

# PETROLEUM DEVELOPMENT CORP Weld County CO

Well Name: **Wiedeman 28F-202**

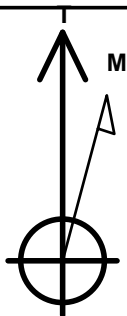
Surface Location: Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W  
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone  
Ground Elevation: 4762.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1348188.34	3198078.21	40.287000	-104.789970	

Original Well Elev WELL @ 4777.0ft (Original Well Elev)

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 1038'FNL & 540'FWL, SEC.28	1.0	0.0	0.0	Point
BHL 1395'FNL & 500'FEL, SEC.28	7047.0	-342.1	4226.7	Point



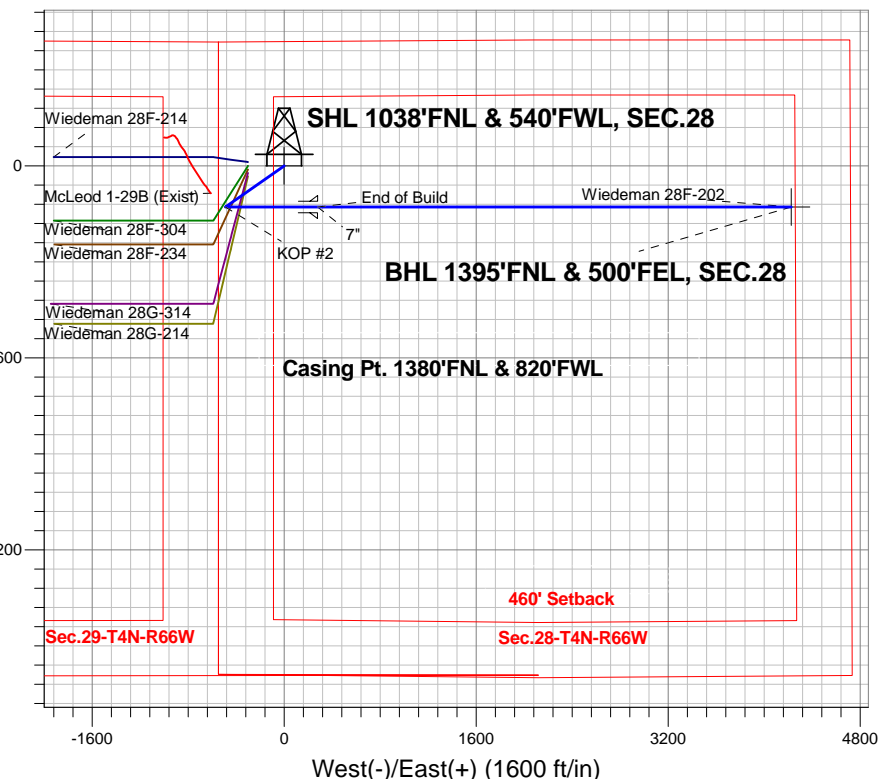
Azimuths to True North  
Magnetic North: 8.44°  
  
Magnetic Field  
Strength: 52738.6snT  
Dip Angle: 66.85°  
Date: 8/7/2014  
Model: IGRF2010

## ANNOTATIONS

TVD	MD	Annotation
1200.0	1200.0	KOP #1
6313.4	6353.4	KOP #2
7077.3	7559.3	End of Build

Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W  
Wiedeman 28F-202  
Plan #1 (8-07-14)

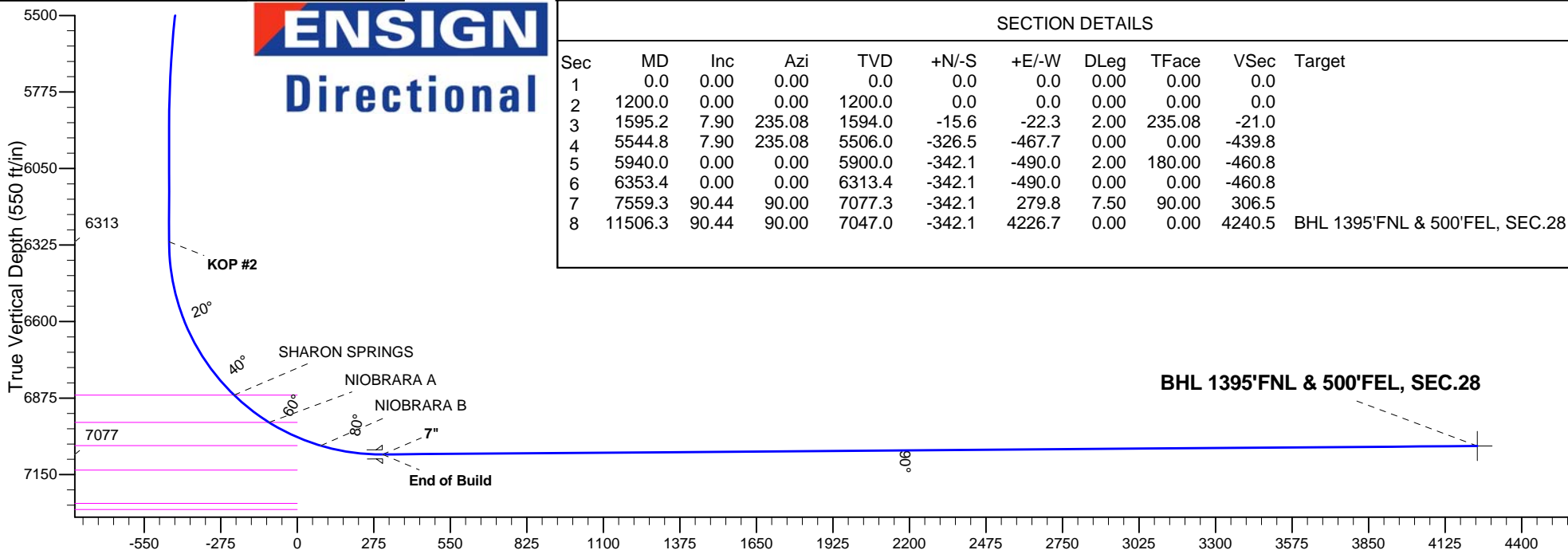
South(-)/North(+) (1600 ft/in)



## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1200.0	0.00	0.00	1200.0	0.0	0.0	0.00	0.00	0.0	
3	1595.2	7.90	235.08	1594.0	-15.6	-22.3	2.00	235.08	-21.0	
4	5544.8	7.90	235.08	5506.0	-326.5	-467.7	0.00	0.00	-439.8	
5	5940.0	0.00	0.00	5900.0	-342.1	-490.0	2.00	180.00	-460.8	
6	6353.4	0.00	0.00	6313.4	-342.1	-490.0	0.00	0.00	-460.8	
7	7559.3	90.44	90.00	7077.3	-342.1	279.8	7.50	90.00	306.5	
8	11506.3	90.44	90.00	7047.0	-342.1	4226.7	0.00	0.00	4240.5	BHL 1395'FNL & 500'FEL, SEC.28

**ENSIGN**  
Directional



Vertical Section at 94.63° (550 ft/in)



# **PETROLEUM DEVELOPMENT CORP Weld County CO**

**SEC.28-T4N-R66W**

**Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W**

**Wiedeman 28F-202**

**Wellbore #1**

**Plan: Plan #1 (8-07-14)**

## **Standard Planning Report**

**11 August, 2014**

<b>Database:</b>	landmark	<b>Local Co-ordinate Reference:</b>	Well Wiedeman 28F-202
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Project:</b>	SEC.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Site:</b>	Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Wiedeman 28F-202	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (8-07-14)		

<b>Project</b>	SEC.28-T4N-R66W, Weld County, Colorado		
<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

Site						Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W											
Site Position:						Northing:			1,348,308.56 ft			Latitude:			40.287330		
From:			Lat/Long			Easting:			3,198,077.24 ft			Longitude:			-104.789970		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.46 °		

Well	Wiedeman 28F-202					
Well Position	+N-S	-120.2 ft	Northing:	1,348,188.34 ft	Latitude:	40.287000
	+E-W	0.0 ft	Easting:	3,198,078.21 ft	Longitude:	-104.789970
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,762.0 ft

<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	8/7/2014	8.44	66.85	52,739

<b>Design</b>	Plan #1 (8-07-14)			
<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	94.63

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,595.2	7.90	235.08	1,594.0	-15.6	-22.3	2.00	2.00	0.00	235.08	
5,544.8	7.90	235.08	5,506.0	-326.5	-467.7	0.00	0.00	0.00	0.00	
5,940.0	0.00	0.00	5,900.0	-342.1	-490.0	2.00	-2.00	0.00	180.00	
6,353.4	0.00	0.00	6,313.4	-342.1	-490.0	0.00	0.00	0.00	0.00	
7,559.3	90.44	90.00	7,077.3	-342.1	279.8	7.50	7.50	0.00	90.00	
11,506.3	90.44	90.00	7,047.0	-342.1	4,226.7	0.00	0.00	0.00	0.00	BHL 1395'FNL & 5C

<b>Database:</b>	landmark	<b>Local Co-ordinate Reference:</b>	Well Wiedeman 28F-202
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Project:</b>	SEC.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Site:</b>	Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Wiedeman 28F-202	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (8-07-14)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>KOP #1</b>									
1,300.0	2.00	235.08	1,300.0	-1.0	-1.4	-1.3	2.00	2.00	0.00
1,400.0	4.00	235.08	1,399.8	-4.0	-5.7	-5.4	2.00	2.00	0.00
1,500.0	6.00	235.08	1,499.5	-9.0	-12.9	-12.1	2.00	2.00	0.00
1,595.2	7.90	235.08	1,594.0	-15.6	-22.3	-21.0	2.00	2.00	0.00
1,600.0	7.90	235.08	1,598.7	-16.0	-22.9	-21.5	0.00	0.00	0.00
1,700.0	7.90	235.08	1,697.8	-23.8	-34.1	-32.1	0.00	0.00	0.00
1,800.0	7.90	235.08	1,796.8	-31.7	-45.4	-42.7	0.00	0.00	0.00
1,900.0	7.90	235.08	1,895.9	-39.6	-56.7	-53.3	0.00	0.00	0.00
2,000.0	7.90	235.08	1,994.9	-47.4	-68.0	-63.9	0.00	0.00	0.00
2,100.0	7.90	235.08	2,094.0	-55.3	-79.2	-74.5	0.00	0.00	0.00
2,200.0	7.90	235.08	2,193.0	-63.2	-90.5	-85.1	0.00	0.00	0.00
2,300.0	7.90	235.08	2,292.1	-71.1	-101.8	-95.7	0.00	0.00	0.00
2,400.0	7.90	235.08	2,391.1	-78.9	-113.1	-106.3	0.00	0.00	0.00
2,500.0	7.90	235.08	2,490.2	-86.8	-124.3	-116.9	0.00	0.00	0.00
2,600.0	7.90	235.08	2,589.2	-94.7	-135.6	-127.5	0.00	0.00	0.00
2,700.0	7.90	235.08	2,688.3	-102.6	-146.9	-138.1	0.00	0.00	0.00
2,800.0	7.90	235.08	2,787.3	-110.4	-158.2	-148.7	0.00	0.00	0.00
2,900.0	7.90	235.08	2,886.4	-118.3	-169.4	-159.4	0.00	0.00	0.00
3,000.0	7.90	235.08	2,985.4	-126.2	-180.7	-170.0	0.00	0.00	0.00
3,100.0	7.90	235.08	3,084.5	-134.0	-192.0	-180.6	0.00	0.00	0.00
3,200.0	7.90	235.08	3,183.5	-141.9	-203.3	-191.2	0.00	0.00	0.00
3,300.0	7.90	235.08	3,282.5	-149.8	-214.6	-201.8	0.00	0.00	0.00
3,400.0	7.90	235.08	3,381.6	-157.7	-225.8	-212.4	0.00	0.00	0.00
3,500.0	7.90	235.08	3,480.6	-165.5	-237.1	-223.0	0.00	0.00	0.00
3,600.0	7.90	235.08	3,579.7	-173.4	-248.4	-233.6	0.00	0.00	0.00
3,700.0	7.90	235.08	3,678.7	-181.3	-259.7	-244.2	0.00	0.00	0.00
3,727.5	7.90	235.08	3,706.0	-183.4	-262.8	-247.1	0.00	0.00	0.00
<b>PARKMAN</b>									
3,800.0	7.90	235.08	3,777.8	-189.1	-270.9	-254.8	0.00	0.00	0.00
3,900.0	7.90	235.08	3,876.8	-197.0	-282.2	-265.4	0.00	0.00	0.00
4,000.0	7.90	235.08	3,975.9	-204.9	-293.5	-276.0	0.00	0.00	0.00
4,100.0	7.90	235.08	4,074.9	-212.8	-304.8	-286.6	0.00	0.00	0.00
4,200.0	7.90	235.08	4,174.0	-220.6	-316.0	-297.2	0.00	0.00	0.00
4,300.0	7.90	235.08	4,273.0	-228.5	-327.3	-307.8	0.00	0.00	0.00
4,380.7	7.90	235.08	4,353.0	-234.9	-336.4	-316.4	0.00	0.00	0.00
<b>SUSSEX</b>									
4,400.0	7.90	235.08	4,372.1	-236.4	-338.6	-318.4	0.00	0.00	0.00
4,500.0	7.90	235.08	4,471.1	-244.2	-349.9	-329.0	0.00	0.00	0.00

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<b>Project:</b>	SEC.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Site:</b>	Wiedeman 4N66W28F - East Pad	<b>North Reference:</b>	True
	Sec.28-T4N-R66W		
<b>Well:</b>	Wiedeman 28F-202	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (8-07-14)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,600.0	7.90	235.08	4,570.2	-252.1	-361.1	-339.6	0.00	0.00	0.00
4,700.0	7.90	235.08	4,669.2	-260.0	-372.4	-350.2	0.00	0.00	0.00
4,800.0	7.90	235.08	4,768.3	-267.9	-383.7	-360.8	0.00	0.00	0.00
4,815.9	7.90	235.08	4,784.0	-269.1	-385.5	-362.5	0.00	0.00	0.00
<b>SHANNON</b>									
4,900.0	7.90	235.08	4,867.3	-275.7	-395.0	-371.4	0.00	0.00	0.00
5,000.0	7.90	235.08	4,966.4	-283.6	-406.2	-382.0	0.00	0.00	0.00
5,100.0	7.90	235.08	5,065.4	-291.5	-417.5	-392.7	0.00	0.00	0.00
5,200.0	7.90	235.08	5,164.5	-299.4	-428.8	-403.3	0.00	0.00	0.00
5,300.0	7.90	235.08	5,263.5	-307.2	-440.1	-413.9	0.00	0.00	0.00
5,400.0	7.90	235.08	5,362.6	-315.1	-451.4	-424.5	0.00	0.00	0.00
5,500.0	7.90	235.08	5,461.6	-323.0	-462.6	-435.1	0.00	0.00	0.00
5,544.8	7.90	235.08	5,506.0	-326.5	-467.7	-439.8	0.00	0.00	0.00
5,600.0	6.80	235.08	5,560.8	-330.5	-473.5	-445.3	2.00	-2.00	0.00
5,700.0	4.80	235.08	5,660.2	-336.3	-481.8	-453.1	2.00	-2.00	0.00
5,800.0	2.80	235.08	5,760.0	-340.1	-487.2	-458.2	2.00	-2.00	0.00
5,900.0	0.80	235.08	5,860.0	-341.9	-489.8	-460.6	2.00	-2.00	0.00
5,940.0	0.00	0.00	5,900.0	-342.1	-490.0	-460.8	2.00	-2.00	0.00
6,000.0	0.00	0.00	5,960.0	-342.1	-490.0	-460.8	0.00	0.00	0.00
6,100.0	0.00	0.00	6,060.0	-342.1	-490.0	-460.8	0.00	0.00	0.00
6,200.0	0.00	0.00	6,160.0	-342.1	-490.0	-460.8	0.00	0.00	0.00
6,300.0	0.00	0.00	6,260.0	-342.1	-490.0	-460.8	0.00	0.00	0.00
6,353.4	0.00	0.00	6,313.4	-342.1	-490.0	-460.8	0.00	0.00	0.00
<b>KOP #2</b>									
6,400.0	3.49	90.00	6,359.9	-342.1	-488.6	-459.4	7.50	7.50	0.00
6,500.0	10.99	90.00	6,459.1	-342.1	-476.0	-446.8	7.50	7.50	0.00
6,600.0	18.49	90.00	6,555.7	-342.1	-450.5	-421.5	7.50	7.50	0.00
6,700.0	25.99	90.00	6,648.2	-342.1	-412.7	-383.8	7.50	7.50	0.00
6,800.0	33.49	90.00	6,735.0	-342.1	-363.1	-334.4	7.50	7.50	0.00
6,900.0	40.99	90.00	6,814.5	-342.1	-302.7	-274.1	7.50	7.50	0.00
6,968.3	46.12	90.00	6,864.0	-342.1	-255.6	-227.2	7.50	7.50	0.00
<b>SHARON SPRINGS</b>									
7,000.0	48.49	90.00	6,885.5	-342.1	-232.3	-204.0	7.50	7.50	0.00
7,100.0	55.99	90.00	6,946.7	-342.1	-153.3	-125.2	7.50	7.50	0.00
7,128.2	58.11	90.00	6,962.0	-342.1	-129.7	-101.7	7.50	7.50	0.00
<b>NIOBRARA A</b>									
7,200.0	63.49	90.00	6,997.0	-342.1	-67.0	-39.2	7.50	7.50	0.00
7,300.0	70.99	90.00	7,035.7	-342.1	25.1	52.7	7.50	7.50	0.00
7,333.9	73.53	90.00	7,046.0	-342.1	57.4	84.8	7.50	7.50	0.00
<b>NIOBRARA B</b>									
7,400.0	78.49	90.00	7,062.0	-342.1	121.6	148.8	7.50	7.50	0.00
7,500.0	85.99	90.00	7,075.5	-342.1	220.6	247.4	7.50	7.50	0.00
7,559.3	90.44	90.00	7,077.3	-342.1	279.8	306.5	7.50	7.50	0.00
<b>End of Build - 7"</b>									
7,600.0	90.44	90.00	7,077.0	-342.1	320.5	347.1	0.00	0.00	0.00
7,700.0	90.44	90.00	7,076.2	-342.1	420.5	446.7	0.00	0.00	0.00
7,800.0	90.44	90.00	7,075.5	-342.1	520.5	546.4	0.00	0.00	0.00
7,900.0	90.44	90.00	7,074.7	-342.1	620.5	646.1	0.00	0.00	0.00
8,000.0	90.44	90.00	7,073.9	-342.1	720.5	745.8	0.00	0.00	0.00
8,100.0	90.44	90.00	7,073.2	-342.1	820.5	845.4	0.00	0.00	0.00
8,200.0	90.44	90.00	7,072.4	-342.1	920.5	945.1	0.00	0.00	0.00

