	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (4-29-15)	Offset TVD Reference:	Offset Datum

Offset Design													Corcilus 1S67W6J Pad Sec.6-T1S-R67W - Corcilus 6J-303 - Wellbore #1 - Plan #1 (4-29-15)		Offset Site Error:		0.0 ft
Survey Program:				0-MWD									Offset Well Error:		0.0 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 (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor					
6,400.0	6,336.0	6,427.1	6,335.0	20.1	22.2	70.85	757.0	588.4	337.8	298.3	39.42	8.569					
6,500.0	6,435.9	6,527.0	6,434.9	20.2	22.3	71.46	757.0	588.4	336.5	296.7	39.82	8.450					
6,564.1	6,500.0	6,591.1	6,499.0	20.3	22.4	90.00	757.0	588.4	336.3	296.2	40.01	8.404					
6,600.0	6,535.9	6,627.0	6,534.9	20.4	22.5	90.00	757.0	588.4	336.3	296.1	40.12	8.382					
6,700.0	6,635.9	6,727.0	6,634.9	20.5	22.6	90.00	757.0	588.4	336.3	295.8	40.43	8.318					
6,800.0	6,735.9	6,827.0	6,734.9	20.7	22.7	90.00	757.0	588.4	336.3	295.5	40.74	8.255					
6,900.0	6,835.9	6,927.0	6,834.9	20.8	22.9	90.00	757.0	588.4	336.3	295.2	41.05	8.192					
6,976.5	6,912.4	7,003.5	6,911.4	20.9	23.0	90.00	757.0	588.4	336.3	295.0	41.29	8.144					
6,978.7	6,914.6	7,005.7	6,913.6	20.9	23.0	-90.00	757.0	588.4	336.3	295.0	41.29	8.143					
7,000.0	6,935.9	7,027.0	6,934.9	21.0	23.0	-90.06	757.0	588.4	336.3	294.9	41.35	8.133					
7,050.0	6,985.8	7,076.9	6,984.8	21.0	23.1	-90.59	757.0	588.4	336.3	294.9	41.37	8.127					
7,100.0	7,035.4	7,127.1	7,035.0	21.0	23.1	-91.33	754.9	588.4	336.3	295.0	41.31	8.142					
7,150.0	7,084.4	7,177.6	7,085.1	21.0	23.1	-92.07	749.4	588.4	336.5	295.3	41.18	8.171					
7,200.0	7,132.7	7,228.4	7,135.1	20.9	23.1	-92.79	740.6	588.4	336.7	295.7	40.99	8.214					
7,250.0	7,180.1	7,279.4	7,184.7	20.8	23.1	-93.51	728.5	588.4	336.9	296.1	40.74	8.269					
7,300.0	7,226.3	7,330.8	7,233.6	20.7	23.0	-94.21	712.9	588.4	337.2	296.7	40.45	8.336					
7,350.0	7,271.2	7,382.4	7,281.7	20.6	22.9	-94.89	694.0	588.4	337.5	297.4	40.11	8.415					
7,400.0	7,314.6	7,434.4	7,328.6	20.5	22.8	-95.55	671.7	588.4	337.8	298.1	39.73	8.503					
7,450.0	7,356.2	7,486.6	7,374.2	20.3	22.6	-96.19	646.2	588.4	338.2	298.9	39.33	8.599					
7,500.0	7,395.9	7,539.1	7,418.1	20.1	22.5	-96.81	617.4	588.4	338.6	299.7	38.92	8.702					
7,550.0	7,433.5	7,591.9	7,460.1	19.9	22.3	-97.39	585.5	588.4	339.1	300.6	38.49	8.810					
7,600.0	7,469.0	7,644.9	7,500.1	19.7	22.1	-97.94	550.6	588.4	339.5	301.5	38.06	8.919					
7,650.0	7,502.0	7,698.2	7,537.7	19.6	21.9	-98.45	512.9	588.4	340.0	302.3	37.65	9.028					
7,700.0	7,532.5	7,751.7	7,572.7	19.4	21.7	-98.92	472.4	588.4	340.4	303.1	37.27	9.133					
7,750.0	7,560.4	7,805.5	7,604.9	19.2	21.5	-99.36	429.4	588.4	340.8	303.9	36.92	9.230					
7,800.0	7,585.4	7,859.4	7,634.1	19.0	21.2	-99.75	384.1	588.4	341.2	304.6	36.62	9.316					
7,850.0	7,607.6	7,913.6	7,660.2	18.9	21.0	-100.10	336.6	588.4	341.6	305.2	36.39	9.387					
7,900.0	7,626.9	7,967.9	7,682.8	18.8	20.8	-100.40	287.3	588.4	341.9	305.7	36.22	9.439					
7,950.0	7,643.0	8,022.3	7,702.0	18.7	20.6	-100.65	236.4	588.4	342.2	306.0	36.13	9.470					
8,000.0	7,656.0	8,076.8	7,717.5	18.7	20.4	-100.86	184.1	588.4	342.4	306.3	36.13	9.478					
8,050.0	7,665.9	8,131.5	7,729.3	18.7	20.3	-101.01	130.8	588.4	342.6	306.4	36.21	9.460					
8,100.0	7,672.5	8,186.2	7,737.2	18.7	20.1	-101.12	76.6	588.4	342.7	306.3	36.39	9.417					
8,150.0	7,675.9	8,240.9	7,741.2	18.8	19.9	-101.17	22.0	588.4	342.7	306.1	36.66	9.349					
8,188.1	7,676.2	8,281.9	7,741.7	18.9	19.8	-101.18	-18.9	588.4	342.8	305.8	36.93	9.282					
8,200.0	7,676.1	8,293.8	7,741.7	19.0	19.8	-101.20	-30.8	588.4	342.8	305.8	37.01	9.262					
8,300.0	7,674.6	8,393.8	7,741.2	19.5	19.7	-101.37	-130.8	588.4	343.0	305.1	37.91	9.046					
8,400.0	7,673.0	8,493.8	7,740.6	20.1	20.5	-101.53	-230.8	588.4	343.2	304.0	39.15	8.765					
8,500.0	7,671.5	8,593.8	7,740.1	21.0	21.5	-101.69	-330.8	588.4	343.4	302.7	40.70	8.437					
8,600.0	7,670.0	8,693.8	7,739.6	22.0	22.5	-101.85	-430.8	588.4	343.6	301.1	42.52	8.081					
8,700.0	7,668.5	8,793.8	7,739.1	23.1	23.6	-102.02	-530.8	588.4	343.8	299.2	44.58	7.712					
8,800.0	7,667.0	8,893.8	7,738.5	24.3	24.8	-102.18	-630.8	588.4	344.0	297.2	46.84	7.344					
8,900.0	7,665.4	8,993.8	7,738.0	25.6	26.1	-102.34	-730.8	588.4	344.2	294.9	49.28	6.984					
9,000.0	7,663.9	9,093.8	7,737.5	26.9	27.4	-102.50	-830.8	588.4	344.4	292.5	51.88	6.639					
9,100.0	7,662.4	9,193.8	7,737.0	28.3	28.8	-102.66	-930.8	588.4	344.6	290.0	54.60	6.312					
9,200.0	7,660.9	9,293.8	7,736.4	29.8	30.3	-102.83	-1,030.8	588.4	344.9	287.4	57.43	6.005					
9,300.0	7,659.4	9,393.8	7,735.9	31.3	31.8	-102.99	-1,130.7	588.4	345.1	284.7	60.36	5.717					
9,400.0	7,657.8	9,493.8	7,735.4	32.9	33.3	-103.15	-1,230.7	588.4	345.3	281.9	63.36	5.450					
9,500.0	7,656.3	9,593.7	7,734.9	34.5	34.9	-103.31	-1,330.7	588.4	345.5	279.1	66.43	5.201					
9,600.0	7,654.8	9,693.7	7,734.3	36.1	36.5	-103.47	-1,430.7	588.4	345.8	276.2	69.56	4.971					
9,700.0	7,653.3	9,793.7	7,733.8	37.8	38.1	-103.63	-1,530.7	588.4	346.0	273.3	72.74	4.756					
9,800.0	7,651.8	9,893.7	7,733.3	39.4	39.8	-103.79	-1,630.7	588.4	346.2	270.3	75.97	4.558					

