

# PETROLEUM DEVELOPMENT CORP DJ Basin

Well Name: **Corcilius 6J-303**

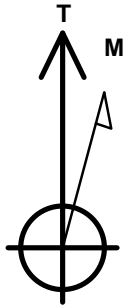
Surface Location: Corcilius 1S67W6J Pad Sec.6-T1S-R67W  
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 5059.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1242666.24	3157712.93	39.998130	-104.937060	
RKB - 13' WELL @ 5072.0ft (RKB - 13')						

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
50' E/W Hardline (6J-303)	1.0	-1899.8	557.6	Rectangle (Sides: L3777.7 W100.0)
SHL 807'FNL & 915'FWL	1.0	0.0	0.0	Point
BHL 500'FSL & 1449'FWL	7722.0	-3788.6	557.6	Point



Azimuths to True North  
Magnetic North: 8.40°

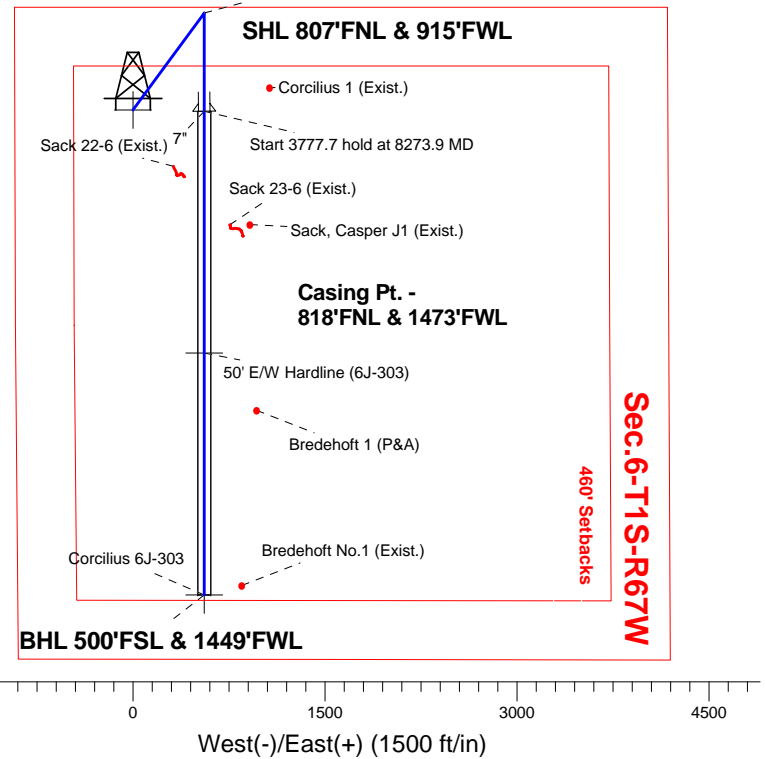
Magnetic Field  
Strength: 52492.4snT  
Dip Angle: 66.56°  
Date: 4/29/2015  
Model: IGRF2010

## ANNOTATIONS

TVD	MD	Annotation
800.0	800.0	KOP - Start Build 1.50
5415.4	5503.4	Start Drop -2.00
6977.8	7069.9	KOP #2 - Start Build 7.50
7741.8	8273.9	Start 3777.7 hold at 8273.9 MD
7722.0	12051.6	TD at 12051.6

Corcilius 1S67W6J Pad Sec.6-T1S-R67W  
Corcilius 6J-303  
Plan #1 (4-29-15)  
15:42, September 23 2015

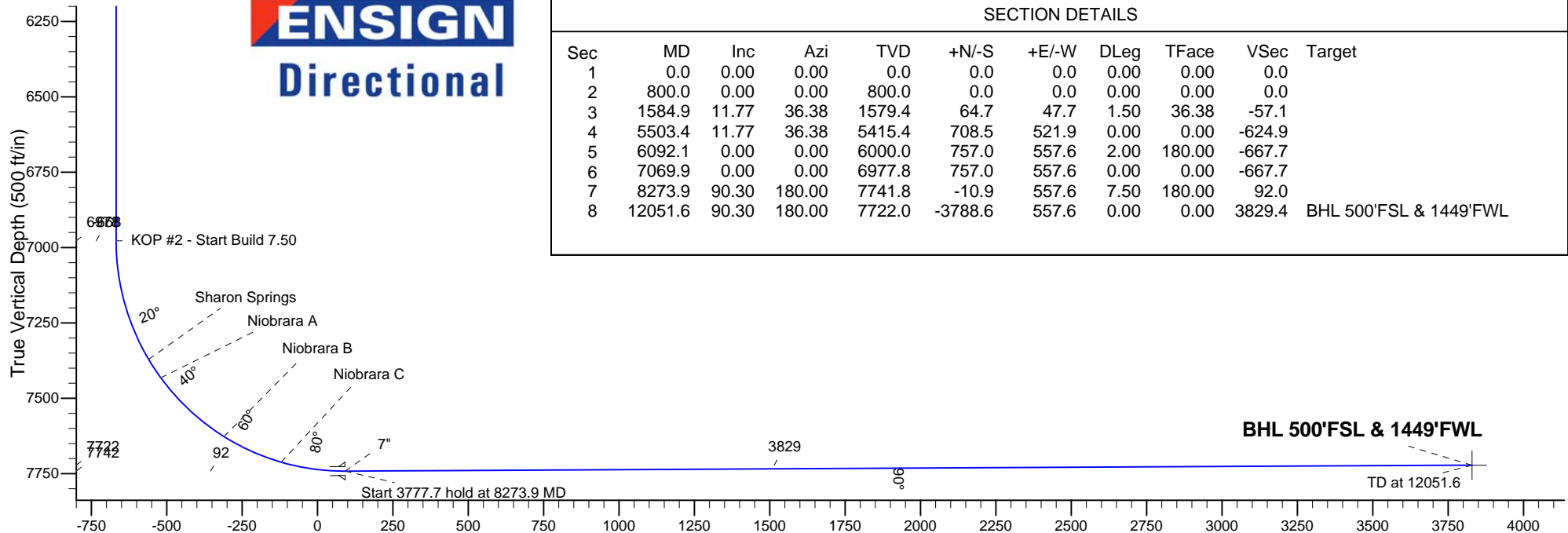
South(-)/North(+) (1500 ft/in)



**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	800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.0	
3	1584.9	11.77	36.38	1579.4	64.7	47.7	1.50	36.38	-57.1	
4	5503.4	11.77	36.38	5415.4	708.5	521.9	0.00	0.00	-624.9	
5	6092.1	0.00	0.00	6000.0	757.0	557.6	2.00	180.00	-667.7	
6	7069.9	0.00	0.00	6977.8	757.0	557.6	0.00	0.00	-667.7	
7	8273.9	90.30	180.00	7741.8	-10.9	557.6	7.50	180.00	92.0	
8	12051.6	90.30	180.00	7722.0	-3788.6	557.6	0.00	0.00	3829.4	BHL 500'FSL & 1449'FWL



Vertical Section at 171.63° (500 ft/in)



# Directional

## **PETROLEUM DEVELOPMENT CORP DJ Basin**

**SEC.6-T1S-R67W**

**Corcilus 1S67W6J Pad Sec.6-T1S-R67W**

**Corcilus 6J-303**

**Wellbore #1**

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

## **Standard Planning Report**

**23 September, 2015**

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well Corcilus 6J-303
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>TVD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Project:</b>	SEC.6-T1S-R67W	<b>MD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Site:</b>	Corcilus 1S67W6J Pad Sec.6-T1S-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Corcilus 6J-303	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (4-29-15)		

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

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

<b>Well</b>	Corcilus 6J-303		
<b>Well Position</b>	<b>+N/-S</b>	3.6 ft	<b>Northing:</b>
	<b>+E/-W</b>	151.3 ft	<b>Easting:</b>
<b>Position Uncertainty</b>		0.0 ft	<b>Wellhead Elevation:</b>
			<b>Latitude:</b>
			<b>Longitude:</b>
			<b>Ground Level:</b>

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

<b>Design</b>	Plan #1 (4-29-15)			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	171.63

<b>Plan Sections</b>										
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	
800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,584.9	11.77	36.38	1,579.4	64.7	47.7	1.50	1.50	0.00	36.38	
5,503.4	11.77	36.38	5,415.4	708.5	521.9	0.00	0.00	0.00	0.00	
6,092.1	0.00	0.00	6,000.0	757.0	557.6	2.00	-2.00	0.00	180.00	
7,069.9	0.00	0.00	6,977.8	757.0	557.6	0.00	0.00	0.00	0.00	
8,273.9	90.30	180.00	7,741.8	-10.9	557.6	7.50	7.50	0.00	180.00	
12,051.6	90.30	180.00	7,722.0	-3,788.6	557.6	0.00	0.00	0.00	0.00	BHL 500'FSL & 1449'

Database:	US_EDM	Local Co-ordinate Reference:	Well Corcilus 6J-303
Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	TVD Reference:	WELL @ 5072.0ft (RKB - 13')
Project:	SEC.6-T1S-R67W	MD Reference:	WELL @ 5072.0ft (RKB - 13')
Site:	Corcilus 1S67W6J Pad Sec.6-T1S-R67W	North Reference:	True
Well:	Corcilus 6J-303	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
SHL 807'FNL & 915'FWL - 50' E/W Hardline (6J-303)									
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
KOP - Start Build 1.50									
900.0	1.50	36.38	900.0	1.1	0.8	-0.9	1.50	1.50	0.00
1,000.0	3.00	36.38	999.9	4.2	3.1	-3.7	1.50	1.50	0.00
1,100.0	4.50	36.38	1,099.7	9.5	7.0	-8.4	1.50	1.50	0.00
1,200.0	6.00	36.38	1,199.3	16.8	12.4	-14.9	1.50	1.50	0.00
1,300.0	7.50	36.38	1,298.6	26.3	19.4	-23.2	1.50	1.50	0.00
1,400.0	9.00	36.38	1,397.5	37.9	27.9	-33.4	1.50	1.50	0.00
1,500.0	10.50	36.38	1,496.1	51.5	37.9	-45.4	1.50	1.50	0.00
1,584.9	11.77	36.38	1,579.4	64.7	47.7	-57.1	1.50	1.50	0.00
1,600.0	11.77	36.38	1,594.2	67.2	49.5	-59.3	0.00	0.00	0.00
1,700.0	11.77	36.38	1,692.1	83.6	61.6	-73.8	0.00	0.00	0.00
1,800.0	11.77	36.38	1,790.0	100.0	73.7	-88.2	0.00	0.00	0.00
1,900.0	11.77	36.38	1,887.9	116.5	85.8	-102.7	0.00	0.00	0.00
2,000.0	11.77	36.38	1,985.8	132.9	97.9	-117.2	0.00	0.00	0.00
2,100.0	11.77	36.38	2,083.7	149.3	110.0	-131.7	0.00	0.00	0.00
2,200.0	11.77	36.38	2,181.5	165.8	122.1	-146.2	0.00	0.00	0.00
2,300.0	11.77	36.38	2,279.4	182.2	134.2	-160.7	0.00	0.00	0.00
2,400.0	11.77	36.38	2,377.3	198.6	146.3	-175.2	0.00	0.00	0.00
2,500.0	11.77	36.38	2,475.2	215.0	158.4	-189.7	0.00	0.00	0.00
2,600.0	11.77	36.38	2,573.1	231.5	170.5	-204.2	0.00	0.00	0.00
2,700.0	11.77	36.38	2,671.0	247.9	182.6	-218.7	0.00	0.00	0.00
2,800.0	11.77	36.38	2,768.9	264.3	194.7	-233.2	0.00	0.00	0.00
2,900.0	11.77	36.38	2,866.8	280.8	206.8	-247.7	0.00	0.00	0.00
3,000.0	11.77	36.38	2,964.7	297.2	218.9	-262.1	0.00	0.00	0.00
3,100.0	11.77	36.38	3,062.6	313.6	231.0	-276.6	0.00	0.00	0.00
3,200.0	11.77	36.38	3,160.5	330.0	243.1	-291.1	0.00	0.00	0.00
3,300.0	11.77	36.38	3,258.4	346.5	255.2	-305.6	0.00	0.00	0.00
3,400.0	11.77	36.38	3,356.3	362.9	267.3	-320.1	0.00	0.00	0.00
3,500.0	11.77	36.38	3,454.2	379.3	279.4	-334.6	0.00	0.00	0.00
3,600.0	11.77	36.38	3,552.1	395.8	291.5	-349.1	0.00	0.00	0.00
3,700.0	11.77	36.38	3,650.0	412.2	303.6	-363.6	0.00	0.00	0.00
3,800.0	11.77	36.38	3,747.9	428.6	315.7	-378.1	0.00	0.00	0.00
3,900.0	11.77	36.38	3,845.8	445.0	327.8	-392.6	0.00	0.00	0.00
4,000.0	11.77	36.38	3,943.7	461.5	339.9	-407.1	0.00	0.00	0.00
4,100.0	11.77	36.38	4,041.6	477.9	352.0	-421.6	0.00	0.00	0.00
4,200.0	11.77	36.38	4,139.5	494.3	364.1	-436.1	0.00	0.00	0.00
4,300.0	11.77	36.38	4,237.4	510.8	376.2	-450.5	0.00	0.00	0.00
4,400.0	11.77	36.38	4,335.3	527.2	388.3	-465.0	0.00	0.00	0.00
4,495.8	11.77	36.38	4,429.0	542.9	399.9	-478.9	0.00	0.00	0.00
Parkman									
4,500.0	11.77	36.38	4,433.2	543.6	400.4	-479.5	0.00	0.00	0.00
4,600.0	11.77	36.38	4,531.1	560.1	412.5	-494.0	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well Corcilus 6J-303
Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	TVD Reference:	WELL @ 5072.0ft (RKB - 13')
Project:	SEC.6-T1S-R67W	MD Reference:	WELL @ 5072.0ft (RKB - 13')
Site:	Corcilus 1S67W6J Pad Sec.6-T1S-R67W	North Reference:	True
Well:	Corcilus 6J-303	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	11.77	36.38	4,628.9	576.5	424.7	-508.5	0.00	0.00	0.00
4,800.0	11.77	36.38	4,726.8	592.9	436.8	-523.0	0.00	0.00	0.00
4,873.7	11.77	36.38	4,799.0	605.0	445.7	-533.7	0.00	0.00	0.00
<b>Sussex</b>									
4,900.0	11.77	36.38	4,824.7	609.3	448.9	-537.5	0.00	0.00	0.00
5,000.0	11.77	36.38	4,922.6	625.8	461.0	-552.0	0.00	0.00	0.00
5,100.0	11.77	36.38	5,020.5	642.2	473.1	-566.5	0.00	0.00	0.00
5,200.0	11.77	36.38	5,118.4	658.6	485.2	-581.0	0.00	0.00	0.00
5,300.0	11.77	36.38	5,216.3	675.1	497.3	-595.5	0.00	0.00	0.00
5,400.0	11.77	36.38	5,314.2	691.5	509.4	-610.0	0.00	0.00	0.00
5,466.2	11.77	36.38	5,379.0	702.4	517.4	-619.5	0.00	0.00	0.00
<b>Shannon</b>									
5,500.0	11.77	36.38	5,412.1	707.9	521.5	-624.4	0.00	0.00	0.00
5,503.4	11.77	36.38	5,415.4	708.5	521.9	-624.9	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
5,600.0	9.84	36.38	5,510.3	723.1	532.6	-637.8	2.00	-2.00	0.00
5,700.0	7.84	36.38	5,609.1	735.4	541.7	-648.7	2.00	-2.00	0.00
5,800.0	5.84	36.38	5,708.4	745.0	548.8	-657.2	2.00	-2.00	0.00
5,900.0	3.84	36.38	5,808.1	751.8	553.8	-663.2	2.00	-2.00	0.00
6,000.0	1.84	36.38	5,907.9	755.8	556.7	-666.7	2.00	-2.00	0.00
6,092.1	0.00	0.00	6,000.0	757.0	557.6	-667.7	2.00	-2.00	0.00
6,100.0	0.00	0.00	6,007.9	757.0	557.6	-667.7	0.00	0.00	0.00
6,200.0	0.00	0.00	6,107.9	757.0	557.6	-667.7	0.00	0.00	0.00
6,300.0	0.00	0.00	6,207.9	757.0	557.6	-667.7	0.00	0.00	0.00
6,400.0	0.00	0.00	6,307.9	757.0	557.6	-667.7	0.00	0.00	0.00
6,500.0	0.00	0.00	6,407.9	757.0	557.6	-667.7	0.00	0.00	0.00
6,600.0	0.00	0.00	6,507.9	757.0	557.6	-667.7	0.00	0.00	0.00
6,700.0	0.00	0.00	6,607.9	757.0	557.6	-667.7	0.00	0.00	0.00
6,800.0	0.00	0.00	6,707.9	757.0	557.6	-667.7	0.00	0.00	0.00
6,900.0	0.00	0.00	6,807.9	757.0	557.6	-667.7	0.00	0.00	0.00
7,000.0	0.00	0.00	6,907.9	757.0	557.6	-667.7	0.00	0.00	0.00
7,069.9	0.00	0.00	6,977.8	757.0	557.6	-667.7	0.00	0.00	0.00
<b>KOP #2 - Start Build 7.50</b>									
7,100.0	2.25	180.00	7,007.9	756.4	557.6	-667.2	7.49	7.49	0.00
7,200.0	9.75	180.00	7,107.3	746.0	557.6	-656.8	7.50	7.50	0.00
7,300.0	17.25	180.00	7,204.4	722.6	557.6	-633.7	7.50	7.50	0.00
7,400.0	24.75	180.00	7,297.7	686.8	557.6	-598.3	7.50	7.50	0.00
7,482.9	30.97	180.00	7,371.0	648.1	557.6	-560.0	7.50	7.50	0.00
<b>Sharon Springs</b>									
7,500.0	32.25	180.00	7,385.6	639.1	557.6	-551.1	7.50	7.50	0.00
7,556.3	36.48	180.00	7,432.0	607.3	557.6	-519.7	7.50	7.50	0.00
<b>Niobrara A</b>									
7,600.0	39.75	180.00	7,466.4	580.4	557.6	-493.0	7.50	7.50	0.00
7,700.0	47.25	180.00	7,538.9	511.6	557.6	-424.9	7.50	7.50	0.00
7,800.0	54.75	180.00	7,601.8	433.9	557.6	-348.1	7.50	7.50	0.00
7,845.7	58.18	180.00	7,627.0	395.8	557.6	-310.4	7.50	7.50	0.00
<b>Niobrara B</b>									
7,900.0	62.25	180.00	7,654.0	348.7	557.6	-263.8	7.50	7.50	0.00
8,000.0	69.75	180.00	7,694.6	257.4	557.6	-173.5	7.50	7.50	0.00
8,055.9	73.95	180.00	7,712.0	204.3	557.6	-120.9	7.50	7.50	0.00
<b>Niobrara C</b>									
8,100.0	77.25	180.00	7,723.0	161.6	557.6	-78.7	7.50	7.50	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well Corcilus 6J-303
Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	TVD Reference:	WELL @ 5072.0ft (RKB - 13')
Project:	SEC.6-T1S-R67W	MD Reference:	WELL @ 5072.0ft (RKB - 13')
Site:	Corcilus 1S67W6J Pad Sec.6-T1S-R67W	North Reference:	True
Well:	Corcilus 6J-303	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	84.75	180.00	7,738.6	62.9	557.6	19.0	7.50	7.50	0.00
8,273.9	90.30	180.00	7,741.8	-10.9	557.6	92.0	7.50	7.50	0.00
Start 3777.7 hold at 8273.9 MD - 7"									
8,300.0	90.30	180.00	7,741.6	-37.0	557.6	117.8	0.01	0.01	0.00
8,400.0	90.30	180.00	7,741.1	-137.0	557.6	216.7	0.00	0.00	0.00
8,500.0	90.30	180.00	7,740.6	-237.0	557.6	315.7	0.00	0.00	0.00
8,600.0	90.30	180.00	7,740.1	-337.0	557.6	414.6	0.00	0.00	0.00
8,700.0	90.30	180.00	7,739.5	-437.0	557.6	513.5	0.00	0.00	0.00
8,800.0	90.30	180.00	7,739.0	-537.0	557.6	612.5	0.00	0.00	0.00
8,900.0	90.30	180.00	7,738.5	-637.0	557.6	711.4	0.00	0.00	0.00
9,000.0	90.30	180.00	7,738.0	-737.0	557.6	810.3	0.00	0.00	0.00
9,100.0	90.30	180.00	7,737.5	-837.0	557.6	909.3	0.00	0.00	0.00
9,200.0	90.30	180.00	7,736.9	-937.0	557.6	1,008.2	0.00	0.00	0.00
9,300.0	90.30	180.00	7,736.4	-1,037.0	557.6	1,107.1	0.00	0.00	0.00
9,400.0	90.30	180.00	7,735.9	-1,137.0	557.6	1,206.1	0.00	0.00	0.00
9,500.0	90.30	180.00	7,735.4	-1,237.0	557.6	1,305.0	0.00	0.00	0.00
9,600.0	90.30	180.00	7,734.8	-1,337.0	557.6	1,403.9	0.00	0.00	0.00
9,700.0	90.30	180.00	7,734.3	-1,437.0	557.6	1,502.9	0.00	0.00	0.00
9,800.0	90.30	180.00	7,733.8	-1,537.0	557.6	1,601.8	0.00	0.00	0.00
9,900.0	90.30	180.00	7,733.3	-1,637.0	557.6	1,700.7	0.00	0.00	0.00
10,000.0	90.30	180.00	7,732.7	-1,737.0	557.6	1,799.7	0.00	0.00	0.00
10,100.0	90.30	180.00	7,732.2	-1,837.0	557.6	1,898.6	0.00	0.00	0.00
10,200.0	90.30	180.00	7,731.7	-1,937.0	557.6	1,997.5	0.00	0.00	0.00
10,300.0	90.30	180.00	7,731.2	-2,037.0	557.6	2,096.5	0.00	0.00	0.00
10,400.0	90.30	180.00	7,730.6	-2,137.0	557.6	2,195.4	0.00	0.00	0.00
10,500.0	90.30	180.00	7,730.1	-2,237.0	557.6	2,294.3	0.00	0.00	0.00
10,600.0	90.30	180.00	7,729.6	-2,337.0	557.6	2,393.3	0.00	0.00	0.00
10,700.0	90.30	180.00	7,729.1	-2,437.0	557.6	2,492.2	0.00	0.00	0.00
10,800.0	90.30	180.00	7,728.6	-2,537.0	557.6	2,591.1	0.00	0.00	0.00
10,900.0	90.30	180.00	7,728.0	-2,637.0	557.6	2,690.1	0.00	0.00	0.00
11,000.0	90.30	180.00	7,727.5	-2,737.0	557.6	2,789.0	0.00	0.00	0.00
11,100.0	90.30	180.00	7,727.0	-2,837.0	557.6	2,887.9	0.00	0.00	0.00
11,200.0	90.30	180.00	7,726.5	-2,937.0	557.6	2,986.9	0.00	0.00	0.00
11,300.0	90.30	180.00	7,725.9	-3,037.0	557.6	3,085.8	0.00	0.00	0.00
11,400.0	90.30	180.00	7,725.4	-3,137.0	557.6	3,184.7	0.00	0.00	0.00
11,500.0	90.30	180.00	7,724.9	-3,237.0	557.6	3,283.7	0.00	0.00	0.00
11,600.0	90.30	180.00	7,724.4	-3,337.0	557.6	3,382.6	0.00	0.00	0.00
11,700.0	90.30	180.00	7,723.8	-3,437.0	557.6	3,481.5	0.00	0.00	0.00
11,800.0	90.30	180.00	7,723.3	-3,537.0	557.6	3,580.5	0.00	0.00	0.00
11,900.0	90.30	180.00	7,722.8	-3,637.0	557.6	3,679.4	0.00	0.00	0.00
12,000.0	90.30	180.00	7,722.3	-3,737.0	557.6	3,778.3	0.00	0.00	0.00
12,051.6	90.30	180.00	7,722.0	-3,788.6	557.6	3,829.4	0.00	0.00	0.00
TD at 12051.6 - BHL 500'FSL & 1449'FWL									