<b>Database:</b>	landmark	<b>Local Co-ordinate Reference:</b>	Well Wiedeman 28F-202
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Project:</b>	SEC.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Site:</b>	Wiedeman 4N66W28F - East Pad	<b>North Reference:</b>	True
	Sec.28-T4N-R66W		
<b>Well:</b>	Wiedeman 28F-202	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (8-07-14)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,300.0	90.44	90.00	7,071.6	-342.1	1,020.5	1,044.8	0.00	0.00	0.00
8,400.0	90.44	90.00	7,070.9	-342.1	1,120.5	1,144.4	0.00	0.00	0.00
8,500.0	90.44	90.00	7,070.1	-342.1	1,220.5	1,244.1	0.00	0.00	0.00
8,600.0	90.44	90.00	7,069.3	-342.1	1,320.5	1,343.8	0.00	0.00	0.00
8,700.0	90.44	90.00	7,068.6	-342.1	1,420.5	1,443.5	0.00	0.00	0.00
8,800.0	90.44	90.00	7,067.8	-342.1	1,520.5	1,543.1	0.00	0.00	0.00
8,900.0	90.44	90.00	7,067.0	-342.1	1,620.5	1,642.8	0.00	0.00	0.00
9,000.0	90.44	90.00	7,066.2	-342.1	1,720.5	1,742.5	0.00	0.00	0.00
9,100.0	90.44	90.00	7,065.5	-342.1	1,820.5	1,842.1	0.00	0.00	0.00
9,200.0	90.44	90.00	7,064.7	-342.1	1,920.5	1,941.8	0.00	0.00	0.00
9,300.0	90.44	90.00	7,063.9	-342.1	2,020.5	2,041.5	0.00	0.00	0.00
9,400.0	90.44	90.00	7,063.2	-342.1	2,120.5	2,141.2	0.00	0.00	0.00
9,500.0	90.44	90.00	7,062.4	-342.1	2,220.5	2,240.8	0.00	0.00	0.00
9,600.0	90.44	90.00	7,061.6	-342.1	2,320.5	2,340.5	0.00	0.00	0.00
9,700.0	90.44	90.00	7,060.9	-342.1	2,420.5	2,440.2	0.00	0.00	0.00
9,800.0	90.44	90.00	7,060.1	-342.1	2,520.5	2,539.8	0.00	0.00	0.00
9,900.0	90.44	90.00	7,059.3	-342.1	2,620.5	2,639.5	0.00	0.00	0.00
10,000.0	90.44	90.00	7,058.6	-342.1	2,720.5	2,739.2	0.00	0.00	0.00
10,100.0	90.44	90.00	7,057.8	-342.1	2,820.4	2,838.9	0.00	0.00	0.00
10,200.0	90.44	90.00	7,057.0	-342.1	2,920.4	2,938.5	0.00	0.00	0.00
10,300.0	90.44	90.00	7,056.3	-342.1	3,020.4	3,038.2	0.00	0.00	0.00
10,400.0	90.44	90.00	7,055.5	-342.1	3,120.4	3,137.9	0.00	0.00	0.00
10,500.0	90.44	90.00	7,054.7	-342.1	3,220.4	3,237.5	0.00	0.00	0.00
10,600.0	90.44	90.00	7,054.0	-342.1	3,320.4	3,337.2	0.00	0.00	0.00
10,700.0	90.44	90.00	7,053.2	-342.1	3,420.4	3,436.9	0.00	0.00	0.00
10,800.0	90.44	90.00	7,052.4	-342.1	3,520.4	3,536.5	0.00	0.00	0.00
10,900.0	90.44	90.00	7,051.7	-342.1	3,620.4	3,636.2	0.00	0.00	0.00
11,000.0	90.44	90.00	7,050.9	-342.1	3,720.4	3,735.9	0.00	0.00	0.00
11,100.0	90.44	90.00	7,050.1	-342.1	3,820.4	3,835.6	0.00	0.00	0.00
11,200.0	90.44	90.00	7,049.4	-342.1	3,920.4	3,935.2	0.00	0.00	0.00
11,300.0	90.44	90.00	7,048.6	-342.1	4,020.4	4,034.9	0.00	0.00	0.00
11,400.0	90.44	90.00	7,047.8	-342.1	4,120.4	4,134.6	0.00	0.00	0.00
11,500.0	90.44	90.00	7,047.0	-342.1	4,220.4	4,234.2	0.00	0.00	0.00
11,506.3	90.44	90.00	7,047.0	-342.1	4,226.7	4,240.5	0.00	0.00	0.00

Casing Points				
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,559.3	7,077.3	7"	7	7-1/2

<b>Database:</b>	landmark	<b>Local Co-ordinate Reference:</b>	Well Wiedeman 28F-202
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Project:</b>	SEC.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Site:</b>	Wiedeman 4N66W28F - East Pad	<b>North Reference:</b>	True
	Sec.28-T4N-R66W		
<b>Well:</b>	Wiedeman 28F-202	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (8-07-14)		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,727.5	3,706.0	PARKMAN				
4,380.7	4,353.0	SUSSEX				
4,815.9	4,784.0	SHANNON				
6,968.3	6,864.0	SHARON SPRINGS				
7,128.2	6,962.0	NIOBRARA A				
7,333.9	7,046.0	NIOBRARA B				
	7,134.0	NIOBRARA C				
	7,253.0	FT. HAYS				
	7,275.0	CODELL				

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,200.0	1,200.0	0.0	0.0	KOP #1
6,353.4	6,313.4	-342.1	-490.0	KOP #2
7,559.3	7,077.3	-342.1	279.8	End of Build



# **PETROLEUM DEVELOPMENT CORP Weld County CO**

**SEC.28-T4N-R66W**

**Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W**

**Wiedeman 28F-202**

**Wellbore #1**

**Plan #1 (8-07-14)**

## **Anticollision Report**

**11 August, 2014**





<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Wiedeman 28F-202
<b>Project:</b>	SEC.28-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Reference Site:</b>	Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Wiedeman 28F-202	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (8-07-14)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Plan #1 (8-07-14)		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD Interval 100.0ft	<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 1,000.0ft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma		

<b>Survey Tool Program</b>	<b>Date</b> 8/11/2014			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	11,505.4	Plan #1 (8-07-14) (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
<b>Offset Well - Wellbore - Design</b>						
Existing Wells Sec.28-T4N-R66W						
Cogburn 21-28 (Exist) - Wellbore #1 - Wellbore #1	8,637.7	7,041.0	401.7	341.3	6.647	CC, ES
Cogburn 21-28 (Exist) - Wellbore #1 - Wellbore #1	8,700.0	7,039.4	406.5	344.4	6.551	SF
McLeod 1-29B (Exist) - Wellbore #1 - Wellbore #1	6,426.7	6,429.8	191.9	159.0	5.834	CC, ES, SF
Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W						
Wiedeman 28E-432 - Wellbore #1 - Plan #1 (7-25-14)	1,200.0	1,200.0	91.1	85.9	17.618	CC, ES
Wiedeman 28E-432 - Wellbore #1 - Plan #1 (7-25-14)	1,300.0	1,297.6	93.4	87.8	16.706	SF
Wiedeman 28F-312 - Wellbore #1 - Plan #1 (7-25-14)	1,200.0	1,200.0	61.9	56.8	11.980	CC, ES
Wiedeman 28F-312 - Wellbore #1 - Plan #1 (7-25-14)	11,506.3	11,585.2	666.7	416.4	2.663	SF
Wiedeman 28F-412 - Wellbore #1 - Plan #1 (7-25-14)	1,200.0	1,200.0	32.8	27.6	6.342	CC, ES
Wiedeman 28F-412 - Wellbore #1 - Plan #1 (7-25-14)	11,506.3	11,680.0	370.8	161.4	1.771	SF
Wiedeman 4N66W28F - West Pad Sec.28-T4N-R66W						
Wiedeman 28F-214 - Wellbore #1 - Plan #1 (8-07-14)	2,057.4	2,033.0	252.2	243.3	28.262	CC, ES
Wiedeman 28F-214 - Wellbore #1 - Plan #1 (8-07-14)	6,400.0	6,371.6	428.7	396.7	13.382	SF
Wiedeman 28F-234 - Wellbore #1 - Plan #1 (8-07-14)	4,336.7	4,304.6	281.1	261.3	14.148	CC
Wiedeman 28F-234 - Wellbore #1 - Plan #1 (8-07-14)	4,600.0	4,567.2	281.8	260.5	13.280	ES
Wiedeman 28F-234 - Wellbore #1 - Plan #1 (8-07-14)	6,300.0	6,306.1	328.3	293.0	9.306	SF
Wiedeman 28F-304 - Wellbore #1 - Plan #1 (8-07-14)	5,960.6	5,963.0	151.7	125.2	5.719	CC
Wiedeman 28F-304 - Wellbore #1 - Plan #1 (8-07-14)	6,300.0	6,302.4	152.0	118.0	4.468	ES, SF
Wiedeman 28G-214 - Wellbore #1 - Plan #1 (8-07-14)	200.0	200.0	313.7	313.1	465.278	CC, ES
Wiedeman 28G-214 - Wellbore #1 - Plan #1 (8-07-14)	6,300.0	6,403.6	977.0	934.2	22.782	SF
Wiedeman 28G-314 - Wellbore #1 - Plan #1 (8-07-14)	366.3	367.3	306.9	305.5	215.476	CC
Wiedeman 28G-314 - Wellbore #1 - Plan #1 (8-07-14)	400.0	400.0	306.9	305.3	195.056	ES
Wiedeman 28G-314 - Wellbore #1 - Plan #1 (8-07-14)	6,300.0	6,377.3	811.7	770.8	19.847	SF

Offset Design													Existing Wells Sec.28-T4N-R66W - Cogburn 21-28 (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																					
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning																
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)																		
7,800.0	7,075.5	7,061.9	7,060.8	27.3	12.6	-92.11	59.9	1,357.8	928.8	888.9	39.92	23.267																	
7,900.0	7,074.7	7,059.4	7,058.3	29.5	12.6	-91.75	59.9	1,357.9	839.8	797.7	42.14	19.928																	

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

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Wiedeman 28F-202
<b>Project:</b>	SEC.28-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Reference Site:</b>	Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Wiedeman 28F-202	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (8-07-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Existing Wells Sec.28-T4N-R66W - Cogburn 21-28 (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	
8,000.0	7,073.9	7,056.9	7,055.8	31.8	12.6	-91.39	59.8	1,357.9	753.5	709.1	44.46	16.951	
8,100.0	7,073.2	7,054.4	7,053.3	34.2	12.6	-91.03	59.8	1,357.9	671.1	624.2	46.84	14.327	
8,200.0	7,072.4	7,051.9	7,050.8	36.7	12.6	-90.68	59.7	1,358.0	594.0	544.7	49.28	12.053	
8,300.0	7,071.6	7,049.4	7,048.3	39.2	12.6	-90.32	59.7	1,358.0	524.7	473.0	51.77	10.135	
8,400.0	7,070.9	7,046.9	7,045.8	41.7	12.6	-89.96	59.7	1,358.1	466.7	412.4	54.30	8.595	
8,500.0	7,070.1	7,044.4	7,043.3	44.3	12.6	-89.61	59.6	1,358.1	424.6	367.8	56.86	7.468	
8,600.0	7,069.3	7,041.9	7,040.8	46.9	12.6	-89.25	59.6	1,358.2	403.5	344.0	59.45	6.787	
8,637.7	7,069.0	7,041.0	7,039.9	47.9	12.6	-89.12	59.6	1,358.2	401.7	341.3	60.43	6.647 CC, ES	
8,700.0	7,068.6	7,039.4	7,038.3	49.5	12.6	-88.90	59.6	1,358.2	406.5	344.4	62.05	6.551 SF	
8,800.0	7,067.8	7,036.9	7,035.8	52.2	12.6	-88.55	59.5	1,358.2	433.2	368.5	64.67	6.699	
8,900.0	7,067.0	7,034.5	7,033.4	54.8	12.6	-88.19	59.5	1,358.3	479.7	412.4	67.31	7.127	
9,000.0	7,066.2	7,032.0	7,030.9	57.5	12.6	-87.84	59.4	1,358.3	540.9	470.9	69.96	7.731	
9,100.0	7,065.5	7,029.5	7,028.4	60.2	12.6	-87.49	59.4	1,358.4	612.3	539.7	72.61	8.432	
9,200.0	7,064.7	7,027.0	7,025.9	62.9	12.6	-87.14	59.4	1,358.4	690.9	615.6	75.28	9.178	
9,300.0	7,063.9	7,024.6	7,023.5	65.6	12.6	-86.78	59.3	1,358.5	774.4	696.5	77.95	9.935	
9,400.0	7,063.2	7,022.1	7,021.0	68.3	12.6	-86.43	59.3	1,358.5	861.4	780.8	80.62	10.685	
9,500.0	7,062.4	7,019.7	7,018.6	71.0	12.6	-86.09	59.2	1,358.5	951.0	867.7	83.29	11.417	

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Wiedeman 28F-202
<b>Project:</b>	SEC.28-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Reference Site:</b>	Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Wiedeman 28F-202	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (8-07-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Existing Wells Sec.28-T4N-R66W - McLeod 1-29B (Exist) - Wellbore #1 - Wellbore #1														Offset Site Error:	0.0 ft
Survey Program: 576-NS-GYRO-MS														Offset Well Error:	0.0 ft
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		
900.0	900.0	931.4	930.7	1.9	1.7	-76.18	238.2	-968.5	998.2	994.6	3.61	276.227			
1,000.0	1,000.0	1,038.9	1,038.1	2.1	2.0	-75.97	240.7	-962.8	993.7	989.6	4.11	241.490			
1,100.0	1,100.0	1,142.6	1,141.6	2.4	2.3	-75.73	243.2	-956.7	988.5	983.9	4.61	214.435			
1,200.0	1,200.0	1,245.1	1,243.9	2.6	2.5	-75.49	245.9	-950.2	983.1	978.0	5.10	192.683			
1,300.0	1,300.0	1,346.0	1,344.5	2.8	2.8	49.92	249.6	-943.4	976.3	970.7	5.56	175.539			
1,400.0	1,399.8	1,445.5	1,443.6	3.0	3.1	50.63	253.6	-936.5	967.3	961.3	6.00	161.163			
1,500.0	1,499.5	1,541.7	1,539.6	3.2	3.3	51.38	255.0	-930.5	956.2	949.8	6.44	148.412			
1,600.0	1,598.7	1,633.3	1,631.1	3.4	3.6	52.19	255.2	-925.6	943.6	936.7	6.88	137.088			
1,700.0	1,697.8	1,727.8	1,725.5	3.6	3.8	52.87	254.6	-921.6	930.9	923.6	7.35	126.600			
1,800.0	1,796.8	1,832.0	1,829.6	3.9	4.1	53.57	253.1	-917.3	918.3	910.5	7.85	116.963			
1,900.0	1,895.9	1,935.3	1,932.8	4.2	4.3	54.23	250.3	-912.7	905.0	896.7	8.35	108.429			
2,000.0	1,994.9	2,031.7	2,029.0	4.5	4.5	54.81	247.0	-908.5	891.8	882.9	8.83	101.044			
2,100.0	2,094.0	2,126.2	2,123.4	4.8	4.7	55.33	242.9	-905.1	879.0	869.7	9.29	94.591			
2,200.0	2,193.0	2,217.9	2,214.9	5.1	4.9	55.81	238.6	-902.5	866.9	857.2	9.75	88.909			
2,300.0	2,292.1	2,314.5	2,311.4	5.4	5.1	56.37	234.8	-900.3	855.6	845.4	10.24	83.592			
2,400.0	2,391.1	2,409.3	2,406.1	5.7	5.3	57.00	232.1	-897.9	844.6	833.9	10.74	78.632			
2,500.0	2,490.2	2,516.1	2,512.9	6.0	5.6	57.76	229.6	-895.0	833.8	822.5	11.30	73.801			
2,600.0	2,589.2	2,623.1	2,619.7	6.3	5.8	58.46	225.4	-891.5	821.9	810.0	11.85	69.366			
2,700.0	2,688.3	2,728.2	2,724.6	6.6	6.1	59.04	219.4	-887.8	809.2	796.8	12.39	65.336			
2,800.0	2,787.3	2,830.5	2,826.6	7.0	6.3	59.54	212.1	-884.2	796.0	783.1	12.91	61.643			
2,900.0	2,886.4	2,936.0	2,931.6	7.3	6.5	60.01	203.6	-880.4	782.5	769.0	13.45	58.175			
3,000.0	2,985.4	3,043.9	3,039.0	7.6	6.8	60.46	193.8	-875.5	767.6	753.6	14.00	54.815			
3,100.0	3,084.5	3,145.6	3,140.1	8.0	7.0	60.85	183.6	-870.5	752.1	737.6	14.55	51.700			
3,200.0	3,183.5	3,245.8	3,239.6	8.3	7.2	61.28	173.7	-865.2	736.4	721.3	15.10	48.774			
3,300.0	3,282.5	3,352.3	3,345.4	8.6	7.5	61.79	163.4	-858.9	720.2	704.5	15.68	45.944			
3,400.0	3,381.6	3,468.8	3,460.9	9.0	7.8	62.39	151.2	-849.9	702.1	685.8	16.29	43.098			
3,500.0	3,480.6	3,569.9	3,561.0	9.3	8.1	62.94	139.9	-840.6	682.5	665.7	16.87	40.448			
3,600.0	3,579.7	3,665.1	3,655.2	9.6	8.3	63.46	128.9	-832.0	663.0	645.5	17.44	38.010			
3,700.0	3,678.7	3,762.0	3,750.9	10.0	8.6	63.81	116.1	-825.0	644.2	626.1	18.01	35.776			
3,800.0	3,777.8	3,873.3	3,860.4	10.3	8.9	63.96	97.9	-816.7	623.7	605.1	18.59	33.543			
3,900.0	3,876.8	3,966.8	3,952.3	10.7	9.1	64.06	82.0	-809.4	602.7	583.6	19.14	31.485			
4,000.0	3,975.9	4,054.8	4,039.0	11.0	9.3	64.26	68.5	-803.2	583.1	563.5	19.68	29.627			
4,100.0	4,074.9	4,156.0	4,139.0	11.3	9.6	64.60	54.1	-796.2	564.2	543.9	20.26	27.842			
4,200.0	4,174.0	4,259.6	4,241.0	11.7	9.9	64.96	38.7	-788.0	544.1	523.3	20.86	26.087			
4,300.0	4,273.0	4,349.4	4,329.7	12.0	10.1	65.39	26.4	-781.1	524.8	503.4	21.42	24.497			
4,400.0	4,372.1	4,448.5	4,427.8	12.4	10.4	66.02	13.9	-773.3	506.1	484.1	22.02	22.982			
4,500.0	4,471.1	4,549.0	4,527.1	12.7	10.7	66.66	0.7	-765.3	486.9	464.3	22.63	21.522			
4,600.0	4,570.2	4,648.2	4,625.0	13.1	10.9	67.26	-12.9	-757.6	467.7	444.4	23.23	20.136			
4,700.0	4,669.2	4,751.2	4,726.6	13.4	11.2	67.91	-27.7	-749.0	447.7	423.9	23.84	18.781			
4,800.0	4,768.3	4,854.5	4,828.3	13.7	11.5	68.73	-42.6	-739.0	426.6	402.1	24.46	17.437			
4,900.0	4,867.3	4,953.9	4,926.0	14.1	11.8	69.53	-57.9	-728.7	404.5	379.5	25.08	16.130			
5,000.0	4,966.4	5,046.5	5,017.0	14.4	12.1	70.30	-72.4	-719.6	382.9	357.2	25.68	14.910			
5,100.0	5,065.4	5,142.7	5,111.8	14.8	12.3	71.30	-86.1	-710.8	362.6	336.3	26.29	13.790			
5,200.0	5,164.5	5,242.9	5,210.5	15.1	12.6	72.47	-100.6	-701.2	342.0	315.1	26.92	12.701			
5,300.0	5,263.5	5,339.1	5,305.1	15.5	12.9	73.70	-114.9	-691.9	321.2	293.6	27.55	11.658			
5,400.0	5,362.6	5,435.7	5,400.4	15.8	13.2	75.16	-128.7	-682.8	301.2	273.0	28.18	10.687			
5,500.0	5,461.6	5,530.2	5,493.5	16.2	13.5	76.78	-141.9	-674.3	281.9	253.1	28.81	9.785			
5,600.0	5,560.8	5,621.1	5,583.5	16.5	13.7	78.44	-152.8	-666.9	264.8	235.4	29.40	9.007			
5,700.0	5,660.2	5,714.5	5,676.2	16.7	14.0	80.03	-161.0	-659.8	251.3	221.4	29.91	8.400			
5,800.0	5,760.0	5,809.5	5,770.8	16.9	14.2	81.26	-167.8	-653.2	240.3	209.9	30.38	7.908			
5,900.0	5,860.0	5,905.9	5,866.8	17.0	14.5	81.58	-174.2	-648.3	231.5	200.7	30.81	7.513			