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

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Corcilius 6J-203
Project:	SEC.6-T1S-R67W	TVD Reference:	WELL @ 5073.0ft (RKB - 13')
Reference Site:	Corcilius 1S67W6J Pad Sec.6-T1S-R67W	MD Reference:	WELL @ 5073.0ft (RKB - 13')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Corcilius 6J-203	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (4-29-15)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Corcilius 1S67W6J Pad Sec.6-T1S-R67W - Corcilius 6J-303 - Wellbore #1 - Plan #1 (4-29-15)													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
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 (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
9,900.0	7,650.3	9,993.7	7,732.8	41.1	41.5	-103.95	-1,730.7	588.4		346.5	267.2	79.23	4.373	
10,000.0	7,648.7	10,093.7	7,732.3	42.8	43.2	-104.11	-1,830.7	588.4		346.7	264.2	82.52	4.202	
10,100.0	7,647.2	10,193.7	7,731.7	44.6	44.9	-104.27	-1,930.7	588.4		347.0	261.1	85.84	4.042	
10,200.0	7,645.7	10,293.7	7,731.2	46.3	46.6	-104.43	-2,030.7	588.4		347.2	258.0	89.18	3.893	
10,300.0	7,644.2	10,393.7	7,730.7	48.1	48.4	-104.59	-2,130.7	588.4		347.5	254.9	92.55	3.754	
10,400.0	7,642.7	10,493.7	7,730.2	49.8	50.1	-104.74	-2,230.7	588.4		347.7	251.8	95.93	3.625	
10,500.0	7,641.1	10,593.7	7,729.6	51.6	51.9	-104.90	-2,330.7	588.4		348.0	248.6	99.33	3.503	
10,600.0	7,639.6	10,693.7	7,729.1	53.4	53.6	-105.06	-2,430.7	588.4		348.2	245.5	102.74	3.389	
10,700.0	7,638.1	10,793.7	7,728.6	55.2	55.4	-105.22	-2,530.7	588.4		348.5	242.3	106.16	3.282	
10,800.0	7,636.6	10,893.7	7,728.1	57.0	57.2	-105.38	-2,630.7	588.4		348.7	239.1	109.60	3.182	
10,900.0	7,635.1	10,993.7	7,727.5	58.8	59.0	-105.53	-2,730.6	588.4		349.0	236.0	113.04	3.088	
11,000.0	7,633.6	11,093.7	7,727.0	60.6	60.8	-105.69	-2,830.6	588.4		349.3	232.8	116.48	2.998	
11,100.0	7,632.0	11,193.7	7,726.5	62.5	62.6	-105.85	-2,930.6	588.4		349.5	229.6	119.94	2.914	
11,200.0	7,630.5	11,293.7	7,726.0	64.3	64.5	-106.00	-3,030.6	588.4		349.8	226.4	123.40	2.835	
11,300.0	7,629.0	11,393.7	7,725.4	66.1	66.3	-106.16	-3,130.6	588.4		350.1	223.2	126.86	2.760	
11,400.0	7,627.5	11,493.7	7,724.9	68.0	68.1	-106.32	-3,230.6	588.4		350.4	220.0	130.33	2.688	
11,500.0	7,626.0	11,593.6	7,724.4	69.8	69.9	-106.47	-3,330.6	588.4		350.7	216.9	133.80	2.621	
11,600.0	7,624.4	11,693.6	7,723.9	71.7	71.8	-106.63	-3,430.6	588.4		350.9	213.7	137.27	2.557	
11,700.0	7,622.9	11,793.6	7,723.4	73.5	73.6	-106.78	-3,530.6	588.4		351.2	210.5	140.74	2.496	
11,800.0	7,621.4	11,893.6	7,722.8	75.4	75.5	-106.94	-3,630.6	588.4		351.5	207.3	144.21	2.437	
11,900.0	7,619.9	11,993.6	7,722.3	77.2	77.3	-107.09	-3,730.6	588.4		351.8	204.1	147.68	2.382	
11,958.5	7,619.0	12,052.2	7,722.0	78.3	78.4	-107.19	-3,789.1	588.4		352.0	202.3	149.71	2.351 SF	

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Corcilus 6J-203
Project:	SEC.6-T1S-R67W	TVD Reference:	WELL @ 5073.0ft (RKB - 13')
Reference Site:	Corcilus 1S67W6J Pad Sec.6-T1S-R67W	MD Reference:	WELL @ 5073.0ft (RKB - 13')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Corcilus 6J-203	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (4-29-15)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Corcilus 1S67W6J Pad Sec.6-T1S-R67W - Corcilus 6J-443 - Wellbore #1 - Plan #1 (4-29-15)													Offset Well Error:	0.0 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 (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	-96.74	-3.6	-30.8	31.0					
100.0	100.0	100.0	100.0	0.1	0.1	-96.74	-3.6	-30.8	31.0	30.8	0.22	138.070		
200.0	200.0	200.0	200.0	0.3	0.3	-96.74	-3.6	-30.8	31.0	30.4	0.67	46.023		
300.0	300.0	300.0	300.0	0.6	0.6	-96.74	-3.6	-30.8	31.0	29.9	1.12	27.614		
400.0	400.0	400.0	400.0	0.8	0.8	-96.74	-3.6	-30.8	31.0	29.5	1.57	19.724		
500.0	500.0	500.0	500.0	1.0	1.0	-96.74	-3.6	-30.8	31.0	29.0	2.02	15.341		
600.0	600.0	600.0	600.0	1.2	1.2	-96.74	-3.6	-30.8	31.0	28.6	2.47	12.552		
700.0	700.0	700.0	700.0	1.5	1.5	-96.74	-3.6	-30.8	31.0	28.1	2.92	10.621		
800.0	800.0	800.0	800.0	1.7	1.7	-96.74	-3.6	-30.8	31.0	27.7	3.37	9.205		
900.0	900.0	900.0	900.0	1.9	1.9	-96.74	-3.6	-30.8	31.0	27.2	3.82	8.122		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-96.74	-3.6	-30.8	31.0	26.8	4.27	7.267		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-96.74	-3.6	-30.8	31.0	26.3	4.72	6.575		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-96.74	-3.6	-30.8	31.0	25.9	5.17	6.003 CC, ES		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-117.31	-3.6	-30.8	31.6	26.0	5.62	5.627		
1,400.0	1,399.9	1,399.9	1,399.9	3.0	3.0	-123.24	-3.6	-30.8	33.6	27.5	6.06	5.540		
1,500.0	1,499.7	1,499.7	1,499.7	3.3	3.3	-131.55	-3.6	-30.8	37.6	31.1	6.51	5.774		
1,600.0	1,599.3	1,599.3	1,599.3	3.5	3.5	-140.39	-3.6	-30.8	44.2	37.2	6.95	6.357		
1,700.0	1,698.6	1,699.4	1,699.4	3.7	3.7	-147.23	-2.4	-30.9	53.0	45.7	7.39	7.175		
1,800.0	1,797.5	1,799.7	1,799.6	4.0	3.9	-151.33	1.6	-31.2	63.1	55.3	7.83	8.054		
1,836.8	1,833.9	1,836.7	1,836.5	4.1	4.0	-152.35	3.7	-31.4	67.0	59.0	8.00	8.381		
1,900.0	1,896.2	1,900.3	1,900.0	4.3	4.2	-153.51	8.1	-31.7	73.5	65.2	8.29	8.870		
2,000.0	1,994.8	2,001.2	2,000.5	4.6	4.4	-153.85	17.4	-32.4	82.4	73.6	8.76	9.408		
2,100.0	2,093.4	2,102.5	2,101.0	4.9	4.6	-152.85	29.3	-33.3	89.6	80.3	9.25	9.685		
2,200.0	2,192.0	2,203.6	2,201.1	5.2	4.9	-150.76	43.8	-34.3	95.1	85.4	9.76	9.745		
2,300.0	2,290.6	2,303.4	2,299.7	5.5	5.2	-148.48	59.1	-35.5	100.2	89.9	10.29	9.735		
2,400.0	2,389.2	2,403.2	2,398.3	5.9	5.4	-146.43	74.4	-36.6	105.4	94.6	10.84	9.722		
2,500.0	2,487.9	2,503.0	2,496.9	6.2	5.7	-144.58	89.6	-37.7	110.8	99.4	11.41	9.708		
2,600.0	2,586.5	2,602.8	2,595.5	6.5	6.0	-142.89	104.9	-38.9	116.2	104.2	11.99	9.691		
2,700.0	2,685.1	2,702.6	2,694.1	6.9	6.3	-141.36	120.2	-40.0	121.8	109.2	12.59	9.673		
2,800.0	2,783.7	2,802.4	2,792.7	7.2	6.6	-139.96	135.5	-41.1	127.4	114.2	13.20	9.653		
2,900.0	2,882.3	2,902.2	2,891.4	7.6	6.9	-138.68	150.8	-42.2	133.1	119.3	13.82	9.633		
3,000.0	2,980.9	3,001.9	2,990.0	7.9	7.2	-137.51	166.1	-43.4	138.9	124.4	14.45	9.612		
3,100.0	3,079.5	3,101.7	3,088.6	8.3	7.6	-136.43	181.4	-44.5	144.7	129.6	15.08	9.591		
3,200.0	3,178.2	3,201.5	3,187.2	8.6	7.9	-135.43	196.6	-45.6	150.5	134.8	15.73	9.570		
3,300.0	3,276.8	3,301.3	3,285.8	9.0	8.2	-134.51	211.9	-46.8	156.4	140.0	16.38	9.549		
3,400.0	3,375.4	3,401.1	3,384.4	9.4	8.5	-133.66	227.2	-47.9	162.4	145.3	17.04	9.529		
3,500.0	3,474.0	3,500.9	3,483.0	9.7	8.9	-132.86	242.5	-49.0	168.3	150.6	17.70	9.509		
3,600.0	3,572.6	3,600.7	3,581.6	10.1	9.2	-132.12	257.8	-50.2	174.3	156.0	18.37	9.490		
3,700.0	3,671.2	3,700.5	3,680.2	10.4	9.5	-131.43	273.1	-51.3	180.4	161.3	19.04	9.472		
3,800.0	3,769.8	3,800.3	3,778.9	10.8	9.9	-130.79	288.4	-52.4	186.4	166.7	19.72	9.454		
3,900.0	3,868.4	3,900.1	3,877.5	11.2	10.2	-130.18	303.6	-53.6	192.5	172.1	20.40	9.437		
4,000.0	3,967.1	3,999.9	3,976.1	11.5	10.6	-129.62	318.9	-54.7	198.6	177.5	21.08	9.421		
4,100.0	4,065.7	4,099.7	4,074.7	11.9	10.9	-129.08	334.2	-55.8	204.7	182.9	21.76	9.405		
4,200.0	4,164.3	4,199.5	4,173.3	12.3	11.2	-128.58	349.5	-56.9	210.8	188.4	22.45	9.390		
4,300.0	4,262.9	4,299.3	4,271.9	12.6	11.6	-128.10	364.8	-58.1	217.0	193.8	23.14	9.376		
4,400.0	4,361.5	4,399.1	4,370.5	13.0	11.9	-127.66	380.1	-59.2	223.1	199.3	23.83	9.362		
4,500.0	4,460.1	4,498.9	4,469.1	13.4	12.3	-127.23	395.4	-60.3	229.3	204.8	24.53	9.349		
4,600.0	4,558.7	4,598.7	4,567.8	13.8	12.6	-126.83	410.6	-61.5	235.5	210.2	25.22	9.336		
4,700.0	4,657.4	4,698.5	4,666.4	14.1	13.0	-126.45	425.9	-62.6	241.7	215.7	25.92	9.324		
4,800.0	4,756.0	4,798.3	4,765.0	14.5	13.3	-126.09	441.2	-63.7	247.9	221.2	26.62	9.313		
4,900.0	4,854.6	4,898.1	4,863.6	14.9	13.7	-125.74	456.5	-64.9	254.1	226.8	27.32	9.301		