<b>Database:</b>	US_EDM	<b>Local Co-ordinate Reference:</b>	Well Corcilus 6J-303
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>TVD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Project:</b>	SEC.6-T1S-R67W	<b>MD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Site:</b>	Corcilus 1S67W6J Pad Sec.6-T1S-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Corcilus 6J-303	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	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
SHL 807'FNL & 915'FWI - plan hits target center - Point	0.00	0.00	1.0	0.0	0.0	1,242,666.25	3,157,712.93	39.998130	-104.937060
50' E/W Hardline (6J-303) - plan misses target center by 1979.9ft at 1.0ft MD (1.0 TVD, 0.0 N, 0.0 E) - Rectangle (sides W100.0 H3,777.7 D0.0)	0.00	0.00	1.0	-1,899.7	557.6	1,240,770.13	3,158,282.56	39.992915	-104.935070
BHL 500'FSL & 1449'FV - plan hits target center - Point	0.00	0.00	7,722.0	-3,788.6	557.6	1,238,881.42	3,158,294.57	39.987730	-104.935070

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
8,273.9	7,741.8	7"	7	7-1/2	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
4,495.8	4,430.0	Parkman		0.00		
4,873.7	4,800.0	Sussex		0.00		
5,466.2	5,380.0	Shannon		0.00		
7,482.9	7,372.0	Sharon Springs		0.00		
7,556.3	7,433.0	Niobrara A		0.00		
7,845.7	7,628.0	Niobrara B		0.00		
8,055.9	7,713.0	Niobrara C		0.00		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
800.0	800.0	0.0	0.0	KOP - Start Build 1.50	
5,503.4	5,415.4	708.5	521.9	Start Drop -2.00	
7,069.9	6,977.8	757.0	557.6	KOP #2 - Start Build 7.50	
8,273.9	7,741.8	-10.9	557.6	Start 3777.7 hold at 8273.9 MD	
12,051.6	7,722.0	-3,788.6	557.6	TD at 12051.6	



# Directional

## **PETROLEUM DEVELOPMENT CORP DJ Basin**

**SEC.6-T1S-R67W**

**Corcilus 1S67W6J Pad Sec.6-T1S-R67W**

**Corcilus 6J-303**

**Wellbore #1**

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

## **Anticollision Report**

**23 September, 2015**





<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Corcilius 6J-303
<b>Project:</b>	SEC.6-T1S-R67W	<b>TVD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Reference Site:</b>	Corcilius 1S67W6J Pad Sec.6-T1S-R67W	<b>MD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Corcilius 6J-303	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (4-29-15)	<b>Offset TVD Reference:</b>	Offset Datum

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

<b>Survey Tool Program</b>	<b>Date</b> 5/5/2015			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	12,051.6	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-203 - Wellbore #1 - Plan #1 (4-29-15)	800.0	801.0	30.8	27.4	9.135	CC, ES
Corcilius 6J-203 - Wellbore #1 - Plan #1 (4-29-15)	12,052.3	11,957.6	352.0	202.3	2.351	SF
Corcilius 6J-443 - Wellbore #1 - Plan #1 (4-29-15)	800.0	801.0	61.7	58.4	18.302	CC, ES
Corcilius 6J-443 - Wellbore #1 - Plan #1 (4-29-15)	12,052.3	12,139.6	690.9	537.0	4.489	SF
Corcilius 6M-243 - Wellbore #1 - Plan #1 (4-29-15)	400.0	399.0	28.0	26.4	17.833	CC, ES
Corcilius 6M-243 - Wellbore #1 - Plan #1 (4-29-15)	12,052.3	12,063.4	681.4	525.9	4.380	SF
Corcilius 6M-343 - Wellbore #1 - Plan #1 (4-29-15)	200.0	199.0	58.8	58.2	87.547	CC, ES
Corcilius 6M-343 - Wellbore #1 - Plan #1 (4-29-15)	12,052.3	12,186.9	938.9	783.1	6.027	SF
Existing Wells Sec.6-T1S-R67W						
Bredehoft 1 (P&A) - Wellbore #1 - Wellbore #1						Out of range
Bredehoft No.1 (Exist.) - Wellbore #1 - Wellbore #1						Out of range
Corcilius 1 (Exist.) - Wellbore #1 - Wellbore #1	4,983.7	4,878.7	755.7	640.1	6.535	CC
Corcilius 1 (Exist.) - Wellbore #1 - Wellbore #1	5,200.0	5,060.0	757.6	637.4	6.302	ES, SF
Sack 22-6 (Exist.) - Wellbore #1 - Wellbore #1	8,735.2	7,709.8	227.2	188.1	5.803	CC, ES, SF
Sack 23-6 (Exist.) - Wellbore #1 - Wellbore #1	9,162.5	7,729.2	202.2	158.6	4.635	CC, ES, SF
Sack, Casper J1 (Exist.) - Wellbore #1 - Wellbore #1						Out of range

<b>Offset Design</b>	Corcilius 1S67W6J Pad Sec.6-T1S-R67W - Corcilius 6J-203 - Wellbore #1 - Plan #1 (4-29-15)												<b>Offset Site Error:</b>	0.0 ft
<b>Survey Program:</b>	0-MWD												<b>Offset Well Error:</b>	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (ft)	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Between Centres (ft)	Between Ellipses (ft)						
0.0	0.0	1.0	1.0	0.0	0.0	-90.00	0.0	-30.8	30.8	30.8	0.00	N/A		
100.0	100.0	101.0	101.0	0.1	0.1	-90.00	0.0	-30.8	30.8	30.6	0.23	135.758		
200.0	200.0	201.0	201.0	0.3	0.3	-90.00	0.0	-30.8	30.8	30.1	0.68	45.553		
300.0	300.0	301.0	301.0	0.6	0.6	-90.00	0.0	-30.8	30.8	29.7	1.13	27.368		
400.0	400.0	401.0	401.0	0.8	0.8	-90.00	0.0	-30.8	30.8	29.2	1.58	19.560		
500.0	500.0	501.0	501.0	1.0	1.0	-90.00	0.0	-30.8	30.8	28.8	2.03	15.218		
600.0	600.0	601.0	601.0	1.2	1.2	-90.00	0.0	-30.8	30.8	28.3	2.47	12.454		
700.0	700.0	701.0	701.0	1.5	1.5	-90.00	0.0	-30.8	30.8	27.9	2.92	10.539		
800.0	800.0	801.0	801.0	1.7	1.7	-90.00	0.0	-30.8	30.8	27.4	3.37	9.135 CC, ES		
900.0	900.0	901.0	901.0	1.9	1.9	-128.28	0.0	-30.8	31.6	27.8	3.82	8.275		

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

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Corcilius 6J-303
<b>Project:</b>	SEC.6-T1S-R67W	<b>TVD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Reference Site:</b>	Corcilius 1S67W6J Pad Sec.6-T1S-R67W	<b>MD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Corcilius 6J-303	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (4-29-15)	<b>Offset TVD Reference:</b>	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	
1,000.0	999.9	1,000.9	1,000.9	2.1	2.1	-133.42	0.0	-30.8	34.2	29.9	4.26	8.015		
1,100.0	1,099.7	1,100.7	1,100.7	2.4	2.4	-140.37	0.0	-30.8	39.0	34.3	4.71	8.273		
1,200.0	1,199.3	1,200.3	1,200.3	2.6	2.6	-147.53	0.0	-30.8	46.4	41.2	5.16	8.995		
1,300.0	1,298.6	1,300.6	1,300.6	2.8	2.8	-152.96	1.3	-30.4	55.7	50.1	5.60	9.947		
1,400.0	1,397.5	1,401.2	1,401.1	3.1	3.0	-156.19	5.0	-29.1	65.9	59.8	6.05	10.891		
1,500.0	1,496.1	1,502.1	1,501.7	3.4	3.3	-158.01	11.3	-27.0	76.5	70.0	6.50	11.783		
1,584.9	1,579.4	1,587.9	1,587.2	3.7	3.5	-158.81	18.7	-24.6	86.0	79.1	6.88	12.489		
1,600.0	1,594.2	1,603.1	1,602.4	3.8	3.5	-158.89	20.2	-24.1	87.6	80.7	6.95	12.602		
1,700.0	1,692.1	1,704.5	1,703.1	4.1	3.7	-158.84	31.6	-20.3	97.5	90.1	7.44	13.109		
1,800.0	1,790.0	1,806.3	1,803.8	4.5	4.0	-157.87	45.6	-15.6	105.4	97.5	7.95	13.258		
1,900.0	1,887.9	1,906.7	1,902.8	4.9	4.3	-156.38	61.2	-10.4	111.8	103.3	8.49	13.176		
2,000.0	1,985.8	2,006.5	2,001.2	5.3	4.6	-155.01	77.0	-5.2	118.2	109.1	9.04	13.074		
2,100.0	2,083.7	2,106.2	2,099.5	5.7	4.9	-153.79	92.7	0.1	124.6	115.0	9.61	12.968		
2,200.0	2,181.5	2,206.0	2,197.9	6.1	5.2	-152.68	108.4	5.3	131.1	120.9	10.19	12.860		
2,300.0	2,279.4	2,305.7	2,296.3	6.5	5.5	-151.68	124.1	10.5	137.6	126.8	10.79	12.751		
2,400.0	2,377.3	2,405.5	2,394.7	6.9	5.9	-150.77	139.8	15.7	144.1	132.7	11.40	12.644		
2,500.0	2,475.2	2,505.3	2,493.1	7.3	6.2	-149.94	155.5	21.0	150.7	138.7	12.02	12.540		
2,600.0	2,573.1	2,605.0	2,591.4	7.8	6.5	-149.18	171.2	26.2	157.3	144.7	12.65	12.439		
2,700.0	2,671.0	2,704.8	2,689.8	8.2	6.9	-148.48	186.9	31.4	164.0	150.7	13.29	12.341		
2,800.0	2,768.9	2,804.5	2,788.2	8.6	7.2	-147.84	202.6	36.7	170.6	156.7	13.93	12.248		
2,900.0	2,866.8	2,904.3	2,886.6	9.0	7.6	-147.24	218.3	41.9	177.3	162.7	14.58	12.159		
3,000.0	2,964.7	3,004.1	2,984.9	9.5	7.9	-146.69	234.0	47.1	184.0	168.8	15.24	12.073		
3,100.0	3,062.6	3,103.8	3,083.3	9.9	8.3	-146.18	249.7	52.4	190.7	174.8	15.91	11.992		
3,200.0	3,160.5	3,203.6	3,181.7	10.3	8.7	-145.70	265.4	57.6	197.5	180.9	16.57	11.915		
3,300.0	3,258.4	3,303.3	3,280.1	10.7	9.0	-145.25	281.1	62.8	204.2	187.0	17.25	11.842		
3,400.0	3,356.3	3,403.1	3,378.4	11.2	9.4	-144.83	296.8	68.1	211.0	193.1	17.92	11.772		
3,500.0	3,454.2	3,502.9	3,476.8	11.6	9.7	-144.44	312.6	73.3	217.7	199.1	18.60	11.706		
3,600.0	3,552.1	3,602.6	3,575.2	12.0	10.1	-144.07	328.3	78.5	224.5	205.2	19.28	11.643		
3,700.0	3,650.0	3,702.4	3,673.6	12.5	10.5	-143.72	344.0	83.8	231.3	211.3	19.97	11.583		
3,800.0	3,747.9	3,802.1	3,771.9	12.9	10.8	-143.39	359.7	89.0	238.1	217.4	20.66	11.526		
3,900.0	3,845.8	3,901.9	3,870.3	13.3	11.2	-143.08	375.4	94.2	244.9	223.6	21.35	11.471		
4,000.0	3,943.7	4,001.7	3,968.7	13.8	11.6	-142.79	391.1	99.5	251.7	229.7	22.04	11.420		
4,100.0	4,041.6	4,101.4	4,067.1	14.2	11.9	-142.51	406.8	104.7	258.5	235.8	22.74	11.370		
4,200.0	4,139.5	4,201.2	4,165.5	14.7	12.3	-142.25	422.5	109.9	265.3	241.9	23.43	11.323		
4,300.0	4,237.4	4,300.9	4,263.8	15.1	12.7	-142.00	438.2	115.2	272.2	248.0	24.13	11.278		
4,400.0	4,335.3	4,400.7	4,362.2	15.5	13.0	-141.76	453.9	120.4	279.0	254.2	24.83	11.235		
4,500.0	4,433.2	4,500.5	4,460.6	16.0	13.4	-141.54	469.6	125.6	285.8	260.3	25.53	11.194		
4,600.0	4,531.1	4,600.2	4,559.0	16.4	13.8	-141.32	485.3	130.9	292.7	266.4	26.24	11.155		
4,700.0	4,628.9	4,700.0	4,657.3	16.8	14.1	-141.12	501.0	136.1	299.5	272.6	26.94	11.118		
4,800.0	4,726.8	4,799.7	4,755.7	17.3	14.5	-140.92	516.7	141.3	306.4	278.7	27.64	11.082		
4,900.0	4,824.7	4,899.5	4,854.1	17.7	14.9	-140.73	532.4	146.6	313.2	284.9	28.35	11.047		
5,000.0	4,922.6	4,999.3	4,952.5	18.1	15.2	-140.55	548.1	151.8	320.1	291.0	29.06	11.014		
5,100.0	5,020.5	5,099.0	5,050.8	18.6	15.6	-140.38	563.9	157.0	326.9	297.1	29.77	10.983		
5,200.0	5,118.4	5,198.8	5,149.2	19.0	16.0	-140.21	579.6	162.3	333.8	303.3	30.48	10.952		
5,300.0	5,216.3	5,298.5	5,247.6	19.5	16.4	-140.06	595.3	167.5	340.6	309.4	31.18	10.923		
5,400.0	5,314.2	5,398.3	5,346.0	19.9	16.7	-139.90	611.0	172.7	347.5	315.6	31.90	10.895		
5,503.4	5,415.4	5,501.4	5,447.7	20.3	17.1	-139.75	627.2	178.1	354.6	322.0	32.63	10.867		
5,600.0	5,510.3	5,597.9	5,542.8	20.7	17.5	-139.52	642.4	183.2	360.0	326.7	33.33	10.802		
5,700.0	5,609.1	5,697.7	5,641.3	21.0	17.8	-139.30	658.1	188.4	363.0	329.0	34.05	10.662		
5,800.0	5,708.4	5,797.5	5,739.7	21.2	18.2	-137.89	673.8	193.7	363.5	328.7	34.80	10.445		
5,900.0	5,808.1	5,897.1	5,837.9	21.5	18.6	-136.48	689.5	198.9	361.5	325.9	35.59	10.158		