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

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Wiedeman 28F-202
<b>Project:</b>	SEC.28-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Reference Site:</b>	Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Wiedeman 28F-202	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (8-07-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Existing Wells Sec.28-T4N-R66W - McLeod 1-29B (Exist) - Wellbore #1 - Wellbore #1													Offset Site Error: 0.0 ft
Survey Program: 576-NS-GYRO-MS													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
6,000.0	5,960.0	6,005.1	5,965.8	17.2	14.8	-43.61	-180.4	-644.0	223.9	195.7	28.22	7.937	
6,100.0	6,060.0	6,106.0	6,066.3	17.3	15.0	-44.11	-187.3	-640.0	216.2	187.5	28.68	7.539	
6,200.0	6,160.0	6,207.2	6,167.1	17.5	15.3	-44.65	-194.8	-635.5	207.8	178.7	29.15	7.130	
6,300.0	6,260.0	6,305.6	6,265.1	17.6	15.6	-45.05	-201.6	-630.7	199.4	169.8	29.61	6.735	
6,400.0	6,359.9	6,404.6	6,363.8	17.8	15.8	-135.89	-208.2	-626.0	192.4	159.6	32.84	5.859	
6,426.7	6,386.6	6,429.8	6,388.9	17.8	15.9	-136.45	-209.8	-625.0	191.9	159.0	32.90	5.834 CC, ES, SF	
6,500.0	6,459.1	6,498.7	6,457.7	17.8	16.1	-138.62	-213.5	-622.8	195.4	162.5	32.96	5.929	
6,600.0	6,555.7	6,593.5	6,552.4	17.8	16.3	-142.59	-217.0	-620.4	211.1	178.5	32.62	6.472	
6,700.0	6,648.2	6,684.5	6,643.4	17.7	16.6	-146.86	-219.4	-618.7	239.8	208.0	31.78	7.545	
6,800.0	6,735.0	6,770.5	6,729.3	17.6	16.8	-150.69	-221.3	-617.5	281.6	251.2	30.45	9.248	
6,900.0	6,814.5	6,849.7	6,808.5	17.5	17.0	-153.56	-222.6	-616.6	336.0	307.2	28.76	11.682	
7,000.0	6,885.5	6,922.1	6,880.9	17.5	17.2	-155.43	-223.7	-615.8	401.4	374.5	26.87	14.942	
7,100.0	6,946.7	6,985.0	6,943.8	17.6	17.3	-156.10	-224.6	-615.0	476.5	451.4	25.02	19.042	
7,200.0	6,997.0	7,035.5	6,994.3	17.9	17.5	-155.12	-225.3	-614.3	559.7	536.0	23.68	23.640	
7,300.0	7,035.7	7,074.4	7,033.2	18.7	17.6	-151.70	-225.7	-613.9	649.6	626.0	23.60	27.519	
7,400.0	7,062.0	7,101.1	7,059.9	19.9	17.6	-143.22	-225.9	-613.6	744.3	717.9	26.43	28.160	
7,500.0	7,075.5	7,115.3	7,074.1	21.4	17.7	-120.32	-226.0	-613.4	842.1	807.1	35.02	24.048	
7,600.0	7,077.0	7,117.9	7,076.7	23.2	17.7	-91.72	-226.0	-613.4	941.2	900.7	40.48	23.249	

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Wiedeman 28F-202
<b>Project:</b>	SEC.28-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Reference Site:</b>	Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Wiedeman 28F-202	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (8-07-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W - Wiedeman 28E-432 - Wellbore #1 - Plan #1 (7-													Offset Site Error:	0.0ft
Survey Program: 0-MWD													Offset Well Error:	0.0ft
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	0.00	91.1	0.0	91.1					
100.0	100.0	100.0	100.0	0.1	0.1	0.00	91.1	0.0	91.1	90.9	0.22	405.205		
200.0	200.0	200.0	200.0	0.3	0.3	0.00	91.1	0.0	91.1	90.4	0.67	135.068		
300.0	300.0	300.0	300.0	0.6	0.6	0.00	91.1	0.0	91.1	90.0	1.12	81.041		
400.0	400.0	400.0	400.0	0.8	0.8	0.00	91.1	0.0	91.1	89.5	1.57	57.886		
500.0	500.0	500.0	500.0	1.0	1.0	0.00	91.1	0.0	91.1	89.1	2.02	45.023		
600.0	600.0	600.0	600.0	1.2	1.2	0.00	91.1	0.0	91.1	88.6	2.47	36.837		
700.0	700.0	700.0	700.0	1.5	1.5	0.00	91.1	0.0	91.1	88.2	2.92	31.170		
800.0	800.0	800.0	800.0	1.7	1.7	0.00	91.1	0.0	91.1	87.7	3.37	27.014		
900.0	900.0	900.0	900.0	1.9	1.9	0.00	91.1	0.0	91.1	87.3	3.82	23.836		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	0.00	91.1	0.0	91.1	86.8	4.27	21.327		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	0.00	91.1	0.0	91.1	86.4	4.72	19.295		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	0.00	91.1	0.0	91.1	85.9	5.17	17.618 CC, ES		
1,300.0	1,300.0	1,297.6	1,297.5	2.8	2.8	125.08	92.3	-1.1	93.4	87.8	5.59	16.706 SF		
1,400.0	1,399.8	1,394.8	1,394.7	3.0	3.0	125.53	96.2	-4.3	100.3	94.3	5.99	16.731		
1,500.0	1,499.5	1,491.5	1,491.0	3.2	3.2	126.13	102.4	-9.5	111.8	105.4	6.41	17.431		
1,600.0	1,598.7	1,587.2	1,586.0	3.4	3.5	126.76	111.1	-16.8	127.8	121.0	6.85	18.658		
1,700.0	1,697.8	1,682.4	1,680.2	3.6	3.7	127.09	122.1	-26.0	147.2	139.9	7.32	20.112		
1,800.0	1,796.8	1,780.4	1,776.8	3.9	4.0	127.06	134.3	-36.2	167.5	159.7	7.81	21.439		
1,900.0	1,895.9	1,878.3	1,873.4	4.2	4.3	127.05	146.5	-46.4	187.7	179.4	8.32	22.566		
2,000.0	1,994.9	1,976.2	1,970.0	4.5	4.6	127.03	158.8	-56.7	208.0	199.2	8.84	23.524		
2,100.0	2,094.0	2,074.1	2,066.7	4.8	4.9	127.02	171.0	-66.9	228.3	218.9	9.38	24.344		
2,200.0	2,193.0	2,172.1	2,163.3	5.1	5.2	127.01	183.2	-77.1	248.5	238.6	9.92	25.051		
2,300.0	2,292.1	2,270.0	2,259.9	5.4	5.6	127.00	195.4	-87.3	268.8	258.3	10.47	25.663		
2,400.0	2,391.1	2,367.9	2,356.5	5.7	5.9	126.99	207.6	-97.6	289.0	278.0	11.03	26.196		
2,500.0	2,490.2	2,465.9	2,453.2	6.0	6.2	126.98	219.8	-107.8	309.3	297.7	11.60	26.663		
2,600.0	2,589.2	2,563.8	2,549.8	6.3	6.6	126.98	232.0	-118.0	329.5	317.4	12.17	27.075		
2,700.0	2,688.3	2,661.7	2,646.4	6.6	6.9	126.97	244.2	-128.2	349.8	337.0	12.75	27.440		
2,800.0	2,787.3	2,759.6	2,743.0	7.0	7.2	126.97	256.4	-138.5	370.0	356.7	13.33	27.765		
2,900.0	2,886.4	2,857.6	2,839.7	7.3	7.6	126.97	268.6	-148.7	390.3	376.4	13.91	28.055		
3,000.0	2,985.4	2,955.5	2,936.3	7.6	7.9	126.96	280.8	-158.9	410.6	396.1	14.50	28.316		
3,100.0	3,084.5	3,053.4	3,032.9	8.0	8.3	126.96	293.1	-169.1	430.8	415.7	15.09	28.552		
3,200.0	3,183.5	3,151.3	3,129.5	8.3	8.7	126.96	305.3	-179.3	451.1	435.4	15.68	28.765		
3,300.0	3,282.5	3,249.3	3,226.1	8.6	9.0	126.95	317.5	-189.6	471.3	455.0	16.28	28.959		
3,400.0	3,381.6	3,347.2	3,322.8	9.0	9.4	126.95	329.7	-199.8	491.6	474.7	16.87	29.136		
3,500.0	3,480.6	3,445.1	3,419.4	9.3	9.7	126.95	341.9	-210.0	511.8	494.4	17.47	29.298		
3,600.0	3,579.7	3,543.1	3,516.0	9.6	10.1	126.95	354.1	-220.2	532.1	514.0	18.07	29.446		
3,700.0	3,678.7	3,641.0	3,612.6	10.0	10.4	126.94	366.3	-230.5	552.3	533.7	18.67	29.583		
3,800.0	3,777.8	3,738.9	3,709.3	10.3	10.8	126.94	378.5	-240.7	572.6	553.3	19.27	29.709		
3,900.0	3,876.8	3,836.8	3,805.9	10.7	11.2	126.94	390.7	-250.9	592.8	573.0	19.88	29.826		
4,000.0	3,975.9	3,934.8	3,902.5	11.0	11.5	126.94	402.9	-261.1	613.1	592.6	20.48	29.934		
4,100.0	4,074.9	4,032.7	3,999.1	11.3	11.9	126.94	415.2	-271.4	633.4	612.3	21.09	30.035		
4,200.0	4,174.0	4,130.6	4,095.8	11.7	12.2	126.94	427.4	-281.6	653.6	631.9	21.69	30.129		
4,300.0	4,273.0	4,228.5	4,192.4	12.0	12.6	126.93	439.6	-291.8	673.9	651.6	22.30	30.216		
4,400.0	4,372.1	4,326.5	4,289.0	12.4	13.0	126.93	451.8	-302.0	694.1	671.2	22.91	30.298		
4,500.0	4,471.1	4,424.4	4,385.6	12.7	13.3	126.93	464.0	-312.3	714.4	690.9	23.52	30.375		
4,600.0	4,570.2	4,522.3	4,482.3	13.1	13.7	126.93	476.2	-322.5	734.6	710.5	24.13	30.446		
4,700.0	4,669.2	4,620.3	4,578.9	13.4	14.1	126.93	488.4	-332.7	754.9	730.2	24.74	30.514		
4,800.0	4,768.3	4,718.2	4,675.5	13.7	14.4	126.93	500.6	-342.9	775.1	749.8	25.35	30.578		
4,900.0	4,867.3	4,816.1	4,772.1	14.1	14.8	126.93	512.8	-353.1	795.4	769.4	25.96	30.638		
5,000.0	4,966.4	4,914.0	4,868.7	14.4	15.2	126.93	525.0	-363.4	815.7	789.1	26.57	30.695		

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

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Wiedeman 28F-202
<b>Project:</b>	SEC.28-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Reference Site:</b>	Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Wiedeman 28F-202	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (8-07-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design      Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W - Wiedeman 28E-432 - Wellbore #1 - Plan #1 (7-													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
5,100.0	5,065.4	5,012.0	4,965.4	14.8	15.5	126.93	537.3	-373.6	835.9	808.7	27.19	30.748		
5,200.0	5,164.5	5,109.9	5,062.0	15.1	15.9	126.93	549.5	-383.8	856.2	828.4	27.80	30.799		
5,300.0	5,263.5	5,207.8	5,158.6	15.5	16.3	126.92	561.7	-394.0	876.4	848.0	28.41	30.847		
5,400.0	5,362.6	5,305.7	5,255.2	15.8	16.6	126.92	573.9	-404.3	896.7	867.7	29.03	30.893		
5,500.0	5,461.6	5,403.7	5,351.9	16.2	17.0	126.92	586.1	-414.5	916.9	887.3	29.64	30.936		
5,600.0	5,560.8	5,501.7	5,448.5	16.5	17.4	127.07	598.3	-424.7	936.9	906.6	30.26	30.958		
5,700.0	5,660.2	5,600.0	5,545.5	16.7	17.7	127.19	610.6	-435.0	955.0	924.1	30.83	30.973		
5,800.0	5,760.0	5,698.5	5,642.8	16.9	18.1	127.11	622.9	-445.3	971.0	939.6	31.36	30.958		
5,900.0	5,860.0	5,797.2	5,740.1	17.0	18.5	126.84	635.2	-455.6	985.0	953.1	31.86	30.918		
6,000.0	5,960.0	5,897.0	5,838.7	17.2	18.8	1.39	647.6	-466.0	997.4	965.8	31.58	31.581		

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Wiedeman 28F-202
<b>Project:</b>	SEC.28-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Reference Site:</b>	Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Wiedeman 28F-202	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (8-07-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W - Wiedeman 28F-312 - Wellbore #1 - Plan #1 (7-													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	
0.0	0.0	0.0	0.0	0.0	0.0	0.00	61.9	0.0	61.9					
100.0	100.0	100.0	100.0	0.1	0.1	0.00	61.9	0.0	61.9	61.7	0.22	275.539		
200.0	200.0	200.0	200.0	0.3	0.3	0.00	61.9	0.0	61.9	61.3	0.67	91.846		
300.0	300.0	300.0	300.0	0.6	0.6	0.00	61.9	0.0	61.9	60.8	1.12	55.108		
400.0	400.0	400.0	400.0	0.8	0.8	0.00	61.9	0.0	61.9	60.4	1.57	39.363		
500.0	500.0	500.0	500.0	1.0	1.0	0.00	61.9	0.0	61.9	59.9	2.02	30.615		
600.0	600.0	600.0	600.0	1.2	1.2	0.00	61.9	0.0	61.9	59.5	2.47	25.049		
700.0	700.0	700.0	700.0	1.5	1.5	0.00	61.9	0.0	61.9	59.0	2.92	21.195		
800.0	800.0	800.0	800.0	1.7	1.7	0.00	61.9	0.0	61.9	58.6	3.37	18.369		
900.0	900.0	900.0	900.0	1.9	1.9	0.00	61.9	0.0	61.9	58.1	3.82	16.208		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	0.00	61.9	0.0	61.9	57.7	4.27	14.502		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	0.00	61.9	0.0	61.9	57.2	4.72	13.121		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	0.00	61.9	0.0	61.9	56.8	5.17	11.980 CC, ES		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	126.21	61.9	0.0	62.9	57.4	5.60	11.247		
1,400.0	1,399.8	1,399.8	1,399.8	3.0	3.0	129.81	61.9	0.0	66.2	60.2	6.01	11.017		
1,500.0	1,499.5	1,498.7	1,498.6	3.2	3.2	133.72	62.7	-1.5	72.6	66.2	6.41	11.319		
1,600.0	1,598.7	1,597.3	1,597.1	3.4	3.5	136.29	65.1	-6.0	82.8	76.0	6.83	12.127		
1,700.0	1,697.8	1,695.7	1,695.1	3.6	3.7	137.04	69.1	-13.5	95.2	87.9	7.27	13.089		
1,800.0	1,796.8	1,794.0	1,792.8	3.9	3.9	135.91	74.5	-23.9	108.5	100.7	7.74	14.008		
1,900.0	1,895.9	1,893.0	1,891.0	4.2	4.2	134.54	80.6	-35.2	122.1	113.9	8.24	14.822		
2,000.0	1,994.9	1,992.1	1,989.2	4.5	4.4	133.45	86.6	-46.6	135.8	127.1	8.75	15.518		
2,100.0	2,094.0	2,091.1	2,087.3	4.8	4.7	132.56	92.6	-58.0	149.6	140.3	9.28	16.117		
2,200.0	2,193.0	2,190.1	2,185.5	5.1	5.0	131.81	98.6	-69.4	163.3	153.5	9.82	16.633		
2,300.0	2,292.1	2,289.2	2,283.7	5.4	5.3	131.19	104.6	-80.8	177.1	166.8	10.37	17.081		
2,400.0	2,391.1	2,388.2	2,381.9	5.7	5.5	130.65	110.6	-92.2	191.0	180.0	10.93	17.471		
2,500.0	2,490.2	2,487.2	2,480.1	6.0	5.8	130.19	116.7	-103.5	204.8	193.3	11.50	17.814		
2,600.0	2,589.2	2,586.2	2,578.3	6.3	6.1	129.78	122.7	-114.9	218.6	206.5	12.07	18.115		
2,700.0	2,688.3	2,685.3	2,676.5	6.6	6.4	129.43	128.7	-126.3	232.5	219.8	12.65	18.382		
2,800.0	2,787.3	2,784.3	2,774.6	7.0	6.7	129.11	134.7	-137.7	246.3	233.1	13.23	18.619		
2,900.0	2,886.4	2,883.3	2,872.8	7.3	7.0	128.83	140.7	-149.1	260.2	246.4	13.82	18.831		
3,000.0	2,985.4	2,982.3	2,971.0	7.6	7.3	128.57	146.8	-160.5	274.0	259.6	14.41	19.022		
3,100.0	3,084.5	3,081.4	3,069.2	8.0	7.7	128.34	152.8	-171.9	287.9	272.9	15.00	19.193		
3,200.0	3,183.5	3,180.4	3,167.4	8.3	8.0	128.13	158.8	-183.2	301.8	286.2	15.60	19.349		
3,300.0	3,282.5	3,279.4	3,265.6	8.6	8.3	127.94	164.8	-194.6	315.7	299.5	16.20	19.489		
3,400.0	3,381.6	3,378.5	3,363.8	9.0	8.6	127.77	170.8	-206.0	329.6	312.8	16.80	19.618		
3,500.0	3,480.6	3,477.5	3,462.0	9.3	8.9	127.61	176.8	-217.4	343.4	326.0	17.40	19.735		
3,600.0	3,579.7	3,576.5	3,560.1	9.6	9.2	127.46	182.9	-228.8	357.3	339.3	18.01	19.843		
3,700.0	3,678.7	3,675.5	3,658.3	10.0	9.5	127.32	188.9	-240.2	371.2	352.6	18.62	19.942		
3,800.0	3,777.8	3,774.6	3,756.5	10.3	9.9	127.20	194.9	-251.6	385.1	365.9	19.22	20.033		
3,900.0	3,876.8	3,873.6	3,854.7	10.7	10.2	127.08	200.9	-262.9	399.0	379.2	19.83	20.117		
4,000.0	3,975.9	3,972.6	3,952.9	11.0	10.5	126.97	206.9	-274.3	412.9	392.5	20.45	20.196		
4,100.0	4,074.9	4,071.6	4,051.1	11.3	10.8	126.86	212.9	-285.7	426.8	405.7	21.06	20.268		
4,200.0	4,174.0	4,170.7	4,149.3	11.7	11.1	126.77	219.0	-297.1	440.7	419.0	21.67	20.336		
4,300.0	4,273.0	4,269.7	4,247.4	12.0	11.4	126.68	225.0	-308.5	454.6	432.3	22.29	20.399		
4,400.0	4,372.1	4,368.7	4,345.6	12.4	11.8	126.59	231.0	-319.9	468.5	445.6	22.90	20.458		
4,500.0	4,471.1	4,467.7	4,443.8	12.7	12.1	126.51	237.0	-331.2	482.4	458.9	23.52	20.513		
4,600.0	4,570.2	4,566.8	4,542.0	13.1	12.4	126.44	243.0	-342.6	496.3	472.2	24.13	20.565		
4,700.0	4,669.2	4,665.8	4,640.2	13.4	12.7	126.36	249.1	-354.0	510.2	485.5	24.75	20.614		
4,800.0	4,768.3	4,764.8	4,738.4	13.7	13.1	126.30	255.1	-365.4	524.1	498.7	25.37	20.659		
4,900.0	4,867.3	4,863.9	4,836.6	14.1	13.4	126.23	261.1	-376.8	538.0	512.0	25.99	20.702		
5,000.0	4,966.4	4,962.9	4,934.7	14.4	13.7	126.17	267.1	-388.2	551.9	525.3	26.61	20.743		