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

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Corcilius 6J-203
Project:	SEC.6-T1S-R67W	TVD Reference:	WELL @ 5073.0ft (RKB - 13')
Reference Site:	Corcilius 1S67W6J Pad Sec.6-T1S-R67W	MD Reference:	WELL @ 5073.0ft (RKB - 13')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Corcilius 6J-203	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (4-29-15)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Corcilius 1S67W6J Pad Sec.6-T1S-R67W - Corcilius 6J-443 - Wellbore #1 - Plan #1 (4-29-15)													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
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 (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5,000.0	4,953.2	4,997.9	4,962.2	15.2	14.0	-125.41	471.8	-66.0		260.3	232.3	28.02	9.291	
5,100.0	5,051.8	5,097.7	5,060.8	15.6	14.4	-125.10	487.1	-67.1		266.5	237.8	28.72	9.281	
5,200.0	5,150.4	5,197.4	5,159.4	16.0	14.7	-124.80	502.4	-68.3		272.8	243.3	29.42	9.271	
5,300.0	5,249.0	5,297.2	5,258.0	16.4	15.1	-124.52	517.6	-69.4		279.0	248.9	30.12	9.262	
5,400.0	5,347.6	5,397.0	5,356.6	16.7	15.4	-124.24	532.9	-70.5		285.3	254.4	30.83	9.253	
5,500.0	5,446.3	5,496.8	5,455.3	17.1	15.8	-123.98	548.2	-71.6		291.5	260.0	31.53	9.244	
5,600.0	5,544.9	5,596.6	5,553.9	17.5	16.1	-123.73	563.5	-72.8		297.8	265.5	32.24	9.236	
5,700.0	5,643.5	5,696.4	5,652.5	17.8	16.5	-123.49	578.8	-73.9		304.0	271.1	32.95	9.228	
5,800.0	5,742.1	5,796.2	5,751.1	18.2	16.8	-123.26	594.1	-75.0		310.3	276.7	33.66	9.220	
5,900.0	5,840.7	5,896.0	5,849.7	18.6	17.2	-123.04	609.4	-76.2		316.6	282.2	34.36	9.213	
6,000.0	5,939.3	5,995.8	5,948.3	19.0	17.5	-122.83	624.6	-77.3		322.9	287.8	35.07	9.206	
6,086.5	6,024.6	6,082.1	6,033.6	19.3	17.8	-122.65	637.9	-78.3		328.3	292.6	35.69	9.200	
6,100.0	6,037.9	6,095.6	6,046.9	19.3	17.9	-122.64	639.9	-78.4		329.1	293.4	35.78	9.199	
6,200.0	6,136.9	6,195.4	6,145.6	19.6	18.2	-122.20	655.2	-79.6		334.2	297.8	36.44	9.172	
6,300.0	6,236.3	6,295.2	6,244.1	19.9	18.6	-121.26	670.5	-80.7		337.6	300.4	37.12	9.095	
6,400.0	6,336.0	6,394.8	6,342.6	20.1	18.9	-119.80	685.8	-81.8		339.2	301.4	37.79	8.976	
6,500.0	6,435.9	6,494.1	6,440.7	20.2	19.3	-117.82	701.0	-82.9		339.5	301.0	38.47	8.826	
6,564.1	6,500.0	6,557.5	6,503.3	20.3	19.5	-97.85	710.7	-83.7		339.0	300.2	38.89	8.718	
6,600.0	6,535.9	6,593.0	6,538.4	20.4	19.6	-96.93	716.1	-84.1		338.7	299.6	39.13	8.657	
6,700.0	6,635.9	6,691.8	6,636.2	20.5	19.9	-94.54	730.2	-85.1		338.4	298.6	39.75	8.512	
6,714.8	6,650.7	6,706.4	6,650.7	20.5	20.0	-94.23	732.0	-85.2		338.4	298.5	39.83	8.495	
6,800.0	6,735.9	6,791.3	6,735.1	20.7	20.2	-92.69	741.1	-85.9		338.5	298.2	40.25	8.410	
6,900.0	6,835.9	6,891.5	6,835.0	20.8	20.4	-91.42	748.6	-86.5		338.8	298.1	40.67	8.329	
6,976.5	6,912.4	6,968.4	6,911.8	20.9	20.5	-90.84	752.0	-86.7		338.9	298.0	40.95	8.277	
7,000.0	6,935.9	6,992.0	6,935.4	21.0	20.6	89.32	752.6	-86.8		339.0	298.0	41.03	8.262	
7,050.0	6,985.8	7,042.3	6,985.7	21.0	20.6	89.97	753.3	-86.8		339.0	297.8	41.16	8.236	
7,100.0	7,035.4	7,092.0	7,035.4	21.0	20.7	91.05	753.4	-86.8		339.1	297.8	41.27	8.216	
7,150.0	7,084.4	7,141.0	7,084.4	21.0	20.8	92.63	753.4	-86.8		339.4	298.0	41.36	8.206	
7,200.0	7,132.7	7,190.4	7,133.8	20.9	20.9	94.62	752.8	-86.8		340.2	298.8	41.40	8.218	
7,250.0	7,180.1	7,241.1	7,184.4	20.8	20.9	96.66	749.2	-86.8		341.5	300.1	41.34	8.260	
7,300.0	7,226.3	7,292.7	7,235.5	20.7	20.9	98.68	742.1	-86.8		343.2	302.0	41.19	8.332	
7,350.0	7,271.2	7,345.2	7,286.9	20.6	20.9	100.66	731.4	-86.8		345.3	304.4	40.94	8.434	
7,400.0	7,314.6	7,398.8	7,338.4	20.5	20.8	102.59	716.9	-86.8		347.9	307.3	40.60	8.567	
7,450.0	7,356.2	7,453.3	7,389.7	20.3	20.7	104.46	698.4	-86.8		350.7	310.6	40.18	8.730	
7,500.0	7,395.9	7,508.9	7,440.5	20.1	20.6	106.26	675.8	-86.8		353.9	314.2	39.67	8.922	
7,550.0	7,433.5	7,565.6	7,490.4	19.9	20.4	107.98	649.0	-86.8		357.3	318.2	39.08	9.141	
7,600.0	7,469.0	7,623.4	7,539.2	19.7	20.2	109.61	618.0	-86.8		360.8	322.4	38.45	9.385	
7,650.0	7,502.0	7,682.2	7,586.3	19.6	20.0	111.14	582.7	-86.8		364.5	326.7	37.78	9.648	
7,700.0	7,532.5	7,742.2	7,631.3	19.4	19.8	112.57	543.2	-86.8		368.1	331.0	37.09	9.925	
7,750.0	7,560.4	7,803.2	7,673.8	19.2	19.6	113.88	499.5	-86.8		371.7	335.3	36.41	10.210	
7,800.0	7,585.4	7,865.2	7,713.3	19.0	19.4	115.07	451.6	-86.8		375.1	339.4	35.76	10.490	
7,850.0	7,607.6	7,928.2	7,749.3	18.9	19.2	116.14	400.0	-86.8		378.4	343.2	35.18	10.755	
7,900.0	7,626.9	7,992.1	7,781.4	18.8	19.1	117.07	344.7	-86.8		381.3	346.6	34.69	10.992	
7,950.0	7,643.0	8,056.8	7,809.0	18.7	19.0	117.86	286.2	-86.8		383.9	349.6	34.32	11.186	
8,000.0	7,656.0	8,122.2	7,831.8	18.7	18.9	118.51	224.9	-86.8		386.1	352.0	34.09	11.324	
8,050.0	7,665.9	8,188.2	7,849.4	18.7	18.9	119.01	161.3	-86.8		387.8	353.8	34.03	11.397	
8,100.0	7,672.5	8,254.7	7,861.5	18.7	19.0	119.36	96.0	-86.8		389.1	354.9	34.14	11.397	
8,150.0	7,675.9	8,321.4	7,867.9	18.8	19.2	119.56	29.7	-86.8		389.8	355.3	34.43	11.321	
8,188.1	7,676.2	8,369.6	7,869.0	18.9	19.3	119.62	-18.5	-86.8		390.0	355.2	34.76	11.221	
8,200.0	7,676.1	8,381.5	7,869.0	19.0	19.4	119.64	-30.5	-86.8		390.1	355.2	34.85	11.194	
8,300.0	7,674.6	8,481.5	7,869.0	19.5	19.9	119.83	-130.5	-86.8		390.8	355.0	35.78	10.924	

