

# PETROLEUM DEVELOPMENT CORP Weld County CO

Well Name: **Kindsfater 24J-303**

Surface Location: Kindsfater 24J-HZ Pad Sec.24-T6N-R66W  
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

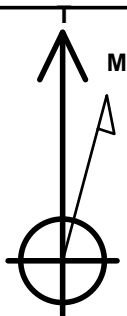
Ground Elevation: 4764.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1418679.60	3214369.30	40.480120	-104.729380	

RKB - 15' WELL @ 4779.0ft (RKB - 15')

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 370'FNL & 1539'FWL	1.0	0.0	0.0	Point
BHL 500'FSL & 1111'FWL	7060.0	-4437.4	-439.6	Point



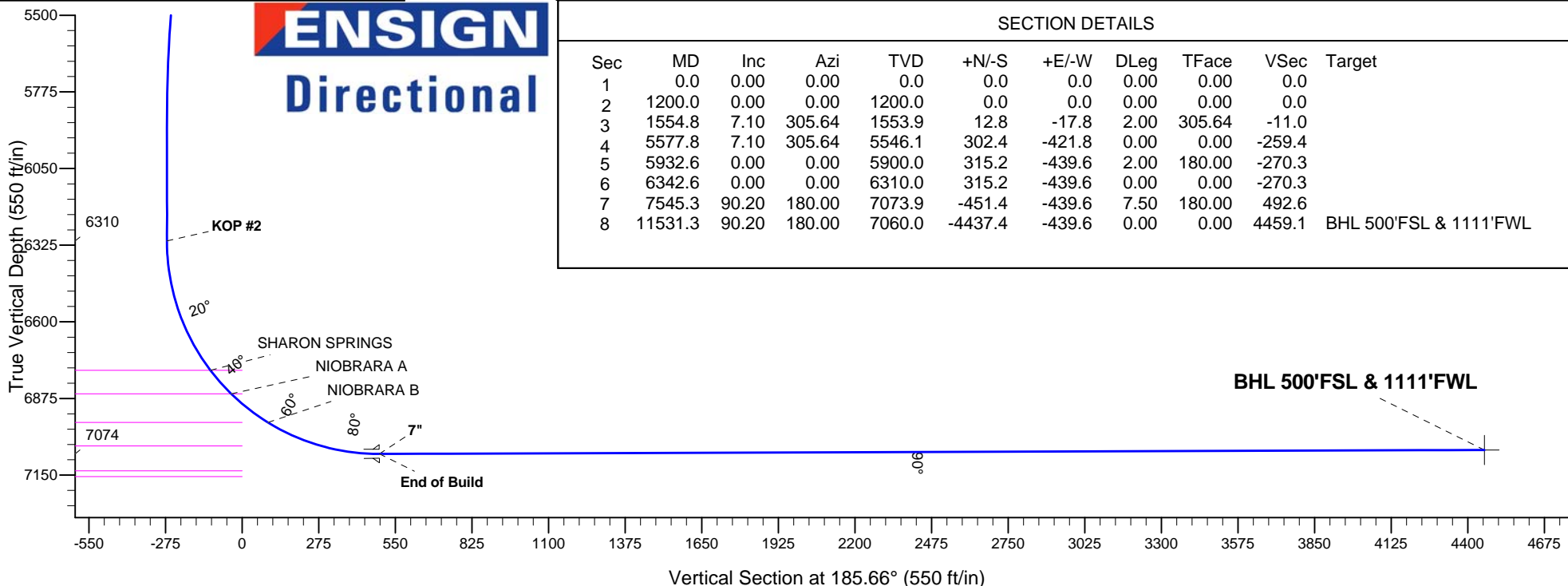
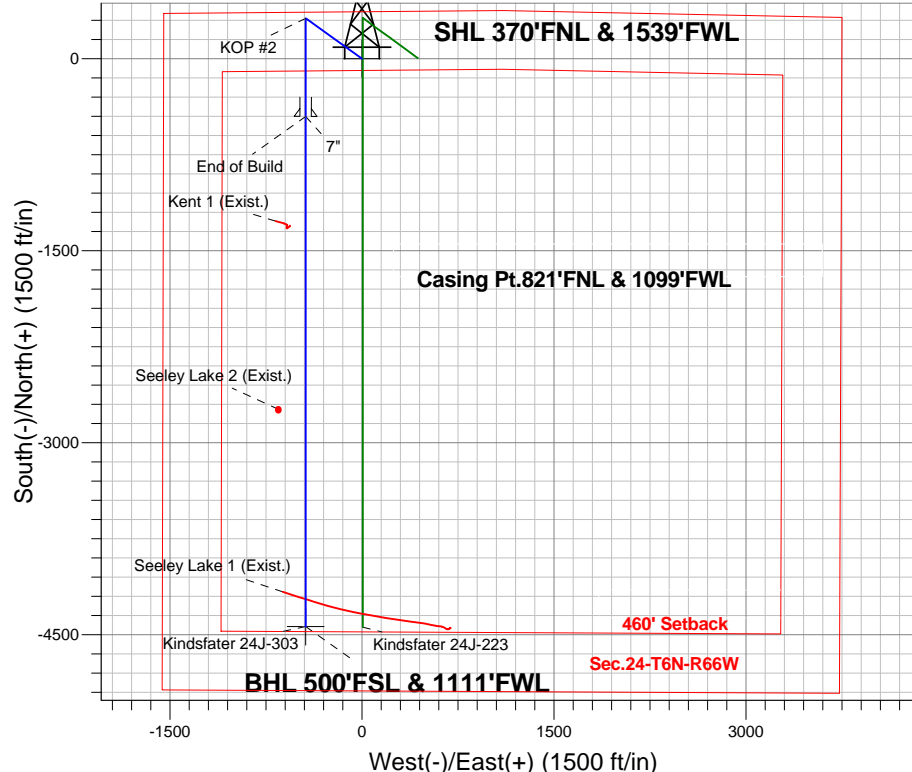
Azimuths to True North  
Magnetic North: 8.43°

Magnetic Field  
Strength: 52844.8srT  
Dip Angle: 67.01°  
Date: 8/11/2014  
Model: IGRF2010

## ANNOTATIONS

TVD	MD	Annotation
1200.0	1200.0	KOP #1
6310.0	6342.6	KOP #2
7073.9	7545.3	End of Build

Kindsfater 24J-HZ Pad Sec.24-T6N-R66W  
Kindsfater 24J-303  
Plan #1 (8-11-14)