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

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Corcilus 6J-303
<b>Project:</b>	SEC.6-T1S-R67W	<b>TVD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Reference Site:</b>	Corcilus 1S67W6J Pad Sec.6-T1S-R67W	<b>MD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Corcilus 6J-303	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (4-29-15)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Corcilus 1S67W6J Pad Sec.6-T1S-R67W - Corcilus 6J-203 - 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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)						
6,000.0	5,907.9	5,996.4	5,935.8	21.6	19.0	-134.64	705.1	204.1	357.3	320.9	36.42	9.810					
6,092.1	6,000.0	6,087.4	6,025.5	21.7	19.3	-96.14	719.5	208.9	351.6	314.4	37.22	9.446					
6,100.0	6,007.9	6,094.8	6,032.8	21.7	19.3	-95.96	720.6	209.3	351.1	313.8	37.29	9.415					
6,200.0	6,107.9	6,189.1	6,126.1	21.9	19.6	-93.87	733.8	213.6	345.2	307.1	38.06	9.070					
6,300.0	6,207.9	6,284.3	6,220.7	22.0	19.8	-92.18	744.0	217.1	341.0	302.3	38.72	8.806					
6,400.0	6,307.9	6,380.1	6,316.1	22.1	20.0	-90.95	751.4	219.5	338.2	299.0	39.27	8.613					
6,500.0	6,407.9	6,476.3	6,412.2	22.3	20.2	-90.22	755.7	220.9	336.7	297.0	39.71	8.479					
6,600.0	6,507.9	6,573.0	6,508.9	22.4	20.3	-90.00	757.0	221.4	336.3	296.2	40.03	8.399					
6,700.0	6,607.9	6,673.0	6,608.9	22.6	20.5	-90.00	757.0	221.4	336.3	295.9	40.34	8.336					
6,800.0	6,707.9	6,773.0	6,708.9	22.7	20.6	-90.00	757.0	221.4	336.3	295.6	40.65	8.272					
6,900.0	6,807.9	6,873.0	6,808.9	22.8	20.8	-90.00	757.0	221.4	336.3	295.3	40.96	8.210					
7,000.0	6,907.9	6,973.0	6,908.9	23.0	20.9	-90.00	757.0	221.4	336.3	295.0	41.27	8.147					
7,019.9	6,927.8	6,992.9	6,928.8	23.0	21.0	-90.03	756.8	221.4	336.3	294.9	41.33	8.136					
7,069.9	6,977.8	7,042.8	6,978.6	23.1	21.0	-90.49	754.1	221.4	336.3	294.9	41.37	8.127					
7,100.0	7,007.9	7,072.5	7,008.2	23.1	21.0	89.07	751.0	221.4	336.3	294.9	41.35	8.133					
7,150.0	7,057.8	7,121.9	7,056.9	23.1	21.0	88.34	743.2	221.4	336.4	295.1	41.25	8.154					
7,200.0	7,107.3	7,170.9	7,104.8	23.1	21.0	87.62	732.4	221.4	336.5	295.4	41.10	8.189					
7,250.0	7,156.2	7,219.7	7,151.6	23.1	20.9	86.91	718.6	221.4	336.7	295.9	40.88	8.236					
7,300.0	7,204.4	7,268.3	7,197.1	23.1	20.8	86.22	701.9	221.4	337.0	296.4	40.62	8.295					
7,350.0	7,251.7	7,316.6	7,241.4	23.0	20.7	85.55	682.5	221.4	337.3	297.0	40.32	8.365					
7,400.0	7,297.7	7,364.6	7,284.1	22.9	20.6	84.90	660.5	221.4	337.6	297.6	39.98	8.445					
7,450.0	7,342.4	7,412.5	7,325.1	22.7	20.4	84.27	635.9	221.4	338.0	298.3	39.61	8.533					
7,500.0	7,385.6	7,460.2	7,364.4	22.6	20.2	83.66	608.9	221.4	338.3	299.1	39.22	8.627					
7,550.0	7,426.9	7,507.6	7,401.8	22.4	20.1	83.09	579.7	221.4	338.7	299.9	38.81	8.727					
7,600.0	7,466.4	7,554.9	7,437.1	22.3	19.9	82.54	548.3	221.4	339.1	300.7	38.41	8.830					
7,650.0	7,503.8	7,602.0	7,470.3	22.1	19.7	82.03	514.9	221.4	339.5	301.5	38.01	8.934					
7,700.0	7,538.9	7,650.0	7,502.0	21.9	19.6	81.54	478.8	221.4	340.0	302.3	37.61	9.038					
7,750.0	7,571.6	7,695.7	7,530.0	21.7	19.4	81.10	442.7	221.4	340.4	303.1	37.26	9.135					
7,800.0	7,601.8	7,742.3	7,556.3	21.5	19.2	80.69	404.2	221.4	340.7	303.8	36.93	9.227					
7,850.0	7,629.2	7,788.8	7,580.1	21.3	19.1	80.32	364.3	221.4	341.1	304.5	36.64	9.309					
7,900.0	7,654.0	7,835.2	7,601.4	21.1	19.0	79.99	323.0	221.4	341.5	305.0	36.41	9.379					
7,950.0	7,675.8	7,881.6	7,620.1	20.9	18.8	79.70	280.7	221.4	341.8	305.5	36.23	9.433					
8,000.0	7,694.6	7,927.8	7,636.2	20.7	18.8	79.45	237.4	221.4	342.0	305.9	36.12	9.470					
8,050.0	7,710.3	7,973.9	7,649.6	20.5	18.7	79.24	193.2	221.4	342.3	306.2	36.08	9.487					
8,100.0	7,723.0	8,020.0	7,660.4	20.4	18.7	79.07	148.4	221.4	342.5	306.4	36.11	9.483					
8,150.0	7,732.4	8,066.1	7,668.4	20.2	18.7	78.95	103.0	221.4	342.6	306.4	36.23	9.458					
8,200.0	7,738.6	8,112.1	7,673.6	20.0	18.7	78.86	57.3	221.4	342.7	306.3	36.42	9.411					
8,250.0	7,741.5	8,158.1	7,676.1	19.9	18.8	78.82	11.4	221.4	342.8	306.1	36.68	9.343					
8,273.9	7,741.8	8,180.2	7,676.3	19.8	18.9	78.82	-10.6	221.4	342.8	305.9	36.84	9.303					
8,274.3	7,741.8	8,180.5	7,676.3	19.8	18.9	78.82	-10.9	221.4	342.8	305.9	36.84	9.303					
8,300.0	7,741.6	8,205.5	7,676.0	19.8	19.0	78.79	-36.0	221.4	342.8	305.8	37.02	9.259					
8,400.0	7,741.1	8,305.5	7,674.5	19.8	19.5	78.62	-136.0	221.4	343.0	305.0	37.95	9.039					
8,500.0	7,740.6	8,405.5	7,672.9	20.6	20.2	78.46	-236.0	221.4	343.2	304.0	39.21	8.753					
8,600.0	7,740.1	8,505.5	7,671.4	21.5	21.1	78.30	-335.9	221.4	343.4	302.6	40.77	8.422					
8,700.0	7,739.5	8,605.5	7,669.9	22.6	22.0	78.14	-435.9	221.4	343.6	301.0	42.61	8.064					
8,800.0	7,739.0	8,705.5	7,668.4	23.7	23.1	77.97	-535.9	221.4	343.8	299.1	44.68	7.694					
8,900.0	7,738.5	8,805.5	7,666.9	24.9	24.3	77.81	-635.9	221.4	344.0	297.0	46.96	7.325					
9,000.0	7,738.0	8,905.5	7,665.4	26.2	25.6	77.65	-735.9	221.4	344.2	294.8	49.42	6.966					
9,100.0	7,737.5	9,005.5	7,663.8	27.5	27.0	77.49	-835.9	221.4	344.4	292.4	52.02	6.621					
9,200.0	7,736.9	9,105.5	7,662.3	28.9	28.4	77.33	-935.8	221.4	344.7	289.9	54.75	6.295					
9,300.0	7,736.4	9,205.5	7,660.8	30.4	29.9	77.17	-1,035.8	221.4	344.9	287.3	57.59	5.988					

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

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Corcilius 6J-303
<b>Project:</b>	SEC.6-T1S-R67W	<b>TVD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Reference Site:</b>	Corcilius 1S67W6J Pad Sec.6-T1S-R67W	<b>MD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Corcilius 6J-303	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (4-29-15)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Corcilius 1S67W6J Pad Sec.6-T1S-R67W - Corcilius 6J-203 - 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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
9,400.0	7,735.9	9,305.5	7,659.3	31.9	31.4	77.00	-1,135.8	221.4	345.1	284.6	60.52	5.702			
9,500.0	7,735.4	9,405.5	7,657.8	33.4	33.0	76.84	-1,235.8	221.4	345.3	281.8	63.53	5.435			
9,600.0	7,734.8	9,505.5	7,656.2	35.0	34.6	76.68	-1,335.8	221.4	345.5	278.9	66.61	5.188			
9,700.0	7,734.3	9,605.5	7,654.7	36.6	36.2	76.52	-1,435.8	221.4	345.8	276.0	69.75	4.958			
9,800.0	7,733.8	9,705.4	7,653.2	38.3	37.8	76.36	-1,535.7	221.4	346.0	273.1	72.93	4.744			
9,900.0	7,733.3	9,805.4	7,651.7	39.9	39.5	76.20	-1,635.7	221.4	346.2	270.1	76.16	4.546			
10,000.0	7,732.7	9,905.4	7,650.2	41.6	41.2	76.04	-1,735.7	221.4	346.5	267.1	79.42	4.363			
10,100.0	7,732.2	10,005.4	7,648.7	43.3	42.9	75.88	-1,835.7	221.4	346.7	264.0	82.72	4.192			
10,200.0	7,731.7	10,105.4	7,647.1	45.0	44.7	75.72	-1,935.7	221.4	347.0	260.9	86.04	4.033			
10,300.0	7,731.2	10,205.4	7,645.6	46.7	46.4	75.56	-2,035.7	221.4	347.2	257.8	89.39	3.885			
10,400.0	7,730.6	10,305.4	7,644.1	48.5	48.2	75.41	-2,135.6	221.4	347.5	254.7	92.75	3.746			
10,500.0	7,730.1	10,405.4	7,642.6	50.2	49.9	75.25	-2,235.6	221.4	347.7	251.6	96.14	3.617			
10,600.0	7,729.6	10,505.4	7,641.1	52.0	51.7	75.09	-2,335.6	221.4	348.0	248.4	99.54	3.496			
10,700.0	7,729.1	10,605.4	7,639.5	53.8	53.5	74.93	-2,435.6	221.4	348.2	245.3	102.95	3.383			
10,800.0	7,728.6	10,705.4	7,638.0	55.5	55.3	74.77	-2,535.6	221.4	348.5	242.1	106.37	3.276			
10,900.0	7,728.0	10,805.4	7,636.5	57.3	57.1	74.61	-2,635.6	221.4	348.8	238.9	109.81	3.176			
11,000.0	7,727.5	10,905.4	7,635.0	59.1	58.9	74.46	-2,735.5	221.4	349.0	235.8	113.25	3.082			
11,100.0	7,727.0	11,005.4	7,633.5	60.9	60.7	74.30	-2,835.5	221.4	349.3	232.6	116.70	2.993			
11,200.0	7,726.5	11,105.4	7,632.0	62.8	62.6	74.14	-2,935.5	221.4	349.6	229.4	120.15	2.909			
11,300.0	7,725.9	11,205.4	7,630.4	64.6	64.4	73.99	-3,035.5	221.4	349.8	226.2	123.61	2.830			
11,400.0	7,725.4	11,305.4	7,628.9	66.4	66.2	73.83	-3,135.5	221.4	350.1	223.0	127.08	2.755			
11,500.0	7,724.9	11,405.4	7,627.4	68.2	68.1	73.67	-3,235.5	221.4	350.4	219.8	130.54	2.684			
11,600.0	7,724.4	11,505.4	7,625.9	70.1	69.9	73.52	-3,335.4	221.4	350.7	216.7	134.01	2.617			
11,700.0	7,723.8	11,605.4	7,624.4	71.9	71.8	73.36	-3,435.4	221.4	351.0	213.5	137.48	2.553			
11,800.0	7,723.3	11,705.4	7,622.8	73.7	73.6	73.21	-3,535.4	221.4	351.2	210.3	140.96	2.492			
11,900.0	7,722.8	11,805.3	7,621.3	75.6	75.5	73.05	-3,635.4	221.4	351.5	207.1	144.43	2.434			
12,000.0	7,722.3	11,905.3	7,619.8	77.4	77.3	72.90	-3,735.4	221.4	351.8	203.9	147.90	2.379			
12,051.6	7,722.0	11,956.9	7,619.0	78.4	78.3	72.82	-3,787.0	221.4	352.0	202.3	149.69	2.351			
12,052.3	7,722.0	11,957.6	7,619.0	78.4	78.3	72.82	-3,787.6	221.4	352.0	202.3	149.71	2.351 SF			