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

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Corcilius 6J-203
Project:	SEC.6-T1S-R67W	TVD Reference:	WELL @ 5073.0ft (RKB - 13')
Reference Site:	Corcilius 1S67W6J Pad Sec.6-T1S-R67W	MD Reference:	WELL @ 5073.0ft (RKB - 13')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Corcilius 6J-203	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (4-29-15)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Corcilius 1S67W6J Pad Sec.6-T1S-R67W - Corcilius 6J-443 - Wellbore #1 - Plan #1 (4-29-15)													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
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 (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,400.0	7,673.0	8,581.5	7,869.0	20.1	20.5	120.03	-230.4	-86.8	391.6	354.6	36.99	10.588		
8,500.0	7,671.5	8,681.5	7,869.0	21.0	21.4	120.22	-330.4	-86.8	392.3	353.9	38.45	10.204		
8,600.0	7,670.0	8,781.5	7,869.0	22.0	22.3	120.41	-430.4	-86.8	393.1	353.0	40.14	9.793		
8,700.0	7,668.5	8,881.5	7,869.0	23.1	23.4	120.60	-530.4	-86.8	393.9	351.9	42.03	9.372		
8,800.0	7,667.0	8,981.5	7,869.0	24.3	24.5	120.79	-630.4	-86.8	394.7	350.6	44.09	8.952		
8,900.0	7,665.4	9,081.4	7,869.0	25.6	25.8	120.98	-730.4	-86.8	395.4	349.2	46.29	8.543		
9,000.0	7,663.9	9,181.4	7,869.0	26.9	27.1	121.17	-830.4	-86.8	396.2	347.6	48.61	8.151		
9,100.0	7,662.4	9,281.4	7,869.0	28.3	28.5	121.35	-930.4	-86.8	397.0	346.0	51.03	7.779		
9,200.0	7,660.9	9,381.4	7,869.0	29.8	30.0	121.54	-1,030.4	-86.8	397.8	344.3	53.55	7.429		
9,300.0	7,659.4	9,481.4	7,869.0	31.3	31.5	121.73	-1,130.3	-86.8	398.6	342.5	56.13	7.101		
9,400.0	7,657.8	9,581.4	7,869.0	32.9	33.0	121.91	-1,230.3	-86.8	399.4	340.6	58.78	6.795		
9,500.0	7,656.3	9,681.4	7,869.0	34.5	34.6	122.10	-1,330.3	-86.8	400.2	338.7	61.48	6.509		
9,600.0	7,654.8	9,781.4	7,869.0	36.1	36.2	122.28	-1,430.3	-86.8	401.0	336.8	64.23	6.244		
9,700.0	7,653.3	9,881.4	7,869.0	37.8	37.9	122.46	-1,530.3	-86.8	401.8	334.8	67.01	5.997		
9,800.0	7,651.8	9,981.3	7,869.0	39.4	39.6	122.65	-1,630.3	-86.8	402.7	332.8	69.82	5.767		
9,900.0	7,650.3	10,081.3	7,869.0	41.1	41.2	122.83	-1,730.3	-86.8	403.5	330.8	72.66	5.553		
10,000.0	7,648.7	10,181.3	7,869.0	42.8	42.9	123.01	-1,830.3	-86.8	404.3	328.8	75.52	5.353		
10,100.0	7,647.2	10,281.3	7,869.0	44.6	44.7	123.19	-1,930.2	-86.8	405.1	326.7	78.40	5.167		
10,200.0	7,645.7	10,381.3	7,869.0	46.3	46.4	123.37	-2,030.2	-86.8	406.0	324.7	81.29	4.994		
10,300.0	7,644.2	10,481.3	7,869.0	48.1	48.2	123.55	-2,130.2	-86.8	406.8	322.6	84.20	4.831		
10,400.0	7,642.7	10,581.3	7,869.0	49.8	49.9	123.72	-2,230.2	-86.8	407.6	320.5	87.12	4.679		
10,500.0	7,641.1	10,681.3	7,869.0	51.6	51.7	123.90	-2,330.2	-86.9	408.5	318.5	90.04	4.537		
10,600.0	7,639.6	10,781.3	7,869.0	53.4	53.5	124.08	-2,430.2	-86.9	409.3	316.4	92.97	4.403		
10,700.0	7,638.1	10,881.2	7,869.0	55.2	55.3	124.25	-2,530.2	-86.9	410.2	314.3	95.90	4.277		
10,800.0	7,636.6	10,981.2	7,869.0	57.0	57.1	124.43	-2,630.2	-86.9	411.1	312.2	98.83	4.159		
10,900.0	7,635.1	11,081.2	7,869.0	58.8	58.9	124.60	-2,730.2	-86.9	411.9	310.1	101.77	4.047		
11,000.0	7,633.6	11,181.2	7,869.0	60.6	60.7	124.77	-2,830.1	-86.9	412.8	308.1	104.71	3.942		
11,100.0	7,632.0	11,281.2	7,869.0	62.5	62.5	124.95	-2,930.1	-86.9	413.7	306.0	107.64	3.843		
11,200.0	7,630.5	11,381.2	7,869.0	64.3	64.4	125.12	-3,030.1	-86.9	414.5	303.9	110.58	3.749		
11,300.0	7,629.0	11,481.2	7,869.0	66.1	66.2	125.29	-3,130.1	-86.9	415.4	301.9	113.51	3.659		
11,400.0	7,627.5	11,581.2	7,869.0	68.0	68.0	125.46	-3,230.1	-86.9	416.3	299.8	116.44	3.575		
11,500.0	7,626.0	11,681.1	7,869.0	69.8	69.9	125.63	-3,330.1	-86.9	417.2	297.8	119.37	3.495		
11,600.0	7,624.4	11,781.1	7,869.0	71.7	71.7	125.80	-3,430.1	-86.9	418.1	295.8	122.29	3.418		
11,700.0	7,622.9	11,881.1	7,869.0	73.5	73.6	125.97	-3,530.1	-86.9	418.9	293.7	125.21	3.346		
11,800.0	7,621.4	11,981.1	7,869.0	75.4	75.4	126.14	-3,630.1	-86.9	419.8	291.7	128.13	3.277		
11,900.0	7,619.9	12,081.1	7,869.0	77.2	77.3	126.30	-3,730.0	-86.9	420.7	289.7	131.03	3.211		
11,958.5	7,619.0	12,139.6	7,869.0	78.3	78.4	126.40	-3,788.6	-86.9	421.3	288.5	132.73	3.174 SF		