## 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	1554.8	7.10	305.64	1553.9	12.8	-17.8	2.00	305.64	-11.0	
4	5577.8	7.10	305.64	5546.1	302.4	-421.8	0.00	0.00	-259.4	
5	5932.6	0.00	0.00	5900.0	315.2	-439.6	2.00	180.00	-270.3	
6	6342.6	0.00	0.00	6310.0	315.2	-439.6	0.00	0.00	-270.3	
7	7545.3	90.20	180.00	7073.9	-451.4	-439.6	7.50	180.00	492.6	
8	11531.3	90.20	180.00	7060.0	-4437.4	-439.6	0.00	0.00	4459.1	BHL 500'FSL & 1111'FWL



# **PETROLEUM DEVELOPMENT CORP Weld County CO**

**SEC.24-T6N-R66W**

**Kindsfater 24J-HZ Pad Sec.24-T6N-R66W**

**Kindsfater 24J-303**

**Wellbore #1**

**Plan: Plan #1 (8-11-14)**

## **Standard Planning Report**

**13 August, 2014**

<b>Database:</b>	landmark	<b>Local Co-ordinate Reference:</b>	Well Kindsfater 24J-303
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Project:</b>	SEC.24-T6N-R66W	<b>MD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Site:</b>	Kindsfater 24J-HZ Pad Sec.24-T6N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Kindsfater 24J-303	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (8-11-14)		

<b>Project</b>	SEC.24-T6N-R66W, Weld County, CO		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site						Kindsfater 24J-HZ Pad Sec.24-T6N-R66W											
Site Position:						Northing:			1,418,678.83ft			Latitude:			40.480120		
From:			Lat/Long			Easting:			3,214,280.29ft			Longitude:			-104.729700		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.50 °		

Well	Kindsfater 24J-303					
Well Position	+N-S	0.0 ft	Northing:	1,418,679.60 ft	Latitude:	40.480120
	+E-W	89.0 ft	Easting:	3,214,369.30 ft	Longitude:	-104.729380
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,764.0 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	8/11/2014	8.43	67.01	52,845

<b>Design</b>	Plan #1 (8-11-14)			
<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	185.66

<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	
1,554.8	7.10	305.64	1,553.9	12.8	-17.8	2.00	2.00	0.00	305.64	
5,577.8	7.10	305.64	5,546.1	302.4	-421.8	0.00	0.00	0.00	0.00	
5,932.6	0.00	0.00	5,900.0	315.2	-439.6	2.00	-2.00	0.00	180.00	
6,342.6	0.00	0.00	6,310.0	315.2	-439.6	0.00	0.00	0.00	0.00	
7,545.3	90.20	180.00	7,073.9	-451.4	-439.6	7.50	7.50	0.00	180.00	
11,531.3	90.20	180.00	7,060.0	-4,437.4	-439.6	0.00	0.00	0.00	0.00	BHL 500'FSL & 111

<b>Database:</b>	landmark	<b>Local Co-ordinate Reference:</b>	Well Kindsfater 24J-303
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Project:</b>	SEC.24-T6N-R66W	<b>MD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Site:</b>	Kindsfater 24J-HZ Pad Sec.24-T6N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Kindsfater 24J-303	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (8-11-14)		

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	305.64	1,300.0	1.0	-1.4	-0.9	2.00	2.00	0.00
1,400.0	4.00	305.64	1,399.8	4.1	-5.7	-3.5	2.00	2.00	0.00
1,500.0	6.00	305.64	1,499.5	9.1	-12.8	-7.8	2.00	2.00	0.00
1,554.8	7.10	305.64	1,553.9	12.8	-17.8	-11.0	2.00	2.00	0.00
1,600.0	7.10	305.64	1,598.7	16.0	-22.4	-13.8	0.00	0.00	0.00
1,700.0	7.10	305.64	1,698.0	23.2	-32.4	-19.9	0.00	0.00	0.00
1,800.0	7.10	305.64	1,797.2	30.4	-42.5	-26.1	0.00	0.00	0.00
1,900.0	7.10	305.64	1,896.4	37.6	-52.5	-32.3	0.00	0.00	0.00
2,000.0	7.10	305.64	1,995.7	44.8	-62.5	-38.5	0.00	0.00	0.00
2,100.0	7.10	305.64	2,094.9	52.0	-72.6	-44.6	0.00	0.00	0.00
2,200.0	7.10	305.64	2,194.2	59.2	-82.6	-50.8	0.00	0.00	0.00
2,300.0	7.10	305.64	2,293.4	66.4	-92.7	-57.0	0.00	0.00	0.00
2,400.0	7.10	305.64	2,392.6	73.6	-102.7	-63.2	0.00	0.00	0.00
2,500.0	7.10	305.64	2,491.9	80.8	-112.7	-69.3	0.00	0.00	0.00
2,600.0	7.10	305.64	2,591.1	88.0	-122.8	-75.5	0.00	0.00	0.00
2,700.0	7.10	305.64	2,690.3	95.2	-132.8	-81.7	0.00	0.00	0.00
2,800.0	7.10	305.64	2,789.6	102.4	-142.9	-87.8	0.00	0.00	0.00
2,900.0	7.10	305.64	2,888.8	109.6	-152.9	-94.0	0.00	0.00	0.00
3,000.0	7.10	305.64	2,988.0	116.8	-162.9	-100.2	0.00	0.00	0.00
3,100.0	7.10	305.64	3,087.3	124.0	-173.0	-106.4	0.00	0.00	0.00
3,200.0	7.10	305.64	3,186.5	131.2	-183.0	-112.5	0.00	0.00	0.00
3,300.0	7.10	305.64	3,285.7	138.4	-193.1	-118.7	0.00	0.00	0.00
3,400.0	7.10	305.64	3,385.0	145.6	-203.1	-124.9	0.00	0.00	0.00
3,500.0	7.10	305.64	3,484.2	152.8	-213.1	-131.1	0.00	0.00	0.00
3,600.0	7.10	305.64	3,583.4	160.0	-223.2	-137.2	0.00	0.00	0.00
3,687.2	7.10	305.64	3,670.0	166.3	-231.9	-142.6	0.00	0.00	0.00
<b>PARKMAN</b>									
3,700.0	7.10	305.64	3,682.7	167.2	-233.2	-143.4	0.00	0.00	0.00
3,800.0	7.10	305.64	3,781.9	174.4	-243.3	-149.6	0.00	0.00	0.00
3,900.0	7.10	305.64	3,881.1	181.6	-253.3	-155.8	0.00	0.00	0.00
4,000.0	7.10	305.64	3,980.4	188.8	-263.3	-161.9	0.00	0.00	0.00
4,100.0	7.10	305.64	4,079.6	196.0	-273.4	-168.1	0.00	0.00	0.00
4,200.0	7.10	305.64	4,178.8	203.2	-283.4	-174.3	0.00	0.00	0.00
4,300.0	7.10	305.64	4,278.1	210.4	-293.5	-180.5	0.00	0.00	0.00
4,322.1	7.10	305.64	4,300.0	212.0	-295.7	-181.8	0.00	0.00	0.00
<b>SUSSEX</b>									
4,400.0	7.10	305.64	4,377.3	217.6	-303.5	-186.6	0.00	0.00	0.00
4,500.0	7.10	305.64	4,476.5	224.8	-313.5	-192.8	0.00	0.00	0.00
4,600.0	7.10	305.64	4,575.8	232.0	-323.6	-199.0	0.00	0.00	0.00