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Corcilus 6J-303
<b>Project:</b>	SEC.6-T1S-R67W	<b>TVD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Reference Site:</b>	Corcilus 1S67W6J Pad Sec.6-T1S-R67W	<b>MD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Corcilus 6J-303	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (4-29-15)	<b>Offset TVD Reference:</b>	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							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	1.0	1.0	0.0	0.0	-93.38	-3.6	-61.6	61.7	61.7	0.00	N/A		
100.0	100.0	101.0	101.0	0.1	0.1	-93.38	-3.6	-61.6	61.7	61.5	0.23	271.989		
200.0	200.0	201.0	201.0	0.3	0.3	-93.38	-3.6	-61.6	61.7	61.1	0.68	91.265		
300.0	300.0	301.0	301.0	0.6	0.6	-93.38	-3.6	-61.6	61.7	60.6	1.13	54.832		
400.0	400.0	401.0	401.0	0.8	0.8	-93.38	-3.6	-61.6	61.7	60.2	1.58	39.188		
500.0	500.0	501.0	501.0	1.0	1.0	-93.38	-3.6	-61.6	61.7	59.7	2.03	30.489		
600.0	600.0	601.0	601.0	1.2	1.2	-93.38	-3.6	-61.6	61.7	59.3	2.47	24.951		
700.0	700.0	701.0	701.0	1.5	1.5	-93.38	-3.6	-61.6	61.7	58.8	2.92	21.115		
800.0	800.0	801.0	801.0	1.7	1.7	-93.38	-3.6	-61.6	61.7	58.4	3.37	18.302 CC, ES		
900.0	900.0	901.0	901.0	1.9	1.9	-130.67	-3.6	-61.6	62.6	58.8	3.82	16.383		
1,000.0	999.9	1,000.9	1,000.9	2.1	2.1	-133.26	-3.6	-61.6	65.2	61.0	4.26	15.291		
1,100.0	1,099.7	1,100.7	1,100.7	2.4	2.4	-137.11	-3.6	-61.6	69.9	65.2	4.71	14.829		
1,200.0	1,199.3	1,200.3	1,200.3	2.6	2.6	-141.69	-3.6	-61.6	76.8	71.7	5.16	14.891		
1,300.0	1,298.6	1,299.6	1,299.6	2.8	2.8	-146.44	-3.6	-61.6	86.4	80.8	5.61	15.401		
1,400.0	1,397.5	1,398.5	1,398.5	3.1	3.0	-150.95	-3.6	-61.6	98.7	92.6	6.06	16.292		
1,500.0	1,496.1	1,497.1	1,497.1	3.4	3.3	-154.98	-3.6	-61.6	113.8	107.3	6.50	17.500		
1,584.9	1,579.4	1,580.4	1,580.4	3.7	3.4	-157.97	-3.6	-61.6	128.9	122.0	6.88	18.734		
1,600.0	1,594.2	1,595.2	1,595.2	3.8	3.5	-158.47	-3.6	-61.6	131.8	124.8	6.95	18.960		
1,700.0	1,692.1	1,695.0	1,695.0	4.1	3.7	-160.97	-2.5	-61.7	150.4	143.0	7.41	20.290		
1,800.0	1,790.0	1,795.6	1,795.5	4.5	3.9	-162.15	1.3	-62.0	167.9	160.0	7.88	21.297		
1,900.0	1,887.9	1,896.7	1,896.4	4.9	4.2	-162.40	7.8	-62.5	184.0	175.6	8.36	22.002		
2,000.0	1,985.8	1,998.3	1,997.6	5.3	4.4	-161.94	17.1	-63.2	198.7	189.8	8.86	22.438		
2,100.0	2,083.7	2,100.2	2,098.8	5.7	4.6	-160.92	29.0	-64.1	212.1	202.7	9.37	22.636		
2,200.0	2,181.5	2,201.8	2,199.3	6.1	4.9	-159.43	43.5	-65.1	224.2	214.3	9.91	22.632		
2,300.0	2,279.4	2,300.9	2,297.3	6.5	5.1	-157.90	58.7	-66.2	236.0	225.6	10.46	22.556		
2,400.0	2,377.3	2,400.1	2,395.2	6.9	5.4	-156.53	73.9	-67.4	248.0	237.0	11.04	22.467		
2,500.0	2,475.2	2,499.2	2,493.2	7.3	5.7	-155.28	89.1	-68.5	260.1	248.5	11.63	22.370		
2,600.0	2,573.1	2,598.3	2,591.1	7.8	6.0	-154.14	104.2	-69.6	272.3	260.0	12.23	22.266		
2,700.0	2,671.0	2,697.4	2,689.0	8.2	6.3	-153.10	119.4	-70.7	284.6	271.7	12.84	22.160		
2,800.0	2,768.9	2,796.5	2,787.0	8.6	6.6	-152.14	134.6	-71.9	297.0	283.5	13.47	22.052		
2,900.0	2,866.8	2,895.6	2,884.9	9.0	6.9	-151.26	149.8	-73.0	309.4	295.3	14.10	21.945		
3,000.0	2,964.7	2,994.7	2,982.8	9.5	7.2	-150.45	165.0	-74.1	321.9	307.2	14.74	21.839		
3,100.0	3,062.6	3,093.9	3,080.8	9.9	7.5	-149.70	180.2	-75.2	334.5	319.1	15.39	21.735		
3,200.0	3,160.5	3,193.0	3,178.7	10.3	7.9	-149.01	195.3	-76.4	347.1	331.1	16.05	21.635		
3,300.0	3,258.4	3,292.1	3,276.7	10.7	8.2	-148.36	210.5	-77.5	359.8	343.1	16.71	21.537		
3,400.0	3,356.3	3,391.2	3,374.6	11.2	8.5	-147.76	225.7	-78.6	372.5	355.2	17.37	21.443		
3,500.0	3,454.2	3,490.3	3,472.5	11.6	8.8	-147.19	240.9	-79.7	385.3	367.3	18.05	21.352		
3,600.0	3,552.1	3,589.4	3,570.5	12.0	9.2	-146.67	256.1	-80.8	398.1	379.4	18.72	21.265		
3,700.0	3,650.0	3,688.5	3,668.4	12.5	9.5	-146.17	271.2	-82.0	410.9	391.5	19.40	21.182		
3,800.0	3,747.9	3,787.7	3,766.4	12.9	9.8	-145.71	286.4	-83.1	423.8	403.7	20.08	21.101		
3,900.0	3,845.8	3,886.8	3,864.3	13.3	10.2	-145.27	301.6	-84.2	436.7	415.9	20.77	21.025		
4,000.0	3,943.7	3,985.9	3,962.2	13.8	10.5	-144.86	316.8	-85.3	449.6	428.1	21.46	20.951		
4,100.0	4,041.6	4,085.0	4,060.2	14.2	10.9	-144.47	332.0	-86.5	462.5	440.3	22.15	20.881		
4,200.0	4,139.5	4,184.1	4,158.1	14.7	11.2	-144.10	347.1	-87.6	475.4	452.6	22.84	20.814		
4,300.0	4,237.4	4,283.2	4,256.0	15.1	11.5	-143.76	362.3	-88.7	488.4	464.9	23.54	20.750		
4,400.0	4,335.3	4,382.3	4,354.0	15.5	11.9	-143.43	377.5	-89.8	501.4	477.1	24.23	20.688		
4,500.0	4,433.2	4,481.4	4,451.9	16.0	12.2	-143.11	392.7	-91.0	514.4	489.4	24.93	20.629		
4,600.0	4,531.1	4,580.6	4,549.9	16.4	12.6	-142.81	407.9	-92.1	527.4	501.7	25.64	20.572		
4,700.0	4,628.9	4,679.7	4,647.8	16.8	12.9	-142.53	423.1	-93.2	540.4	514.1	26.34	20.518		
4,800.0	4,726.8	4,778.8	4,745.7	17.3	13.2	-142.26	438.2	-94.3	553.4	526.4	27.04	20.466		
4,900.0	4,824.7	4,877.9	4,843.7	17.7	13.6	-142.00	453.4	-95.4	566.5	538.7	27.75	20.416		

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

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Corcilius 6J-303
<b>Project:</b>	SEC.6-T1S-R67W	<b>TVD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Reference Site:</b>	Corcilius 1S67W6J Pad Sec.6-T1S-R67W	<b>MD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Corcilius 6J-303	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (4-29-15)	<b>Offset TVD Reference:</b>	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				
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	4,922.6	4,977.0	4,941.6	18.1	13.9	-141.76	468.6	-96.6	579.5	551.1	28.45	20.369	
5,100.0	5,020.5	5,076.1	5,039.5	18.6	14.3	-141.52	483.8	-97.7	592.6	563.4	29.16	20.323	
5,200.0	5,118.4	5,175.2	5,137.5	19.0	14.6	-141.29	499.0	-98.8	605.7	575.8	29.87	20.279	
5,300.0	5,216.3	5,274.4	5,235.4	19.5	15.0	-141.08	514.1	-99.9	618.8	588.2	30.58	20.236	
5,400.0	5,314.2	5,373.5	5,333.4	19.9	15.3	-140.87	529.3	-101.1	631.9	600.6	31.29	20.195	
5,503.4	5,415.4	5,475.9	5,434.6	20.3	15.7	-140.67	545.0	-102.2	645.4	613.4	32.02	20.155	
5,600.0	5,510.3	5,571.8	5,529.4	20.7	16.0	-140.54	559.7	-103.3	656.8	624.1	32.71	20.079	
5,700.0	5,609.1	5,671.2	5,627.6	21.0	16.4	-140.19	574.9	-104.4	666.0	632.7	33.38	19.950	
5,800.0	5,708.4	5,770.7	5,725.9	21.2	16.7	-139.64	590.2	-105.6	672.6	638.6	34.05	19.757	
5,900.0	5,808.1	5,870.2	5,824.2	21.5	17.1	-138.87	605.4	-106.7	676.7	642.0	34.69	19.504	
6,000.0	5,907.9	5,969.4	5,922.3	21.6	17.4	-137.89	620.6	-107.8	678.3	643.0	35.33	19.199	
6,092.1	6,000.0	6,060.6	6,012.3	21.7	17.7	-100.41	634.6	-108.8	677.7	641.8	35.90	18.876	
6,100.0	6,007.9	6,068.4	6,020.1	21.7	17.8	-100.31	635.8	-108.9	677.6	641.6	35.96	18.845	
6,200.0	6,107.9	6,167.2	6,117.7	21.9	18.1	-99.03	650.9	-110.1	676.1	639.5	36.63	18.460	
6,300.0	6,207.9	6,266.0	6,215.3	22.0	18.5	-97.75	666.0	-111.2	675.0	637.7	37.29	18.100	
6,400.0	6,307.9	6,364.9	6,313.0	22.1	18.8	-96.46	681.2	-112.3	674.2	636.3	37.96	17.763	
6,500.0	6,407.9	6,463.7	6,410.6	22.3	19.2	-95.17	696.3	-113.4	673.8	635.2	38.61	17.450	
6,572.7	6,480.6	6,535.5	6,481.6	22.4	19.4	-94.23	707.3	-114.2	673.7	634.6	39.08	17.237	
6,600.0	6,507.9	6,562.5	6,508.3	22.4	19.5	-93.88	711.4	-114.5	673.7	634.4	39.26	17.159	
6,700.0	6,607.9	6,661.6	6,606.3	22.6	19.8	-92.62	726.2	-115.6	674.0	634.1	39.88	16.900	
6,800.0	6,707.9	6,761.8	6,705.7	22.7	20.1	-91.59	738.2	-116.5	674.4	634.0	40.40	16.692	
6,900.0	6,807.9	6,862.7	6,806.2	22.8	20.3	-90.86	746.8	-117.2	674.9	634.0	40.85	16.521	
7,000.0	6,907.9	6,964.0	6,907.5	23.0	20.5	-90.44	751.9	-117.5	675.2	633.9	41.23	16.376	
7,069.9	6,977.8	7,035.1	6,978.5	23.1	20.6	-90.32	753.3	-117.6	675.3	633.8	41.46	16.286	
7,100.0	7,007.9	7,065.5	7,008.9	23.1	20.7	-89.74	753.4	-117.6	675.3	633.7	41.55	16.253	
7,144.5	7,052.3	7,109.9	7,053.3	23.1	20.7	-90.00	753.4	-117.6	675.3	633.6	41.67	16.206	
7,150.0	7,057.8	7,115.4	7,058.8	23.1	20.7	-90.05	753.4	-117.6	675.3	633.6	41.68	16.200	
7,200.0	7,107.3	7,164.9	7,108.3	23.1	20.8	-90.62	753.4	-117.6	675.3	633.5	41.81	16.150	
7,250.0	7,156.2	7,215.0	7,158.3	23.1	20.9	-91.31	751.5	-117.6	675.4	633.6	41.89	16.123	
7,300.0	7,204.4	7,265.6	7,208.7	23.1	20.9	-92.00	746.3	-117.6	675.7	633.8	41.90	16.126	
7,350.0	7,251.7	7,316.8	7,259.1	23.0	20.9	-92.68	737.7	-117.6	676.0	634.2	41.84	16.156	
7,400.0	7,297.7	7,368.6	7,309.5	22.9	20.8	-93.36	725.5	-117.6	676.5	634.7	41.72	16.214	
7,450.0	7,342.4	7,421.0	7,359.4	22.7	20.7	-94.02	709.8	-117.6	677.0	635.4	41.53	16.299	
7,500.0	7,385.6	7,474.0	7,408.8	22.6	20.6	-94.68	690.4	-117.6	677.6	636.3	41.29	16.410	
7,550.0	7,426.9	7,527.6	7,457.2	22.4	20.5	-95.31	667.4	-117.6	678.2	637.2	41.00	16.544	
7,600.0	7,466.4	7,581.8	7,504.4	22.3	20.4	-95.92	640.7	-117.6	679.0	638.3	40.66	16.700	
7,650.0	7,503.8	7,636.7	7,550.1	22.1	20.2	-96.51	610.4	-117.6	679.7	639.4	40.28	16.875	
7,700.0	7,538.9	7,692.1	7,593.9	21.9	20.0	-97.07	576.5	-117.6	680.5	640.6	39.88	17.063	
7,750.0	7,571.6	7,748.1	7,635.6	21.7	19.8	-97.60	539.1	-117.6	681.3	641.9	39.47	17.261	
7,800.0	7,601.8	7,804.7	7,674.8	21.5	19.6	-98.09	498.3	-117.6	682.1	643.1	39.07	17.461	
7,850.0	7,629.2	7,861.9	7,711.3	21.3	19.4	-98.55	454.3	-117.6	682.9	644.3	38.68	17.655	
7,900.0	7,654.0	7,919.5	7,744.6	21.1	19.3	-98.97	407.3	-117.6	683.7	645.4	38.33	17.836	
7,950.0	7,675.8	7,977.6	7,774.5	20.9	19.1	-99.35	357.5	-117.6	684.4	646.4	38.03	17.995	
8,000.0	7,694.6	8,036.2	7,800.7	20.7	19.0	-99.68	305.1	-117.6	685.1	647.3	37.80	18.121	
8,050.0	7,710.3	8,095.1	7,823.0	20.5	18.9	-99.96	250.6	-117.6	685.6	648.0	37.66	18.207	
8,100.0	7,723.0	8,154.3	7,841.0	20.4	18.9	-100.19	194.2	-117.6	686.1	648.5	37.61	18.243	
8,150.0	7,732.4	8,213.9	7,854.7	20.2	19.0	-100.37	136.3	-117.6	686.5	648.8	37.67	18.224	
8,200.0	7,738.6	8,273.6	7,863.9	20.0	19.1	-100.50	77.3	-117.6	686.8	648.9	37.84	18.149	
8,250.0	7,741.5	8,333.4	7,868.5	19.9	19.2	-100.57	17.7	-117.6	686.9	648.8	38.13	18.018	
8,273.9	7,741.8	8,362.0	7,869.0	19.8	19.3	-100.59	-10.9	-117.6	687.0	648.7	38.30	17.938	
8,300.0	7,741.6	8,388.1	7,869.0	19.8	19.4	-100.60	-37.0	-117.6	687.0	648.5	38.50	17.844	

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



<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Corcilius 6J-303
<b>Project:</b>	SEC.6-T1S-R67W	<b>TVD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Reference Site:</b>	Corcilius 1S67W6J Pad Sec.6-T1S-R67W	<b>MD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Corcilius 6J-303	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (4-29-15)	<b>Offset TVD Reference:</b>	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	7,741.1	8,488.1	7,869.0	19.8	19.9	100.64	-137.0	-117.6		687.1	647.6	39.49	17.399	
8,500.0	7,740.6	8,588.1	7,869.0	20.6	20.6	100.68	-237.0	-117.6		687.2	646.4	40.80	16.842	
8,600.0	7,740.1	8,688.1	7,869.0	21.5	21.4	100.73	-337.0	-117.6		687.3	644.9	42.41	16.206	
8,700.0	7,739.5	8,788.1	7,869.0	22.6	22.4	100.77	-437.0	-117.6		687.4	643.1	44.28	15.524	
8,800.0	7,739.0	8,888.1	7,869.0	23.7	23.4	100.81	-537.0	-117.7		687.5	641.1	46.38	14.823	
8,900.0	7,738.5	8,988.1	7,869.0	24.9	24.6	100.86	-637.0	-117.7		687.6	638.9	48.68	14.124	
9,000.0	7,738.0	9,088.1	7,869.0	26.2	25.9	100.90	-737.0	-117.7		687.7	636.5	51.16	13.442	
9,100.0	7,737.5	9,188.0	7,869.0	27.5	27.2	100.94	-837.0	-117.7		687.8	634.0	53.79	12.788	
9,200.0	7,736.9	9,288.0	7,869.0	28.9	28.6	100.98	-937.0	-117.7		687.9	631.3	56.54	12.166	
9,300.0	7,736.4	9,388.0	7,869.0	30.4	30.1	101.03	-1,037.0	-117.7		688.0	628.6	59.41	11.581	
9,400.0	7,735.9	9,488.0	7,869.0	31.9	31.6	101.07	-1,137.0	-117.7		688.1	625.7	62.37	11.033	
9,500.0	7,735.4	9,588.0	7,869.0	33.4	33.1	101.11	-1,237.0	-117.7		688.2	622.8	65.41	10.521	
9,600.0	7,734.8	9,688.0	7,869.0	35.0	34.7	101.16	-1,337.0	-117.7		688.3	619.8	68.52	10.045	
9,700.0	7,734.3	9,788.0	7,869.0	36.6	36.3	101.20	-1,437.0	-117.7		688.4	616.7	71.70	9.601	
9,800.0	7,733.8	9,888.0	7,869.0	38.3	38.0	101.24	-1,537.0	-117.7		688.5	613.6	74.93	9.189	
9,900.0	7,733.3	9,988.0	7,869.0	39.9	39.7	101.28	-1,637.0	-117.7		688.6	610.4	78.20	8.805	
10,000.0	7,732.7	10,088.0	7,869.0	41.6	41.4	101.33	-1,737.0	-117.7		688.7	607.2	81.52	8.448	
10,100.0	7,732.2	10,188.0	7,869.0	43.3	43.1	101.37	-1,837.0	-117.7		688.8	603.9	84.87	8.116	
10,200.0	7,731.7	10,288.0	7,869.0	45.0	44.8	101.41	-1,937.0	-117.7		688.9	600.7	88.26	7.806	
10,300.0	7,731.2	10,388.0	7,869.0	46.7	46.5	101.45	-2,037.0	-117.7		689.0	597.3	91.67	7.516	
10,400.0	7,730.6	10,488.0	7,869.0	48.5	48.3	101.50	-2,137.0	-117.7		689.1	594.0	95.11	7.246	
10,500.0	7,730.1	10,588.0	7,869.0	50.2	50.1	101.54	-2,237.0	-117.7		689.2	590.7	98.57	6.992	
10,600.0	7,729.6	10,688.0	7,869.0	52.0	51.8	101.58	-2,337.0	-117.7		689.3	587.3	102.05	6.755	
10,700.0	7,729.1	10,788.0	7,869.0	53.8	53.6	101.62	-2,437.0	-117.7		689.4	583.9	105.55	6.532	
10,800.0	7,728.6	10,888.0	7,869.0	55.5	55.4	101.67	-2,537.0	-117.7		689.5	580.5	109.06	6.323	
10,900.0	7,728.0	10,988.0	7,869.0	57.3	57.2	101.71	-2,637.0	-117.7		689.7	577.1	112.59	6.126	
11,000.0	7,727.5	11,088.0	7,869.0	59.1	59.0	101.75	-2,737.0	-117.7		689.8	573.6	116.13	5.940	
11,100.0	7,727.0	11,188.0	7,869.0	60.9	60.8	101.79	-2,837.0	-117.7		689.9	570.2	119.68	5.764	
11,200.0	7,726.5	11,288.0	7,869.0	62.8	62.7	101.84	-2,937.0	-117.7		690.0	566.7	123.25	5.598	
11,300.0	7,725.9	11,388.0	7,869.0	64.6	64.5	101.88	-3,037.0	-117.7		690.1	563.3	126.82	5.442	
11,400.0	7,725.4	11,488.0	7,869.0	66.4	66.3	101.92	-3,137.0	-117.7		690.2	559.8	130.40	5.293	
11,500.0	7,724.9	11,588.0	7,869.0	68.2	68.2	101.96	-3,237.0	-117.7		690.3	556.3	133.99	5.152	
11,600.0	7,724.4	11,688.0	7,869.0	70.1	70.0	102.01	-3,337.0	-117.7		690.4	552.8	137.59	5.018	
11,700.0	7,723.8	11,788.0	7,869.0	71.9	71.8	102.05	-3,437.0	-117.7		690.5	549.3	141.19	4.891	
11,800.0	7,723.3	11,888.0	7,869.0	73.7	73.7	102.09	-3,537.0	-117.7		690.6	545.8	144.80	4.770	
11,900.0	7,722.8	11,988.0	7,869.0	75.6	75.5	102.13	-3,636.9	-117.7		690.7	542.3	148.42	4.654	
12,000.0	7,722.3	12,088.0	7,869.0	77.4	77.4	102.18	-3,736.9	-117.7		690.9	538.8	152.04	4.544	
12,051.6	7,722.0	12,139.6	7,869.0	78.4	78.4	102.20	-3,788.6	-117.7		690.9	537.0	153.91	4.489	
12,052.3	7,722.0	12,139.6	7,869.0	78.4	78.4	102.20	-3,788.6	-117.7		690.9	537.0	153.92	4.489 SF	