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Corcilus 6J-203
Project:	SEC.6-T1S-R67W	TVD Reference:	WELL @ 5073.0ft (RKB - 13')
Reference Site:	Corcilus 1S67W6J Pad Sec.6-T1S-R67W	MD Reference:	WELL @ 5073.0ft (RKB - 13')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Corcilus 6J-203	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (4-29-15)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Corcilus 1S67W6J Pad Sec.6-T1S-R67W - Corcilus 6M-243 - Wellbore #1 - Plan #1 (4-29-15)												Offset Well Error:	0.0 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 (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.00	0.0	58.8	58.9				
100.0	100.0	98.0	98.0	0.1	0.1	90.00	0.0	58.8	58.8	58.6	0.22	264.405	
200.0	200.0	198.0	198.0	0.3	0.3	90.00	0.0	58.8	58.8	58.2	0.67	87.841	
300.0	300.0	298.0	298.0	0.6	0.6	90.00	0.0	58.8	58.8	57.7	1.12	52.563	
400.0	400.0	398.0	398.0	0.8	0.8	90.00	0.0	58.8	58.8	57.3	1.57	37.502 CC, ES	
500.0	500.0	496.7	496.7	1.0	1.0	89.38	0.7	59.9	59.9	57.9	2.01	29.793	
600.0	600.0	595.3	595.2	1.2	1.2	87.59	2.7	63.1	63.2	60.7	2.45	25.772	
700.0	700.0	693.6	693.3	1.5	1.4	84.99	6.0	68.4	68.8	65.9	2.90	23.752	
800.0	800.0	791.5	790.8	1.7	1.7	81.99	10.7	75.8	76.9	73.5	3.35	22.981 SF	
900.0	900.0	888.9	887.6	1.9	1.9	78.97	16.6	85.3	87.5	83.7	3.80	23.046	
1,000.0	1,000.0	985.7	983.4	2.1	2.2	76.16	23.8	96.8	100.7	96.5	4.25	23.690	
1,100.0	1,100.0	1,081.7	1,078.1	2.4	2.5	73.68	32.3	110.2	116.6	111.8	4.71	24.740	
1,200.0	1,200.0	1,176.8	1,171.5	2.6	2.9	71.55	41.9	125.5	134.9	129.8	5.17	26.077	
1,300.0	1,300.0	1,271.2	1,263.7	2.8	3.3	51.45	52.6	142.6	155.0	149.4	5.64	27.504	
1,400.0	1,399.9	1,365.0	1,354.8	3.0	3.7	50.60	64.5	161.5	175.9	169.8	6.10	28.837	
1,500.0	1,499.7	1,462.3	1,448.9	3.3	4.2	50.38	77.6	182.3	196.7	190.1	6.58	29.885	
1,600.0	1,599.3	1,560.4	1,543.8	3.5	4.6	50.71	90.8	203.4	215.9	208.8	7.07	30.531	
1,700.0	1,698.6	1,658.8	1,639.0	3.7	5.1	51.48	104.0	224.4	233.4	225.9	7.58	30.796	
1,800.0	1,797.5	1,757.3	1,734.3	4.0	5.6	52.61	117.3	245.6	249.5	241.4	8.11	30.748	
1,836.8	1,833.9	1,793.6	1,769.5	4.1	5.8	53.11	122.2	253.3	255.0	246.7	8.32	30.661	
1,900.0	1,896.2	1,856.0	1,829.8	4.3	6.1	54.07	130.6	266.7	264.5	255.8	8.68	30.462	
2,000.0	1,994.8	1,954.6	1,925.2	4.6	6.6	55.47	143.9	287.8	279.5	270.2	9.27	30.140	
2,100.0	2,093.4	2,053.3	2,020.6	4.9	7.1	56.72	157.1	309.0	294.6	284.8	9.88	29.814	
2,200.0	2,192.0	2,151.9	2,116.1	5.2	7.7	57.86	170.4	330.1	309.9	299.4	10.51	29.493	
2,300.0	2,290.6	2,250.6	2,211.5	5.5	8.2	58.88	183.7	351.2	325.3	314.2	11.15	29.179	
2,400.0	2,389.2	2,349.2	2,306.9	5.9	8.7	59.81	197.0	372.4	340.8	329.0	11.80	28.876	
2,500.0	2,487.9	2,447.8	2,402.4	6.2	9.2	60.66	210.3	393.5	356.4	343.9	12.47	28.586	
2,600.0	2,586.5	2,546.5	2,497.8	6.5	9.7	61.44	223.5	414.7	372.0	358.9	13.14	28.310	
2,700.0	2,685.1	2,645.1	2,593.2	6.9	10.2	62.16	236.8	435.8	387.7	373.9	13.82	28.048	
2,800.0	2,783.7	2,743.8	2,688.7	7.2	10.8	62.82	250.1	456.9	403.5	389.0	14.51	27.800	
2,900.0	2,882.3	2,842.4	2,784.1	7.6	11.3	63.43	263.4	478.1	419.3	404.1	15.21	27.566	
3,000.0	2,980.9	2,941.1	2,879.6	7.9	11.8	64.00	276.7	499.2	435.2	419.3	15.91	27.344	
3,100.0	3,079.5	3,039.7	2,975.0	8.3	12.3	64.53	289.9	520.3	451.1	434.4	16.62	27.136	
3,200.0	3,178.2	3,138.4	3,070.4	8.6	12.8	65.02	303.2	541.5	467.0	449.6	17.33	26.939	
3,300.0	3,276.8	3,237.0	3,165.9	9.0	13.4	65.48	316.5	562.6	482.9	464.9	18.05	26.753	
3,400.0	3,375.4	3,335.7	3,261.3	9.4	13.9	65.91	329.8	583.8	498.9	480.2	18.77	26.578	
3,500.0	3,474.0	3,434.3	3,356.7	9.7	14.4	66.31	343.1	604.9	514.9	495.4	19.50	26.412	
3,600.0	3,572.6	3,533.0	3,452.2	10.1	14.9	66.69	356.3	626.0	531.0	510.7	20.22	26.256	
3,700.0	3,671.2	3,631.6	3,547.6	10.4	15.4	67.04	369.6	647.2	547.0	526.1	20.95	26.108	
3,800.0	3,769.8	3,730.3	3,643.0	10.8	16.0	67.38	382.9	668.3	563.1	541.4	21.68	25.968	
3,900.0	3,868.4	3,828.9	3,738.5	11.2	16.5	67.70	396.2	689.4	579.2	556.8	22.42	25.835	
4,000.0	3,967.1	3,927.6	3,833.9	11.5	17.0	68.00	409.5	710.6	595.3	572.1	23.15	25.709	
4,100.0	4,065.7	4,026.2	3,929.4	11.9	17.5	68.28	422.7	731.7	611.4	587.5	23.89	25.590	
4,200.0	4,164.3	4,124.8	4,024.8	12.3	18.1	68.55	436.0	752.9	627.6	602.9	24.63	25.477	
4,300.0	4,262.9	4,223.5	4,120.2	12.6	18.6	68.81	449.3	774.0	643.7	618.3	25.37	25.369	
4,400.0	4,361.5	4,322.1	4,215.7	13.0	19.1	69.05	462.6	795.1	659.9	633.8	26.12	25.266	
4,500.0	4,460.1	4,420.8	4,311.1	13.4	19.6	69.29	475.9	816.3	676.0	649.2	26.86	25.168	
4,600.0	4,558.7	4,519.4	4,406.5	13.8	20.2	69.51	489.1	837.4	692.2	664.6	27.61	25.075	
4,700.0	4,657.4	4,618.1	4,502.0	14.1	20.7	69.72	502.4	858.5	708.4	680.1	28.35	24.986	
4,800.0	4,756.0	4,716.7	4,597.4	14.5	21.2	69.92	515.7	879.7	724.6	695.5	29.10	24.901	
4,900.0	4,854.6	4,815.4	4,692.9	14.9	21.7	70.11	529.0	900.8	740.8	711.0	29.85	24.819	

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

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Corcilius 6J-203
Project:	SEC.6-T1S-R67W	TVD Reference:	WELL @ 5073.0ft (RKB - 13')
Reference Site:	Corcilius 1S67W6J Pad Sec.6-T1S-R67W	MD Reference:	WELL @ 5073.0ft (RKB - 13')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Corcilius 6J-203	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (4-29-15)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Corcilius 1S67W6J Pad Sec.6-T1S-R67W - Corcilius 6M-243 - Wellbore #1 - Plan #1 (4-29-15)													Offset Well Error:	0.0 ft
Survey Program: 0-MWD														
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 (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,953.2	4,914.0	4,788.3	15.2	22.3	70.30	542.3	922.0	757.1	726.5	30.60	24.741		
5,100.0	5,051.8	5,012.7	4,883.7	15.6	22.8	70.47	555.5	943.1	773.3	741.9	31.35	24.667		
5,200.0	5,150.4	5,111.3	4,979.2	16.0	23.3	70.64	568.8	964.2	789.5	757.4	32.10	24.595		
5,300.0	5,249.0	5,210.0	5,074.6	16.4	23.8	70.81	582.1	985.4	805.8	772.9	32.85	24.527		
5,400.0	5,347.6	5,308.6	5,170.0	16.7	24.4	70.96	595.4	1,006.5	822.0	788.4	33.60	24.461		
5,500.0	5,446.3	5,407.3	5,265.5	17.1	24.9	71.11	608.7	1,027.6	838.3	803.9	34.36	24.398		
5,600.0	5,544.9	5,505.9	5,360.9	17.5	25.4	71.26	621.9	1,048.8	854.5	819.4	35.11	24.337		
5,700.0	5,643.5	5,604.6	5,456.3	17.8	25.9	71.40	635.2	1,069.9	870.8	834.9	35.87	24.278		
5,800.0	5,742.1	5,703.2	5,551.8	18.2	26.5	71.53	648.5	1,091.1	887.0	850.4	36.62	24.222		
5,900.0	5,840.7	5,801.9	5,647.2	18.6	27.0	71.66	661.8	1,112.2	903.3	865.9	37.38	24.168		
6,000.0	5,939.3	5,900.5	5,742.7	19.0	27.5	71.79	675.1	1,133.3	919.6	881.5	38.13	24.116		
6,086.5	6,024.6	5,985.8	5,825.2	19.3	28.0	71.89	686.5	1,151.6	933.7	894.9	38.79	24.072		
6,100.0	6,037.9	5,999.1	5,838.1	19.3	28.0	71.95	688.3	1,154.5	935.9	897.0	38.89	24.065		
6,200.0	6,136.9	6,097.7	5,933.4	19.6	28.6	72.26	701.6	1,175.6	952.8	913.3	39.57	24.078		
6,300.0	6,236.3	6,217.9	6,050.0	19.9	29.1	72.37	717.3	1,200.5	970.2	930.0	40.21	24.127		
6,400.0	6,336.0	6,356.3	6,185.5	20.1	29.6	72.32	732.2	1,224.3	985.1	944.3	40.75	24.174		
6,500.0	6,435.9	6,496.2	6,323.6	20.2	30.0	72.17	743.8	1,242.7	997.0	955.8	41.18	24.209		