<b>Database:</b>	landmark	<b>Local Co-ordinate Reference:</b>	Well Kindsfater 24J-303
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Project:</b>	SEC.24-T6N-R66W	<b>MD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Site:</b>	Kindsfater 24J-HZ Pad Sec.24-T6N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Kindsfater 24J-303	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (8-11-14)		

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)
4,700.0	7.10	305.64	4,675.0	239.2	-333.6	-205.2	0.00	0.00	0.00
4,800.0	7.10	305.64	4,774.2	246.4	-343.7	-211.3	0.00	0.00	0.00
4,900.0	7.10	305.64	4,873.5	253.6	-353.7	-217.5	0.00	0.00	0.00
4,977.1	7.10	305.64	4,950.0	259.2	-361.5	-222.3	0.00	0.00	0.00
<b>SHANNON</b>									
5,000.0	7.10	305.64	4,972.7	260.8	-363.7	-223.7	0.00	0.00	0.00
5,100.0	7.10	305.64	5,071.9	268.0	-373.8	-229.9	0.00	0.00	0.00
5,200.0	7.10	305.64	5,171.2	275.2	-383.8	-236.0	0.00	0.00	0.00
5,300.0	7.10	305.64	5,270.4	282.4	-393.9	-242.2	0.00	0.00	0.00
5,400.0	7.10	305.64	5,369.6	289.6	-403.9	-248.4	0.00	0.00	0.00
5,500.0	7.10	305.64	5,468.9	296.8	-414.0	-254.6	0.00	0.00	0.00
5,577.8	7.10	305.64	5,546.1	302.4	-421.8	-259.4	0.00	0.00	0.00
5,600.0	6.65	305.64	5,568.1	304.0	-423.9	-260.7	2.00	-2.00	0.00
5,700.0	4.65	305.64	5,667.6	309.7	-431.9	-265.6	2.00	-2.00	0.00
5,800.0	2.65	305.64	5,767.4	313.4	-437.1	-268.8	2.00	-2.00	0.00
5,900.0	0.65	305.64	5,867.4	315.1	-439.4	-270.2	2.00	-2.00	0.00
5,932.6	0.00	0.00	5,900.0	315.2	-439.6	-270.3	2.00	-2.00	0.00
6,000.0	0.00	0.00	5,967.4	315.2	-439.6	-270.3	0.00	0.00	0.00
6,100.0	0.00	0.00	6,067.4	315.2	-439.6	-270.3	0.00	0.00	0.00
6,200.0	0.00	0.00	6,167.4	315.2	-439.6	-270.3	0.00	0.00	0.00
6,300.0	0.00	0.00	6,267.4	315.2	-439.6	-270.3	0.00	0.00	0.00
6,342.6	0.00	0.00	6,310.0	315.2	-439.6	-270.3	0.00	0.00	0.00
<b>KOP #2</b>									
6,400.0	4.30	180.00	6,367.3	313.0	-439.6	-268.2	7.50	7.50	0.00
6,500.0	11.80	180.00	6,466.3	299.0	-439.6	-254.2	7.50	7.50	0.00
6,600.0	19.30	180.00	6,562.5	272.2	-439.6	-227.6	7.50	7.50	0.00
6,700.0	26.80	180.00	6,654.5	233.1	-439.6	-188.6	7.50	7.50	0.00
6,800.0	34.30	180.00	6,740.5	182.3	-439.6	-138.1	7.50	7.50	0.00
6,841.3	37.40	180.00	6,774.0	158.1	-439.6	-114.0	7.50	7.50	0.00
<b>SHARON SPRINGS</b>									
6,900.0	41.80	180.00	6,819.2	120.7	-439.6	-76.8	7.50	7.50	0.00
6,953.8	45.84	180.00	6,858.0	83.5	-439.6	-39.7	7.50	7.50	0.00
<b>NIORARA A</b>									
7,000.0	49.30	180.00	6,889.2	49.4	-439.6	-5.8	7.50	7.50	0.00
7,100.0	56.80	180.00	6,949.2	-30.5	-439.6	73.7	7.50	7.50	0.00
7,122.0	58.45	180.00	6,961.0	-49.0	-439.6	92.1	7.50	7.50	0.00
<b>NIORARA B</b>									
7,200.0	64.30	180.00	6,998.4	-117.5	-439.6	160.3	7.50	7.50	0.00
7,300.0	71.80	180.00	7,035.7	-210.2	-439.6	252.5	7.50	7.50	0.00
7,331.7	74.18	180.00	7,045.0	-240.5	-439.6	282.7	7.50	7.50	0.00
<b>NIORARA C</b>									
7,400.0	79.30	180.00	7,060.6	-307.0	-439.6	348.8	7.50	7.50	0.00
7,500.0	86.80	180.00	7,072.7	-406.2	-439.6	447.5	7.50	7.50	0.00
7,545.3	90.20	180.00	7,073.9	-451.4	-439.6	492.6	7.50	7.50	0.00
<b>End of Build - 7"</b>									
7,600.0	90.20	180.00	7,073.7	-506.1	-439.6	547.0	0.00	0.00	0.00
7,700.0	90.20	180.00	7,073.4	-606.1	-439.6	646.5	0.00	0.00	0.00
7,800.0	90.20	180.00	7,073.0	-706.1	-439.6	746.0	0.00	0.00	0.00
7,900.0	90.20	180.00	7,072.7	-806.1	-439.6	845.5	0.00	0.00	0.00
8,000.0	90.20	180.00	7,072.3	-906.1	-439.6	945.1	0.00	0.00	0.00
8,100.0	90.20	180.00	7,072.0	-1,006.1	-439.6	1,044.6	0.00	0.00	0.00
8,200.0	90.20	180.00	7,071.6	-1,106.1	-439.6	1,144.1	0.00	0.00	0.00

<b>Database:</b>	landmark	<b>Local Co-ordinate Reference:</b>	Well Kindsfater 24J-303
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Project:</b>	SEC.24-T6N-R66W	<b>MD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Site:</b>	Kindsfater 24J-HZ Pad Sec.24-T6N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Kindsfater 24J-303	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (8-11-14)		