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



<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Wiedeman 28F-202
<b>Project:</b>	SEC.28-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Reference Site:</b>	Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Wiedeman 28F-202	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (8-07-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W - Wiedeman 28F-312 - Wellbore #1 - Plan #1 (7- Survey Program: 0-MWD														Offset Site Error:	0.0 ft
Reference Offset Semi Major Axis														Offset Well Error:	0.0 ft
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		
5,100.0	5,065.4	5,061.9	5,032.9	14.8	14.0	126.11	273.1	-399.6	565.8	538.6	27.23	20.782			
5,200.0	5,164.5	5,160.9	5,131.1	15.1	14.3	126.06	279.1	-410.9	579.7	551.9	27.85	20.818			
5,300.0	5,263.5	5,260.0	5,229.3	15.5	14.7	126.00	285.2	-422.3	593.6	565.2	28.47	20.853			
5,400.0	5,362.6	5,359.0	5,327.5	15.8	15.0	125.95	291.2	-433.7	607.5	578.5	29.09	20.885			
5,500.0	5,461.6	5,458.0	5,425.7	16.2	15.3	125.91	297.2	-445.1	621.5	591.7	29.71	20.917			
5,600.0	5,560.8	5,557.1	5,523.9	16.5	15.6	125.94	303.2	-456.5	635.1	604.7	30.33	20.939			
5,700.0	5,660.2	5,656.3	5,622.3	16.7	16.0	125.83	309.2	-467.9	646.8	615.9	30.89	20.942			
5,800.0	5,760.0	5,766.7	5,731.9	16.9	16.2	125.52	315.1	-478.9	655.8	624.5	31.37	20.909			
5,900.0	5,860.0	5,878.3	5,843.2	17.0	16.5	125.21	318.9	-486.2	661.1	629.3	31.77	20.810			
6,000.0	5,960.0	5,990.2	5,955.1	17.2	16.7	0.03	320.8	-489.7	662.9	633.9	28.94	22.905			
6,100.0	6,060.0	6,095.1	6,060.0	17.3	16.8	0.00	320.9	-490.0	663.0	633.7	29.29	22.634			
6,200.0	6,160.0	6,195.1	6,160.0	17.5	17.0	0.00	320.9	-490.0	663.0	633.3	29.66	22.354			
6,300.0	6,260.0	6,295.1	6,260.0	17.6	17.2	0.00	320.9	-490.0	663.0	633.0	30.03	22.079			
6,351.0	6,311.0	6,346.1	6,311.0	17.7	17.3	-90.07	320.9	-490.0	663.0	629.7	33.30	19.909			
6,400.0	6,359.9	6,395.1	6,359.9	17.8	17.3	-90.12	320.9	-490.0	663.0	629.5	33.47	19.811			
6,500.0	6,459.1	6,495.2	6,460.0	17.8	17.5	-91.00	320.9	-487.6	663.1	629.4	33.68	19.686			
6,600.0	6,555.7	6,596.9	6,560.5	17.8	17.5	-91.96	320.9	-472.9	663.4	629.7	33.72	19.673			
6,700.0	6,648.2	6,700.1	6,659.7	17.7	17.5	-92.90	320.9	-444.5	663.9	630.2	33.63	19.743			
6,800.0	6,735.0	6,804.9	6,755.5	17.6	17.4	-93.79	320.9	-402.2	664.5	631.0	33.47	19.853			
6,900.0	6,814.5	6,911.3	6,845.9	17.5	17.3	-94.61	320.9	-346.3	665.2	631.8	33.38	19.929			
7,000.0	6,885.5	7,019.1	6,928.7	17.5	17.3	-95.36	320.9	-277.4	665.9	632.4	33.51	19.872			
7,100.0	6,946.7	7,128.3	7,001.8	17.6	17.4	-96.01	320.9	-196.4	666.7	632.6	34.06	19.573			
7,200.0	6,997.0	7,238.7	7,063.3	17.9	17.9	-96.56	320.9	-104.8	667.4	632.2	35.21	18.955			
7,300.0	7,035.7	7,350.1	7,111.3	18.7	18.8	-96.98	320.9	-4.4	668.0	630.9	37.07	18.020			
7,400.0	7,062.0	7,462.2	7,144.4	19.9	20.1	-97.26	320.9	102.6	668.4	628.7	39.68	16.845			
7,500.0	7,075.5	7,574.8	7,161.5	21.4	21.8	-97.41	320.9	213.8	668.6	625.7	42.92	15.578			
7,600.0	7,077.0	7,682.6	7,163.3	23.2	23.7	-97.42	320.9	321.5	668.6	622.1	46.55	14.362			
7,700.0	7,076.2	7,782.6	7,162.1	25.2	25.6	-97.38	320.9	421.5	668.6	618.1	50.43	13.257			
7,800.0	7,075.5	7,882.6	7,160.9	27.3	27.7	-97.35	320.9	521.5	668.5	613.9	54.59	12.245			
7,900.0	7,074.7	7,982.6	7,159.8	29.5	29.9	-97.31	320.9	621.5	668.5	609.5	58.99	11.332			
8,000.0	7,073.9	8,082.6	7,158.6	31.8	32.2	-97.28	320.9	721.5	668.4	604.8	63.57	10.514			
8,100.0	7,073.2	8,182.6	7,157.4	34.2	34.6	-97.24	320.9	821.5	668.3	600.0	68.30	9.785			
8,200.0	7,072.4	8,282.6	7,156.2	36.7	37.1	-97.20	320.9	921.5	668.3	595.1	73.15	9.135			
8,300.0	7,071.6	8,382.6	7,155.0	39.2	39.5	-97.17	320.9	1,021.5	668.2	590.1	78.10	8.556			
8,400.0	7,070.9	8,482.6	7,153.8	41.7	42.1	-97.13	320.9	1,121.5	668.2	585.1	83.13	8.038			
8,500.0	7,070.1	8,582.6	7,152.6	44.3	44.6	-97.10	320.9	1,221.5	668.1	579.9	88.23	7.573			
8,600.0	7,069.3	8,682.6	7,151.4	46.9	47.2	-97.06	320.9	1,321.5	668.1	574.7	93.38	7.155			
8,700.0	7,068.6	8,782.6	7,150.3	49.5	49.8	-97.03	320.9	1,421.5	668.0	569.5	98.58	6.777			
8,800.0	7,067.8	8,882.6	7,149.1	52.2	52.5	-96.99	320.9	1,521.4	668.0	564.2	103.82	6.434			
8,900.0	7,067.0	8,982.6	7,147.9	54.8	55.1	-96.95	320.9	1,621.4	667.9	558.8	109.09	6.123			
9,000.0	7,066.2	9,082.6	7,146.7	57.5	57.8	-96.92	320.9	1,721.4	667.9	553.5	114.39	5.838			
9,100.0	7,065.5	9,182.6	7,145.5	60.2	60.4	-96.88	320.9	1,821.4	667.8	548.1	119.72	5.578			
9,200.0	7,064.7	9,282.6	7,144.3	62.9	63.1	-96.85	320.9	1,921.4	667.8	542.7	125.08	5.339			
9,300.0	7,063.9	9,382.6	7,143.1	65.6	65.8	-96.81	320.9	2,021.4	667.7	537.3	130.45	5.119			
9,400.0	7,063.2	9,482.6	7,142.0	68.3	68.5	-96.78	320.9	2,121.4	667.7	531.8	135.84	4.915			
9,500.0	7,062.4	9,582.6	7,140.8	71.0	71.2	-96.74	320.9	2,221.4	667.6	526.4	141.24	4.727			
9,600.0	7,061.6	9,682.6	7,139.6	73.7	74.0	-96.70	320.9	2,321.4	667.6	520.9	146.67	4.552			
9,700.0	7,060.9	9,782.6	7,138.4	76.4	76.7	-96.67	320.9	2,421.4	667.5	515.4	152.10	4.389			
9,800.0	7,060.1	9,882.6	7,137.2	79.2	79.4	-96.63	320.9	2,521.4	667.5	510.0	157.54	4.237			
9,900.0	7,059.3	9,982.6	7,136.0	81.9	82.2	-96.60	320.9	2,621.4	667.4	504.4	163.00	4.095			

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



<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Wiedeman 28F-202
<b>Project:</b>	SEC.28-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Reference Site:</b>	Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Wiedeman 28F-202	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (8-07-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design      Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W - Wiedeman 28F-312 - Wellbore #1 - Plan #1 (7-													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	
10,000.0	7,058.6	10,082.6	7,134.8	84.7	84.9	-96.56	320.9	2,721.4	667.4	498.9	168.46	3.962		
10,100.0	7,057.8	10,182.6	7,133.6	87.4	87.6	-96.53	320.9	2,821.3	667.4	493.4	173.94	3.837		
10,200.0	7,057.0	10,282.6	7,132.5	90.2	90.4	-96.49	321.0	2,921.3	667.3	487.9	179.42	3.719		
10,300.0	7,056.3	10,382.6	7,131.3	92.9	93.1	-96.45	321.0	3,021.3	667.3	482.4	184.90	3.609		
10,400.0	7,055.5	10,482.6	7,130.1	95.7	95.9	-96.42	321.0	3,121.3	667.2	476.8	190.40	3.504		
10,500.0	7,054.7	10,582.6	7,128.9	98.4	98.7	-96.38	321.0	3,221.3	667.2	471.3	195.90	3.406		
10,600.0	7,054.0	10,682.6	7,127.7	101.2	101.4	-96.35	321.0	3,321.3	667.1	465.7	201.41	3.312		
10,700.0	7,053.2	10,782.6	7,126.5	104.0	104.2	-96.31	321.0	3,421.3	667.1	460.2	206.92	3.224		
10,800.0	7,052.4	10,882.6	7,125.3	106.7	107.0	-96.28	321.0	3,521.3	667.0	454.6	212.44	3.140		
10,900.0	7,051.7	10,982.6	7,124.2	109.5	109.7	-96.24	321.0	3,621.3	667.0	449.0	217.96	3.060		
11,000.0	7,050.9	11,082.6	7,123.0	112.3	112.5	-96.20	321.0	3,721.3	666.9	443.5	223.48	2.984		
11,100.0	7,050.1	11,182.6	7,121.8	115.1	115.3	-96.17	321.0	3,821.3	666.9	437.9	229.01	2.912		
11,200.0	7,049.4	11,282.6	7,120.6	117.8	118.0	-96.13	321.0	3,921.3	666.8	432.3	234.55	2.843		
11,300.0	7,048.6	11,382.6	7,119.4	120.6	120.8	-96.10	321.0	4,021.3	666.8	426.7	240.08	2.777		
11,400.0	7,047.8	11,482.6	7,118.2	123.4	123.6	-96.06	321.0	4,121.2	666.8	421.1	245.62	2.715		
11,500.0	7,047.0	11,582.6	7,117.0	125.2	126.4	-96.03	321.0	4,221.2	666.7	416.5	250.17	2.665		
11,502.9	7,047.0	11,585.2	7,117.0	125.2	126.4	-96.02	321.0	4,223.8	666.7	416.4	250.30	2.664		
11,506.3	7,047.0	11,585.2	7,117.0	125.3	126.4	-96.02	321.0	4,223.8	666.7	416.4	250.36	2.663 SF		

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Wiedeman 28F-202
<b>Project:</b>	SEC.28-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Reference Site:</b>	Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Wiedeman 28F-202	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (8-07-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W - Wiedeman 28F-412 - Wellbore #1 - Plan #1 (7-													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	
0.0	0.0	0.0	0.0	0.0	0.0	0.00	32.8	0.0	32.8					
100.0	100.0	100.0	100.0	0.1	0.1	0.00	32.8	0.0	32.8	32.6	0.22	145.874		
200.0	200.0	200.0	200.0	0.3	0.3	0.00	32.8	0.0	32.8	32.1	0.67	48.625		
300.0	300.0	300.0	300.0	0.6	0.6	0.00	32.8	0.0	32.8	31.7	1.12	29.175		
400.0	400.0	400.0	400.0	0.8	0.8	0.00	32.8	0.0	32.8	31.2	1.57	20.839		
500.0	500.0	500.0	500.0	1.0	1.0	0.00	32.8	0.0	32.8	30.8	2.02	16.208		
600.0	600.0	600.0	600.0	1.2	1.2	0.00	32.8	0.0	32.8	30.3	2.47	13.261		
700.0	700.0	700.0	700.0	1.5	1.5	0.00	32.8	0.0	32.8	29.9	2.92	11.221		
800.0	800.0	800.0	800.0	1.7	1.7	0.00	32.8	0.0	32.8	29.4	3.37	9.725		
900.0	900.0	900.0	900.0	1.9	1.9	0.00	32.8	0.0	32.8	29.0	3.82	8.581		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	0.00	32.8	0.0	32.8	28.5	4.27	7.678		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	0.00	32.8	0.0	32.8	28.1	4.72	6.946		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	0.00	32.8	0.0	32.8	27.6	5.17	6.342 CC, ES		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	127.33	32.8	0.0	33.8	28.2	5.60	6.042		
1,400.0	1,399.8	1,399.8	1,399.8	3.0	3.0	133.69	32.8	0.0	37.2	31.2	6.01	6.198		
1,500.0	1,499.5	1,499.5	1,499.5	3.2	3.3	141.89	32.8	0.0	43.7	37.3	6.42	6.811		
1,600.0	1,598.7	1,598.7	1,598.7	3.4	3.5	149.81	32.8	0.0	53.8	47.0	6.83	7.886		
1,700.0	1,697.8	1,697.8	1,697.8	3.6	3.7	155.80	32.8	0.0	66.1	58.9	7.25	9.118		
1,800.0	1,796.8	1,796.8	1,796.8	3.9	3.9	159.89	32.8	0.0	78.9	71.2	7.68	10.271		
1,900.0	1,895.9	1,895.9	1,895.9	4.2	4.1	162.84	32.8	0.0	91.9	83.8	8.11	11.333		
2,000.0	1,994.9	1,994.9	1,994.9	4.5	4.4	165.05	32.8	0.0	105.1	96.6	8.55	12.304		
2,100.0	2,094.0	2,097.0	2,097.0	4.8	4.6	166.30	32.6	-1.6	117.3	108.3	8.98	13.066		
2,200.0	2,193.0	2,199.9	2,199.7	5.1	4.8	166.25	31.8	-6.9	126.7	117.3	9.40	13.481		
2,300.0	2,292.1	2,303.2	2,302.6	5.4	5.0	165.18	30.5	-15.9	133.4	123.6	9.84	13.561		
2,400.0	2,391.1	2,406.1	2,404.7	5.7	5.2	163.20	28.7	-28.4	137.6	127.3	10.30	13.357		
2,500.0	2,490.2	2,505.9	2,503.6	6.0	5.5	161.02	26.7	-41.8	141.0	130.2	10.78	13.083		
2,600.0	2,589.2	2,605.7	2,602.5	6.3	5.7	158.94	24.7	-55.2	144.6	133.3	11.27	12.832		
2,700.0	2,688.3	2,705.5	2,701.3	6.6	6.0	156.96	22.8	-68.7	148.3	136.6	11.77	12.600		
2,800.0	2,787.3	2,805.3	2,800.2	7.0	6.2	155.09	20.8	-82.1	152.3	140.0	12.29	12.385		
2,900.0	2,886.4	2,905.1	2,899.1	7.3	6.5	153.31	18.9	-95.5	156.4	143.5	12.83	12.186		
3,000.0	2,985.4	3,004.9	2,998.0	7.6	6.8	151.62	16.9	-108.9	160.6	147.2	13.38	12.002		
3,100.0	3,084.5	3,104.7	3,096.8	8.0	7.1	150.03	15.0	-122.4	165.0	151.0	13.94	11.831		
3,200.0	3,183.5	3,204.5	3,195.7	8.3	7.4	148.51	13.0	-135.8	169.4	154.9	14.52	11.672		
3,300.0	3,282.5	3,304.3	3,294.6	8.6	7.7	147.07	11.1	-149.2	174.0	158.9	15.10	11.525		
3,400.0	3,381.6	3,404.1	3,393.5	9.0	8.0	145.71	9.1	-162.6	178.7	163.0	15.69	11.388		
3,500.0	3,480.6	3,503.9	3,492.3	9.3	8.3	144.42	7.2	-176.1	183.5	167.2	16.30	11.262		
3,600.0	3,579.7	3,603.7	3,591.2	9.6	8.6	143.19	5.2	-189.5	188.4	171.5	16.91	11.144		
3,700.0	3,678.7	3,703.5	3,690.1	10.0	8.9	142.03	3.3	-202.9	193.4	175.9	17.53	11.034		
3,800.0	3,777.8	3,803.3	3,789.0	10.3	9.2	140.93	1.3	-216.3	198.4	180.3	18.15	10.932		
3,900.0	3,876.8	3,903.1	3,887.8	10.7	9.5	139.88	-0.6	-229.8	203.5	184.8	18.78	10.837		
4,000.0	3,975.9	4,002.9	3,986.7	11.0	9.8	138.88	-2.6	-243.2	208.7	189.3	19.42	10.749		
4,100.0	4,074.9	4,102.7	4,085.6	11.3	10.1	137.93	-4.6	-256.6	214.0	193.9	20.06	10.667		
4,200.0	4,174.0	4,202.5	4,184.5	11.7	10.5	137.03	-6.5	-270.0	219.3	198.6	20.70	10.590		
4,300.0	4,273.0	4,302.3	4,283.3	12.0	10.8	136.17	-8.5	-283.5	224.6	203.3	21.35	10.519		
4,400.0	4,372.1	4,402.1	4,382.2	12.4	11.1	135.35	-10.4	-296.9	230.0	208.0	22.01	10.452		
4,500.0	4,471.1	4,501.9	4,481.1	12.7	11.4	134.56	-12.4	-310.3	235.4	212.8	22.66	10.390		
4,600.0	4,570.2	4,601.7	4,580.0	13.1	11.8	133.81	-14.3	-323.7	240.9	217.6	23.32	10.331		
4,700.0	4,669.2	4,701.5	4,678.8	13.4	12.1	133.10	-16.3	-337.2	246.4	222.5	23.98	10.277		
4,800.0	4,768.3	4,801.3	4,777.7	13.7	12.4	132.42	-18.2	-350.6	252.0	227.4	24.64	10.225		
4,900.0	4,867.3	4,901.1	4,876.6	14.1	12.7	131.76	-20.2	-364.0	257.6	232.3	25.31	10.178		
5,000.0	4,966.4	5,000.9	4,975.5	14.4	13.1	131.14	-22.1	-377.5	263.2	237.2	25.98	10.133		