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Corcilus 6J-303
<b>Project:</b>	SEC.6-T1S-R67W	<b>TVD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Reference Site:</b>	Corcilus 1S67W6J Pad Sec.6-T1S-R67W	<b>MD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Corcilus 6J-303	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (4-29-15)	<b>Offset TVD Reference:</b>	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	28.0	28.0				
100.0	100.0	99.0	99.0	0.1	0.1	90.00	0.0	28.0	28.0	27.8	0.22	125.275	
200.0	200.0	199.0	199.0	0.3	0.3	90.00	0.0	28.0	28.0	27.3	0.67	41.689	
300.0	300.0	299.0	299.0	0.6	0.6	90.00	0.0	28.0	28.0	26.9	1.12	24.980	
400.0	400.0	399.0	399.0	0.8	0.8	90.00	0.0	28.0	28.0	26.4	1.57	17.833 CC, ES	
500.0	500.0	498.4	498.4	1.0	1.0	88.67	0.7	29.1	29.1	27.1	2.01	14.451	
600.0	600.0	597.6	597.5	1.2	1.2	85.20	2.7	32.3	32.5	30.0	2.46	13.220	
700.0	700.0	696.6	696.3	1.5	1.4	80.79	6.1	37.8	38.4	35.4	2.91	13.195	
800.0	800.0	795.1	794.4	1.7	1.7	76.52	10.9	45.3	46.8	43.5	3.36	13.930	
900.0	900.0	893.3	891.9	1.9	2.0	37.19	16.9	55.0	56.9	53.1	3.80	14.970	
1,000.0	999.9	991.2	988.8	2.1	2.2	35.87	24.3	66.7	67.4	63.2	4.25	15.868	
1,100.0	1,099.7	1,088.8	1,085.1	2.4	2.6	35.53	32.9	80.5	78.3	73.6	4.71	16.647	
1,200.0	1,199.3	1,186.1	1,180.6	2.6	2.9	35.82	42.9	96.3	89.6	84.4	5.17	17.316	
1,300.0	1,298.6	1,283.1	1,275.2	2.8	3.3	36.51	54.1	114.1	101.2	95.5	5.66	17.883	
1,400.0	1,397.5	1,379.8	1,369.1	3.1	3.8	37.48	66.5	133.8	113.1	107.0	6.16	18.353	
1,500.0	1,496.1	1,479.1	1,465.2	3.4	4.2	38.86	79.9	155.1	124.2	117.5	6.71	18.517	
1,584.9	1,579.4	1,563.6	1,546.9	3.7	4.7	40.42	91.2	173.2	132.1	124.9	7.20	18.357	
1,600.0	1,594.2	1,578.6	1,561.4	3.8	4.7	40.74	93.2	176.4	133.4	126.1	7.29	18.299	
1,700.0	1,692.1	1,678.1	1,657.7	4.1	5.2	42.70	106.6	197.8	142.1	134.2	7.93	17.924	
1,800.0	1,790.0	1,777.6	1,754.0	4.5	5.7	44.43	120.0	219.1	150.9	142.3	8.59	17.566	
1,900.0	1,887.9	1,877.1	1,850.3	4.9	6.2	45.97	133.4	240.4	159.8	150.5	9.28	17.226	
2,000.0	1,985.8	1,976.7	1,946.5	5.3	6.7	47.35	146.8	261.7	168.8	158.8	9.99	16.906	
2,100.0	2,083.7	2,076.2	2,042.8	5.7	7.3	48.58	160.2	283.1	177.9	167.2	10.71	16.609	
2,200.0	2,181.5	2,175.7	2,139.1	6.1	7.8	49.70	173.6	304.4	187.1	175.6	11.46	16.333	
2,300.0	2,279.4	2,275.2	2,235.4	6.5	8.3	50.71	187.0	325.7	196.3	184.1	12.21	16.078	
2,400.0	2,377.3	2,374.7	2,331.6	6.9	8.8	51.63	200.4	347.0	205.7	192.7	12.98	15.843	
2,500.0	2,475.2	2,474.2	2,427.9	7.3	9.3	52.47	213.8	368.4	215.0	201.2	13.76	15.627	
2,600.0	2,573.1	2,573.8	2,524.2	7.8	9.9	53.25	227.2	389.7	224.4	209.8	14.55	15.427	
2,700.0	2,671.0	2,673.3	2,620.5	8.2	10.4	53.95	240.6	411.0	233.8	218.5	15.34	15.243	
2,800.0	2,768.9	2,772.8	2,716.7	8.6	10.9	54.61	254.0	432.3	243.3	227.1	16.14	15.073	
2,900.0	2,866.8	2,872.3	2,813.0	9.0	11.4	55.21	267.4	453.6	252.8	235.8	16.95	14.916	
3,000.0	2,964.7	2,971.8	2,909.3	9.5	12.0	55.77	280.8	475.0	262.3	244.5	17.76	14.770	
3,100.0	3,062.6	3,071.3	3,005.6	9.9	12.5	56.30	294.2	496.3	271.8	253.3	18.57	14.635	
3,200.0	3,160.5	3,170.8	3,101.8	10.3	13.0	56.78	307.6	517.6	281.4	262.0	19.39	14.510	
3,300.0	3,258.4	3,270.4	3,198.1	10.7	13.5	57.24	321.0	538.9	291.0	270.7	20.22	14.393	
3,400.0	3,356.3	3,369.9	3,294.4	11.2	14.1	57.66	334.4	560.3	300.6	279.5	21.04	14.284	
3,500.0	3,454.2	3,469.4	3,390.7	11.6	14.6	58.06	347.8	581.6	310.2	288.3	21.87	14.182	
3,600.0	3,552.1	3,568.9	3,486.9	12.0	15.1	58.44	361.2	602.9	319.8	297.1	22.70	14.087	
3,700.0	3,650.0	3,668.4	3,583.2	12.5	15.6	58.79	374.6	624.2	329.4	305.9	23.53	13.998	
3,800.0	3,747.9	3,767.9	3,679.5	12.9	16.2	59.12	388.0	645.6	339.1	314.7	24.37	13.914	
3,900.0	3,845.8	3,867.4	3,775.8	13.3	16.7	59.44	401.4	666.9	348.7	323.5	25.21	13.835	
4,000.0	3,943.7	3,967.0	3,872.0	13.8	17.2	59.73	414.8	688.2	358.4	332.4	26.05	13.761	
4,100.0	4,041.6	4,066.5	3,968.3	14.2	17.8	60.02	428.2	709.5	368.1	341.2	26.89	13.691	
4,200.0	4,139.5	4,166.0	4,064.6	14.7	18.3	60.28	441.6	730.8	377.8	350.1	27.73	13.625	
4,300.0	4,237.4	4,265.5	4,160.9	15.1	18.8	60.54	455.0	752.2	387.5	358.9	28.57	13.562	
4,400.0	4,335.3	4,365.0	4,257.1	15.5	19.3	60.78	468.4	773.5	397.2	367.8	29.41	13.503	
4,500.0	4,433.2	4,464.5	4,353.4	16.0	19.9	61.01	481.7	794.8	406.9	376.6	30.26	13.447	
4,600.0	4,531.1	4,564.0	4,449.7	16.4	20.4	61.23	495.1	816.1	416.6	385.5	31.10	13.394	
4,700.0	4,628.9	4,663.6	4,546.0	16.8	20.9	61.44	508.5	837.5	426.3	394.4	31.95	13.343	
4,800.0	4,726.8	4,763.1	4,642.2	17.3	21.5	61.64	521.9	858.8	436.0	403.3	32.80	13.295	
4,900.0	4,824.7	4,862.6	4,738.5	17.7	22.0	61.83	535.3	880.1	445.8	412.1	33.65	13.249	

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



<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Corcilus 6J-303
<b>Project:</b>	SEC.6-T1S-R67W	<b>TVD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Reference Site:</b>	Corcilus 1S67W6J Pad Sec.6-T1S-R67W	<b>MD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Corcilus 6J-303	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (4-29-15)	<b>Offset TVD Reference:</b>	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
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
5,000.0	4,922.6	4,962.1	4,834.8	18.1	22.5	62.01	548.7	901.4	455.5	421.0	34.50	13.205			
5,100.0	5,020.5	5,061.6	4,931.1	18.6	23.0	62.19	562.1	922.8	465.3	429.9	35.35	13.163			
5,200.0	5,118.4	5,161.1	5,027.3	19.0	23.6	62.36	575.5	944.1	475.0	438.8	36.20	13.123			
5,300.0	5,216.3	5,260.6	5,123.6	19.5	24.1	62.52	588.9	965.4	484.8	447.7	37.05	13.085			
5,400.0	5,314.2	5,360.2	5,219.9	19.9	24.6	62.67	602.3	986.7	494.5	456.6	37.90	13.048			
5,503.4	5,415.4	5,463.0	5,319.4	20.3	25.2	62.83	616.2	1,008.8	504.6	465.8	38.78	13.012			
5,600.0	5,510.3	5,559.1	5,412.4	20.7	25.7	62.99	629.1	1,029.4	514.8	475.2	39.53	13.023			
5,700.0	5,609.1	5,658.3	5,508.4	21.0	26.2	62.84	642.5	1,050.6	526.8	486.7	40.14	13.125			
5,800.0	5,708.4	5,757.2	5,604.0	21.2	26.7	62.42	655.8	1,071.8	540.5	499.9	40.63	13.305			
5,900.0	5,808.1	5,855.6	5,699.2	21.5	27.3	61.74	669.0	1,092.9	556.0	515.0	40.99	13.562			
6,000.0	5,907.9	5,953.4	5,793.8	21.6	27.8	60.84	682.2	1,113.8	573.2	532.0	41.24	13.898			
6,092.1	6,000.0	6,042.8	5,880.3	21.7	28.3	96.23	694.2	1,133.0	590.8	549.5	41.37	14.281			
6,100.0	6,007.9	6,050.4	5,887.7	21.7	28.3	96.11	695.2	1,134.6	592.4	551.0	41.38	14.318			
6,200.0	6,107.9	6,148.5	5,982.6	21.9	28.8	94.64	708.4	1,155.6	612.7	571.3	41.42	14.791			
6,300.0	6,207.9	6,266.8	6,097.7	22.0	29.3	93.14	722.9	1,178.7	631.5	590.1	41.45	15.237			
6,400.0	6,307.9	6,387.2	6,215.9	22.1	29.7	91.96	735.1	1,198.1	647.2	605.7	41.52	15.587			
6,500.0	6,407.9	6,509.4	6,336.8	22.3	30.0	91.07	744.7	1,213.4	659.6	617.9	41.66	15.833			
6,600.0	6,507.9	6,633.0	6,459.6	22.4	30.3	90.46	751.6	1,224.4	668.5	626.6	41.85	15.974			
6,700.0	6,607.9	6,757.4	6,583.8	22.6	30.5	90.11	755.7	1,230.9	673.7	631.6	42.09	16.008			
6,800.0	6,707.9	6,880.5	6,706.9	22.7	30.7	90.00	757.0	1,232.9	675.3	632.9	42.37	15.937			
6,900.0	6,807.9	6,980.5	6,806.9	22.8	30.8	90.00	757.0	1,232.9	675.3	632.6	42.66	15.829			
7,000.0	6,907.9	7,080.5	6,906.9	23.0	30.9	90.00	757.0	1,232.9	675.3	632.4	42.96	15.720			
7,018.6	6,926.5	7,099.1	6,925.5	23.0	30.9	90.02	756.8	1,232.9	675.3	632.3	43.01	15.699			
7,069.9	6,977.8	7,150.3	6,976.6	23.1	30.9	90.26	753.9	1,232.9	675.3	632.1	43.21	15.629			
7,100.0	7,007.9	7,180.1	7,006.2	23.1	30.9	-89.51	750.7	1,232.9	675.3	632.0	43.32	15.588			
7,150.0	7,057.8	7,229.4	7,054.8	23.1	30.9	-89.14	742.8	1,232.9	675.4	631.9	43.46	15.540			
7,200.0	7,107.3	7,278.4	7,102.6	23.1	30.9	-88.77	731.9	1,232.9	675.5	631.9	43.53	15.516			
7,250.0	7,156.2	7,327.1	7,149.3	23.1	30.8	-88.41	718.0	1,232.9	675.6	632.0	43.54	15.515			
7,300.0	7,204.4	7,375.6	7,194.8	23.1	30.8	-88.05	701.2	1,232.9	675.7	632.2	43.49	15.538			
7,350.0	7,251.7	7,423.9	7,238.9	23.0	30.7	-87.70	681.7	1,232.9	675.9	632.5	43.37	15.583			
7,400.0	7,297.7	7,471.9	7,281.5	22.9	30.6	-87.37	659.6	1,232.9	676.0	632.8	43.20	15.650			
7,450.0	7,342.4	7,519.6	7,322.5	22.7	30.4	-87.04	635.0	1,232.9	676.2	633.2	42.97	15.737			
7,500.0	7,385.6	7,567.2	7,361.6	22.6	30.3	-86.73	608.0	1,232.9	676.4	633.7	42.70	15.842			
7,550.0	7,426.9	7,614.6	7,398.8	22.4	30.2	-86.43	578.7	1,232.9	676.6	634.2	42.39	15.963			
7,600.0	7,466.4	7,661.8	7,434.0	22.3	30.0	-86.15	547.3	1,232.9	676.8	634.8	42.05	16.098			
7,650.0	7,503.8	7,708.8	7,467.1	22.1	29.9	-85.88	513.9	1,232.9	677.1	635.4	41.68	16.243			
7,700.0	7,538.9	7,755.6	7,498.0	21.9	29.7	-85.63	478.7	1,232.9	677.3	636.0	41.31	16.396			
7,750.0	7,571.6	7,802.3	7,526.5	21.7	29.6	-85.40	441.8	1,232.9	677.5	636.6	40.93	16.551			
7,800.0	7,601.8	7,850.0	7,553.3	21.5	29.4	-85.18	402.3	1,232.9	677.7	637.1	40.57	16.705			
7,850.0	7,629.2	7,895.2	7,576.4	21.3	29.3	-84.99	363.4	1,232.9	677.9	637.7	40.24	16.848			
7,900.0	7,654.0	7,941.5	7,597.6	21.1	29.1	-84.82	322.3	1,232.9	678.1	638.2	39.94	16.979			
7,950.0	7,675.8	7,987.7	7,616.3	20.9	29.0	-84.66	280.0	1,232.9	678.3	638.6	39.68	17.091			
8,000.0	7,694.6	8,033.9	7,632.3	20.7	28.8	-84.53	236.8	1,232.9	678.4	638.9	39.49	17.179			
8,050.0	7,710.3	8,079.9	7,645.7	20.5	28.7	-84.42	192.7	1,232.9	678.5	639.2	39.37	17.236			
8,100.0	7,723.0	8,125.9	7,656.4	20.4	28.6	-84.33	148.0	1,232.9	678.6	639.3	39.32	17.259			
8,150.0	7,732.4	8,171.8	7,664.3	20.2	28.5	-84.27	102.8	1,232.9	678.7	639.3	39.35	17.246			
8,200.0	7,738.6	8,217.7	7,669.5	20.0	28.4	-84.23	57.2	1,232.9	678.8	639.3	39.48	17.194			
8,250.0	7,741.5	8,263.6	7,672.0	19.9	28.3	-84.21	11.4	1,232.9	678.8	639.1	39.69	17.103			
8,273.9	7,741.8	8,285.6	7,672.2	19.8	28.3	-84.20	-10.6	1,232.9	678.8	639.0	39.82	17.047			
8,274.3	7,741.8	8,285.9	7,672.2	19.8	28.3	-84.20	-10.9	1,232.9	678.8	639.0	39.82	17.046			
8,300.0	7,741.6	8,311.2	7,672.0	19.8	28.3	-84.19	-36.2	1,232.9	678.8	638.8	40.01	16.968			