#### 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	90.20	180.00	7,071.3	-1,206.1	-439.6	1,243.6	0.00	0.00	0.00
8,400.0	90.20	180.00	7,070.9	-1,306.1	-439.6	1,343.1	0.00	0.00	0.00
8,500.0	90.20	180.00	7,070.6	-1,406.1	-439.6	1,442.6	0.00	0.00	0.00
8,600.0	90.20	180.00	7,070.2	-1,506.1	-439.6	1,542.1	0.00	0.00	0.00
8,700.0	90.20	180.00	7,069.9	-1,606.1	-439.6	1,641.6	0.00	0.00	0.00
8,800.0	90.20	180.00	7,069.5	-1,706.1	-439.6	1,741.2	0.00	0.00	0.00
8,900.0	90.20	180.00	7,069.2	-1,806.1	-439.6	1,840.7	0.00	0.00	0.00
9,000.0	90.20	180.00	7,068.8	-1,906.1	-439.6	1,940.2	0.00	0.00	0.00
9,100.0	90.20	180.00	7,068.5	-2,006.1	-439.6	2,039.7	0.00	0.00	0.00
9,200.0	90.20	180.00	7,068.1	-2,106.1	-439.6	2,139.2	0.00	0.00	0.00
9,300.0	90.20	180.00	7,067.8	-2,206.1	-439.6	2,238.7	0.00	0.00	0.00
9,400.0	90.20	180.00	7,067.4	-2,306.1	-439.6	2,338.2	0.00	0.00	0.00
9,500.0	90.20	180.00	7,067.1	-2,406.1	-439.6	2,437.7	0.00	0.00	0.00
9,600.0	90.20	180.00	7,066.7	-2,506.1	-439.6	2,537.3	0.00	0.00	0.00
9,700.0	90.20	180.00	7,066.4	-2,606.1	-439.6	2,636.8	0.00	0.00	0.00
9,800.0	90.20	180.00	7,066.0	-2,706.1	-439.6	2,736.3	0.00	0.00	0.00
9,900.0	90.20	180.00	7,065.7	-2,806.1	-439.6	2,835.8	0.00	0.00	0.00
10,000.0	90.20	180.00	7,065.3	-2,906.1	-439.6	2,935.3	0.00	0.00	0.00
10,100.0	90.20	180.00	7,065.0	-3,006.1	-439.6	3,034.8	0.00	0.00	0.00
10,200.0	90.20	180.00	7,064.6	-3,106.1	-439.6	3,134.3	0.00	0.00	0.00
10,300.0	90.20	180.00	7,064.3	-3,206.1	-439.6	3,233.8	0.00	0.00	0.00
10,400.0	90.20	180.00	7,063.9	-3,306.1	-439.6	3,333.4	0.00	0.00	0.00
10,500.0	90.20	180.00	7,063.6	-3,406.1	-439.6	3,432.9	0.00	0.00	0.00
10,600.0	90.20	180.00	7,063.3	-3,506.1	-439.6	3,532.4	0.00	0.00	0.00
10,700.0	90.20	180.00	7,062.9	-3,606.1	-439.6	3,631.9	0.00	0.00	0.00
10,800.0	90.20	180.00	7,062.6	-3,706.1	-439.6	3,731.4	0.00	0.00	0.00
10,900.0	90.20	180.00	7,062.2	-3,806.1	-439.6	3,830.9	0.00	0.00	0.00
11,000.0	90.20	180.00	7,061.9	-3,906.1	-439.6	3,930.4	0.00	0.00	0.00
11,100.0	90.20	180.00	7,061.5	-4,006.1	-439.6	4,029.9	0.00	0.00	0.00
11,200.0	90.20	180.00	7,061.2	-4,106.1	-439.6	4,129.5	0.00	0.00	0.00
11,300.0	90.20	180.00	7,060.8	-4,206.1	-439.6	4,229.0	0.00	0.00	0.00
11,400.0	90.20	180.00	7,060.5	-4,306.1	-439.6	4,328.5	0.00	0.00	0.00
11,500.0	90.20	180.00	7,060.1	-4,406.1	-439.6	4,428.0	0.00	0.00	0.00
11,531.3	90.20	180.00	7,060.0	-4,437.4	-439.6	4,459.1	0.00	0.00	0.00

#### Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,545.3	7,073.9	7"	7	7-1/2

<b>Database:</b>	landmark	<b>Local Co-ordinate Reference:</b>	Well Kindsfater 24J-303
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Project:</b>	SEC.24-T6N-R66W	<b>MD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Site:</b>	Kindsfater 24J-HZ Pad Sec.24-T6N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Kindsfater 24J-303	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (8-11-14)		

#### Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,687.2	3,670.0	PARKMAN			
4,322.1	4,300.0	SUSSEX			
4,977.1	4,950.0	SHANNON			
6,841.3	6,774.0	SHARON SPRINGS			
6,953.8	6,858.0	NIOBRARA A			
7,122.0	6,961.0	NIOBRARA B			
7,331.7	7,045.0	NIOBRARA C			
	7,135.0	FT HAYS			
	7,155.0	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
6,342.6	6,310.0	315.2	-439.6	KOP #2
7,545.3	7,073.9	-451.4	-439.6	End of Build



# **PETROLEUM DEVELOPMENT CORP Weld County CO**

**SEC.24-T6N-R66W**

**Kindsfater 24J-HZ Pad Sec.24-T6N-R66W**

**Kindsfater 24J-303**

**Wellbore #1**

**Plan #1 (8-11-14)**

## **Anticollision Report**

**12 August, 2014**





<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Kindsfater 24J-303
<b>Project:</b>	SEC.24-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Reference Site:</b>	Kindsfater 24J-HZ Pad Sec.24-T6N-R66W	<b>MD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Kindsfater 24J-303	<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 (8-11-14)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Plan #1 (8-11-14)		
<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 600.0ft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma		