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

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Wiedeman 28F-202
<b>Project:</b>	SEC.28-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Reference Site:</b>	Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Wiedeman 28F-202	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (8-07-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W - Wiedeman 28F-412 - Wellbore #1 - Plan #1 (7-										Offset Site Error:		0.0 ft
Survey Program: 0-MWD												Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth	Vertical	Measured	Vertical	Reference	Offset	Highside	Offset Wellbore Centre		Between	Between	Minimum	Separation	Warning	
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	Toolface (°)	+N/-S (ft)	+E/-W (ft)	Centres (ft)	Ellipses (ft)	Separation (ft)	Factor		
5,100.0	5,065.4	5,100.7	5,074.3	14.8	13.4	130.54	-24.1	-390.9	268.9	242.2	26.65	10.090		
5,200.0	5,164.5	5,200.5	5,173.2	15.1	13.7	129.97	-26.0	-404.3	274.5	247.2	27.32	10.051		
5,300.0	5,263.5	5,300.3	5,272.1	15.5	14.1	129.41	-28.0	-417.7	280.3	252.3	27.99	10.013		
5,400.0	5,362.6	5,400.1	5,371.0	15.8	14.4	128.88	-29.9	-431.2	286.0	257.3	28.66	9.978		
5,500.0	5,461.6	5,499.9	5,469.8	16.2	14.7	128.38	-31.9	-444.6	291.7	262.4	29.34	9.945		
5,600.0	5,560.8	5,599.7	5,568.7	16.5	15.1	127.85	-33.9	-458.0	297.2	267.2	30.00	9.905		
5,700.0	5,660.2	5,698.4	5,666.6	16.7	15.4	127.00	-35.7	-470.7	300.9	270.3	30.60	9.832		
5,800.0	5,760.0	5,796.5	5,764.2	16.9	15.6	126.21	-37.1	-480.4	303.1	272.0	31.09	9.751		
5,900.0	5,860.0	5,894.8	5,862.2	17.0	15.8	125.50	-38.0	-486.7	303.9	272.4	31.50	9.647		
6,000.0	5,960.0	5,993.2	5,960.6	17.2	15.9	0.05	-38.5	-489.7	303.6	275.6	28.05	10.823		
6,055.5	6,015.4	6,048.0	6,015.4	17.3	16.0	0.00	-38.5	-490.0	303.6	275.3	28.24	10.748		
6,100.0	6,060.0	6,092.6	6,060.0	17.3	16.1	0.00	-38.5	-490.0	303.6	275.2	28.40	10.687		
6,200.0	6,160.0	6,192.6	6,160.0	17.5	16.3	0.00	-38.5	-490.0	303.6	274.8	28.78	10.549		
6,300.0	6,260.0	6,292.6	6,260.0	17.6	16.5	0.00	-38.5	-490.0	303.6	274.4	29.15	10.414		
6,351.0	6,311.0	6,343.6	6,311.0	17.7	16.5	-90.15	-38.5	-490.0	303.6	270.5	33.05	9.184		
6,400.0	6,359.9	6,392.5	6,359.9	17.8	16.6	-90.27	-38.5	-490.0	303.6	270.3	33.22	9.137		
6,500.0	6,459.1	6,491.7	6,459.1	17.8	16.8	-92.60	-38.5	-490.0	303.9	270.3	33.61	9.042		
6,600.0	6,555.7	6,591.4	6,558.7	17.8	17.0	-96.77	-38.5	-487.5	305.8	271.9	33.94	9.010		
6,700.0	6,648.2	6,695.1	6,661.3	17.7	17.0	-101.04	-38.5	-472.2	309.6	275.6	34.00	9.106		
6,800.0	6,735.0	6,802.7	6,764.3	17.6	17.0	-105.09	-38.5	-441.9	315.0	281.2	33.80	9.319		
6,900.0	6,814.5	6,914.1	6,865.5	17.5	16.9	-108.83	-38.5	-395.5	321.5	288.1	33.40	9.625		
7,000.0	6,885.5	7,029.6	6,962.2	17.5	16.9	-112.18	-38.5	-332.4	328.7	295.7	32.97	9.971		
7,100.0	6,946.7	7,149.2	7,051.0	17.6	17.0	-115.06	-38.5	-252.5	336.0	303.3	32.71	10.271		
7,200.0	6,997.0	7,272.5	7,128.4	17.9	17.4	-117.44	-38.5	-156.7	342.7	309.8	32.92	10.410		
7,300.0	7,035.7	7,399.3	7,190.9	18.7	18.3	-119.26	-38.5	-46.6	348.4	314.6	33.85	10.294		
7,400.0	7,062.0	7,528.6	7,235.0	19.9	19.7	-120.50	-38.5	74.9	352.5	316.8	35.68	9.878		
7,500.0	7,075.5	7,659.7	7,258.1	21.4	21.7	-121.14	-38.5	203.7	354.7	316.3	38.43	9.230		
7,600.0	7,077.0	7,776.7	7,261.4	23.2	23.7	-121.27	-38.5	320.6	355.2	313.5	41.69	8.520		
7,700.0	7,076.2	7,876.7	7,261.3	25.2	25.7	-121.37	-38.5	420.6	355.5	310.5	45.01	7.900		
7,800.0	7,075.5	7,976.7	7,261.3	27.3	27.8	-121.47	-38.5	520.6	355.9	307.4	48.57	7.328		
7,900.0	7,074.7	8,076.7	7,261.3	29.5	30.0	-121.57	-38.5	620.6	356.3	304.0	52.32	6.810		
8,000.0	7,073.9	8,176.7	7,261.2	31.8	32.3	-121.67	-38.5	720.6	356.7	300.5	56.23	6.343		
8,100.0	7,073.2	8,276.7	7,261.2	34.2	34.6	-121.77	-38.5	820.6	357.1	296.8	60.26	5.926		
8,200.0	7,072.4	8,376.7	7,261.2	36.7	37.1	-121.87	-38.5	920.6	357.5	293.1	64.38	5.552		
8,300.0	7,071.6	8,476.7	7,261.1	39.2	39.6	-121.97	-38.5	1,020.6	357.9	289.3	68.58	5.218		
8,400.0	7,070.9	8,576.7	7,261.1	41.7	42.1	-122.07	-38.5	1,120.6	358.2	285.4	72.85	4.918		
8,500.0	7,070.1	8,676.7	7,261.0	44.3	44.7	-122.17	-38.5	1,220.6	358.6	281.5	77.16	4.648		
8,600.0	7,069.3	8,776.7	7,261.0	46.9	47.2	-122.27	-38.5	1,320.6	359.0	277.5	81.51	4.405		
8,700.0	7,068.6	8,876.6	7,261.0	49.5	49.9	-122.37	-38.5	1,420.6	359.4	273.5	85.89	4.185		
8,800.0	7,067.8	8,976.6	7,260.9	52.2	52.5	-122.47	-38.5	1,520.6	359.8	269.5	90.30	3.985		
8,900.0	7,067.0	9,076.6	7,260.9	54.8	55.1	-122.57	-38.5	1,620.6	360.2	265.5	94.73	3.803		
9,000.0	7,066.2	9,176.6	7,260.9	57.5	57.8	-122.66	-38.5	1,720.5	360.6	261.4	99.17	3.636		
9,100.0	7,065.5	9,276.6	7,260.8	60.2	60.5	-122.76	-38.5	1,820.5	361.0	257.4	103.63	3.483		
9,200.0	7,064.7	9,376.6	7,260.8	62.9	63.2	-122.86	-38.5	1,920.5	361.4	253.3	108.10	3.343		
9,300.0	7,063.9	9,476.6	7,260.8	65.6	65.9	-122.96	-38.5	2,020.5	361.8	249.2	112.58	3.214		
9,400.0	7,063.2	9,576.6	7,260.7	68.3	68.6	-123.06	-38.5	2,120.5	362.2	245.1	117.06	3.094		
9,500.0	7,062.4	9,676.6	7,260.7	71.0	71.3	-123.15	-38.5	2,220.5	362.6	241.0	121.55	2.983		
9,600.0	7,061.6	9,776.6	7,260.7	73.7	74.0	-123.25	-38.5	2,320.5	363.0	236.9	126.04	2.880		
9,700.0	7,060.9	9,876.6	7,260.6	76.4	76.7	-123.35	-38.5	2,420.5	363.4	232.9	130.54	2.784		
9,800.0	7,060.1	9,976.6	7,260.6	79.2	79.5	-123.44	-38.5	2,520.5	363.8	228.8	135.03	2.694		

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

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Wiedeman 28F-202
<b>Project:</b>	SEC.28-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Reference Site:</b>	Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Wiedeman 28F-202	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (8-07-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W - Wiedeman 28F-412 - Wellbore #1 - Plan #1 (7-													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	
9,900.0	7,059.3	10,076.6	7,260.6	81.9	82.2	-123.54	-38.5	2,620.5	364.2	224.7	139.52	2.610		
10,000.0	7,058.6	10,176.6	7,260.5	84.7	85.0	-123.63	-38.5	2,720.5	364.6	220.6	144.01	2.532		
10,100.0	7,057.8	10,276.6	7,260.5	87.4	87.7	-123.73	-38.5	2,820.5	365.0	216.5	148.49	2.458		
10,200.0	7,057.0	10,376.6	7,260.5	90.2	90.5	-123.83	-38.5	2,920.5	365.4	212.4	152.98	2.389		
10,300.0	7,056.3	10,476.6	7,260.4	92.9	93.2	-123.92	-38.5	3,020.5	365.8	208.4	157.46	2.323		
10,400.0	7,055.5	10,576.6	7,260.4	95.7	96.0	-124.02	-38.5	3,120.5	366.2	204.3	161.94	2.262		
10,500.0	7,054.7	10,676.6	7,260.4	98.4	98.7	-124.11	-38.5	3,220.5	366.6	200.2	166.41	2.203		
10,600.0	7,054.0	10,776.6	7,260.3	101.2	101.5	-124.21	-38.5	3,320.5	367.1	196.2	170.87	2.148		
10,700.0	7,053.2	10,876.6	7,260.3	104.0	104.3	-124.30	-38.5	3,420.5	367.5	192.1	175.34	2.096		
10,800.0	7,052.4	10,976.6	7,260.2	106.7	107.0	-124.39	-38.5	3,520.5	367.9	188.1	179.79	2.046		
10,900.0	7,051.7	11,076.6	7,260.2	109.5	109.8	-124.49	-38.5	3,620.5	368.3	184.1	184.24	1.999		
11,000.0	7,050.9	11,176.6	7,260.2	112.3	112.6	-124.58	-38.5	3,720.5	368.7	180.0	188.69	1.954		
11,100.0	7,050.1	11,276.6	7,260.1	115.1	115.3	-124.68	-38.5	3,820.5	369.1	176.0	193.12	1.911		
11,200.0	7,049.4	11,376.6	7,260.1	117.8	118.1	-124.77	-38.5	3,920.5	369.6	172.0	197.55	1.871		
11,300.0	7,048.6	11,476.6	7,260.1	120.6	120.9	-124.86	-38.5	4,020.5	370.0	168.0	201.98	1.832		
11,400.0	7,047.8	11,576.6	7,260.0	123.4	123.7	-124.96	-38.5	4,120.5	370.4	164.0	206.39	1.795		
11,500.0	7,047.0	11,676.6	7,260.0	125.2	125.7	-125.05	-38.5	4,220.5	370.8	161.5	209.31	1.772		
11,506.3	7,047.0	11,680.0	7,260.0	125.3	125.7	-125.05	-38.5	4,223.9	370.8	161.4	209.45	1.771 SF		

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Wiedeman 28F-202
<b>Project:</b>	SEC.28-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Reference Site:</b>	Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Wiedeman 28F-202	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (8-07-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Wiedeman 4N66W28F - West Pad Sec.28-T4N-R66W - Wiedeman 28F-214 - Wellbore #1 - Plan #1 (8										Offset Site Error:		0.0 ft
Survey Program:		0-MWD										Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	1.0	1.0	0.0	0.0	-83.79	32.8	-301.3	303.1					
100.0	100.0	101.0	101.0	0.1	0.1	-83.79	32.8	-301.3	303.1	302.9	0.23	1,335.094		
200.0	200.0	201.0	201.0	0.3	0.3	-83.79	32.8	-301.3	303.1	302.4	0.68	447.988		
300.0	300.0	301.0	301.0	0.6	0.6	-83.79	32.8	-301.3	303.1	302.0	1.13	269.151		
400.0	400.0	401.0	401.0	0.8	0.8	-83.79	32.8	-301.3	303.1	301.5	1.58	192.360		
500.0	500.0	501.0	501.0	1.0	1.0	-83.79	32.8	-301.3	303.1	301.1	2.03	149.661		
600.0	600.0	601.0	601.0	1.2	1.2	-83.79	32.8	-301.3	303.1	300.6	2.47	122.475		
700.0	700.0	701.0	701.0	1.5	1.5	-83.79	32.8	-301.3	303.1	300.2	2.92	103.647		
800.0	800.0	801.0	801.0	1.7	1.7	-83.79	32.8	-301.3	303.1	299.7	3.37	89.836		
900.0	900.0	901.0	901.0	1.9	1.9	-83.79	32.8	-301.3	303.1	299.3	3.82	79.274		
1,000.0	1,000.0	1,001.0	1,001.0	2.1	2.1	-83.79	32.8	-301.3	303.1	298.8	4.27	70.933		
1,100.0	1,100.0	1,101.0	1,101.0	2.4	2.4	-83.79	32.8	-301.3	303.1	298.4	4.72	64.181		
1,200.0	1,200.0	1,201.0	1,201.0	2.6	2.6	-83.79	32.8	-301.3	303.1	297.9	5.17	58.603		
1,300.0	1,300.0	1,301.0	1,301.0	2.8	2.8	41.37	32.8	-301.3	301.8	296.2	5.60	53.910		
1,400.0	1,399.8	1,400.8	1,400.8	3.0	3.0	42.08	32.8	-301.3	297.9	291.9	6.00	49.614		
1,500.0	1,499.5	1,500.5	1,500.5	3.2	3.3	43.32	32.8	-301.3	291.4	285.0	6.42	45.428		
1,600.0	1,598.7	1,599.7	1,599.7	3.4	3.5	45.12	32.8	-301.3	282.7	275.8	6.84	41.336		
1,700.0	1,697.8	1,698.8	1,698.8	3.6	3.7	47.16	32.8	-301.3	273.1	265.8	7.29	37.476		
1,800.0	1,796.8	1,797.8	1,797.8	3.9	3.9	49.34	32.8	-301.3	263.9	256.1	7.75	34.041		
1,900.0	1,895.9	1,889.0	1,889.0	4.2	4.1	51.43	33.0	-302.7	256.6	248.4	8.20	31.284		
2,000.0	1,994.9	1,980.4	1,980.3	4.5	4.3	53.52	33.6	-306.9	252.8	244.2	8.66	29.204		
2,057.4	2,051.8	2,033.0	2,032.7	4.6	4.4	54.68	34.1	-310.7	252.2	243.3	8.92	28.262	CC, ES	
2,100.0	2,094.0	2,072.0	2,071.6	4.8	4.5	55.52	34.6	-314.1	252.6	243.4	9.13	27.673		
2,200.0	2,193.0	2,167.1	2,166.2	5.1	4.7	57.44	36.1	-324.2	255.4	245.8	9.62	26.559		
2,300.0	2,292.1	2,266.7	2,265.1	5.4	5.0	59.38	37.6	-335.3	259.1	249.0	10.13	25.576		
2,400.0	2,391.1	2,366.2	2,364.0	5.7	5.2	61.26	39.2	-346.5	263.1	252.4	10.66	24.686		
2,500.0	2,490.2	2,465.8	2,462.9	6.0	5.4	63.08	40.8	-357.6	267.4	256.2	11.20	23.880		
2,600.0	2,589.2	2,565.3	2,561.8	6.3	5.7	64.84	42.4	-368.7	271.9	260.1	11.74	23.150		
2,700.0	2,688.3	2,664.9	2,660.7	6.6	6.0	66.54	44.0	-379.8	276.6	264.3	12.30	22.488		
2,800.0	2,787.3	2,764.4	2,759.7	7.0	6.2	68.19	45.6	-390.9	281.6	268.8	12.87	21.887		
2,900.0	2,886.4	2,864.0	2,858.6	7.3	6.5	69.78	47.2	-402.0	286.8	273.4	13.44	21.341		
3,000.0	2,985.4	2,963.5	2,957.5	7.6	6.8	71.31	48.7	-413.1	292.3	278.3	14.02	20.844		
3,100.0	3,084.5	3,063.1	3,056.4	8.0	7.0	72.78	50.3	-424.2	297.9	283.3	14.61	20.392		
3,200.0	3,183.5	3,162.6	3,155.3	8.3	7.3	74.20	51.9	-435.3	303.8	288.5	15.20	19.979		
3,300.0	3,282.5	3,262.2	3,254.3	8.6	7.6	75.56	53.5	-446.4	309.8	294.0	15.80	19.603		
3,400.0	3,381.6	3,361.7	3,353.2	9.0	7.9	76.87	55.1	-457.5	315.9	299.5	16.40	19.259		
3,500.0	3,480.6	3,461.3	3,452.1	9.3	8.2	78.13	56.7	-468.7	322.3	305.3	17.01	18.944		
3,600.0	3,579.7	3,560.8	3,551.0	9.6	8.4	79.34	58.3	-479.8	328.8	311.1	17.62	18.656		
3,700.0	3,678.7	3,660.4	3,649.9	10.0	8.7	80.51	59.8	-490.9	335.4	317.2	18.24	18.391		
3,800.0	3,777.8	3,760.0	3,748.8	10.3	9.0	81.63	61.4	-502.0	342.1	323.3	18.85	18.148		
3,900.0	3,876.8	3,859.5	3,847.8	10.7	9.3	82.70	63.0	-513.1	349.0	329.6	19.47	17.924		
4,000.0	3,975.9	3,959.1	3,946.7	11.0	9.6	83.74	64.6	-524.2	356.0	335.9	20.09	17.718		
4,100.0	4,074.9	4,058.6	4,045.6	11.3	9.9	84.73	66.2	-535.3	363.2	342.4	20.72	17.528		
4,200.0	4,174.0	4,158.2	4,144.5	11.7	10.2	85.69	67.8	-546.4	370.4	349.0	21.34	17.353		
4,300.0	4,273.0	4,257.7	4,243.4	12.0	10.5	86.61	69.4	-557.5	377.7	355.7	21.97	17.191		
4,400.0	4,372.1	4,357.3	4,342.3	12.4	10.8	87.49	70.9	-568.6	385.1	362.5	22.60	17.041		
4,500.0	4,471.1	4,463.6	4,448.1	12.7	11.0	88.49	72.5	-579.6	392.0	368.8	23.20	16.896		
4,600.0	4,570.2	4,573.6	4,557.8	13.1	11.3	89.90	73.6	-587.1	396.6	372.8	23.79	16.674		
4,700.0	4,669.2	4,683.1	4,667.2	13.4	11.5	91.71	74.1	-590.4	398.9	374.5	24.36	16.374		
4,800.0	4,768.3	4,785.1	4,769.3	13.7	11.6	93.71	74.1	-590.6	399.7	374.8	24.92	16.039		
4,900.0	4,867.3	4,884.2	4,868.3	14.1	11.8	95.65	74.1	-590.6	400.8	375.3	25.48	15.732		