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Corcilius 6J-203
Project:	SEC.6-T1S-R67W	TVD Reference:	WELL @ 5073.0ft (RKB - 13')
Reference Site:	Corcilius 1S67W6J Pad Sec.6-T1S-R67W	MD Reference:	WELL @ 5073.0ft (RKB - 13')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Corcilius 6J-203	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (4-29-15)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 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 (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	90.00	0.0	89.7	89.7					
100.0	100.0	98.0	98.0	0.1	0.1	90.00	0.0	89.7	89.7	89.4	0.22	402.902		
200.0	200.0	198.0	198.0	0.3	0.3	90.00	0.0	89.7	89.7	89.0	0.67	133.853 CC, ES		
300.0	300.0	296.0	296.0	0.6	0.5	89.65	0.6	90.7	90.7	89.6	1.11	81.744		
400.0	400.0	393.8	393.7	0.8	0.8	88.60	2.3	94.0	94.1	92.6	1.55	60.572		
500.0	500.0	491.4	491.1	1.0	1.0	87.02	5.2	99.5	99.9	97.9	2.00	49.869		
600.0	600.0	588.6	587.9	1.2	1.2	85.09	9.2	107.1	108.0	105.5	2.45	44.002		
700.0	700.0	685.2	683.9	1.5	1.5	83.00	14.3	116.9	118.6	115.7	2.91	40.777		
800.0	800.0	781.3	779.1	1.7	1.8	80.92	20.6	128.7	131.7	128.4	3.37	39.133		
900.0	900.0	876.6	873.1	1.9	2.1	78.94	27.9	142.5	147.4	143.5	3.83	38.506		
1,000.0	1,000.0	971.1	965.9	2.1	2.5	77.14	36.1	158.3	165.5	161.2	4.29	38.562		
1,100.0	1,100.0	1,064.7	1,057.3	2.4	2.9	75.52	45.4	175.9	186.1	181.4	4.76	39.087		
1,200.0	1,200.0	1,157.1	1,147.2	2.6	3.3	74.11	55.6	195.2	209.2	204.0	5.24	39.942		
1,300.0	1,300.0	1,248.7	1,235.6	2.8	3.8	54.38	66.7	216.2	234.0	228.3	5.71	40.979		
1,400.0	1,399.9	1,344.4	1,327.6	3.0	4.3	53.66	78.9	239.6	258.9	252.7	6.19	41.790		
1,500.0	1,499.7	1,441.6	1,421.0	3.3	4.8	53.45	91.4	263.3	282.3	275.6	6.68	42.235		
1,600.0	1,599.3	1,539.2	1,514.8	3.5	5.4	53.67	104.0	287.1	304.2	297.0	7.19	42.315		
1,700.0	1,698.6	1,637.0	1,608.8	3.7	5.9	54.21	116.6	311.0	324.7	317.0	7.71	42.093		
1,800.0	1,797.5	1,734.9	1,702.9	4.0	6.5	55.04	129.1	334.9	343.7	335.5	8.26	41.603		
1,836.8	1,833.9	1,771.0	1,737.7	4.1	6.7	55.41	133.8	343.7	350.4	341.9	8.47	41.362		
1,900.0	1,896.2	1,833.0	1,797.2	4.3	7.0	56.19	141.8	358.8	361.7	352.9	8.84	40.912		
2,000.0	1,994.8	1,931.1	1,891.5	4.6	7.6	57.33	154.4	382.8	379.8	370.3	9.44	40.217		
2,100.0	2,093.4	2,029.2	1,985.8	4.9	8.1	58.36	167.0	406.7	397.9	387.9	10.06	39.551		
2,200.0	2,192.0	2,127.3	2,080.1	5.2	8.7	59.31	179.6	430.7	416.2	405.5	10.70	38.916		
2,300.0	2,290.6	2,225.4	2,174.3	5.5	9.3	60.17	192.2	454.6	434.6	423.3	11.34	38.317		
2,400.0	2,389.2	2,323.5	2,268.6	5.9	9.8	60.97	204.8	478.6	453.1	441.1	12.00	37.752		
2,500.0	2,487.9	2,421.6	2,362.9	6.2	10.4	61.70	217.4	502.5	471.7	459.0	12.67	37.221		
2,600.0	2,586.5	2,519.6	2,457.2	6.5	10.9	62.38	230.0	526.5	490.3	476.9	13.35	36.724		
2,700.0	2,685.1	2,617.7	2,551.5	6.9	11.5	63.01	242.6	550.4	509.0	494.9	14.04	36.259		
2,800.0	2,783.7	2,715.8	2,645.8	7.2	12.1	63.59	255.3	574.4	527.7	513.0	14.73	35.823		
2,900.0	2,882.3	2,813.9	2,740.0	7.6	12.6	64.13	267.9	598.3	546.5	531.1	15.43	35.415		
3,000.0	2,980.9	2,912.0	2,834.3	7.9	13.2	64.64	280.5	622.3	565.4	549.2	16.14	35.033		
3,100.0	3,079.5	3,010.1	2,928.6	8.3	13.8	65.12	293.1	646.2	584.2	567.4	16.85	34.675		
3,200.0	3,178.2	3,108.2	3,022.9	8.6	14.3	65.56	305.7	670.2	603.1	585.6	17.56	34.339		
3,300.0	3,276.8	3,206.3	3,117.2	9.0	14.9	65.98	318.3	694.1	622.1	603.8	18.28	34.023		
3,400.0	3,375.4	3,304.4	3,211.5	9.4	15.4	66.37	330.9	718.1	641.1	622.1	19.01	33.727		
3,500.0	3,474.0	3,402.5	3,305.7	9.7	16.0	66.74	343.5	742.0	660.1	640.3	19.73	33.448		
3,600.0	3,572.6	3,500.5	3,400.0	10.1	16.6	67.09	356.1	765.9	679.1	658.6	20.46	33.185		
3,700.0	3,671.2	3,598.6	3,494.3	10.4	17.1	67.43	368.8	789.9	698.2	677.0	21.20	32.937		
3,800.0	3,769.8	3,696.7	3,588.6	10.8	17.7	67.74	381.4	813.8	717.2	695.3	21.93	32.703		
3,900.0	3,868.4	3,794.8	3,682.9	11.2	18.3	68.04	394.0	837.8	736.3	713.7	22.67	32.482		
4,000.0	3,967.1	3,892.9	3,777.1	11.5	18.8	68.32	406.6	861.7	755.4	732.0	23.41	32.273		
4,100.0	4,065.7	3,991.0	3,871.4	11.9	19.4	68.59	419.2	885.7	774.6	750.4	24.15	32.074		
4,200.0	4,164.3	4,089.1	3,965.7	12.3	20.0	68.84	431.8	909.6	793.7	768.8	24.89	31.886		
4,300.0	4,262.9	4,187.2	4,060.0	12.6	20.5	69.09	444.4	933.6	812.9	787.2	25.64	31.707		
4,400.0	4,361.5	4,285.3	4,154.3	13.0	21.1	69.32	457.0	957.5	832.1	805.7	26.38	31.538		
4,500.0	4,460.1	4,383.4	4,248.6	13.4	21.7	69.54	469.6	981.5	851.2	824.1	27.13	31.376		
4,600.0	4,558.7	4,481.4	4,342.8	13.8	22.2	69.75	482.3	1,005.4	870.4	842.6	27.88	31.222		
4,700.0	4,657.4	4,579.5	4,437.1	14.1	22.8	69.95	494.9	1,029.4	889.7	861.0	28.63	31.075		
4,800.0	4,756.0	4,677.6	4,531.4	14.5	23.4	70.15	507.5	1,053.3	908.9	879.5	29.38	30.935		
4,900.0	4,854.6	4,775.7	4,625.7	14.9	23.9	70.33	520.1	1,077.3	928.1	898.0	30.13	30.801		

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

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Corcilius 6J-203
Project:	SEC.6-T1S-R67W	TVD Reference:	WELL @ 5073.0ft (RKB - 13')
Reference Site:	Corcilius 1S67W6J Pad Sec.6-T1S-R67W	MD Reference:	WELL @ 5073.0ft (RKB - 13')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Corcilius 6J-203	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (4-29-15)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 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 (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
5,000.0	4,953.2	4,873.8	4,720.0	15.2	24.5	70.51	532.7	1,101.2	947.3	916.5	30.89	30.673		
5,100.0	5,051.8	4,971.9	4,814.3	15.6	25.1	70.69	545.3	1,125.2	966.6	934.9	31.64	30.550		
5,200.0	5,150.4	5,070.0	4,908.5	16.0	25.6	70.85	557.9	1,149.1	985.8	953.4	32.39	30.433 SF		