<b>Survey Tool Program</b>	<b>Date</b>	8/12/2014		
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	11,530.5	Plan #1 (8-11-14) (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
<b>Offset Well - Wellbore - Design</b>						
Existing Wells Sec.24-T6N-R66W						
Kent 1 (Exist.) - Wellbore #1 - Wellbore #1	8,378.1	7,033.5	183.1	139.6	4.206	CC, ES
Kent 1 (Exist.) - Wellbore #1 - Wellbore #1	8,400.0	7,033.3	184.4	140.5	4.201	SF
Seeley Lake 1 (Exist.) - Wellbore #1 - Wellbore #1	11,300.0	7,327.3	15.9	-80.4	0.165	Level 1, ES
Seeley Lake 1 (Exist.) - Wellbore #1 - Wellbore #1	11,315.9	7,324.1	7.4	-73.6	0.092	Level 1, CC, SF
Seeley Lake 2 (Exist.) - Wellbore #1 - Wellbore #1	9,833.5	7,013.9	214.2	17.9	1.091	Level 2, CC, ES, SF
Kindsfater 24J-HZ Pad Sec.24-T6N-R66W						
Kindsfater 24E-223 - Wellbore #1 - Plan #1 (8-11-14)	400.0	400.0	89.0	87.4	56.580	CC, ES
Kindsfater 24E-223 - Wellbore #1 - Plan #1 (8-11-14)	4,000.0	3,933.0	589.0	569.0	29.347	SF
Kindsfater 24E-323 - Wellbore #1 - Plan #1 (8-11-14)	600.0	600.0	61.2	58.7	24.754	CC, ES
Kindsfater 24E-323 - Wellbore #1 - Plan #1 (8-11-14)	11,531.3	11,580.7	542.6	367.0	3.090	SF
Kindsfater 24E-403 - Wellbore #1 - Plan #1 (8-11-14)	166.3	167.3	119.6	119.1	227.771	CC
Kindsfater 24E-403 - Wellbore #1 - Plan #1 (8-11-14)	200.0	200.0	119.6	119.0	177.409	ES
Kindsfater 24E-403 - Wellbore #1 - Plan #1 (8-11-14)	3,200.0	3,119.7	591.7	575.9	37.381	SF
Kindsfater 24J-243 - Wellbore #1 - Plan #1 (8-11-14)	1,000.0	999.0	30.6	26.3	7.169	CC, ES
Kindsfater 24J-243 - Wellbore #1 - Plan #1 (8-11-14)	11,531.3	11,495.0	371.9	198.9	2.150	SF
Kindsfater 24J-403 - Wellbore #1 - Plan #1 (8-11-14)	1,200.0	1,199.0	30.6	25.4	5.922	CC, ES
Kindsfater 24J-403 - Wellbore #1 - Plan #1 (8-11-14)	11,531.3	11,587.4	202.3	43.3	1.272	Level 3, SF
Kindsfater 24JM-HZ Pad Sec.24-T6N-R66W						
Kindsfater 24J-223 - Wellbore #1 - Plan #1 (8-11-14)	1,200.0	1,199.0	436.8	431.6	84.526	CC
Kindsfater 24J-223 - Wellbore #1 - Plan #1 (8-11-14)	11,531.3	11,440.8	451.4	278.4	2.609	ES, SF

Offset Design												Offset Site Error:	0.0 ft	
Existing Wells Sec.24-T6N-R66W - Kent 1 (Exist.) - Wellbore #1 - Wellbore #1												Offset Well Error:	0.0 ft	
Survey Program: 100-NS-GYRO-MS														
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)			
7,900.0	7,072.7	7,038.7	7,037.4	23.6	13.3	90.13	-1,284.1	-622.8	511.9	475.7	36.17	14.155		
8,000.0	7,072.3	7,037.6	7,036.3	25.0	13.3	89.79	-1,284.2	-622.7	420.1	382.4	37.60	11.170		
8,100.0	7,072.0	7,036.5	7,035.2	26.4	13.3	89.45	-1,284.2	-622.7	332.9	293.8	39.10	8.513		
8,200.0	7,071.6	7,035.4	7,034.2	28.0	13.3	89.11	-1,284.2	-622.7	255.4	214.7	40.66	6.281		
8,300.0	7,071.3	7,034.3	7,033.1	29.5	13.3	88.77	-1,284.2	-622.7	199.0	156.8	42.26	4.710		
8,378.1	7,071.0	7,033.5	7,032.2	30.8	13.3	88.51	-1,284.2	-622.6	183.1	139.6	43.53	4.206	CC, ES	

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 Kindsfater 24J-303
<b>Project:</b>	SEC.24-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Reference Site:</b>	Kindsfater 24J-HZ Pad Sec.24-T6N-R66W	<b>MD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Kindsfater 24J-303	<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 (8-11-14)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Existing Wells Sec.24-T6N-R66W - Kent 1 (Exist.) - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 100-NS-GYRO-MS												<b>Offset Well Error:</b>	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)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
8,400.0	7,070.9	7,033.3	7,032.0	31.1	13.3	88.43	-1,284.2	-622.6	184.4	140.5	43.89	4.201 SF	
8,500.0	7,070.6	7,032.2	7,030.9	32.8	13.3	88.10	-1,284.2	-622.6	220.0	174.4	45.55	4.829	
8,600.0	7,070.2	7,031.1	7,029.8	34.4	13.3	87.76	-1,284.2	-622.6	287.7	240.5	47.24	6.090	
8,700.0	7,069.9	7,030.0	7,028.8	36.1	13.3	87.42	-1,284.2	-622.5	370.3	321.4	48.95	7.565	
8,800.0	7,069.5	7,028.9	7,027.7	37.9	13.3	87.08	-1,284.2	-622.5	459.9	409.2	50.68	9.075	
8,900.0	7,069.2	7,027.9	7,026.6	39.6	13.3	86.74	-1,284.2	-622.5	553.1	500.7	52.42	10.551	

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Kindsfater 24J-303
<b>Project:</b>	SEC.24-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Reference Site:</b>	Kindsfater 24J-HZ Pad Sec.24-T6N-R66W	<b>MD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Kindsfater 24J-303	<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 (8-11-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Existing Wells Sec.24-T6N-R66W - Seeley Lake 1 (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		Highside Toolface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
10,800.0	7,062.6	7,430.1	7,072.5	74.3	19.7	135.20	-4,199.4	-512.8	503.9	438.8	65.12	7.738		
10,900.0	7,062.2	7,408.7	7,056.8	76.2	19.5	134.35	-4,203.8	-499.0	406.0	338.7	67.33	6.030		
11,000.0	7,061.9	7,387.9	7,041.4	78.0	19.4	132.87	-4,207.9	-485.5	308.1	237.9	70.16	4.391		
11,100.0	7,061.5	7,367.4	7,026.2	79.9	19.3	129.91	-4,212.0	-472.4	210.2	135.8	74.42	2.825		
11,200.0	7,061.2	7,347.2	7,011.2	81.8	19.2	121.80	-4,216.0	-459.6	112.3	29.3	83.03	1.353 Level 3		
11,300.0	7,060.8	7,327.3	6,996.2	83.7	19.1	70.97	-4,219.9	-447.0	15.9	-80.4	96.29	0.165 Level 1, ES		
11,315.9	7,060.8	7,324.1	6,993.8	84.0	19.1	47.82	-4,220.5	-445.0	7.4	-73.6	81.04	0.092 Level 1, CC, SF		
11,400.0	7,060.5	7,307.6	6,981.4	85.6	19.0	-15.94	-4,223.7	-434.7	84.3	40.4	43.87	1.921		
11,500.0	7,060.1	7,288.1	6,966.6	87.4	18.9	-28.06	-4,227.5	-422.5	182.1	125.7	56.46	3.226		
11,531.3	7,060.0	7,282.0	6,962.0	87.9	18.9	-29.65	-4,228.7	-418.7	212.8	154.3	58.46	3.640		