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

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Wiedeman 28F-202
<b>Project:</b>	SEC.28-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Reference Site:</b>	Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Wiedeman 28F-202	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (8-07-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design				Wiedeman 4N66W28F - West Pad Sec.28-T4N-R66W - Wiedeman 28F-214 - Wellbore #1 - Plan #1 (8										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	4,966.4	4,983.2	4,967.4	14.4	12.0	97.58	74.1	-590.6	402.4	376.4	26.03	15.460				
5,100.0	5,065.4	5,082.3	5,066.4	14.8	12.2	99.49	74.1	-590.6	404.5	377.9	26.57	15.222				
5,200.0	5,164.5	5,181.3	5,165.5	15.1	12.4	101.39	74.1	-590.6	407.0	379.9	27.10	15.016				
5,300.0	5,263.5	5,280.4	5,264.5	15.5	12.6	103.25	74.1	-590.6	409.9	382.3	27.63	14.838				
5,400.0	5,362.6	5,379.4	5,363.6	15.8	12.8	105.09	74.1	-590.6	413.3	385.2	28.14	14.688				
5,500.0	5,461.6	5,478.5	5,462.6	16.2	13.0	106.90	74.1	-590.6	417.2	388.5	28.64	14.563				
5,600.0	5,560.8	5,577.6	5,561.8	16.5	13.2	108.65	74.1	-590.6	421.2	392.1	29.12	14.467				
5,700.0	5,660.2	5,677.1	5,661.2	16.7	13.4	110.00	74.1	-590.6	424.6	395.1	29.51	14.387				
5,800.0	5,760.0	5,776.9	5,761.0	16.9	13.6	110.88	74.1	-590.6	426.9	397.0	29.89	14.284				
5,900.0	5,860.0	5,876.8	5,861.0	17.0	13.8	111.29	74.1	-590.6	428.0	397.8	30.25	14.152				
6,000.0	5,960.0	5,976.8	5,961.0	17.2	14.0	-13.59	74.1	-590.6	428.1	401.1	27.04	15.832				
6,100.0	6,060.0	6,076.8	6,061.0	17.3	14.2	-13.59	74.1	-590.6	428.1	400.7	27.44	15.605				
6,200.0	6,160.0	6,176.8	6,161.0	17.5	14.4	-13.59	74.1	-590.6	428.1	400.3	27.83	15.384				
6,300.0	6,260.0	6,276.8	6,261.0	17.6	14.6	-13.59	74.1	-590.6	428.1	399.9	28.23	15.168				
6,334.2	6,294.2	6,311.0	6,295.2	17.7	14.7	-103.63	74.1	-590.6	428.2	396.4	31.81	13.463				
6,400.0	6,359.9	6,371.6	6,355.8	17.8	14.8	-103.83	74.1	-591.6	428.7	396.7	32.04	13.382 SF				
6,500.0	6,459.1	6,456.3	6,439.9	17.8	15.1	-105.87	74.1	-600.5	434.8	402.5	32.33	13.451				
6,600.0	6,555.7	6,531.0	6,513.0	17.8	15.3	-108.97	74.1	-616.0	450.0	417.5	32.49	13.851				
6,700.0	6,648.2	6,592.1	6,571.3	17.7	15.6	-111.59	74.1	-634.0	477.7	445.3	32.44	14.724				
6,800.0	6,735.0	6,638.5	6,614.6	17.6	15.8	-112.56	74.1	-650.7	520.2	487.9	32.28	16.115				
6,900.0	6,814.5	6,671.2	6,644.5	17.5	16.0	-111.10	74.1	-664.1	577.1	544.9	32.20	17.922				
7,000.0	6,885.5	6,700.0	6,670.3	17.5	16.1	-107.68	74.1	-676.9	646.2	613.8	32.42	19.934				
7,100.0	6,946.7	6,700.0	6,670.3	17.6	16.1	-98.59	74.1	-676.9	724.0	691.0	33.05	21.908				
7,200.0	6,997.0	6,700.0	6,670.3	17.9	16.1	-87.09	74.1	-676.9	807.8	774.2	33.62	24.029				
7,300.0	7,035.7	6,700.0	6,670.3	18.7	16.1	-74.19	74.1	-676.9	894.6	861.1	33.43	26.757				
7,400.0	7,062.0	6,700.0	6,670.3	19.9	16.1	-61.54	74.1	-676.9	982.3	950.1	32.18	30.527				

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Wiedeman 28F-202
<b>Project:</b>	SEC.28-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Reference Site:</b>	Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Wiedeman 28F-202	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (8-07-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Wiedeman 4N66W28F - West Pad Sec.28-T4N-R66W - Wiedeman 28F-234 - Wellbore #1 - Plan #1 (8										Offset Site Error:		0.0 ft		
Survey Program: 0-MWD														Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor				
0.0	0.0	1.0	1.0	0.0	0.0	-95.52	-29.1	-301.3	302.7							
100.0	100.0	101.0	101.0	0.1	0.1	-95.52	-29.1	-301.3	302.7	302.5	0.23	1,333.455				
200.0	200.0	201.0	201.0	0.3	0.3	-95.52	-29.1	-301.3	302.7	302.0	0.68	447.438				
300.0	300.0	301.0	301.0	0.6	0.6	-95.52	-29.1	-301.3	302.7	301.6	1.13	268.820				
400.0	400.0	401.0	401.0	0.8	0.8	-95.52	-29.1	-301.3	302.7	301.1	1.58	192.124				
500.0	500.0	501.0	501.0	1.0	1.0	-95.52	-29.1	-301.3	302.7	300.7	2.03	149.477				
566.3	566.3	567.3	567.3	1.2	1.2	-95.52	-29.1	-301.3	302.7	300.4	2.32	130.293				
600.0	600.0	600.0	600.0	1.2	1.2	-95.52	-29.1	-301.3	302.7	300.2	2.47	122.436				
700.0	700.0	695.8	695.8	1.5	1.4	-95.79	-30.6	-302.0	303.6	300.7	2.89	105.101				
800.0	800.0	790.5	790.4	1.7	1.6	-96.55	-34.9	-304.0	306.1	302.9	3.29	93.013				
900.0	900.0	884.8	884.3	1.9	1.8	-97.78	-42.0	-307.2	310.5	306.8	3.70	83.821				
1,000.0	1,000.0	978.5	977.4	2.1	2.0	-99.43	-51.8	-311.8	316.9	312.8	4.13	76.810				
1,100.0	1,100.0	1,077.2	1,075.3	2.4	2.3	-101.36	-63.8	-317.3	324.7	320.1	4.56	71.180				
1,200.0	1,200.0	1,176.3	1,173.5	2.6	2.6	-103.21	-75.8	-322.9	332.8	327.8	5.00	66.595				
1,300.0	1,300.0	1,275.6	1,271.9	2.8	2.9	20.01	-87.8	-328.4	339.6	334.0	5.54	61.274				
1,400.0	1,399.8	1,375.2	1,370.6	3.0	3.2	18.57	-99.9	-334.0	343.3	337.4	5.98	57.372				
1,500.0	1,499.5	1,474.9	1,469.4	3.2	3.5	17.36	-111.9	-339.6	344.0	337.6	6.43	53.469				
1,600.0	1,598.7	1,574.7	1,568.3	3.4	3.8	16.33	-124.0	-345.2	341.4	334.5	6.89	49.585				
1,700.0	1,697.8	1,674.4	1,667.1	3.6	4.1	15.34	-136.1	-350.8	337.5	330.1	7.36	45.837				
1,800.0	1,796.8	1,774.2	1,766.0	3.9	4.4	14.33	-148.2	-356.4	333.6	325.8	7.84	42.535				
1,900.0	1,895.9	1,873.9	1,864.8	4.2	4.8	13.29	-160.3	-362.0	329.8	321.5	8.33	39.614				
2,000.0	1,994.9	1,973.7	1,963.7	4.5	5.1	12.23	-172.4	-367.6	326.2	317.4	8.81	37.022				
2,100.0	2,094.0	2,073.4	2,062.5	4.8	5.4	11.15	-184.5	-373.2	322.7	313.4	9.30	34.711				
2,200.0	2,193.0	2,173.2	2,161.4	5.1	5.8	10.04	-196.5	-378.7	319.2	309.5	9.78	32.645				
2,300.0	2,292.1	2,272.9	2,260.3	5.4	6.1	8.92	-208.6	-384.3	316.0	305.7	10.26	30.789				
2,400.0	2,391.1	2,372.7	2,359.1	5.7	6.4	7.76	-220.7	-389.9	312.8	302.0	10.74	29.118				
2,500.0	2,490.2	2,472.4	2,458.0	6.0	6.8	6.59	-232.8	-395.5	309.8	298.5	11.22	27.607				
2,600.0	2,589.2	2,572.2	2,556.8	6.3	7.1	5.39	-244.9	-401.1	306.8	295.2	11.70	26.237				
2,700.0	2,688.3	2,671.9	2,655.7	6.6	7.4	4.17	-257.0	-406.7	304.1	291.9	12.17	24.990				
2,800.0	2,787.3	2,771.7	2,754.5	7.0	7.8	2.93	-269.0	-412.3	301.5	288.8	12.64	23.852				
2,900.0	2,886.4	2,871.4	2,853.4	7.3	8.1	1.67	-281.1	-417.9	299.0	285.9	13.11	22.812				
3,000.0	2,985.4	2,971.2	2,952.3	7.6	8.4	0.38	-293.2	-423.5	296.6	283.1	13.57	21.857				
3,100.0	3,084.5	3,070.9	3,051.1	8.0	8.8	-0.92	-305.3	-429.1	294.5	280.4	14.04	20.979				
3,200.0	3,183.5	3,170.7	3,150.0	8.3	9.1	-2.24	-317.4	-434.6	292.4	277.9	14.50	20.170				
3,300.0	3,282.5	3,270.4	3,248.8	8.6	9.5	-3.58	-329.5	-440.2	290.6	275.6	14.96	19.423				
3,400.0	3,381.6	3,370.2	3,347.7	9.0	9.8	-4.94	-341.6	-445.8	288.9	273.4	15.42	18.731				
3,500.0	3,480.6	3,469.9	3,446.5	9.3	10.1	-6.31	-353.6	-451.4	287.3	271.4	15.88	18.089				
3,600.0	3,579.7	3,569.7	3,545.4	9.6	10.5	-7.69	-365.7	-457.0	285.9	269.6	16.35	17.493				
3,700.0	3,678.7	3,669.4	3,644.2	10.0	10.8	-9.09	-377.8	-462.6	284.7	267.9	16.81	16.937				
3,800.0	3,777.8	3,769.2	3,743.1	10.3	11.2	-10.50	-389.9	-468.2	283.7	266.4	17.28	16.419				
3,900.0	3,876.8	3,868.9	3,842.0	10.7	11.5	-11.92	-402.0	-473.8	282.8	265.1	17.75	15.934				
4,000.0	3,975.9	3,968.7	3,940.8	11.0	11.8	-13.34	-414.1	-479.4	282.1	263.9	18.23	15.481				
4,100.0	4,074.9	4,068.4	4,039.7	11.3	12.2	-14.77	-426.1	-485.0	281.6	262.9	18.71	15.055				
4,200.0	4,174.0	4,168.2	4,138.5	11.7	12.5	-16.21	-438.2	-490.5	281.3	262.1	19.19	14.656				
4,300.0	4,273.0	4,267.9	4,237.4	12.0	12.9	-17.65	-450.3	-496.1	281.2	261.5	19.69	14.281				
4,336.7	4,309.4	4,304.6	4,273.7	12.1	13.0	-18.18	-454.8	-498.2	281.1	261.3	19.87	14.148 CC				
4,400.0	4,372.1	4,367.7	4,336.2	12.4	13.2	-19.09	-462.4	-501.7	281.2	261.0	20.19	13.927				
4,500.0	4,471.1	4,467.4	4,435.1	12.7	13.5	-20.53	-474.5	-507.3	281.4	260.7	20.70	13.594				
4,600.0	4,570.2	4,567.2	4,534.0	13.1	13.9	-21.96	-486.6	-512.9	281.8	260.5	21.22	13.280 ES				
4,700.0	4,669.2	4,666.9	4,632.8	13.4	14.2	-23.39	-498.7	-518.5	282.3	260.6	21.75	12.983				
4,800.0	4,768.3	4,766.7	4,731.7	13.7	14.6	-24.81	-510.7	-524.1	283.0	260.8	22.28	12.702				

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



<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Wiedeman 28F-202
<b>Project:</b>	SEC.28-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Reference Site:</b>	Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Wiedeman 28F-202	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (8-07-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design				Wiedeman 4N66W28F - West Pad Sec.28-T4N-R66W - Wiedeman 28F-234 - Wellbore #1 - Plan #1 (8									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			
4,900.0	4,867.3	4,866.4	4,830.5	14.1	14.9	-26.23	-522.8	-529.7	284.0	261.1	22.83	12.437			
5,000.0	4,966.4	4,966.2	4,929.4	14.4	15.2	-27.64	-534.9	-535.3	285.0	261.6	23.39	12.186			
5,100.0	5,065.4	5,065.9	5,028.2	14.8	15.6	-29.03	-547.0	-540.9	286.3	262.3	23.96	11.948			
5,200.0	5,164.5	5,165.7	5,127.1	15.1	15.9	-30.41	-559.1	-546.5	287.7	263.2	24.54	11.723			
5,300.0	5,263.5	5,265.4	5,226.0	15.5	16.3	-31.78	-571.2	-552.0	289.3	264.2	25.13	11.510			
5,400.0	5,362.6	5,365.2	5,324.8	15.8	16.6	-33.13	-583.2	-557.6	291.0	265.3	25.74	11.309			
5,500.0	5,461.6	5,464.9	5,423.7	16.2	16.9	-34.46	-595.3	-563.2	293.0	266.6	26.35	11.118			
5,600.0	5,560.8	5,564.7	5,522.5	16.5	17.3	-35.74	-607.4	-568.8	295.5	268.5	26.95	10.962			
5,700.0	5,660.2	5,664.4	5,621.4	16.7	17.6	-36.68	-619.5	-574.4	300.6	273.1	27.47	10.943			
5,800.0	5,760.0	5,764.4	5,720.5	16.9	18.0	-37.23	-631.6	-580.0	308.6	280.7	27.92	11.051			
5,900.0	5,860.0	5,876.1	5,831.5	17.0	18.2	-37.44	-643.1	-585.3	317.3	289.0	28.30	11.214			
6,000.0	5,960.0	5,988.3	5,943.4	17.2	18.4	-162.24	-650.6	-588.8	324.5	290.1	34.34	9.450			
6,100.0	6,060.0	6,101.0	6,056.0	17.3	18.6	-162.16	-654.2	-590.5	328.0	293.3	34.68	9.458			
6,200.0	6,160.0	6,206.0	6,161.0	17.5	18.8	-162.15	-654.5	-590.6	328.3	293.3	34.99	9.383			
6,300.0	6,260.0	6,306.0	6,261.0	17.6	18.9	-162.15	-654.5	-590.6	328.3	293.0	35.27	9.306			
6,300.0	6,260.0	6,306.1	6,261.0	17.6	18.9	-162.15	-654.5	-590.6	328.3	293.0	35.27	9.306 SF			
6,400.0	6,359.9	6,400.0	6,354.9	17.8	19.0	108.39	-654.5	-593.0	329.5	299.5	29.98	10.989			
6,500.0	6,459.1	6,481.8	6,435.9	17.8	19.2	111.16	-654.5	-603.8	338.5	308.6	29.90	11.319			
6,600.0	6,555.7	6,555.2	6,507.3	17.8	19.4	115.02	-654.5	-620.9	359.3	329.7	29.58	12.144			
6,700.0	6,648.2	6,614.7	6,563.7	17.7	19.6	118.05	-654.5	-639.7	395.5	366.4	29.17	13.559			
6,800.0	6,735.0	6,659.5	6,605.2	17.6	19.8	118.92	-654.5	-656.7	448.2	419.4	28.86	15.534			
6,900.0	6,814.5	6,690.8	6,633.5	17.5	19.9	116.81	-654.5	-670.0	515.5	486.5	29.00	17.776			
7,000.0	6,885.5	6,710.3	6,650.8	17.5	20.0	110.93	-654.5	-678.9	593.8	563.7	30.07	19.744			
7,100.0	6,946.7	6,719.9	6,659.3	17.6	20.1	100.42	-654.5	-683.4	679.6	647.3	32.25	21.072			
7,200.0	6,997.0	6,721.5	6,660.7	17.9	20.1	85.17	-654.5	-684.2	769.6	735.2	34.44	22.344			
7,300.0	7,035.7	6,716.5	6,656.3	18.7	20.0	67.50	-654.5	-681.8	861.5	827.0	34.48	24.984			
7,400.0	7,062.0	6,700.0	6,641.7	19.9	20.0	50.88	-654.5	-674.2	953.0	921.3	31.70	30.063			