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

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Corcilius 6J-303
<b>Project:</b>	SEC.6-T1S-R67W	<b>TVD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Reference Site:</b>	Corcilius 1S67W6J Pad Sec.6-T1S-R67W	<b>MD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Corcilius 6J-303	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (4-29-15)	<b>Offset TVD Reference:</b>	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		
8,400.0	7,741.1	8,411.2	7,670.8	19.8	28.3	-84.14	-136.2	1,232.9	678.9	637.9	40.92	16.590		
8,500.0	7,740.6	8,511.2	7,669.7	20.6	28.4	-84.09	-236.2	1,232.9	678.9	636.8	42.16	16.104		
8,600.0	7,740.1	8,611.2	7,668.6	21.5	28.6	-84.04	-336.2	1,232.9	679.0	635.3	43.70	15.538		
8,700.0	7,739.5	8,711.2	7,667.5	22.6	29.1	-83.99	-436.2	1,232.9	679.0	633.5	45.51	14.922		
8,800.0	7,739.0	8,811.2	7,666.4	23.7	29.6	-83.94	-536.2	1,232.9	679.1	631.6	47.55	14.282		
8,900.0	7,738.5	8,911.2	7,665.3	24.9	30.4	-83.89	-636.2	1,232.9	679.2	629.4	49.80	13.637		
9,000.0	7,738.0	9,011.2	7,664.1	26.2	31.3	-83.84	-736.2	1,232.9	679.2	627.0	52.24	13.003		
9,100.0	7,737.5	9,111.2	7,663.0	27.5	32.3	-83.79	-836.2	1,232.9	679.3	624.5	54.83	12.389		
9,200.0	7,736.9	9,211.2	7,661.9	28.9	33.4	-83.74	-936.2	1,232.9	679.4	621.8	57.56	11.803		
9,300.0	7,736.4	9,311.2	7,660.8	30.4	34.6	-83.69	-1,036.2	1,232.9	679.4	619.0	60.40	11.249		
9,400.0	7,735.9	9,411.2	7,659.7	31.9	35.8	-83.64	-1,136.2	1,232.9	679.5	616.1	63.34	10.727		
9,500.0	7,735.4	9,511.2	7,658.6	33.4	37.2	-83.59	-1,236.1	1,232.9	679.6	613.2	66.38	10.238		
9,600.0	7,734.8	9,611.2	7,657.4	35.0	38.5	-83.55	-1,336.1	1,232.9	679.6	610.1	69.49	9.781		
9,700.0	7,734.3	9,711.2	7,656.3	36.6	40.0	-83.50	-1,436.1	1,232.9	679.7	607.0	72.66	9.354		
9,800.0	7,733.8	9,811.2	7,655.2	38.3	41.5	-83.45	-1,536.1	1,232.9	679.8	603.9	75.89	8.957		
9,900.0	7,733.3	9,911.2	7,654.1	39.9	43.0	-83.40	-1,636.1	1,232.9	679.8	600.6	79.18	8.586		
10,000.0	7,732.7	10,011.2	7,653.0	41.6	44.5	-83.35	-1,736.1	1,232.9	679.9	597.4	82.50	8.241		
10,100.0	7,732.2	10,111.2	7,651.9	43.3	46.1	-83.30	-1,836.1	1,232.9	680.0	594.1	85.87	7.918		
10,200.0	7,731.7	10,211.2	7,650.7	45.0	47.7	-83.25	-1,936.1	1,232.9	680.0	590.8	89.27	7.618		
10,300.0	7,731.2	10,311.2	7,649.6	46.7	49.3	-83.20	-2,036.1	1,232.9	680.1	587.4	92.70	7.336		
10,400.0	7,730.6	10,411.2	7,648.5	48.5	50.9	-83.15	-2,136.1	1,232.9	680.2	584.0	96.16	7.073		
10,500.0	7,730.1	10,511.2	7,647.4	50.2	52.6	-83.10	-2,236.1	1,232.9	680.2	580.6	99.65	6.827		
10,600.0	7,729.6	10,611.2	7,646.3	52.0	54.3	-83.05	-2,336.1	1,232.9	680.3	577.2	103.15	6.595		
10,700.0	7,729.1	10,711.2	7,645.1	53.8	56.0	-83.00	-2,436.0	1,232.9	680.4	573.7	106.68	6.378		
10,800.0	7,728.6	10,811.2	7,644.0	55.5	57.7	-82.95	-2,536.0	1,232.9	680.5	570.2	110.22	6.174		
10,900.0	7,728.0	10,911.2	7,642.9	57.3	59.4	-82.90	-2,636.0	1,232.9	680.5	566.8	113.78	5.981		
11,000.0	7,727.5	11,011.2	7,641.8	59.1	61.1	-82.85	-2,736.0	1,232.9	680.6	563.3	117.35	5.800		
11,100.0	7,727.0	11,111.2	7,640.7	60.9	62.9	-82.80	-2,836.0	1,232.9	680.7	559.7	120.94	5.628		
11,200.0	7,726.5	11,211.2	7,639.6	62.8	64.6	-82.75	-2,936.0	1,232.9	680.8	556.2	124.54	5.466		
11,300.0	7,725.9	11,311.2	7,638.4	64.6	66.4	-82.70	-3,036.0	1,232.9	680.8	552.7	128.15	5.313		
11,400.0	7,725.4	11,411.2	7,637.3	66.4	68.1	-82.65	-3,136.0	1,232.9	680.9	549.1	131.77	5.167		
11,500.0	7,724.9	11,511.2	7,636.2	68.2	69.9	-82.60	-3,236.0	1,232.9	681.0	545.6	135.40	5.030		
11,600.0	7,724.4	11,611.2	7,635.1	70.1	71.7	-82.55	-3,336.0	1,232.9	681.1	542.0	139.03	4.899		
11,700.0	7,723.8	11,711.2	7,634.0	71.9	73.5	-82.50	-3,436.0	1,232.9	681.1	538.5	142.68	4.774		
11,800.0	7,723.3	11,811.2	7,632.9	73.7	75.3	-82.45	-3,536.0	1,232.9	681.2	534.9	146.33	4.655		
11,900.0	7,722.8	11,911.2	7,631.7	75.6	77.1	-82.40	-3,636.0	1,232.9	681.3	531.3	149.98	4.542		
12,000.0	7,722.3	12,011.2	7,630.6	77.4	78.9	-82.36	-3,735.9	1,232.9	681.4	527.7	153.65	4.435		
12,051.6	7,722.0	12,062.8	7,630.1	78.4	79.8	-82.33	-3,787.5	1,232.9	681.4	525.9	155.54	4.381		
12,052.3	7,722.0	12,063.4	7,630.0	78.4	79.8	-82.33	-3,788.2	1,232.9	681.4	525.9	155.56	4.380 SF		

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Corcilius 6J-303
<b>Project:</b>	SEC.6-T1S-R67W	<b>TVD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Reference Site:</b>	Corcilius 1S67W6J Pad Sec.6-T1S-R67W	<b>MD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Corcilius 6J-303	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (4-29-15)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Corcilius 1S67W6J Pad Sec.6-T1S-R67W - Corcilius 6M-343 - 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	58.8				
100.0	100.0	99.0	99.0	0.1	0.1	90.00	0.0	58.8	58.8	58.6	0.22	263.078	
200.0	200.0	199.0	199.0	0.3	0.3	90.00	0.0	58.8	58.8	58.2	0.67	87.547 CC, ES	
300.0	300.0	297.6	297.6	0.6	0.6	89.44	0.6	59.9	60.0	58.8	1.11	53.822	
400.0	400.0	396.2	396.1	0.8	0.8	87.88	2.3	63.3	63.4	61.8	1.56	40.638	
500.0	500.0	494.4	494.1	1.0	1.0	85.61	5.3	68.9	69.2	67.2	2.01	34.421	
600.0	600.0	592.3	591.6	1.2	1.3	83.03	9.4	76.6	77.6	75.1	2.47	31.422	
700.0	700.0	689.6	688.3	1.5	1.5	80.43	14.6	86.6	88.4	85.5	2.93	30.165	
800.0	800.0	786.3	784.0	1.7	1.8	78.01	20.9	98.6	101.9	98.5	3.40	29.927	
900.0	900.0	882.4	878.8	1.9	2.2	39.76	28.3	112.6	116.9	113.1	3.84	30.459	
1,000.0	999.9	978.2	972.8	2.1	2.5	38.74	36.8	128.7	132.4	128.1	4.30	30.806	
1,100.0	1,099.7	1,073.5	1,065.9	2.4	2.9	38.31	46.3	146.8	148.3	143.5	4.77	31.108	
1,200.0	1,199.3	1,168.4	1,158.0	2.6	3.4	38.30	56.9	166.9	164.6	159.3	5.25	31.347	
1,300.0	1,298.6	1,262.8	1,249.1	2.8	3.9	38.60	68.5	188.8	181.2	175.4	5.75	31.515	
1,400.0	1,397.5	1,361.3	1,343.8	3.1	4.4	39.23	81.1	212.9	197.1	190.9	6.28	31.374	
1,500.0	1,496.1	1,460.2	1,438.9	3.4	4.9	40.22	93.8	237.0	211.1	204.3	6.84	30.870	
1,584.9	1,579.4	1,544.4	1,519.8	3.7	5.4	41.31	104.6	257.6	221.6	214.2	7.35	30.159	
1,600.0	1,594.2	1,559.3	1,534.1	3.8	5.5	41.54	106.6	261.2	223.3	215.9	7.44	30.010	
1,700.0	1,692.1	1,658.5	1,629.4	4.1	6.0	42.98	119.3	285.4	234.9	226.8	8.08	29.067	
1,800.0	1,790.0	1,757.6	1,724.8	4.5	6.6	44.28	132.1	309.6	246.6	237.9	8.74	28.199	
1,900.0	1,887.9	1,856.8	1,820.1	4.9	7.2	45.46	144.8	333.8	258.4	249.0	9.43	27.403	
2,000.0	1,985.8	1,955.9	1,915.4	5.3	7.7	46.54	157.6	358.0	270.4	260.2	10.14	26.675	
2,100.0	2,083.7	2,055.1	2,010.7	5.7	8.3	47.52	170.3	382.2	282.4	271.5	10.86	26.011	
2,200.0	2,181.5	2,154.3	2,106.0	6.1	8.8	48.43	183.1	406.5	294.5	282.9	11.59	25.405	
2,300.0	2,279.4	2,253.4	2,201.3	6.5	9.4	49.26	195.8	430.7	306.6	294.3	12.34	24.851	
2,400.0	2,377.3	2,352.6	2,296.6	6.9	10.0	50.04	208.6	454.9	318.9	305.8	13.10	24.345	
2,500.0	2,475.2	2,451.8	2,391.9	7.3	10.5	50.75	221.3	479.1	331.1	317.3	13.86	23.882	
2,600.0	2,573.1	2,550.9	2,487.3	7.8	11.1	51.41	234.1	503.3	343.4	328.8	14.64	23.457	
2,700.0	2,671.0	2,650.1	2,582.6	8.2	11.7	52.03	246.8	527.5	355.8	340.4	15.42	23.067	
2,800.0	2,768.9	2,749.2	2,677.9	8.6	12.3	52.61	259.6	551.7	368.2	352.0	16.21	22.708	
2,900.0	2,866.8	2,848.4	2,773.2	9.0	12.8	53.14	272.3	575.9	380.6	363.6	17.01	22.376	
3,000.0	2,964.7	2,947.6	2,868.5	9.5	13.4	53.65	285.1	600.1	393.1	375.3	17.81	22.070	
3,100.0	3,062.6	3,046.7	2,963.8	9.9	14.0	54.12	297.8	624.3	405.6	387.0	18.62	21.785	
3,200.0	3,160.5	3,145.9	3,059.1	10.3	14.5	54.57	310.5	648.5	418.1	398.7	19.43	21.522	
3,300.0	3,258.4	3,245.1	3,154.5	10.7	15.1	54.98	323.3	672.8	430.7	410.4	20.24	21.276	
3,400.0	3,356.3	3,344.2	3,249.8	11.2	15.7	55.38	336.0	697.0	443.2	422.2	21.06	21.047	
3,500.0	3,454.2	3,443.4	3,345.1	11.6	16.2	55.75	348.8	721.2	455.8	433.9	21.88	20.833	
3,600.0	3,552.1	3,542.5	3,440.4	12.0	16.8	56.11	361.5	745.4	468.4	445.7	22.70	20.633	
3,700.0	3,650.0	3,641.7	3,535.7	12.5	17.4	56.44	374.3	769.6	481.0	457.5	23.53	20.446	
3,800.0	3,747.9	3,740.9	3,631.0	12.9	18.0	56.76	387.0	793.8	493.7	469.3	24.36	20.269	
3,900.0	3,845.8	3,840.0	3,726.3	13.3	18.5	57.06	399.8	818.0	506.3	481.1	25.18	20.104	
4,000.0	3,943.7	3,939.2	3,821.6	13.8	19.1	57.35	412.5	842.2	519.0	493.0	26.02	19.948	
4,100.0	4,041.6	4,038.4	3,917.0	14.2	19.7	57.62	425.3	866.4	531.6	504.8	26.85	19.800	
4,200.0	4,139.5	4,137.5	4,012.3	14.7	20.2	57.88	438.0	890.6	544.3	516.6	27.69	19.661	
4,300.0	4,237.4	4,236.7	4,107.6	15.1	20.8	58.13	450.8	914.8	557.0	528.5	28.52	19.530	
4,400.0	4,335.3	4,335.8	4,202.9	15.5	21.4	58.37	463.5	939.1	569.7	540.4	29.36	19.405	
4,500.0	4,433.2	4,435.0	4,298.2	16.0	22.0	58.60	476.3	963.3	582.4	552.2	30.20	19.287	
4,600.0	4,531.1	4,534.2	4,393.5	16.4	22.5	58.81	489.0	987.5	595.2	564.1	31.04	19.174	
4,700.0	4,628.9	4,633.3	4,488.8	16.8	23.1	59.02	501.8	1,011.7	607.9	576.0	31.88	19.067	
4,800.0	4,726.8	4,732.5	4,584.1	17.3	23.7	59.22	514.5	1,035.9	620.6	587.9	32.72	18.966	
4,900.0	4,824.7	4,831.7	4,679.5	17.7	24.3	59.41	527.3	1,060.1	633.4	599.8	33.57	18.869	

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

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Corcilus 6J-303
<b>Project:</b>	SEC.6-T1S-R67W	<b>TVD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Reference Site:</b>	Corcilus 1S67W6J Pad Sec.6-T1S-R67W	<b>MD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Corcilus 6J-303	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (4-29-15)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Corcilus 1S67W6J Pad Sec.6-T1S-R67W - Corcilus 6M-343 - 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			
5,000.0	4,922.6	4,930.8	4,774.8	18.1	24.8	59.60	540.0	1,084.3	646.1	611.7	34.41	18.776			
5,100.0	5,020.5	5,030.0	4,870.1	18.6	25.4	59.78	552.8	1,108.5	658.9	623.6	35.26	18.688			
5,200.0	5,118.4	5,129.1	4,965.4	19.0	26.0	59.95	565.5	1,132.7	671.7	635.6	36.10	18.604			
5,300.0	5,216.3	5,228.3	5,060.7	19.5	26.5	60.11	578.3	1,156.9	684.4	647.5	36.95	18.523			
5,400.0	5,314.2	5,327.5	5,156.0	19.9	27.1	60.27	591.0	1,181.1	697.2	659.4	37.80	18.446			
5,503.4	5,415.4	5,430.0	5,254.6	20.3	27.7	60.43	604.2	1,206.2	710.4	671.7	38.67	18.369			
5,600.0	5,510.3	5,525.7	5,346.6	20.7	28.3	60.69	616.5	1,229.5	723.6	684.1	39.44	18.346			
5,700.0	5,609.1	5,624.5	5,441.5	21.0	28.8	60.75	629.2	1,253.7	738.8	698.7	40.09	18.429			
5,800.0	5,708.4	5,722.9	5,536.1	21.2	29.4	60.62	641.9	1,277.7	755.8	715.2	40.64	18.598			
5,900.0	5,808.1	5,820.7	5,630.2	21.5	30.0	60.32	654.4	1,301.6	774.5	733.5	41.09	18.851			
6,000.0	5,907.9	5,918.0	5,723.6	21.6	30.5	59.86	666.9	1,325.3	795.1	753.7	41.44	19.188			
6,092.1	6,000.0	6,006.8	5,809.0	21.7	31.0	95.69	678.4	1,347.0	815.7	774.0	41.67	19.574			
6,100.0	6,007.9	6,014.4	5,816.3	21.7	31.1	95.61	679.3	1,348.9	817.6	775.9	41.68	19.613			
6,200.0	6,107.9	6,110.6	5,908.7	21.9	31.6	94.58	691.7	1,372.3	841.0	799.2	41.83	20.103			
6,300.0	6,207.9	6,206.7	6,001.1	22.0	32.2	93.61	704.1	1,395.8	864.7	822.7	42.00	20.589			
6,400.0	6,307.9	6,335.0	6,125.1	22.1	32.8	92.48	719.4	1,425.0	887.0	844.9	42.15	21.045			
6,500.0	6,407.9	6,469.5	6,256.5	22.3	33.3	91.56	732.8	1,450.3	905.6	863.3	42.32	21.399			
6,600.0	6,507.9	6,606.4	6,391.5	22.4	33.7	90.86	743.4	1,470.4	920.2	877.6	42.53	21.635			
6,700.0	6,607.9	6,745.2	6,529.3	22.6	34.0	90.37	751.0	1,485.0	930.6	887.8	42.78	21.755			
6,800.0	6,707.9	6,885.3	6,669.0	22.7	34.3	90.09	755.6	1,493.7	936.8	893.8	43.06	21.756			
6,900.0	6,807.9	7,023.2	6,806.9	22.8	34.4	90.00	757.0	1,496.3	938.7	895.3	43.37	21.646			
7,000.0	6,907.9	7,123.2	6,906.9	23.0	34.5	90.00	757.0	1,496.3	938.7	895.1	43.65	21.505			
7,069.9	6,977.8	7,193.1	6,976.8	23.1	34.6	90.00	757.0	1,496.3	938.7	894.9	43.85	21.406			
7,100.0	7,007.9	7,223.2	7,006.9	23.1	34.6	-90.02	756.8	1,496.3	938.7	894.8	43.92	21.375			
7,150.0	7,057.8	7,273.3	7,056.9	23.1	34.6	-90.07	753.9	1,496.3	938.7	894.7	43.97	21.351			
7,200.0	7,107.3	7,323.4	7,106.6	23.1	34.6	-90.11	747.8	1,496.3	938.7	894.8	43.95	21.358			
7,250.0	7,156.2	7,373.5	7,155.8	23.1	34.6	-90.16	738.4	1,496.3	938.7	894.8	43.88	21.395			
7,300.0	7,204.4	7,423.7	7,204.4	23.1	34.6	-90.20	725.8	1,496.3	938.7	895.0	43.74	21.460			
7,350.0	7,251.7	7,473.9	7,252.1	23.0	34.5	-90.25	710.0	1,496.3	938.7	895.2	43.56	21.552			
7,400.0	7,297.7	7,524.2	7,298.6	22.9	34.4	-90.29	691.1	1,496.3	938.7	895.4	43.32	21.669			
7,450.0	7,342.4	7,574.5	7,343.9	22.7	34.3	-90.33	669.2	1,496.3	938.7	895.7	43.04	21.809			
7,500.0	7,385.6	7,624.9	7,387.7	22.6	34.2	-90.37	644.2	1,496.3	938.7	896.0	42.73	21.970			
7,550.0	7,426.9	7,675.3	7,429.8	22.4	34.1	-90.41	616.5	1,496.3	938.7	896.3	42.39	22.147			
7,600.0	7,466.4	7,725.8	7,470.0	22.3	34.0	-90.44	586.0	1,496.3	938.7	896.7	42.02	22.338			
7,650.0	7,503.8	7,776.3	7,508.1	22.1	33.8	-90.48	552.9	1,496.3	938.7	897.1	41.65	22.537			
7,700.0	7,538.9	7,826.8	7,543.9	21.9	33.7	-90.51	517.3	1,496.3	938.7	897.5	41.28	22.741			
7,750.0	7,571.6	7,877.4	7,577.4	21.7	33.5	-90.54	479.4	1,496.3	938.7	897.8	40.92	22.943			
7,800.0	7,601.8	7,928.0	7,608.3	21.5	33.4	-90.57	439.3	1,496.3	938.8	898.2	40.57	23.138			
7,850.0	7,629.2	7,978.6	7,636.5	21.3	33.2	-90.59	397.3	1,496.3	938.8	898.5	40.26	23.318			
7,900.0	7,654.0	8,029.2	7,661.8	21.1	33.1	-90.61	353.5	1,496.3	938.8	898.8	39.99	23.477			
7,950.0	7,675.8	8,079.9	7,684.2	20.9	32.9	-90.63	308.0	1,496.3	938.8	899.0	39.76	23.609			
8,000.0	7,694.6	8,130.6	7,703.6	20.7	32.8	-90.65	261.2	1,496.3	938.8	899.2	39.60	23.707			
8,050.0	7,710.3	8,181.3	7,719.8	20.5	32.7	-90.67	213.1	1,496.3	938.8	899.3	39.50	23.765			
8,100.0	7,723.0	8,232.1	7,732.8	20.4	32.5	-90.68	164.1	1,496.3	938.8	899.3	39.48	23.780			
8,150.0	7,732.4	8,282.8	7,742.5	20.2	32.4	-90.69	114.3	1,496.3	938.8	899.2	39.53	23.748			
8,200.0	7,738.6	8,333.6	7,748.9	20.0	32.4	-90.69	64.0	1,496.3	938.8	899.1	39.66	23.669			
8,250.0	7,741.5	8,384.3	7,751.9	19.9	32.3	-90.70	13.3	1,496.3	938.8	898.9	39.88	23.542			
8,273.9	7,741.8	8,408.6	7,752.2	19.8	32.3	-90.70	-11.0	1,496.3	938.8	898.8	40.00	23.467			
8,300.0	7,741.6	8,434.7	7,752.1	19.8	32.2	-90.70	-37.0	1,496.3	938.8	898.6	40.18	23.363			
8,400.0	7,741.1	8,534.7	7,751.7	19.8	32.2	-90.71	-137.0	1,496.3	938.8	897.7	41.03	22.879			
8,500.0	7,740.6	8,634.7	7,751.3	20.6	32.3	-90.71	-237.0	1,496.3	938.8	896.6	42.21	22.242			