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Kindsfater 24J-303
<b>Project:</b>	SEC.24-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Reference Site:</b>	Kindsfater 24J-HZ Pad Sec.24-T6N-R66W	<b>MD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Kindsfater 24J-303	<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 (8-11-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Existing Wells Sec.24-T6N-R66W - Seeley Lake 2 (Exist.) - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 ft
Survey Program: 7245-UNKNOWN												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)		
9,300.0	7,067.8	7,015.8	7,015.8	46.7	140.3	90.50	-2,739.7	-653.8	574.9	388.4	186.53	3.082	
9,400.0	7,067.4	7,015.4	7,015.4	48.5	140.3	90.40	-2,739.7	-653.8	483.6	295.2	188.34	2.568	
9,500.0	7,067.1	7,015.1	7,015.1	50.3	140.3	90.31	-2,739.7	-653.8	396.4	206.2	190.16	2.085	
9,600.0	7,066.7	7,014.7	7,014.7	52.1	140.3	90.22	-2,739.7	-653.8	316.9	124.9	191.98	1.651	
9,700.0	7,066.4	7,014.4	7,014.4	53.9	140.3	90.12	-2,739.7	-653.8	252.4	58.6	193.81	1.302	Level 3
9,800.0	7,066.0	7,014.0	7,014.0	55.7	140.3	90.03	-2,739.7	-653.8	216.8	21.2	195.65	1.108	Level 2
9,833.5	7,065.9	7,013.9	7,013.9	56.4	140.3	90.00	-2,739.7	-653.8	214.2	17.9	196.27	1.091	Level 2, CC, ES, SF
9,900.0	7,065.7	7,013.7	7,013.7	57.6	140.3	89.94	-2,739.7	-653.8	224.3	26.8	197.49	1.136	Level 2
10,000.0	7,065.3	7,013.3	7,013.3	59.4	140.3	89.84	-2,739.7	-653.8	271.3	72.0	199.34	1.361	Level 3
10,100.0	7,065.0	7,013.0	7,013.0	61.3	140.3	89.75	-2,739.7	-653.8	341.9	140.7	201.18	1.699	
10,200.0	7,064.6	7,012.6	7,012.6	63.1	140.3	89.66	-2,739.7	-653.8	424.5	221.4	203.04	2.091	
10,300.0	7,064.3	7,012.3	7,012.3	65.0	140.2	89.56	-2,739.7	-653.8	513.3	308.4	204.89	2.505	

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Kindsfater 24J-303
<b>Project:</b>	SEC.24-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Reference Site:</b>	Kindsfater 24J-HZ Pad Sec.24-T6N-R66W	<b>MD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Kindsfater 24J-303	<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 (8-11-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Kindsfater 24J-HZ Pad Sec.24-T6N-R66W - Kindsfater 24E-223 - Wellbore #1 - Plan #1 (8-11-14)													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	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-90.00		0.0	-89.0	89.0				
100.0	100.0	100.0	100.0	0.1	0.1	-90.00		0.0	-89.0	89.0	88.8	0.22	396.062	
200.0	200.0	200.0	200.0	0.3	0.3	-90.00		0.0	-89.0	89.0	88.3	0.67	132.021	
300.0	300.0	300.0	300.0	0.6	0.6	-90.00		0.0	-89.0	89.0	87.9	1.12	79.212	
400.0	400.0	400.0	400.0	0.8	0.8	-90.00		0.0	-89.0	89.0	87.4	1.57	56.580 CC, ES	
500.0	500.0	497.0	497.0	1.0	1.0	-89.74		0.4	-90.6	90.7	88.7	2.01	45.144	
600.0	600.0	593.9	593.7	1.2	1.2	-89.03		1.6	-95.4	95.6	93.1	2.45	39.092	
700.0	700.0	690.2	689.7	1.5	1.4	-87.99		3.6	-103.3	103.8	100.9	2.90	35.860	
800.0	800.0	786.0	784.8	1.7	1.7	-86.78		6.4	-114.2	115.4	112.0	3.36	34.312	
900.0	900.0	880.8	878.6	1.9	2.0	-85.56		9.9	-128.0	130.2	126.3	3.85	33.811	
1,000.0	1,000.0	974.6	970.8	2.1	2.3	-84.40		14.2	-144.7	148.3	143.9	4.37	33.964	
1,100.0	1,100.0	1,067.2	1,061.2	2.4	2.7	-83.35		19.1	-164.0	169.6	164.7	4.91	34.521	
1,200.0	1,200.0	1,162.3	1,153.5	2.6	3.1	-82.42		24.8	-186.1	193.4	187.9	5.50	35.182	
1,300.0	1,300.0	1,259.7	1,248.0	2.8	3.6	-27.32		30.6	-208.9	216.0	210.3	5.62	38.399	
1,400.0	1,399.8	1,357.8	1,343.2	3.0	4.1	-27.10		36.4	-231.9	235.5	229.4	6.08	38.715	
1,500.0	1,499.5	1,456.4	1,438.8	3.3	4.6	-27.29		42.3	-255.1	252.0	245.4	6.55	38.485	
1,600.0	1,598.7	1,555.4	1,534.9	3.5	5.0	-27.83		48.3	-278.3	265.7	258.7	7.03	37.785	
1,700.0	1,698.0	1,654.5	1,631.0	3.7	5.5	-28.43		54.2	-301.5	279.0	271.5	7.53	37.050	
1,800.0	1,797.2	1,753.5	1,727.2	4.0	6.1	-28.98		60.1	-324.7	292.4	284.3	8.04	36.375	
1,900.0	1,896.4	1,852.6	1,823.3	4.3	6.6	-29.48		66.0	-348.0	305.7	297.2	8.55	35.755	
2,000.0	1,995.7	1,951.7	1,919.4	4.6	7.1	-29.94		72.0	-371.2	319.1	310.0	9.07	35.186	
2,100.0	2,094.9	2,050.7	2,015.5	4.9	7.6	-30.36		77.9	-394.4	332.5	322.9	9.59	34.661	
2,200.0	2,194.2	2,149.8	2,111.6	5.1	8.1	-30.75		83.8	-417.7	345.9	335.8	10.12	34.177	
2,300.0	2,293.4	2,248.9	2,207.8	5.4	8.6	-31.11		89.7	-440.9	359.4	348.7	10.66	33.729	
2,400.0	2,392.6	2,347.9	2,303.9	5.7	9.1	-31.44		95.7	-464.1	372.8	361.6	11.19	33.314	
2,500.0	2,491.9	2,447.0	2,400.0	6.0	9.6	-31.75		101.6	-487.4	386.3	374.6	11.73	32.928	
2,600.0	2,591.1	2,546.1	2,496.1	6.3	10.1	-32.04		107.5	-510.6	399.8	387.5	12.27	32.570	
2,700.0	2,690.3	2,645.1	2,592.3	6.6	10.7	-32.31		113.5	-533.8	413.2	400.4	12.82	32.236	
2,800.0	2,789.6	2,744.2	2,688.4	6.9	11.2	-32.57		119.4	-557.1	426.7	413.4	13.37	31.923	
2,900.0	2,888.8	2,843.3	2,784.5	7.2	11.7	-32.80		125.3	-580.3	440.2	426.3	13.92	31.631	
3,000.0	2,988.0	2,942.4	2,880.6	7.6	12.2	-33.03		131.2	-603.5	453.7	439.3	14.47	31.358	
3,100.0	3,087.3	3,041.4	2,976.8	7.9	12.7	-33.24		137.2	-626.8	467.2	452.2	15.02	31.101	
3,200.0	3,186.5	3,140.5	3,072.9	8.2	13.2	-33.44		143.1	-650.0	480.8	465.2	15.58	30.859	
3,300.0	3,285.7	3,239.6	3,169.0	8.5	13.8	-33.63		149.0	-673.2	494.3	478.1	16.14	30.631	
3,400.0	3,385.0	3,338.6	3,265.1	8.8	14.3	-33.81		154.9	-696.5	507.8	491.1	16.70	30.416	
3,500.0	3,484.2	3,437.7	3,361.3	9.1	14.8	-33.97		160.9	-719.7	521.3	504.1	17.26	30.213	
3,600.0	3,583.4	3,536.8	3,457.4	9.4	15.3	-34.13		166.8	-742.9	534.9	517.1	17.82	30.021	
3,700.0	3,682.7	3,635.8	3,553.5	9.7	15.8	-34.29		172.7	-766.2	548.4	530.0	18.38	29.839	
3,800.0	3,781.9	3,734.9	3,649.6	10.1	16.4	-34.43		178.6	-789.4	562.0	543.0	18.94	29.667	
3,900.0	3,881.1	3,834.0	3,745.7	10.4	16.9	-34.57		184.6	-812.6	575.5	556.0	19.51	29.503	
4,000.0	3,980.4	3,933.0	3,841.9	10.7	17.4	-34.70		190.5	-835.9	589.0	569.0	20.07	29.347 SF	