<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Wiedeman 28F-202
<b>Project:</b>	SEC.28-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Reference Site:</b>	Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Wiedeman 28F-202	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (8-07-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Wiedeman 4N66W28F - West Pad Sec.28-T4N-R66W - Wiedeman 28F-304 - Wellbore #1 - Plan #1 (8										Offset Site Error:		0.0 ft
Survey Program: 0-MWD												Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	1.0	1.0	0.0	0.0	-90.00	0.0	-301.3	301.3					
100.0	100.0	101.0	101.0	0.1	0.1	-90.00	0.0	-301.3	301.3	301.1	0.23	1,327.260		
200.0	200.0	201.0	201.0	0.3	0.3	-90.00	0.0	-301.3	301.3	300.6	0.68	445.360		
300.0	300.0	301.0	301.0	0.6	0.6	-90.00	0.0	-301.3	301.3	300.2	1.13	267.571		
400.0	400.0	401.0	401.0	0.8	0.8	-90.00	0.0	-301.3	301.3	299.7	1.58	191.231		
500.0	500.0	501.0	501.0	1.0	1.0	-90.00	0.0	-301.3	301.3	299.3	2.03	148.783		
600.0	600.0	601.0	601.0	1.2	1.2	-90.00	0.0	-301.3	301.3	298.8	2.47	121.756		
700.0	700.0	701.0	701.0	1.5	1.5	-90.00	0.0	-301.3	301.3	298.4	2.92	103.039		
800.0	800.0	801.0	801.0	1.7	1.7	-90.00	0.0	-301.3	301.3	297.9	3.37	89.309		
900.0	900.0	901.0	901.0	1.9	1.9	-90.00	0.0	-301.3	301.3	297.5	3.82	78.808		
1,000.0	1,000.0	1,001.0	1,001.0	2.1	2.1	-90.00	0.0	-301.3	301.3	297.0	4.27	70.517		
1,100.0	1,100.0	1,101.0	1,101.0	2.4	2.4	-90.00	0.0	-301.3	301.3	296.6	4.72	63.804		
1,200.0	1,200.0	1,201.0	1,201.0	2.6	2.6	-90.00	0.0	-301.3	301.3	296.1	5.17	58.259		
1,300.0	1,300.0	1,301.0	1,301.0	2.8	2.8	35.13	0.0	-301.3	299.9	294.3	5.60	53.573		
1,400.0	1,399.8	1,400.0	1,400.0	3.0	3.0	35.75	0.0	-301.3	295.6	289.6	6.00	49.263		
1,500.0	1,499.5	1,495.5	1,495.5	3.2	3.2	36.52	-1.3	-302.2	289.4	283.1	6.37	45.410		
1,600.0	1,598.7	1,590.4	1,590.2	3.4	3.4	37.18	-5.3	-304.7	282.2	275.5	6.73	41.909		
1,700.0	1,697.8	1,685.5	1,685.0	3.6	3.6	37.41	-12.0	-308.9	275.4	268.3	7.12	38.651		
1,800.0	1,796.8	1,780.8	1,779.7	3.9	3.8	37.06	-21.3	-314.8	270.2	262.7	7.54	35.845		
1,900.0	1,895.9	1,876.9	1,874.7	4.2	4.0	36.12	-33.4	-322.5	266.8	258.8	7.98	33.446		
2,000.0	1,994.9	1,976.7	1,973.2	4.5	4.2	34.92	-46.8	-331.0	264.0	255.6	8.45	31.259		
2,100.0	2,094.0	2,076.5	2,071.7	4.8	4.5	33.69	-60.3	-339.6	261.4	252.5	8.93	29.270		
2,200.0	2,193.0	2,176.3	2,170.2	5.1	4.8	32.43	-73.7	-348.1	258.9	249.5	9.43	27.466		
2,300.0	2,292.1	2,276.1	2,268.8	5.4	5.1	31.15	-87.2	-356.6	256.5	246.6	9.93	25.836		
2,400.0	2,391.1	2,375.9	2,367.3	5.7	5.4	29.85	-100.7	-365.2	254.2	243.8	10.43	24.364		
2,500.0	2,490.2	2,475.7	2,465.8	6.0	5.7	28.52	-114.1	-373.7	252.1	241.2	10.94	23.037		
2,600.0	2,589.2	2,575.5	2,564.3	6.3	6.0	27.17	-127.6	-382.2	250.1	238.7	11.45	21.840		
2,700.0	2,688.3	2,675.3	2,662.9	6.6	6.4	25.80	-141.0	-390.8	248.3	236.3	11.96	20.760		
2,800.0	2,787.3	2,775.1	2,761.4	7.0	6.7	24.42	-154.5	-399.3	246.6	234.1	12.46	19.783		
2,900.0	2,886.4	2,874.9	2,859.9	7.3	7.1	23.01	-167.9	-407.8	245.0	232.1	12.97	18.899		
3,000.0	2,985.4	2,974.7	2,958.5	7.6	7.4	21.59	-181.4	-416.4	243.6	230.2	13.46	18.099		
3,100.0	3,084.5	3,074.5	3,057.0	8.0	7.7	20.15	-194.8	-424.9	242.4	228.4	13.95	17.372		
3,200.0	3,183.5	3,174.3	3,155.5	8.3	8.1	18.70	-208.3	-433.4	241.3	226.8	14.44	16.712		
3,300.0	3,282.5	3,274.1	3,254.0	8.6	8.5	17.23	-221.7	-442.0	240.3	225.4	14.92	16.112		
3,400.0	3,381.6	3,373.9	3,352.6	9.0	8.8	15.76	-235.2	-450.5	239.6	224.2	15.39	15.565		
3,500.0	3,480.6	3,473.7	3,451.1	9.3	9.2	14.27	-248.6	-459.0	238.9	223.1	15.86	15.065		
3,600.0	3,579.7	3,573.5	3,549.6	9.6	9.5	12.78	-262.1	-467.6	238.5	222.2	16.32	14.609		
3,700.0	3,678.7	3,673.4	3,648.1	10.0	9.9	11.29	-275.5	-476.1	238.2	221.4	16.78	14.192		
3,800.0	3,777.8	3,773.2	3,746.7	10.3	10.3	9.79	-289.0	-484.6	238.1	220.8	17.24	13.810		
3,830.7	3,808.2	3,803.8	3,776.9	10.4	10.4	9.33	-293.1	-487.3	238.1	220.7	17.38	13.699		
3,900.0	3,876.8	3,873.0	3,845.2	10.7	10.6	8.29	-302.4	-493.2	238.1	220.4	17.69	13.459		
4,000.0	3,975.9	3,972.8	3,943.7	11.0	11.0	6.79	-315.9	-501.7	238.3	220.2	18.14	13.137		
4,100.0	4,074.9	4,072.6	4,042.2	11.3	11.4	5.30	-329.3	-510.3	238.6	220.1	18.59	12.840		
4,200.0	4,174.0	4,172.4	4,140.8	11.7	11.7	3.81	-342.8	-518.8	239.2	220.1	19.03	12.567		
4,300.0	4,273.0	4,272.2	4,239.3	12.0	12.1	2.33	-356.2	-527.3	239.9	220.4	19.48	12.314		
4,400.0	4,372.1	4,372.0	4,337.8	12.4	12.5	0.86	-369.7	-535.9	240.7	220.8	19.92	12.081		
4,500.0	4,471.1	4,471.8	4,436.3	12.7	12.8	-0.60	-383.1	-544.4	241.7	221.3	20.37	11.864		
4,600.0	4,570.2	4,571.6	4,534.9	13.1	13.2	-2.05	-396.6	-552.9	242.8	222.0	20.82	11.663		
4,700.0	4,669.2	4,671.4	4,633.4	13.4	13.6	-3.48	-410.1	-561.5	244.2	222.9	21.28	11.476		
4,800.0	4,768.3	4,771.2	4,731.9	13.7	14.0	-4.90	-423.5	-570.0	245.6	223.9	21.73	11.302		
4,900.0	4,867.3	4,879.0	4,838.6	14.1	14.3	-6.31	-436.7	-578.3	245.8	223.6	22.18	11.081		

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

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Wiedeman 28F-202
<b>Project:</b>	SEC.28-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Reference Site:</b>	Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Wiedeman 28F-202	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (8-07-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design														Wiedeman 4N66W28F - West Pad Sec.28-T4N-R66W - Wiedeman 28F-304 - Wellbore #1 - Plan #1 (8		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	4,966.4	4,987.8	4,946.7	14.4	14.5	-7.47	-446.5	-584.6	242.4	219.8	22.63	10.715							
5,100.0	5,065.4	5,096.2	5,054.9	14.8	14.7	-8.43	-452.9	-588.6	235.5	212.4	23.07	10.209							
5,200.0	5,164.5	5,204.1	5,162.6	15.1	14.9	-9.21	-455.8	-590.5	225.0	201.5	23.51	9.571							
5,300.0	5,263.5	5,306.0	5,264.5	15.5	15.1	-9.84	-456.0	-590.6	211.6	187.7	23.94	8.840							
5,400.0	5,362.6	5,405.0	5,363.6	15.8	15.2	-10.52	-456.0	-590.6	198.1	173.7	24.37	8.130							
5,500.0	5,461.6	5,504.1	5,462.6	16.2	15.4	-11.29	-456.0	-590.6	184.6	159.8	24.79	7.445							
5,600.0	5,560.8	5,603.2	5,561.8	16.5	15.5	-12.13	-456.0	-590.6	171.6	146.4	25.23	6.804							
5,700.0	5,660.2	5,702.7	5,661.2	16.7	15.7	-12.84	-456.0	-590.6	161.8	136.2	25.62	6.315							
5,800.0	5,760.0	5,802.4	5,761.0	16.9	15.8	-13.35	-456.0	-590.6	155.3	129.3	25.98	5.978							
5,900.0	5,860.0	5,902.4	5,861.0	17.0	16.0	-13.61	-456.0	-590.6	152.3	126.0	26.31	5.788							
5,960.6	5,920.5	5,963.0	5,921.5	17.1	16.1	-13.66	-456.0	-590.6	151.7	125.2	26.52	5.719 CC							
6,000.0	5,960.0	6,002.4	5,961.0	17.2	16.1	-138.55	-456.0	-590.6	152.0	118.9	33.08	4.594							
6,100.0	6,060.0	6,102.4	6,061.0	17.3	16.3	-138.55	-456.0	-590.6	152.0	118.6	33.39	4.552							
6,200.0	6,160.0	6,202.4	6,161.0	17.5	16.4	-138.55	-456.0	-590.6	152.0	118.3	33.70	4.510							
6,300.0	6,260.0	6,302.4	6,261.0	17.6	16.6	-138.55	-456.0	-590.6	152.0	118.0	34.02	4.468 ES, SF							
6,332.3	6,292.2	6,334.6	6,293.2	17.7	16.6	131.53	-456.0	-590.6	152.2	124.3	27.90	5.454							
6,400.0	6,359.9	6,402.3	6,360.9	17.8	16.8	131.79	-456.0	-590.6	152.9	124.8	28.09	5.445							
6,500.0	6,459.1	6,492.7	6,451.2	17.8	16.9	134.76	-456.0	-592.8	163.4	135.4	28.01	5.834							
6,600.0	6,555.7	6,571.4	6,529.3	17.8	17.1	139.97	-456.0	-602.7	192.1	164.5	27.62	6.953							
6,700.0	6,648.2	6,637.5	6,593.7	17.7	17.3	144.47	-456.0	-617.3	240.6	213.7	26.91	8.943							
6,800.0	6,735.0	6,689.0	6,643.0	17.6	17.5	146.68	-456.0	-632.4	306.8	280.9	25.89	11.853							
6,900.0	6,814.5	6,726.4	6,678.0	17.5	17.7	145.95	-456.0	-645.5	386.6	361.7	24.82	15.574							
7,000.0	6,885.5	6,750.0	6,699.7	17.5	17.8	140.87	-456.0	-654.6	475.6	451.1	24.46	19.442							
7,100.0	6,946.7	6,765.2	6,713.6	17.6	17.8	128.25	-456.0	-660.8	570.4	543.8	26.57	21.471							
7,200.0	6,997.0	6,770.3	6,718.3	17.9	17.9	97.81	-456.0	-663.0	668.2	635.4	32.84	20.350							
7,300.0	7,035.7	6,768.2	6,716.4	18.7	17.9	55.25	-456.0	-662.1	766.8	735.2	31.53	24.317							
7,400.0	7,062.0	6,750.0	6,699.7	19.9	17.8	29.53	-456.0	-654.6	864.5	840.4	24.09	35.886							
7,500.0	7,075.5	6,750.0	6,699.7	21.4	17.8	19.90	-456.0	-654.6	959.6	938.8	20.78	46.169							

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Wiedeman 28F-202
<b>Project:</b>	SEC.28-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Reference Site:</b>	Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Wiedeman 28F-202	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (8-07-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design				Wiedeman 4N66W28F - West Pad Sec.28-T4N-R66W - Wiedeman 28G-214 - Wellbore #1 - Plan #1 (8										Offset Site Error:		0.0 ft
Survey Program: 0-MWD														Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance									
Measured Depth	Vertical	Measured	Vertical	Reference	Offset	Highside	Offset Wellbore Centre		Between	Between	Minimum	Separation	Warning			
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	Toolface (°)	+N/-S (ft)	+E/-W (ft)	Centres (ft)	Ellipses (ft)	Separation (ft)	Factor				
0.0	0.0	0.0	0.0	0.0	0.0	-106.18	-87.4	-301.3	313.7							
100.0	100.0	100.0	100.0	0.1	0.1	-106.18	-87.4	-301.3	313.7	313.5	0.22	1,395.834				
200.0	200.0	200.0	200.0	0.3	0.3	-106.18	-87.4	-301.3	313.7	313.1	0.67	465.278	CC, ES			
300.0	300.0	294.9	294.8	0.6	0.5	-106.43	-89.0	-301.7	314.6	313.5	1.09	287.940				
400.0	400.0	389.5	389.4	0.8	0.7	-107.17	-93.5	-302.7	317.0	315.5	1.52	209.178				
500.0	500.0	483.7	483.3	1.0	1.0	-108.36	-101.1	-304.5	321.3	319.4	1.95	164.576				
600.0	600.0	577.4	576.3	1.2	1.2	-109.97	-111.6	-307.0	327.5	325.1	2.40	136.653				
700.0	700.0	670.2	668.1	1.5	1.5	-111.94	-124.9	-310.1	335.9	333.0	2.85	117.980				
800.0	800.0	762.0	758.4	1.7	1.9	-114.17	-140.9	-313.9	346.6	343.3	3.30	104.959				
900.0	900.0	852.7	847.1	1.9	2.2	-116.61	-159.5	-318.3	359.9	356.2	3.76	95.604				
1,000.0	1,000.0	947.8	939.5	2.1	2.7	-119.25	-181.1	-323.4	375.6	371.3	4.24	88.481				
1,100.0	1,100.0	1,045.0	1,034.0	2.4	3.1	-121.74	-203.3	-328.6	392.0	387.3	4.73	82.919				
1,200.0	1,200.0	1,142.2	1,128.5	2.6	3.6	-124.04	-225.5	-333.9	409.2	404.0	5.23	78.301				
1,300.0	1,300.0	1,239.7	1,223.2	2.8	4.1	-1.23	-247.8	-339.1	425.2	419.0	6.20	68.580				
1,400.0	1,399.8	1,337.6	1,318.5	3.0	4.6	-3.21	-270.2	-344.4	438.4	431.7	6.70	65.475				
1,500.0	1,499.5	1,436.0	1,414.1	3.2	5.0	-5.11	-292.6	-349.7	448.6	441.4	7.18	62.440				
1,600.0	1,598.7	1,534.6	1,510.0	3.4	5.5	-6.97	-315.2	-355.0	455.8	448.1	7.66	59.471				
1,700.0	1,697.8	1,633.3	1,605.9	3.6	6.0	-8.82	-337.7	-360.3	461.9	453.8	8.16	56.629				
1,800.0	1,796.8	1,732.0	1,701.8	3.9	6.5	-10.61	-360.3	-365.7	468.6	459.9	8.65	54.190				
1,900.0	1,895.9	1,830.7	1,797.7	4.2	7.0	-12.36	-382.8	-371.0	475.6	466.5	9.13	52.080				
2,000.0	1,994.9	1,929.4	1,893.7	4.5	7.5	-14.06	-405.4	-376.3	483.2	473.5	9.62	50.242				
2,100.0	2,094.0	2,028.1	1,989.6	4.8	8.0	-15.70	-427.9	-381.6	491.1	481.0	10.10	48.629				
2,200.0	2,193.0	2,126.7	2,085.5	5.1	8.5	-17.29	-450.5	-386.9	499.4	488.8	10.58	47.204				
2,300.0	2,292.1	2,225.4	2,181.5	5.4	9.0	-18.83	-473.0	-392.3	508.1	497.0	11.06	45.936				
2,400.0	2,391.1	2,324.1	2,277.4	5.7	9.5	-20.31	-495.6	-397.6	517.2	505.6	11.54	44.801				
2,500.0	2,490.2	2,422.8	2,373.3	6.0	10.0	-21.75	-518.1	-402.9	526.6	514.5	12.03	43.777				
2,600.0	2,589.2	2,521.5	2,469.3	6.3	10.4	-23.13	-540.7	-408.2	536.3	523.8	12.52	42.849				
2,700.0	2,688.3	2,620.2	2,565.2	6.6	10.9	-24.47	-563.2	-413.5	546.3	533.3	13.01	42.003				
2,800.0	2,787.3	2,718.9	2,661.1	7.0	11.4	-25.75	-585.8	-418.9	556.6	543.1	13.50	41.228				
2,900.0	2,886.4	2,817.6	2,757.0	7.3	11.9	-27.00	-608.3	-424.2	567.2	553.2	14.00	40.513				
3,000.0	2,985.4	2,916.2	2,853.0	7.6	12.4	-28.19	-630.9	-429.5	578.0	563.5	14.50	39.852				
3,100.0	3,084.5	3,014.9	2,948.9	8.0	12.9	-29.34	-653.4	-434.8	589.1	574.1	15.01	39.238				
3,200.0	3,183.5	3,113.6	3,044.8	8.3	13.4	-30.45	-676.0	-440.1	600.4	584.9	15.53	38.664				
3,300.0	3,282.5	3,212.3	3,140.8	8.6	13.9	-31.52	-698.5	-445.4	612.0	595.9	16.05	38.127				
3,400.0	3,381.6	3,311.0	3,236.7	9.0	14.4	-32.55	-721.1	-450.8	623.7	607.1	16.58	37.623				
3,500.0	3,480.6	3,409.7	3,332.6	9.3	14.9	-33.54	-743.6	-456.1	635.6	618.5	17.11	37.148				
3,600.0	3,579.7	3,508.4	3,428.6	9.6	15.4	-34.49	-766.2	-461.4	647.7	630.1	17.65	36.699				
3,700.0	3,678.7	3,607.1	3,524.5	10.0	15.9	-35.41	-788.7	-466.7	660.0	641.8	18.20	36.274				
3,800.0	3,777.8	3,705.8	3,620.4	10.3	16.4	-36.30	-811.3	-472.0	672.5	653.7	18.75	35.872				
3,900.0	3,876.8	3,804.4	3,716.4	10.7	16.9	-37.15	-833.8	-477.4	685.1	665.8	19.30	35.490				
4,000.0	3,975.9	3,903.1	3,812.3	11.0	17.4	-37.98	-856.3	-482.7	697.8	678.0	19.87	35.126				
4,100.0	4,074.9	4,001.8	3,908.2	11.3	17.9	-38.77	-878.9	-488.0	710.7	690.3	20.44	34.779				
4,200.0	4,174.0	4,100.5	4,004.1	11.7	18.4	-39.54	-901.4	-493.3	723.7	702.7	21.01	34.448				
4,300.0	4,273.0	4,199.2	4,100.1	12.0	18.9	-40.28	-924.0	-498.6	736.9	715.3	21.59	34.133				
4,400.0	4,372.1	4,297.9	4,196.0	12.4	19.4	-40.99	-946.5	-504.0	750.1	728.0	22.17	33.831				
4,500.0	4,471.1	4,396.6	4,291.9	12.7	19.9	-41.68	-969.1	-509.3	763.5	740.7	22.76	33.542				
4,600.0	4,570.2	4,495.3	4,387.9	13.1	20.3	-42.34	-991.6	-514.6	777.0	753.6	23.36	33.265				
4,700.0	4,669.2	4,593.9	4,483.8	13.4	20.8	-42.99	-1,014.2	-519.9	790.5	766.6	23.96	33.000				
4,800.0	4,768.3	4,692.6	4,579.7	13.7	21.3	-43.61	-1,036.7	-525.2	804.2	779.7	24.56	32.746				
4,900.0	4,867.3	4,791.3	4,675.7	14.1	21.8	-44.21	-1,059.3	-530.5	818.0	792.8	25.17	32.502				
5,000.0	4,966.4	4,890.0	4,771.6	14.4	22.3	-44.79	-1,081.8	-535.9	831.8	806.0	25.78	32.268				