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Corcilus 6J-203
Project:	SEC.6-T1S-R67W	TVD Reference:	WELL @ 5073.0ft (RKB - 13')
Reference Site:	Corcilus 1S67W6J Pad Sec.6-T1S-R67W	MD Reference:	WELL @ 5073.0ft (RKB - 13')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Corcilus 6J-203	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (4-29-15)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Sec.6-T1S-R67W - Sack 22-6 (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 100-NS-GYRO-MS													Offset Well Error:	0.0 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 (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	140.18	-520.9	434.3	678.5					
100.0	100.0	84.2	84.2	0.1	0.1	140.22	-521.0	433.8	678.0	677.7	0.22	3,021.944		
200.0	200.0	181.8	181.8	0.3	0.3	140.30	-521.2	432.7	677.4	676.7	0.68	989.789		
300.0	300.0	281.4	281.4	0.6	0.6	140.36	-521.5	432.0	677.2	676.1	1.17	578.349		
400.0	400.0	383.1	383.1	0.8	0.9	140.40	-521.5	431.5	676.9	675.3	1.66	408.339		
500.0	500.0	482.3	482.3	1.0	1.1	140.43	-521.5	430.9	676.5	674.4	2.14	316.289		
600.0	600.0	581.7	581.7	1.2	1.4	140.46	-521.5	430.5	676.2	673.6	2.62	258.550		
700.0	700.0	682.8	682.8	1.5	1.6	140.46	-521.3	430.3	675.9	672.8	3.07	220.480		
800.0	800.0	784.7	784.6	1.7	1.8	140.46	-520.8	429.9	675.4	671.8	3.51	192.381		
900.0	900.0	885.0	885.0	1.9	2.1	140.47	-520.3	429.3	674.6	670.6	3.98	169.508		
1,000.0	1,000.0	983.5	983.5	2.1	2.3	140.50	-520.1	428.7	674.0	669.5	4.46	151.051		
1,100.0	1,100.0	1,083.4	1,083.4	2.4	2.6	140.53	-519.9	428.1	673.5	668.5	4.95	136.148		
1,200.0	1,200.0	1,186.5	1,186.5	2.6	2.8	140.52	-519.3	427.7	672.8	667.4	5.41	124.390		
1,286.6	1,286.6	1,274.8	1,274.7	2.8	3.0	122.13	-518.2	427.5	672.4	666.6	5.78	116.359		
1,300.0	1,300.0	1,288.3	1,288.3	2.8	3.0	122.14	-518.0	427.5	672.4	666.5	5.83	115.238		
1,400.0	1,399.9	1,391.0	1,391.0	3.0	3.2	122.36	-516.4	427.2	673.0	666.8	6.27	107.391		
1,500.0	1,499.7	1,492.5	1,492.5	3.3	3.5	122.75	-514.5	426.6	674.8	668.1	6.72	100.437		
1,600.0	1,599.3	1,595.2	1,595.1	3.5	3.7	123.33	-512.4	425.8	677.7	670.5	7.19	94.265		
1,700.0	1,698.6	1,696.6	1,696.5	3.7	4.0	124.06	-510.0	424.7	681.7	674.1	7.67	88.890		
1,800.0	1,797.5	1,796.6	1,796.4	4.0	4.2	124.93	-507.5	423.6	687.2	679.0	8.16	84.226		
1,836.8	1,833.9	1,833.5	1,833.3	4.1	4.3	125.29	-506.5	423.2	689.6	681.3	8.35	82.637		
1,900.0	1,896.2	1,896.8	1,896.6	4.3	4.5	125.98	-505.0	422.3	694.0	685.3	8.67	80.012		
2,000.0	1,994.8	1,994.5	1,994.2	4.6	4.7	127.07	-502.8	420.5	701.0	691.8	9.20	76.200		
2,100.0	2,093.4	2,090.6	2,090.3	4.9	5.0	128.16	-501.1	418.6	708.7	698.9	9.73	72.824		
2,200.0	2,192.0	2,185.0	2,184.6	5.2	5.2	129.22	-499.9	416.7	717.0	706.8	10.26	69.883		
2,300.0	2,290.6	2,281.8	2,281.4	5.5	5.5	130.29	-499.2	415.0	726.1	715.3	10.79	67.266		
2,400.0	2,389.2	2,379.9	2,379.6	5.9	5.7	131.36	-498.6	413.2	735.6	724.3	11.33	64.920		
2,500.0	2,487.9	2,475.7	2,475.3	6.2	6.0	132.38	-498.2	411.5	745.5	733.7	11.86	62.877		
2,600.0	2,586.5	2,571.4	2,571.0	6.5	6.2	133.36	-498.1	410.0	756.1	743.7	12.37	61.108		
2,700.0	2,685.1	2,667.9	2,667.5	6.9	6.4	134.32	-498.2	408.8	767.3	754.4	12.88	59.563		
2,800.0	2,783.7	2,763.5	2,763.2	7.2	6.6	135.23	-498.5	408.0	778.9	765.5	13.36	58.285		
2,900.0	2,882.3	2,860.1	2,859.7	7.6	6.8	136.11	-499.1	407.3	791.1	777.2	13.82	57.251		
3,000.0	2,980.9	2,960.3	2,959.9	7.9	7.0	137.00	-499.7	406.6	803.5	789.2	14.28	56.267		
3,100.0	3,079.5	3,060.9	3,060.5	8.3	7.2	137.87	-500.0	405.8	815.8	801.0	14.77	55.216		
3,200.0	3,178.2	3,159.8	3,159.4	8.6	7.4	138.71	-500.3	404.8	828.1	812.8	15.28	54.189		
3,300.0	3,276.8	3,258.7	3,258.3	9.0	7.6	139.54	-500.6	403.6	840.5	824.8	15.79	53.226		
3,400.0	3,375.4	3,358.8	3,358.4	9.4	7.9	140.34	-500.8	402.5	853.1	836.8	16.31	52.292		
3,500.0	3,474.0	3,459.0	3,458.6	9.7	8.1	141.09	-500.6	401.8	865.5	848.7	16.84	51.396		
3,600.0	3,572.6	3,558.5	3,558.1	10.1	8.4	141.78	-500.1	401.4	878.0	860.6	17.35	50.592		
3,700.0	3,671.2	3,657.2	3,656.8	10.4	8.6	142.44	-499.5	401.2	890.5	872.7	17.85	49.897		
3,800.0	3,769.8	3,754.7	3,754.3	10.8	8.8	143.07	-498.9	401.1	903.2	884.9	18.31	49.326		
3,900.0	3,868.4	3,850.1	3,849.7	11.2	8.9	143.66	-498.6	401.1	916.3	897.5	18.74	48.895		
4,000.0	3,967.1	3,943.3	3,942.9	11.5	9.1	144.24	-498.7	401.0	929.9	910.7	19.14	48.582		
4,100.0	4,065.7	4,036.9	4,036.5	11.9	9.2	144.83	-499.6	400.6	944.2	924.7	19.53	48.336		
4,200.0	4,164.3	4,133.4	4,133.0	12.3	9.3	145.45	-500.9	400.0	959.0	939.0	19.93	48.105		
4,300.0	4,262.9	4,231.0	4,230.6	12.6	9.5	146.06	-502.3	399.3	974.0	953.6	20.35	47.868		
4,400.0	4,361.5	4,330.4	4,330.0	13.0	9.7	146.71	-504.0	397.8	989.1	968.3	20.79	47.585		
7,500.0	7,502.0	7,533.6	7,532.5	19.6	16.5	-11.45	-484.2	368.3	971.3	949.1	22.20	43.744		
7,700.0	7,532.5	7,569.1	7,567.9	19.4	16.5	-13.15	-482.3	367.4	930.4	909.3	21.11	44.063		
7,750.0	7,560.4	7,600.5	7,599.2	19.2	16.6	-15.39	-480.5	366.5	887.5	867.3	20.24	43.854		
7,800.0	7,585.4	7,629.7	7,628.3	19.0	16.7	-18.49	-478.5	365.4	843.0	823.2	19.79	42.596		

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

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Corcilius 6J-203
Project:	SEC.6-T1S-R67W	TVD Reference:	WELL @ 5073.0ft (RKB - 13')
Reference Site:	Corcilius 1S67W6J Pad Sec.6-T1S-R67W	MD Reference:	WELL @ 5073.0ft (RKB - 13')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Corcilius 6J-203	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (4-29-15)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Sec.6-T1S-R67W - Sack 22-6 (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 100-NS-GYRO-MS													Offset Well Error:	0.0 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 (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
7,850.0	7,607.6	7,654.1	7,652.7	18.9	16.8	-22.82	-476.7	364.4	797.0	777.0	20.07	39.723		
7,900.0	7,626.9	7,673.9	7,672.4	18.8	16.8	-29.07	-475.2	363.5	749.9	728.4	21.50	34.885		
7,950.0	7,643.0	7,689.3	7,687.7	18.7	16.8	-38.33	-473.9	362.7	701.9	677.4	24.55	28.594		
8,000.0	7,656.0	7,700.0	7,698.3	18.7	16.9	-51.93	-473.0	362.1	653.3	624.1	29.18	22.386		
8,050.0	7,665.9	7,700.0	7,698.3	18.7	16.9	-67.37	-473.0	362.1	604.3	571.1	33.24	18.179		
8,100.0	7,672.5	7,706.9	7,705.2	18.7	16.9	-89.08	-472.4	361.7	555.3	519.7	35.53	15.629		
8,150.0	7,675.9	7,700.0	7,698.3	18.8	16.9	-103.00	-473.0	362.1	506.4	471.8	34.63	14.624		
8,188.1	7,676.2	7,700.0	7,698.3	18.9	16.9	-114.03	-473.0	362.1	469.4	436.8	32.66	14.373		
8,200.0	7,676.1	7,700.0	7,698.3	19.0	16.9	-114.03	-473.0	362.1	457.9	425.2	32.71	14.001		
8,300.0	7,674.6	7,691.5	7,689.9	19.5	16.8	-110.19	-473.7	362.6	362.3	328.3	34.02	10.650		
8,400.0	7,673.0	7,680.5	7,679.0	20.1	16.8	-104.97	-474.6	363.1	269.5	233.9	35.60	7.569		
8,500.0	7,671.5	7,670.1	7,668.6	21.0	16.8	-99.82	-475.5	363.7	183.7	146.6	37.10	4.953		
8,600.0	7,670.0	7,660.2	7,658.8	22.0	16.8	-94.84	-476.3	364.1	121.3	82.8	38.48	3.152		
8,646.1	7,669.3	7,655.8	7,654.4	22.5	16.8	-92.61	-476.6	364.3	112.3	73.2	39.08	2.872 CC, ES, SF		
8,700.0	7,668.5	7,650.8	7,649.4	23.1	16.7	-90.07	-477.0	364.6	124.4	84.7	39.73	3.132		
8,800.0	7,667.0	7,641.9	7,640.5	24.3	16.7	-85.56	-477.6	364.9	190.0	149.1	40.86	4.649		
8,900.0	7,665.4	7,633.4	7,632.0	25.6	16.7	-81.34	-478.3	365.3	276.7	234.8	41.88	6.607		
9,000.0	7,663.9	7,625.3	7,624.0	26.9	16.7	-77.43	-478.8	365.6	369.9	327.1	42.79	8.645		
9,100.0	7,662.4	7,617.6	7,616.2	28.3	16.7	-73.82	-479.4	365.9	465.9	422.2	43.62	10.679		
9,200.0	7,660.9	7,610.2	7,608.9	29.8	16.6	-70.50	-479.8	366.2	563.1	518.7	44.39	12.685		
9,300.0	7,659.4	7,600.0	7,598.7	31.3	16.6	-66.17	-480.5	366.5	661.1	616.3	44.76	14.768		
9,400.0	7,657.8	7,600.0	7,598.7	32.9	16.6	-66.17	-480.5	366.5	759.5	713.3	46.22	16.433		
9,500.0	7,656.3	7,589.5	7,588.3	34.5	16.6	-62.01	-481.1	366.8	858.2	811.8	46.40	18.496		
9,600.0	7,654.8	7,583.1	7,581.8	36.1	16.6	-59.59	-481.5	367.0	957.2	910.2	47.00	20.365		