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

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Corcilius 6J-303
<b>Project:</b>	SEC.6-T1S-R67W	<b>TVD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Reference Site:</b>	Corcilius 1S67W6J Pad Sec.6-T1S-R67W	<b>MD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Corcilius 6J-303	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (4-29-15)	<b>Offset TVD Reference:</b>	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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
8,600.0	7,740.1	8,734.7	7,750.9	21.5	32.5	-90.72	-337.0	1,496.3	938.8	895.1	43.69	21.488			
8,700.0	7,739.5	8,834.7	7,750.5	22.6	32.9	-90.73	-437.0	1,496.3	938.8	893.3	45.45	20.658			
8,800.0	7,739.0	8,934.7	7,750.1	23.7	33.3	-90.73	-537.0	1,496.3	938.8	891.3	47.45	19.787			
8,900.0	7,738.5	9,034.7	7,749.7	24.9	33.9	-90.74	-637.0	1,496.3	938.8	889.1	49.66	18.904			
9,000.0	7,738.0	9,134.7	7,749.3	26.2	34.6	-90.75	-737.0	1,496.3	938.8	886.7	52.06	18.032			
9,100.0	7,737.5	9,234.7	7,748.9	27.5	35.4	-90.76	-837.0	1,496.3	938.8	884.2	54.63	17.186			
9,200.0	7,736.9	9,334.7	7,748.5	28.9	36.3	-90.76	-937.0	1,496.3	938.8	881.5	57.33	16.374			
9,300.0	7,736.4	9,434.7	7,748.1	30.4	37.4	-90.77	-1,037.0	1,496.3	938.8	878.6	60.16	15.605			
9,400.0	7,735.9	9,534.7	7,747.7	31.9	38.5	-90.78	-1,137.0	1,496.3	938.8	875.7	63.09	14.879			
9,500.0	7,735.4	9,634.7	7,747.3	33.4	39.7	-90.79	-1,237.0	1,496.3	938.8	872.7	66.12	14.199			
9,600.0	7,734.8	9,734.7	7,746.9	35.0	40.9	-90.79	-1,337.0	1,496.3	938.8	869.6	69.22	13.562			
9,700.0	7,734.3	9,834.7	7,746.5	36.6	42.3	-90.80	-1,437.0	1,496.3	938.8	866.4	72.40	12.968			
9,800.0	7,733.8	9,934.7	7,746.1	38.3	43.6	-90.81	-1,537.0	1,496.3	938.8	863.2	75.63	12.413			
9,900.0	7,733.3	10,034.7	7,745.7	39.9	45.0	-90.82	-1,637.0	1,496.3	938.8	859.9	78.92	11.896			
10,000.0	7,732.7	10,134.7	7,745.2	41.6	46.5	-90.82	-1,737.0	1,496.3	938.8	856.6	82.25	11.414			
10,100.0	7,732.2	10,234.7	7,744.8	43.3	48.0	-90.83	-1,837.0	1,496.3	938.8	853.2	85.63	10.964			
10,200.0	7,731.7	10,334.7	7,744.4	45.0	49.5	-90.84	-1,937.0	1,496.3	938.8	849.8	89.04	10.544			
10,300.0	7,731.2	10,434.7	7,744.0	46.7	51.1	-90.85	-2,037.0	1,496.3	938.8	846.3	92.48	10.151			
10,400.0	7,730.6	10,534.7	7,743.6	48.5	52.6	-90.85	-2,137.0	1,496.3	938.8	842.9	95.96	9.784			
10,500.0	7,730.1	10,634.7	7,743.2	50.2	54.2	-90.86	-2,237.0	1,496.3	938.8	839.4	99.46	9.440			
10,600.0	7,729.6	10,734.7	7,742.8	52.0	55.9	-90.87	-2,337.0	1,496.3	938.8	835.8	102.98	9.117			
10,700.0	7,729.1	10,834.7	7,742.4	53.8	57.5	-90.88	-2,437.0	1,496.3	938.8	832.3	106.52	8.813			
10,800.0	7,728.6	10,934.7	7,742.0	55.5	59.1	-90.88	-2,537.0	1,496.3	938.8	828.7	110.09	8.528			
10,900.0	7,728.0	11,034.7	7,741.6	57.3	60.8	-90.89	-2,637.0	1,496.3	938.8	825.2	113.67	8.259			
11,000.0	7,727.5	11,134.7	7,741.2	59.1	62.5	-90.90	-2,737.0	1,496.3	938.8	821.6	117.26	8.006			
11,100.0	7,727.0	11,234.7	7,740.8	60.9	64.2	-90.91	-2,837.0	1,496.3	938.8	818.0	120.87	7.767			
11,200.0	7,726.5	11,334.7	7,740.4	62.8	65.9	-90.91	-2,937.0	1,496.3	938.8	814.3	124.50	7.541			
11,300.0	7,725.9	11,434.7	7,740.0	64.6	67.6	-90.92	-3,037.0	1,496.3	938.8	810.7	128.13	7.327			
11,400.0	7,725.4	11,534.7	7,739.6	66.4	69.4	-90.93	-3,137.0	1,496.3	938.8	807.1	131.78	7.124			
11,500.0	7,724.9	11,634.7	7,739.2	68.2	71.1	-90.94	-3,237.0	1,496.3	938.8	803.4	135.43	6.932			
11,600.0	7,724.4	11,734.7	7,738.8	70.1	72.8	-90.94	-3,337.0	1,496.3	938.8	799.7	139.10	6.749			
11,700.0	7,723.8	11,834.7	7,738.4	71.9	74.6	-90.95	-3,437.0	1,496.3	938.8	796.1	142.77	6.576			
11,800.0	7,723.3	11,934.7	7,738.0	73.7	76.4	-90.96	-3,537.0	1,496.3	938.8	792.4	146.45	6.411			
11,900.0	7,722.8	12,034.7	7,737.6	75.6	78.1	-90.97	-3,637.0	1,496.3	938.8	788.7	150.14	6.253			
12,000.0	7,722.3	12,134.7	7,737.2	77.4	79.9	-90.97	-3,737.0	1,496.3	938.9	785.0	153.84	6.103			
12,051.6	7,722.0	12,186.3	7,737.0	78.4	80.8	-90.98	-3,788.6	1,496.3	938.9	783.1	155.75	6.028			
12,052.3	7,722.0	12,186.9	7,737.0	78.4	80.8	-90.98	-3,789.3	1,496.3	938.9	783.1	155.77	6.027 SF			

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Corcilus 6J-303
<b>Project:</b>	SEC.6-T1S-R67W	<b>TVD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Reference Site:</b>	Corcilus 1S67W6J Pad Sec.6-T1S-R67W	<b>MD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Corcilus 6J-303	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (4-29-15)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Existing Wells Sec.6-T1S-R67W - Corcilus 1 (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 5060-UNKNOWN													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		
1,800.0	1,790.0	1,762.0	1,762.0	4.5	35.2	49.92	174.9	1,067.4	996.6	957.4	39.20	25.425		
1,900.0	1,887.9	1,859.9	1,859.9	4.9	37.2	50.82	174.9	1,067.4	983.4	941.9	41.49	23.703		
2,000.0	1,985.8	1,957.8	1,957.8	5.3	39.2	51.74	174.9	1,067.4	970.5	926.7	43.79	22.159		
2,100.0	2,083.7	2,055.7	2,055.7	5.7	41.1	52.68	174.9	1,067.4	957.8	911.7	46.11	20.771		
2,200.0	2,181.5	2,153.5	2,153.5	6.1	43.1	53.65	174.9	1,067.4	945.4	896.9	48.44	19.516		
2,300.0	2,279.4	2,251.4	2,251.4	6.5	45.0	54.65	174.9	1,067.4	933.3	882.5	50.78	18.379		
2,400.0	2,377.3	2,349.3	2,349.3	6.9	47.0	55.67	174.9	1,067.4	921.4	868.3	53.13	17.343		
2,500.0	2,475.2	2,447.2	2,447.2	7.3	48.9	56.71	174.9	1,067.4	909.9	854.4	55.49	16.398		
2,600.0	2,573.1	2,545.1	2,545.1	7.8	50.9	57.79	174.9	1,067.4	898.7	840.9	57.86	15.533		
2,700.0	2,671.0	2,643.0	2,643.0	8.2	52.9	58.88	174.9	1,067.4	887.8	827.6	60.23	14.740		
2,800.0	2,768.9	2,740.9	2,740.9	8.6	54.8	60.01	174.9	1,067.4	877.3	814.7	62.62	14.010		
2,900.0	2,866.8	2,838.8	2,838.8	9.0	56.8	61.15	174.9	1,067.4	867.1	802.1	65.01	13.338		
3,000.0	2,964.7	2,936.7	2,936.7	9.5	58.7	62.33	174.9	1,067.4	857.3	789.9	67.41	12.717		
3,100.0	3,062.6	3,034.6	3,034.6	9.9	60.7	63.53	174.9	1,067.4	847.9	778.0	69.82	12.143		
3,200.0	3,160.5	3,132.5	3,132.5	10.3	62.7	64.76	174.9	1,067.4	838.8	766.6	72.24	11.612		
3,300.0	3,258.4	3,230.4	3,230.4	10.7	64.6	66.01	174.9	1,067.4	830.2	755.5	74.66	11.119		
3,400.0	3,356.3	3,328.3	3,328.3	11.2	66.6	67.29	174.9	1,067.4	821.9	744.8	77.09	10.662		
3,500.0	3,454.2	3,426.2	3,426.2	11.6	68.5	68.59	174.9	1,067.4	814.1	734.6	79.52	10.238		
3,600.0	3,552.1	3,524.1	3,524.1	12.0	70.5	69.91	174.9	1,067.4	806.7	724.8	81.95	9.844		
3,700.0	3,650.0	3,622.0	3,622.0	12.5	72.4	71.26	174.9	1,067.4	799.8	715.4	84.39	9.477		
3,800.0	3,747.9	3,719.9	3,719.9	12.9	74.4	72.63	174.9	1,067.4	793.4	706.5	86.84	9.136		
3,900.0	3,845.8	3,817.8	3,817.8	13.3	76.4	74.02	174.9	1,067.4	787.4	698.1	89.28	8.819		
4,000.0	3,943.7	3,915.7	3,915.7	13.8	78.3	75.42	174.9	1,067.4	781.9	690.2	91.73	8.524		
4,100.0	4,041.6	4,013.6	4,013.6	14.2	80.3	76.85	174.9	1,067.4	776.9	682.8	94.17	8.250		
4,200.0	4,139.5	4,111.5	4,111.5	14.7	82.2	78.30	174.9	1,067.4	772.5	675.8	96.62	7.995		
4,300.0	4,237.4	4,209.4	4,209.4	15.1	84.2	79.76	174.9	1,067.4	768.5	669.4	99.06	7.758		
4,400.0	4,335.3	4,307.3	4,307.3	15.5	86.1	81.23	174.9	1,067.4	765.1	663.5	101.51	7.537		
4,500.0	4,433.2	4,405.2	4,405.2	16.0	88.1	82.71	174.9	1,067.4	762.1	658.2	103.94	7.332		
4,600.0	4,531.1	4,503.1	4,503.1	16.4	90.1	84.21	174.9	1,067.4	759.8	653.4	106.37	7.142		
4,700.0	4,628.9	4,600.9	4,600.9	16.8	92.0	85.71	174.9	1,067.4	757.9	649.1	108.80	6.966		
4,800.0	4,726.8	4,698.8	4,698.8	17.3	94.0	87.22	174.9	1,067.4	756.7	645.4	111.22	6.803		
4,900.0	4,824.7	4,796.7	4,796.7	17.7	95.9	88.73	174.9	1,067.4	755.9	642.3	113.63	6.652		
4,983.7	4,906.7	4,878.7	4,878.7	18.1	97.6	90.00	174.9	1,067.4	755.7	640.1	115.64	6.535 CC		
5,000.0	4,922.6	4,894.6	4,894.6	18.1	97.9	90.25	174.9	1,067.4	755.7	639.7	116.04	6.513		
5,100.0	5,020.5	4,992.5	4,992.5	18.6	99.9	91.76	174.9	1,067.4	756.1	637.7	118.43	6.384		
5,200.0	5,118.4	5,060.0	5,060.0	19.0	101.2	92.80	174.9	1,067.4	757.6	637.4	120.21	6.302 ES, SF		
5,300.0	5,216.3	5,060.0	5,060.0	19.5	101.2	92.80	174.9	1,067.4	769.3	648.6	120.65	6.376		
5,400.0	5,314.2	5,060.0	5,060.0	19.9	101.2	92.80	174.9	1,067.4	793.4	672.3	121.09	6.553		
5,503.4	5,415.4	5,060.0	5,060.0	20.3	101.2	92.80	174.9	1,067.4	830.4	708.9	121.54	6.832		
5,600.0	5,510.3	5,060.0	5,060.0	20.7	101.2	93.80	174.9	1,067.4	874.6	752.7	121.89	7.175		
5,700.0	5,609.1	5,060.0	5,060.0	21.0	101.2	95.08	174.9	1,067.4	928.5	806.4	122.16	7.601		
5,800.0	5,708.4	5,060.0	5,060.0	21.2	101.2	96.61	174.9	1,067.4	989.4	867.0	122.38	8.085		