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Kindsfater 24J-303
<b>Project:</b>	SEC.24-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Reference Site:</b>	Kindsfater 24J-HZ Pad Sec.24-T6N-R66W	<b>MD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Kindsfater 24J-303	<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 (8-11-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Kindsfater 24J-HZ Pad Sec.24-T6N-R66W - Kindsfater 24E-323 - Wellbore #1 - Plan #1 (8-11-14)													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)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	-90.00	0.0	-61.2	61.2					
100.0	100.0	100.0	100.0	0.1	0.1	-90.00	0.0	-61.2	61.2	61.0	0.22	272.293		
200.0	200.0	200.0	200.0	0.3	0.3	-90.00	0.0	-61.2	61.2	60.5	0.67	90.764		
300.0	300.0	300.0	300.0	0.6	0.6	-90.00	0.0	-61.2	61.2	60.1	1.12	54.459		
400.0	400.0	400.0	400.0	0.8	0.8	-90.00	0.0	-61.2	61.2	59.6	1.57	38.899		
500.0	500.0	500.0	500.0	1.0	1.0	-90.00	0.0	-61.2	61.2	59.2	2.02	30.255		
600.0	600.0	600.0	600.0	1.2	1.2	-90.00	0.0	-61.2	61.2	58.7	2.47	24.754 CC, ES		
700.0	700.0	698.0	698.0	1.5	1.4	-89.51	0.5	-62.8	62.8	59.9	2.91	21.592		
800.0	800.0	795.7	795.6	1.7	1.7	-88.18	2.1	-67.5	67.7	64.4	3.35	20.233		
900.0	900.0	893.0	892.5	1.9	1.9	-86.36	4.8	-75.4	75.9	72.1	3.79	20.010		
1,000.0	1,000.0	989.6	988.4	2.1	2.1	-84.39	8.5	-86.3	87.4	83.2	4.25	20.553		
1,100.0	1,100.0	1,085.4	1,083.1	2.4	2.4	-82.51	13.1	-100.1	102.3	97.6	4.74	21.611		
1,200.0	1,200.0	1,181.5	1,177.6	2.6	2.7	-80.86	18.8	-116.7	120.3	115.1	5.24	22.948		
1,300.0	1,300.0	1,280.0	1,274.3	2.8	3.1	-25.37	24.7	-134.3	137.4	131.8	5.58	24.650		
1,400.0	1,399.8	1,379.0	1,371.5	3.0	3.5	-25.05	30.7	-152.0	151.4	145.4	6.02	25.173		
1,500.0	1,499.5	1,478.4	1,469.1	3.3	3.8	-25.31	36.8	-169.8	162.3	155.9	6.46	25.112		
1,600.0	1,598.7	1,578.1	1,567.0	3.5	4.2	-26.03	42.8	-187.7	170.4	163.5	6.93	24.605		
1,700.0	1,698.0	1,677.7	1,664.9	3.7	4.6	-26.81	48.8	-205.5	178.1	170.7	7.41	24.042		
1,800.0	1,797.2	1,777.4	1,762.7	4.0	5.0	-27.52	54.9	-223.3	185.7	177.9	7.89	23.529		
1,900.0	1,896.4	1,877.1	1,860.6	4.3	5.4	-28.17	60.9	-241.2	193.5	185.1	8.39	23.061		
2,000.0	1,995.7	1,976.8	1,958.5	4.6	5.9	-28.77	66.9	-259.0	201.2	192.3	8.89	22.632		
2,100.0	2,094.9	2,076.5	2,056.4	4.9	6.3	-29.33	73.0	-276.8	208.9	199.5	9.40	22.238		
2,200.0	2,194.2	2,176.1	2,154.3	5.1	6.7	-29.85	79.0	-294.7	216.7	206.8	9.91	21.875		
2,300.0	2,293.4	2,275.8	2,252.2	5.4	7.1	-30.33	85.0	-312.5	224.5	214.1	10.42	21.540		
2,400.0	2,392.6	2,375.5	2,350.1	5.7	7.5	-30.78	91.1	-330.4	232.3	221.3	10.94	21.230		
2,500.0	2,491.9	2,475.2	2,447.9	6.0	7.9	-31.20	97.1	-348.2	240.1	228.6	11.46	20.942		
2,600.0	2,591.1	2,574.9	2,545.8	6.3	8.3	-31.59	103.1	-366.0	247.9	235.9	11.99	20.675		
2,700.0	2,690.3	2,674.5	2,643.7	6.6	8.8	-31.96	109.2	-383.9	255.7	243.2	12.52	20.427		
2,800.0	2,789.6	2,774.2	2,741.6	6.9	9.2	-32.31	115.2	-401.7	263.6	250.5	13.05	20.195		
2,900.0	2,888.8	2,873.9	2,839.5	7.2	9.6	-32.64	121.2	-419.6	271.4	257.8	13.59	19.978		
3,000.0	2,988.0	2,973.6	2,937.4	7.6	10.0	-32.95	127.3	-437.4	279.3	265.2	14.12	19.774		
3,100.0	3,087.3	3,073.3	3,035.2	7.9	10.4	-33.24	133.3	-455.2	287.2	272.5	14.66	19.584		
3,200.0	3,186.5	3,172.9	3,133.1	8.2	10.9	-33.52	139.3	-473.1	295.0	279.8	15.20	19.404		
3,300.0	3,285.7	3,272.6	3,231.0	8.5	11.3	-33.78	145.4	-490.9	302.9	287.2	15.75	19.235		
3,400.0	3,385.0	3,372.3	3,328.9	8.8	11.7	-34.03	151.4	-508.7	310.8	294.5	16.29	19.076		
3,500.0	3,484.2	3,472.0	3,426.8	9.1	12.1	-34.27	157.5	-526.6	318.7	301.9	16.84	18.926		
3,600.0	3,583.4	3,571.6	3,524.7	9.4	12.6	-34.49	163.5	-544.4	326.6	309.2	17.39	18.784		
3,700.0	3,682.7	3,671.3	3,622.6	9.7	13.0	-34.71	169.5	-562.3	334.5	316.6	17.94	18.649		
3,800.0	3,781.9	3,771.0	3,720.4	10.1	13.4	-34.91	175.6	-580.1	342.4	323.9	18.49	18.522		
3,900.0	3,881.1	3,870.7	3,818.3	10.4	13.8	-35.11	181.6	-597.9	350.3	331.3	19.04	18.400		
4,000.0	3,980.4	3,970.4	3,916.2	10.7	14.2	-35.30	187.6	-615.8	358.2	338.6	19.59	18.285		
4,100.0	4,079.6	4,070.0	4,014.1	11.0	14.7	-35.48	193.7	-633.6	366.1	346.0	20.14	18.175		
4,200.0	4,178.8	4,169.7	4,112.0	11.3	15.1	-35.65	199.7	-651.5	374.1	353.4	20.70	18.071		
4,300.0	4,278.1	4,269.4	4,209.9	11.6	15.5	-35.81	205.7	-669.3	382.0	360.7	21.26	17.971		
4,400.0	4,377.3	4,369.1	4,307.7	12.0	15.9	-35.97	211.8	-687.1	389.9	368.1	21.81	17.876		
4,500.0	4,476.5	4,468.8	4,405.6	12.3	16.4	-36.12	217.8	-705.0	397.8	375.5	22.37	17.785		
4,600.0	4,575.8	4,568.4	4,503.5	12.6	16.8	-36.27	223.8	-722.8	405.8	382.9	22.93	17.698		
4,700.0	4,675.0	4,668.1	4,601.4	12.9	17.2	-36.40	229.9	-740.6	413.7	390.2	23.49	17.615		
4,800.0	4,774.2	4,767.8	4,699.3	13.2	17.6	-36.54	235.9	-758.5	421.7	397.6	24.05	17.535		
4,900.0	4,873.5	4,867.5	4,797.2	13.5	18.1	-36.67	241.9	-776.3	429.6	405.0	24.61	17.459		
5,000.0	4,972.7	4,967.2	4,895.1	13.9	18.5	-36.79	248.0	-794.2	437.5	412.4	25.17	17.385		