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Corcilius 6J-203
Project:	SEC.6-T1S-R67W	TVD Reference:	WELL @ 5073.0ft (RKB - 13')
Reference Site:	Corcilius 1S67W6J Pad Sec.6-T1S-R67W	MD Reference:	WELL @ 5073.0ft (RKB - 13')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Corcilius 6J-203	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (4-29-15)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Sec.6-T1S-R67W - Veal 14-6 (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 112-NS-GYRO-MS													Offset Well Error:	0.0 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 (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,400.0	7,642.7	7,670.7	7,670.2	49.8	13.7	96.72	-3,198.7	106.2	979.4	916.3	63.18	15.503		
10,500.0	7,641.1	7,668.9	7,668.4	51.6	13.7	96.03	-3,198.7	106.2	880.7	815.7	65.00	13.549		
10,600.0	7,639.6	7,667.2	7,666.6	53.4	13.7	95.35	-3,198.7	106.2	782.3	715.4	66.84	11.705		
10,700.0	7,638.1	7,665.4	7,664.9	55.2	13.7	94.66	-3,198.7	106.2	684.3	615.6	68.67	9.965		
10,800.0	7,636.6	7,663.7	7,663.1	57.0	13.7	93.97	-3,198.7	106.2	587.0	516.5	70.51	8.325		
10,900.0	7,635.1	7,661.9	7,661.3	58.8	13.7	93.29	-3,198.7	106.2	490.8	418.5	72.35	6.784		
11,000.0	7,633.6	7,660.2	7,659.6	60.6	13.7	92.60	-3,198.7	106.2	396.5	322.3	74.19	5.344		
11,100.0	7,632.0	7,658.4	7,657.8	62.5	13.7	91.92	-3,198.7	106.2	305.7	229.7	76.03	4.021		
11,200.0	7,630.5	7,656.7	7,656.1	64.3	13.6	91.23	-3,198.7	106.2	223.1	145.2	77.87	2.865		
11,300.0	7,629.0	7,654.9	7,654.4	66.1	13.6	90.55	-3,198.8	106.2	161.4	81.7	79.70	2.025		
11,368.6	7,628.0	7,653.7	7,653.2	67.4	13.6	90.09	-3,198.8	106.2	146.0	65.1	80.95	1.804 CC, ES, SF		
11,400.0	7,627.5	7,653.2	7,652.6	68.0	13.6	89.87	-3,198.8	106.2	149.4	67.8	81.53	1.832		
11,500.0	7,626.0	7,651.5	7,650.9	69.8	13.6	89.19	-3,198.8	106.2	196.4	113.1	83.35	2.356		
11,600.0	7,624.4	7,649.7	7,649.2	71.7	13.6	88.52	-3,198.8	106.1	273.6	188.4	85.16	3.212		
11,700.0	7,622.9	7,648.0	7,647.5	73.5	13.6	87.84	-3,198.8	106.1	362.1	275.1	86.97	4.163		
11,800.0	7,621.4	7,646.3	7,645.7	75.4	13.6	87.17	-3,198.8	106.1	455.3	366.6	88.78	5.129		
11,900.0	7,619.9	7,644.6	7,644.0	77.2	13.6	86.50	-3,198.8	106.1	551.0	460.4	90.57	6.084		
11,958.5	7,619.0	7,643.6	7,643.0	78.3	13.6	86.11	-3,198.8	106.1	607.6	516.0	91.61	6.632		

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Corcilus 6J-203
Project:	SEC.6-T1S-R67W	TVD Reference:	WELL @ 5073.0ft (RKB - 13')
Reference Site:	Corcilus 1S67W6J Pad Sec.6-T1S-R67W	MD Reference:	WELL @ 5073.0ft (RKB - 13')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Corcilus 6J-203	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (4-29-15)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5073.0ft (RKB - 13')

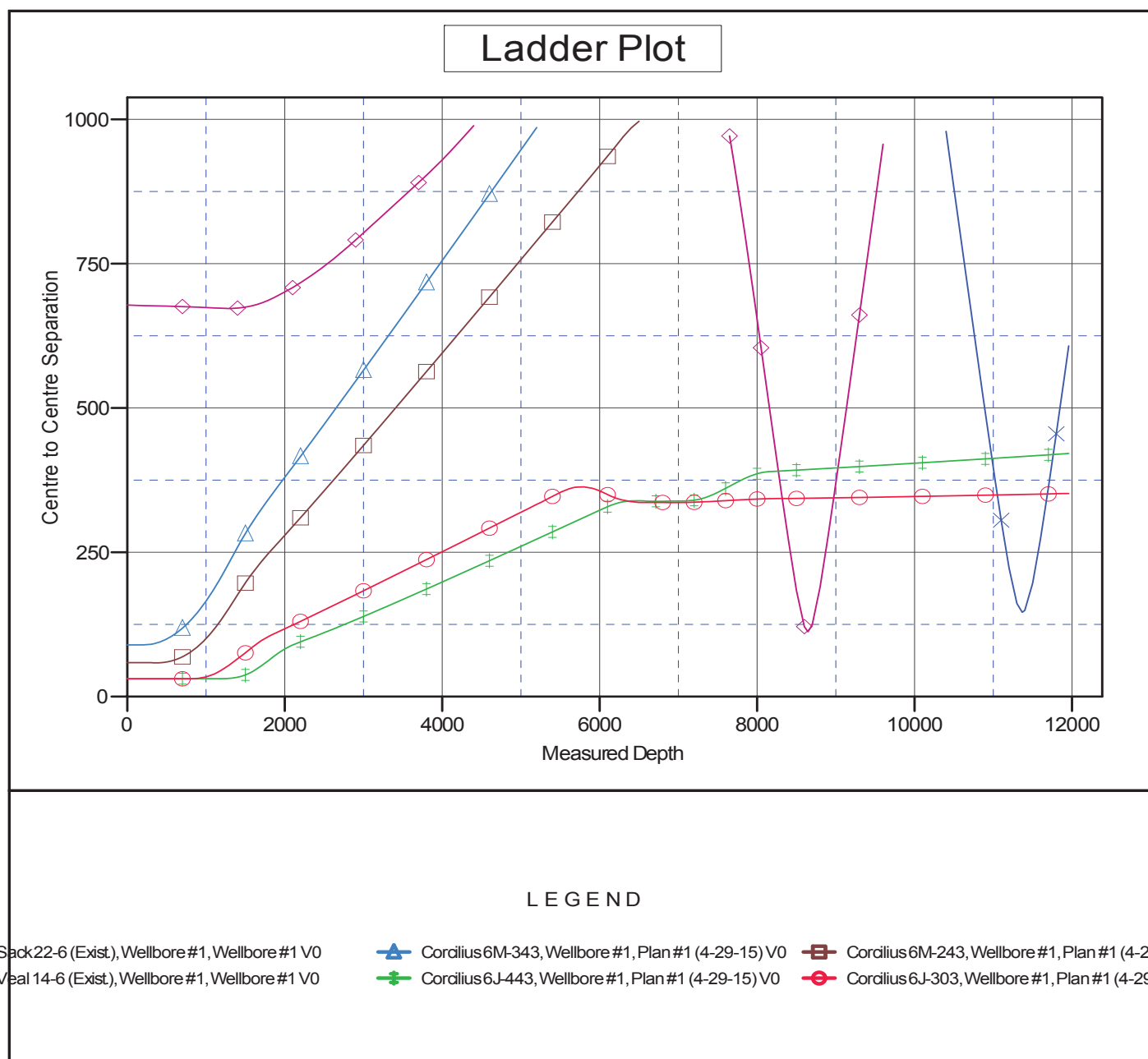
Offset Depths are relative to Offset Datum

Central Meridian is -105.500000

Coordinates are relative to: Corcilus 6J-203

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.36°



Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Corcilius 6J-203
Project:	SEC.6-T1S-R67W	TVD Reference:	WELL @ 5073.0ft (RKB - 13')
Reference Site:	Corcilius 1S67W6J Pad Sec.6-T1S-R67W	MD Reference:	WELL @ 5073.0ft (RKB - 13')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Corcilius 6J-203	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (4-29-15)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5073.0ft (RKB - 13')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: Corcilius 6J-203
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.36°