<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Corcilus 6J-303
<b>Project:</b>	SEC.6-T1S-R67W	<b>TVD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Reference Site:</b>	Corcilus 1S67W6J Pad Sec.6-T1S-R67W	<b>MD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Corcilus 6J-303	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (4-29-15)	<b>Offset TVD Reference:</b>	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	142.24	-520.9	403.5	659.2				
100.0	100.0	84.9	84.9	0.1	0.1	142.28	-521.0	403.0	658.7	658.4	0.23	2,923.699	
200.0	200.0	182.5	182.5	0.3	0.3	142.37	-521.2	401.9	658.2	657.5	0.69	959.021	
300.0	300.0	282.2	282.2	0.6	0.6	142.43	-521.5	401.2	658.0	656.8	1.17	560.866	
400.0	400.0	384.0	383.9	0.8	0.9	142.47	-521.5	400.7	657.7	656.0	1.66	396.246	
500.0	500.0	483.1	483.1	1.0	1.1	142.50	-521.5	400.1	657.3	655.2	2.14	307.019	
600.0	600.0	582.6	582.6	1.2	1.4	142.53	-521.5	399.7	657.0	654.4	2.62	251.000	
700.0	700.0	683.7	683.7	1.5	1.6	142.54	-521.3	399.4	656.7	653.6	3.07	214.082	
800.0	800.0	785.5	785.5	1.7	1.8	142.54	-520.8	399.1	656.2	652.6	3.51	186.816	
898.6	898.6	884.4	884.4	1.9	2.1	106.29	-520.3	398.5	655.8	651.8	3.97	165.073	
900.0	900.0	885.8	885.7	1.9	2.1	106.29	-520.3	398.5	655.8	651.8	3.98	164.807	
1,000.0	999.9	984.2	984.2	2.1	2.3	106.64	-520.1	397.8	656.3	651.8	4.46	147.223	
1,100.0	1,099.7	1,083.9	1,083.9	2.4	2.6	107.19	-519.9	397.3	657.7	652.8	4.94	133.030	
1,200.0	1,199.3	1,186.8	1,186.8	2.6	2.8	107.94	-519.3	396.9	659.8	654.4	5.42	121.796	
1,300.0	1,298.6	1,288.2	1,288.2	2.8	3.0	108.84	-518.0	396.7	662.4	656.5	5.87	112.849	
1,400.0	1,397.5	1,390.0	1,389.9	3.1	3.2	109.92	-516.4	396.4	665.7	659.3	6.35	104.861	
1,500.0	1,496.1	1,490.2	1,490.1	3.4	3.5	111.19	-514.5	395.8	669.8	662.9	6.87	97.554	
1,584.9	1,579.4	1,576.1	1,576.0	3.7	3.7	112.41	-512.8	395.1	674.2	666.8	7.34	91.869	
1,600.0	1,594.2	1,591.4	1,591.3	3.8	3.7	112.65	-512.5	395.0	675.0	667.6	7.42	90.915	
1,700.0	1,692.1	1,691.5	1,691.3	4.1	3.9	114.22	-510.1	394.0	680.7	672.7	8.01	85.023	
1,800.0	1,790.0	1,790.4	1,790.3	4.5	4.2	115.73	-507.6	392.9	686.7	678.1	8.60	79.888	
1,900.0	1,887.9	1,889.2	1,889.0	4.9	4.4	117.24	-505.1	391.6	693.0	683.8	9.20	75.367	
2,000.0	1,985.8	1,985.8	1,985.5	5.3	4.7	118.72	-502.9	389.8	699.9	690.1	9.80	71.427	
2,100.0	2,083.7	2,080.8	2,080.5	5.7	4.9	120.19	-501.2	387.9	707.6	697.2	10.40	68.030	
2,200.0	2,181.5	2,174.4	2,174.1	6.1	5.2	121.61	-500.0	386.1	716.3	705.3	11.00	65.131	
2,300.0	2,279.4	2,269.9	2,269.6	6.5	5.4	123.03	-499.2	384.4	726.0	714.4	11.59	62.624	
2,400.0	2,377.3	2,367.0	2,366.6	6.9	5.7	124.44	-498.7	382.6	736.3	724.1	12.18	60.429	
2,500.0	2,475.2	2,462.4	2,462.0	7.3	5.9	125.79	-498.2	380.9	747.2	734.4	12.76	58.539	
2,600.0	2,573.1	2,557.4	2,557.0	7.8	6.2	127.09	-498.1	379.4	758.9	745.6	13.33	56.935	
2,700.0	2,671.0	2,653.3	2,653.0	8.2	6.4	128.35	-498.2	378.2	771.3	757.4	13.88	55.560	
2,800.0	2,768.9	2,748.8	2,748.4	8.6	6.6	129.55	-498.4	377.3	784.3	769.9	14.41	54.424	
2,900.0	2,866.8	2,844.3	2,843.9	9.0	6.8	130.69	-499.0	376.6	798.0	783.1	14.91	53.531	
3,000.0	2,964.7	2,942.8	2,942.5	9.5	6.9	131.83	-499.6	375.9	812.1	796.7	15.40	52.742	
3,100.0	3,062.6	3,042.9	3,042.6	9.9	7.1	132.96	-500.0	375.1	826.3	810.4	15.92	51.913	
3,200.0	3,160.5	3,141.0	3,140.6	10.3	7.4	134.04	-500.3	374.2	840.6	824.1	16.45	51.099	
3,300.0	3,258.4	3,238.7	3,238.3	10.7	7.6	135.08	-500.6	373.1	855.2	838.2	16.98	50.353	
3,400.0	3,356.3	3,338.2	3,337.8	11.2	7.8	136.12	-500.8	371.9	870.0	852.5	17.52	49.645	
3,500.0	3,454.2	3,438.9	3,438.5	11.6	8.1	137.10	-500.6	371.1	884.7	866.7	18.07	48.952	
3,600.0	3,552.1	3,538.6	3,538.1	12.0	8.3	138.02	-500.2	370.6	899.5	880.9	18.61	48.328	
3,700.0	3,650.0	3,637.0	3,636.6	12.5	8.5	138.88	-499.6	370.4	914.3	895.2	19.13	47.801	
3,800.0	3,747.9	3,734.5	3,734.1	12.9	8.7	139.70	-499.0	370.3	929.3	909.7	19.62	47.375	
3,900.0	3,845.8	3,829.7	3,829.3	13.3	8.9	140.47	-498.6	370.3	944.6	924.5	20.07	47.070	
4,000.0	3,943.7	3,921.8	3,921.3	13.8	9.0	141.19	-498.6	370.3	960.6	940.1	20.49	46.883	
4,100.0	4,041.6	4,012.4	4,011.9	14.2	9.2	141.90	-499.3	370.0	977.4	956.5	20.90	46.778	
4,200.0	4,139.5	4,107.3	4,106.9	14.7	9.3	142.64	-500.5	369.4	994.9	973.6	21.31	46.697	
7,750.0	7,571.6	7,608.1	7,606.8	21.7	16.6	21.71	-480.0	335.4	980.8	958.2	22.60	43.394	
7,800.0	7,601.8	7,641.4	7,640.0	21.5	16.7	25.00	-477.7	334.2	940.3	918.4	21.92	42.890	
7,850.0	7,629.2	7,670.5	7,669.0	21.3	16.8	29.14	-475.5	332.8	898.2	876.4	21.82	41.161	
7,900.0	7,654.0	7,695.4	7,693.7	21.1	16.9	34.36	-473.4	331.5	854.6	832.1	22.54	37.916	
7,950.0	7,675.8	7,712.2	7,710.4	20.9	16.9	40.43	-471.9	330.6	810.0	785.9	24.06	33.659	
8,000.0	7,694.6	7,725.3	7,723.6	20.7	16.9	47.72	-470.9	329.9	764.5	738.1	26.39	28.972	

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

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Corcilius 6J-303
<b>Project:</b>	SEC.6-T1S-R67W	<b>TVD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Reference Site:</b>	Corcilius 1S67W6J Pad Sec.6-T1S-R67W	<b>MD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Corcilius 6J-303	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (4-29-15)	<b>Offset TVD Reference:</b>	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	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
8,050.0	7,710.3	7,735.9	7,734.1	20.5	17.0	56.32	-470.0	329.4	718.5	689.3	29.24	24.571		
8,100.0	7,723.0	7,743.9	7,742.0	20.4	17.0	65.94	-469.4	329.0	672.2	640.1	32.08	20.951		
8,150.0	7,732.4	7,749.0	7,747.2	20.2	17.0	75.88	-469.0	328.8	625.8	591.5	34.32	18.234		
8,200.0	7,738.6	7,751.3	7,749.4	20.0	17.0	85.28	-468.8	328.7	579.7	544.0	35.63	16.269		
8,250.0	7,741.5	7,750.5	7,748.6	19.9	17.0	93.38	-468.9	328.7	534.1	498.0	36.10	14.797		
8,273.9	7,741.8	7,749.1	7,747.2	19.8	17.0	96.68	-469.0	328.8	512.6	476.5	36.12	14.193		
8,300.0	7,741.6	7,747.1	7,745.2	19.8	17.0	96.19	-469.1	328.9	489.5	453.2	36.22	13.512		
8,400.0	7,741.1	7,739.2	7,737.3	19.8	17.0	94.24	-469.8	329.3	403.9	367.1	36.72	10.999		
8,500.0	7,740.6	7,730.9	7,729.1	20.6	16.9	92.19	-470.4	329.7	326.3	289.0	37.33	8.741		
8,600.0	7,740.1	7,722.2	7,720.5	21.5	16.9	90.02	-471.1	330.1	264.1	226.1	38.05	6.941		
8,700.0	7,739.5	7,713.1	7,711.4	22.6	16.9	87.74	-471.9	330.6	229.9	191.1	38.85	5.918		
8,735.2	7,739.4	7,709.8	7,708.1	23.0	16.9	86.91	-472.1	330.7	227.2	188.1	39.15	5.803 CC, ES, SF		
8,800.0	7,739.0	7,703.6	7,701.9	23.7	16.9	85.34	-472.7	331.1	236.2	196.5	39.69	5.950		
8,900.0	7,738.5	7,694.6	7,693.0	24.9	16.9	83.09	-473.5	331.6	280.3	239.7	40.60	6.902		
9,000.0	7,738.0	7,686.4	7,684.9	26.2	16.8	81.06	-474.2	332.0	348.1	306.5	41.57	8.373		
9,100.0	7,737.5	7,678.7	7,677.1	27.5	16.8	79.13	-474.8	332.4	428.5	385.9	42.58	10.062		
9,200.0	7,736.9	7,671.2	7,669.7	28.9	16.8	77.30	-475.4	332.8	515.7	472.1	43.63	11.820		
9,300.0	7,736.4	7,664.0	7,662.6	30.4	16.8	75.57	-476.0	333.1	606.7	562.0	44.70	13.573		
9,400.0	7,735.9	7,657.2	7,655.7	31.9	16.8	73.92	-476.5	333.5	700.2	654.4	45.80	15.288		
9,500.0	7,735.4	7,650.6	7,649.2	33.4	16.7	72.36	-477.0	333.8	795.1	748.2	46.91	16.951		
9,600.0	7,734.8	7,644.2	7,642.8	35.0	16.7	70.89	-477.5	334.0	891.1	843.1	48.03	18.553		
9,700.0	7,734.3	7,638.2	7,636.8	36.6	16.7	69.49	-477.9	334.3	987.9	938.7	49.16	20.094		



<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Corcilius 6J-303
<b>Project:</b>	SEC.6-T1S-R67W	<b>TVD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Reference Site:</b>	Corcilius 1S67W6J Pad Sec.6-T1S-R67W	<b>MD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Corcilius 6J-303	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (4-29-15)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Existing Wells Sec.6-T1S-R67W - Sack 23-6 (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		
8,200.0	7,738.6	7,731.8	7,728.9	20.0	15.9	-67.02	-899.5	759.8	983.4	950.4	33.07	29.737		
8,250.0	7,741.5	7,734.9	7,731.9	19.9	15.9	-83.96	-899.5	759.8	934.6	899.7	34.98	26.720		
8,273.9	7,741.8	7,735.2	7,732.2	19.8	15.9	-92.00	-899.5	759.8	911.3	876.3	34.94	26.080		
8,300.0	7,741.6	7,735.0	7,732.0	19.8	15.9	-91.94	-899.5	759.8	885.9	850.8	35.04	25.284		
8,400.0	7,741.1	7,734.3	7,731.3	19.8	15.9	-91.74	-899.5	759.8	788.9	753.3	35.52	22.210		
8,500.0	7,740.6	7,733.6	7,730.6	20.6	15.9	-91.55	-899.5	759.8	692.7	656.5	36.17	19.151		
8,600.0	7,740.1	7,732.9	7,729.9	21.5	15.9	-91.35	-899.5	759.8	597.7	560.8	36.97	16.167		
8,700.0	7,739.5	7,732.2	7,729.2	22.6	15.9	-91.16	-899.5	759.8	504.8	466.9	37.92	13.313		
8,800.0	7,739.0	7,731.5	7,728.6	23.7	15.9	-90.97	-899.5	759.8	415.1	376.1	38.98	10.648		
8,900.0	7,738.5	7,730.9	7,727.9	24.9	15.9	-90.79	-899.5	759.8	331.4	291.2	40.15	8.253		
9,000.0	7,738.0	7,730.3	7,727.3	26.2	15.9	-90.61	-899.5	759.8	259.4	218.0	41.41	6.264		
9,100.0	7,737.5	7,729.6	7,726.7	27.5	15.9	-90.43	-899.5	759.8	211.6	168.9	42.75	4.951		
9,162.5	7,737.1	7,729.2	7,726.3	28.4	15.9	-90.32	-899.5	759.8	202.2	158.6	43.63	4.635 CC, ES, SF		
9,200.0	7,736.9	7,729.0	7,726.0	28.9	15.9	-90.26	-899.5	759.8	205.6	161.5	44.15	4.657		
9,300.0	7,736.4	7,728.4	7,725.4	30.4	15.9	-90.09	-899.5	759.8	244.5	198.9	45.61	5.360		
9,400.0	7,735.9	7,727.8	7,724.8	31.9	15.9	-89.92	-899.5	759.8	311.9	264.8	47.13	6.618		
9,500.0	7,735.4	7,727.2	7,724.3	33.4	15.9	-89.75	-899.5	759.8	393.4	344.7	48.68	8.082		
9,600.0	7,734.8	7,726.7	7,723.7	35.0	15.9	-89.59	-899.5	759.8	481.9	431.7	50.27	9.588		
9,700.0	7,734.3	7,726.1	7,723.1	36.6	15.9	-89.43	-899.5	759.8	574.2	522.4	51.89	11.067		
9,800.0	7,733.8	7,725.5	7,722.6	38.3	15.9	-89.28	-899.5	759.8	668.8	615.2	53.54	12.492		
9,900.0	7,733.3	7,725.0	7,722.0	39.9	15.9	-89.12	-899.5	759.8	764.7	709.5	55.21	13.851		
10,000.0	7,732.7	7,724.5	7,721.5	41.6	15.9	-88.97	-899.5	759.8	861.5	804.6	56.90	15.141		
10,100.0	7,732.2	7,723.9	7,721.0	43.3	15.9	-88.82	-899.5	759.9	959.0	900.4	58.61	16.363		

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Corcilius 6J-303
<b>Project:</b>	SEC.6-T1S-R67W	<b>TVD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Reference Site:</b>	Corcilius 1S67W6J Pad Sec.6-T1S-R67W	<b>MD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Corcilius 6J-303	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (4-29-15)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 5072.0ft (RKB - 13')

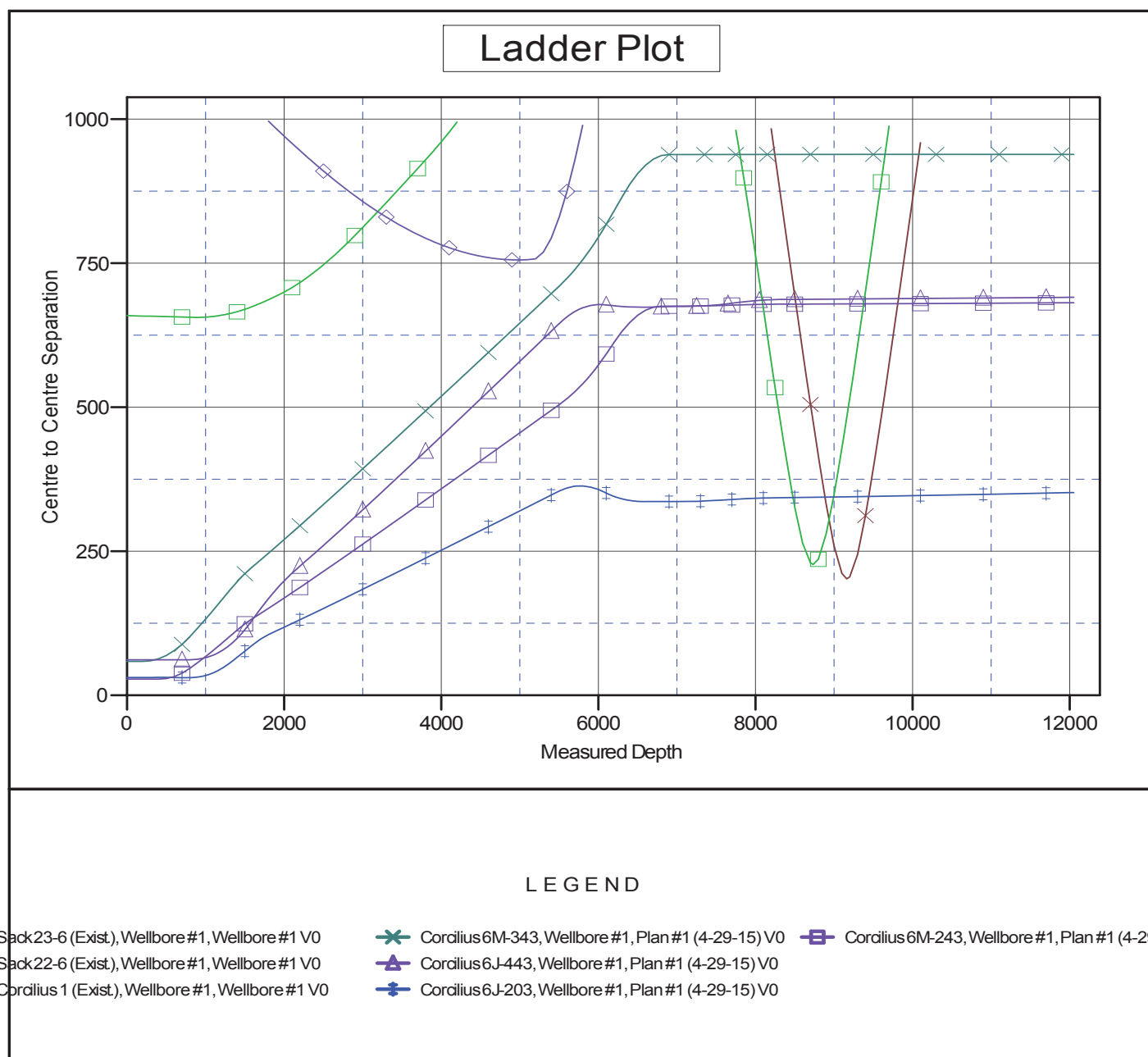
Offset Depths are relative to Offset Datum

Central Meridian is -105.500000

Coordinates are relative to: Corcilius 6J-303

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.36°



<b>Company:</b>	PETROLEUM DEVELOPMENT CORP DJ Basin	<b>Local Co-ordinate Reference:</b>	Well Corcilus 6J-303
<b>Project:</b>	SEC.6-T1S-R67W	<b>TVD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Reference Site:</b>	Corcilus 1S67W6J Pad Sec.6-T1S-R67W	<b>MD Reference:</b>	WELL @ 5072.0ft (RKB - 13')
<b>Site Error:</b>	0.0 ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Corcilus 6J-303	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0 ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	US_EDM
<b>Reference Design:</b>	Plan #1 (4-29-15)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 5072.0ft (RKB - 13')  
 Offset Depths are relative to Offset Datum  
 Central Meridian is -105.500000

Coordinates are relative to: Corcilus 6J-303  
 Coordinate System is US State Plane 1983, Colorado Northern Zone  
 Grid Convergence at Surface is: 0.36°