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

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Wiedeman 28F-202
<b>Project:</b>	SEC.28-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Reference Site:</b>	Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Wiedeman 28F-202	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (8-07-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Wiedeman 4N66W28F - West Pad Sec.28-T4N-R66W - Wiedeman 28G-214 - Wellbore #1 - Plan #1 (8													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference	Offset	Semi Major Axis		Distance										
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
5,100.0	5,065.4	4,988.7	4,867.5	14.8	22.8	-45.35	-1,104.4	-541.2	845.7	819.3	26.39	32.043		
5,200.0	5,164.5	5,087.4	4,963.4	15.1	23.3	-45.89	-1,126.9	-546.5	859.7	832.7	27.01	31.827		
5,300.0	5,263.5	5,186.1	5,059.4	15.5	23.8	-46.42	-1,149.5	-551.8	873.8	846.2	27.64	31.619		
5,400.0	5,362.6	5,284.8	5,155.3	15.8	24.3	-46.93	-1,172.0	-557.1	888.0	859.7	28.26	31.420		
5,500.0	5,461.6	5,383.5	5,251.2	16.2	24.8	-47.42	-1,194.6	-562.5	902.2	873.3	28.89	31.227		
5,600.0	5,560.8	5,482.1	5,347.1	16.5	25.3	-48.00	-1,217.1	-567.8	916.8	887.3	29.49	31.088		
5,700.0	5,660.2	5,588.2	5,450.2	16.7	25.8	-48.56	-1,241.3	-573.5	933.5	903.5	30.02	31.100		
5,800.0	5,760.0	5,734.6	5,593.7	16.9	26.3	-49.02	-1,270.0	-580.3	949.2	918.7	30.53	31.088		
5,900.0	5,860.0	5,882.8	5,740.1	17.0	26.7	-49.26	-1,291.8	-585.4	962.2	931.2	30.97	31.072		
6,000.0	5,960.0	6,032.4	5,889.0	17.2	26.9	-174.15	-1,306.3	-588.8	971.9	930.0	41.97	23.158		
6,100.0	6,060.0	6,183.1	6,039.5	17.3	27.1	-174.09	-1,313.3	-590.5	976.6	934.3	42.34	23.064		
6,200.0	6,160.0	6,303.6	6,160.0	17.5	27.3	-174.09	-1,313.9	-590.6	977.0	934.4	42.64	22.916		
6,300.0	6,260.0	6,403.6	6,260.0	17.6	27.4	-174.09	-1,313.9	-590.6	977.0	934.2	42.89	22.782 SF		
6,318.3	6,278.2	6,421.9	6,278.2	17.7	27.4	95.92	-1,313.9	-590.6	977.1	944.6	32.50	30.065		
6,400.0	6,359.9	6,495.7	6,352.0	17.8	27.5	96.08	-1,313.9	-592.8	977.5	944.7	32.71	29.880		
6,500.0	6,459.1	6,579.6	6,435.1	17.8	27.6	97.09	-1,313.9	-603.7	980.5	947.7	32.77	29.917		
6,600.0	6,555.7	6,650.0	6,503.7	17.8	27.7	98.43	-1,313.9	-619.8	987.9	955.2	32.70	30.213		

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Wiedeman 28F-202
<b>Project:</b>	SEC.28-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Reference Site:</b>	Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Wiedeman 28F-202	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (8-07-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Wiedeman 4N66W28F - West Pad Sec.28-T4N-R66W - Wiedeman 28G-314 - Wellbore #1 - Plan #1 (8										Offset Site Error:		0.0 ft		
Survey Program: 0-MWD														Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor				
0.0	0.0	1.0	1.0	0.0	0.0	-100.95	-58.3	-301.3	306.9							
100.0	100.0	101.0	101.0	0.1	0.1	-100.95	-58.3	-301.3	306.9	306.7	0.23	1,351.869				
200.0	200.0	201.0	201.0	0.3	0.3	-100.95	-58.3	-301.3	306.9	306.2	0.68	453.617				
300.0	300.0	301.0	301.0	0.6	0.6	-100.95	-58.3	-301.3	306.9	305.8	1.13	272.532				
366.3	366.3	367.3	367.3	0.7	0.7	-100.95	-58.3	-301.3	306.9	305.5	1.42	215.476 CC				
400.0	400.0	400.0	400.0	0.8	0.8	-100.95	-58.3	-301.3	306.9	305.3	1.57	195.056 ES				
500.0	500.0	496.5	496.4	1.0	1.0	-101.22	-59.9	-301.7	307.6	305.6	1.99	154.507				
600.0	600.0	591.8	591.6	1.2	1.2	-102.02	-64.5	-303.0	309.9	307.5	2.40	129.068				
700.0	700.0	686.6	686.1	1.5	1.4	-103.31	-72.1	-305.0	313.8	310.9	2.82	111.105				
800.0	800.0	780.9	779.7	1.7	1.6	-105.04	-82.7	-307.8	319.4	316.2	3.26	98.100				
900.0	900.0	874.3	872.1	1.9	1.9	-107.16	-96.1	-311.4	327.1	323.5	3.70	88.526				
1,000.0	1,000.0	966.7	963.0	2.1	2.2	-109.58	-112.3	-315.6	337.2	333.0	4.14	81.430				
1,100.0	1,100.0	1,061.3	1,055.5	2.4	2.6	-112.27	-131.3	-320.7	349.5	344.9	4.60	76.009				
1,200.0	1,200.0	1,159.0	1,151.0	2.6	3.0	-114.91	-151.4	-326.0	362.9	357.9	5.06	71.765				
1,300.0	1,300.0	1,257.0	1,246.7	2.8	3.4	7.56	-171.5	-331.4	375.3	369.5	5.88	63.837				
1,400.0	1,399.8	1,355.4	1,342.9	3.0	3.8	5.32	-191.7	-336.7	384.9	378.6	6.38	60.356				
1,500.0	1,499.5	1,454.2	1,439.4	3.2	4.3	3.23	-212.0	-342.1	391.6	384.7	6.87	57.003				
1,600.0	1,598.7	1,553.1	1,536.1	3.4	4.7	1.22	-232.3	-347.5	395.3	387.9	7.36	53.715				
1,700.0	1,697.8	1,652.1	1,632.9	3.6	5.1	-0.74	-252.6	-352.9	397.9	390.0	7.86	50.604				
1,800.0	1,796.8	1,751.2	1,729.7	3.9	5.6	-2.68	-273.0	-358.3	401.0	392.6	8.36	47.948				
1,900.0	1,895.9	1,850.2	1,826.4	4.2	6.0	-4.58	-293.3	-363.7	404.5	395.6	8.86	45.667				
2,000.0	1,994.9	1,949.2	1,923.2	4.5	6.5	-6.45	-313.6	-369.1	408.5	399.1	9.35	43.698				
2,100.0	2,094.0	2,048.2	2,019.9	4.8	6.9	-8.29	-334.0	-374.5	412.9	403.0	9.83	41.986				
2,200.0	2,193.0	2,147.2	2,116.7	5.1	7.4	-10.08	-354.3	-379.9	417.7	407.4	10.32	40.490				
2,300.0	2,292.1	2,246.3	2,213.5	5.4	7.9	-11.83	-374.6	-385.3	422.9	412.1	10.80	39.174				
2,400.0	2,391.1	2,345.3	2,310.2	5.7	8.3	-13.54	-394.9	-390.7	428.6	417.3	11.27	38.011				
2,500.0	2,490.2	2,444.3	2,407.0	6.0	8.8	-15.20	-415.3	-396.1	434.6	422.8	11.75	36.976				
2,600.0	2,589.2	2,543.3	2,503.7	6.3	9.2	-16.82	-435.6	-401.5	440.9	428.7	12.23	36.050				
2,700.0	2,688.3	2,642.3	2,600.5	6.6	9.7	-18.39	-455.9	-406.9	447.6	434.9	12.71	35.218				
2,800.0	2,787.3	2,741.4	2,697.3	7.0	10.1	-19.92	-476.3	-412.3	454.7	441.5	13.19	34.464				
2,900.0	2,886.4	2,840.4	2,794.0	7.3	10.6	-21.39	-496.6	-417.7	462.0	448.3	13.68	33.780				
3,000.0	2,985.4	2,939.4	2,890.8	7.6	11.1	-22.83	-516.9	-423.1	469.7	455.5	14.17	33.154				
3,100.0	3,084.5	3,038.4	2,987.5	8.0	11.5	-24.21	-537.2	-428.5	477.6	462.9	14.66	32.579				
3,200.0	3,183.5	3,137.5	3,084.3	8.3	12.0	-25.55	-557.6	-433.9	485.8	470.7	15.16	32.049				
3,300.0	3,282.5	3,236.5	3,181.1	8.6	12.4	-26.84	-577.9	-439.3	494.3	478.6	15.66	31.558				
3,400.0	3,381.6	3,335.5	3,277.8	9.0	12.9	-28.10	-598.2	-444.7	503.0	486.8	16.17	31.101				
3,500.0	3,480.6	3,434.5	3,374.6	9.3	13.3	-29.30	-618.6	-450.1	511.9	495.2	16.69	30.675				
3,600.0	3,579.7	3,533.5	3,471.3	9.6	13.8	-30.47	-638.9	-455.5	521.1	503.9	17.21	30.275				
3,700.0	3,678.7	3,632.6	3,568.1	10.0	14.3	-31.60	-659.2	-460.9	530.5	512.7	17.74	29.900				
3,800.0	3,777.8	3,731.6	3,664.9	10.3	14.7	-32.68	-679.5	-466.3	540.0	521.8	18.28	29.547				
3,900.0	3,876.8	3,830.6	3,761.6	10.7	15.2	-33.73	-699.9	-471.7	549.8	531.0	18.82	29.214				
4,000.0	3,975.9	3,929.6	3,858.4	11.0	15.6	-34.75	-720.2	-477.1	559.7	540.4	19.37	28.898				
4,100.0	4,074.9	4,028.6	3,955.2	11.3	16.1	-35.72	-740.5	-482.5	569.8	549.9	19.93	28.599				
4,200.0	4,174.0	4,127.7	4,051.9	11.7	16.6	-36.67	-760.9	-487.9	580.1	559.6	20.49	28.315				
4,300.0	4,273.0	4,226.7	4,148.7	12.0	17.0	-37.58	-781.2	-493.3	590.5	569.5	21.06	28.045				
4,400.0	4,372.1	4,325.7	4,245.4	12.4	17.5	-38.46	-801.5	-498.7	601.1	579.5	21.63	27.788				
4,500.0	4,471.1	4,424.7	4,342.2	12.7	17.9	-39.31	-821.8	-504.1	611.8	589.6	22.21	27.543				
4,600.0	4,570.2	4,523.7	4,439.0	13.1	18.4	-40.13	-842.2	-509.5	622.6	599.8	22.80	27.310				
4,700.0	4,669.2	4,622.8	4,535.7	13.4	18.9	-40.92	-862.5	-514.9	633.6	610.2	23.39	27.086				
4,800.0	4,768.3	4,721.8	4,632.5	13.7	19.3	-41.68	-882.8	-520.3	644.6	620.7	23.99	26.873				
4,900.0	4,867.3	4,820.8	4,729.2	14.1	19.8	-42.42	-903.2	-525.7	655.8	631.2	24.59	26.669				

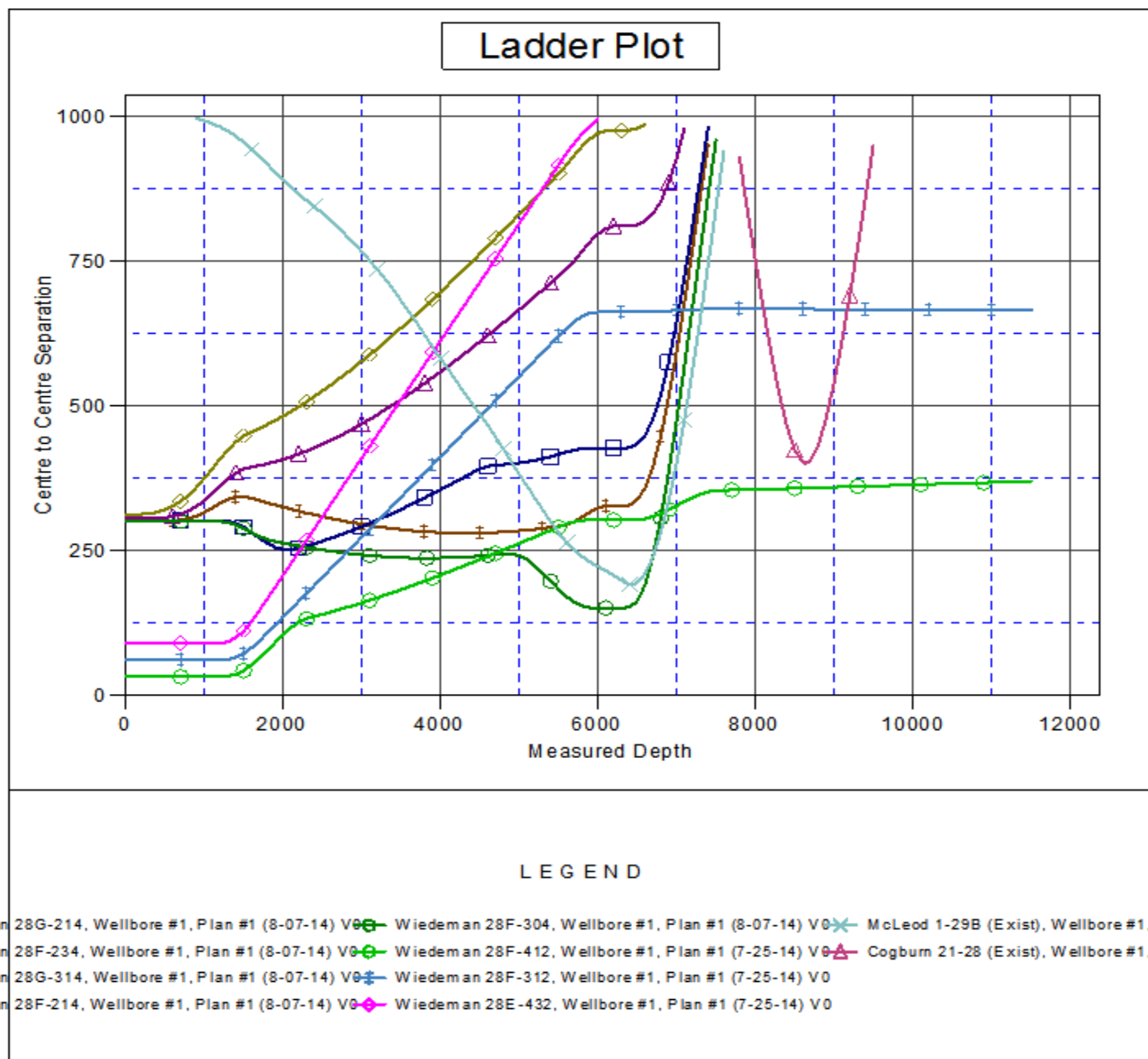
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Wiedeman 28F-202
<b>Project:</b>	SEC.28-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Reference Site:</b>	Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Wiedeman 28F-202	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (8-07-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Wiedeman 4N66W28F - West Pad Sec.28-T4N-R66W - Wiedeman 28G-314 - Wellbore #1 - Plan #1 (8														Offset Site Error:	0.0 ft
Survey Program: 0-MWD														Offset Well Error:	0.0 ft
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	4,966.4	4,919.8	4,826.0	14.4	20.2	-43.14	-923.5	-531.1	667.1	641.9	25.20	26.474			
5,100.0	5,065.4	5,018.8	4,922.8	14.8	20.7	-43.83	-943.8	-536.5	678.5	652.7	25.81	26.287			
5,200.0	5,164.5	5,117.9	5,019.5	15.1	21.2	-44.50	-964.1	-541.9	690.0	663.5	26.43	26.108			
5,300.0	5,263.5	5,216.9	5,116.3	15.5	21.6	-45.14	-984.5	-547.3	701.5	674.5	27.05	25.936			
5,400.0	5,362.6	5,315.9	5,213.0	15.8	22.1	-45.77	-1,004.8	-552.7	713.2	685.5	27.67	25.772			
5,500.0	5,461.6	5,414.9	5,309.8	16.2	22.5	-46.37	-1,025.1	-558.1	724.9	696.6	28.30	25.614			
5,600.0	5,560.8	5,513.9	5,406.5	16.5	23.0	-47.03	-1,045.5	-563.5	737.1	708.2	28.90	25.501			
5,700.0	5,660.2	5,612.8	5,503.1	16.7	23.5	-47.60	-1,065.7	-568.9	751.4	722.0	29.41	25.547			
5,800.0	5,760.0	5,714.3	5,602.4	16.9	23.9	-48.01	-1,086.6	-574.4	768.1	738.2	29.88	25.708			
5,900.0	5,860.0	5,849.2	5,734.9	17.0	24.4	-48.23	-1,110.7	-580.8	784.4	754.1	30.32	25.867			
6,000.0	5,960.0	5,985.5	5,869.9	17.2	24.7	-173.07	-1,129.0	-585.7	798.0	758.2	39.80	20.048			
6,100.0	6,060.0	6,123.4	6,007.1	17.3	25.0	-172.94	-1,141.2	-588.9	807.0	766.8	40.24	20.055			
6,200.0	6,160.0	6,262.1	6,145.7	17.5	25.2	-172.88	-1,147.0	-590.5	811.3	770.7	40.60	19.982			
6,300.0	6,260.0	6,377.3	6,261.0	17.6	25.3	-172.88	-1,147.5	-590.6	811.7	770.8	40.90	19.847 SF			
6,332.4	6,292.4	6,409.7	6,293.4	17.7	25.3	97.14	-1,147.5	-590.6	811.7	779.7	31.97	25.388			
6,400.0	6,359.9	6,477.3	6,360.9	17.8	25.4	97.21	-1,147.5	-590.6	811.8	779.7	32.16	25.245			
6,500.0	6,459.1	6,567.7	6,451.2	17.8	25.5	97.98	-1,147.5	-592.8	813.9	781.6	32.24	25.248			
6,600.0	6,555.7	6,650.0	6,532.8	17.8	25.6	99.68	-1,147.5	-603.4	820.1	788.0	32.14	25.520			
6,700.0	6,648.2	6,712.4	6,593.7	17.7	25.7	101.20	-1,147.5	-617.3	832.8	800.9	31.98	26.045			
6,800.0	6,735.0	6,764.0	6,643.0	17.6	25.9	102.14	-1,147.5	-632.4	854.3	822.5	31.87	26.810			
6,900.0	6,814.5	6,800.0	6,676.7	17.5	26.0	101.74	-1,147.5	-645.0	886.1	854.1	32.00	27.694			
7,000.0	6,885.5	6,826.1	6,700.8	17.5	26.0	99.94	-1,147.5	-655.1	928.4	895.9	32.53	28.541			
7,100.0	6,946.7	6,850.0	6,722.5	17.6	26.1	97.05	-1,147.5	-665.0	980.4	946.9	33.50	29.263			

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Wiedeman 28F-202
<b>Project:</b>	SEC.28-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Reference Site:</b>	Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Wiedeman 28F-202	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (8-07-14)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4777.0ft (Original Well Elev) Coordinates are relative to: Wiedeman 28F-202  
 Offset Depths are relative to Offset Datum  
 Central Meridian is -105.500000 °  
 Coordinate System is US State Plane 1983, Colorado Northern Zone  
 Grid Convergence at Surface is: 0.46°





<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Wiedeman 28F-202
<b>Project:</b>	SEC.28-T4N-R66W	<b>TVD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Reference Site:</b>	Wiedeman 4N66W28F - East Pad Sec.28-T4N-R66W	<b>MD Reference:</b>	WELL @ 4777.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Wiedeman 28F-202	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
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