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 Kindsfater 24J-303
<b>Project:</b>	SEC.24-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Reference Site:</b>	Kindsfater 24J-HZ Pad Sec.24-T6N-R66W	<b>MD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Kindsfater 24J-303	<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 (8-11-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Kindsfater 24J-HZ Pad Sec.24-T6N-R66W - Kindsfater 24E-323 - Wellbore #1 - Plan #1 (8-11-14)													Offset Site Error:	0.0 ft
Survey Program: 0-MWDD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis 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	5,071.9	5,066.8	4,992.9	14.2	18.9	-36.91	254.0	-812.0	445.5	419.8	25.73	17.315		
5,200.0	5,171.2	5,166.5	5,090.8	14.5	19.3	-37.03	260.0	-829.8	453.4	427.1	26.29	17.247		
5,300.0	5,270.4	5,266.2	5,188.7	14.8	19.8	-37.14	266.1	-847.7	461.4	434.5	26.85	17.182		
5,400.0	5,369.6	5,365.9	5,286.6	15.1	20.2	-37.25	272.1	-865.5	469.3	441.9	27.42	17.119		
5,500.0	5,468.9	5,465.6	5,384.5	15.5	20.6	-37.36	278.2	-883.3	477.3	449.3	27.98	17.058		
5,600.0	5,568.1	5,565.2	5,482.4	15.8	21.0	-37.47	284.2	-901.2	485.3	456.8	28.54	17.007		
5,700.0	5,667.6	5,664.7	5,580.1	16.0	21.5	-37.51	290.2	-919.0	493.3	466.2	29.00	17.076		
5,800.0	5,767.4	5,767.7	5,681.2	16.2	21.9	-37.34	296.4	-937.3	507.9	478.5	29.41	17.269		
5,900.0	5,867.4	5,886.9	5,798.8	16.3	22.2	-36.98	302.6	-955.5	520.7	491.0	29.74	17.506		
6,000.0	5,967.4	6,006.9	5,918.0	16.5	22.5	-90.87	307.1	-969.0	531.8	501.7	30.07	17.685		
6,100.0	6,067.4	6,128.0	6,038.7	16.7	22.8	-90.54	310.1	-977.9	539.1	508.6	30.44	17.713		
6,200.0	6,167.4	6,249.6	6,160.3	16.9	22.9	-90.39	311.5	-981.9	542.4	511.6	30.81	17.604		
6,300.0	6,267.4	6,356.8	6,267.4	17.0	23.1	-90.38	311.6	-982.2	542.6	511.4	31.19	17.399		
6,400.0	6,367.3	6,456.5	6,367.0	17.2	23.2	89.62	309.5	-982.2	542.6	511.1	31.51	17.221		
6,500.0	6,466.3	6,556.0	6,465.5	17.3	23.2	89.63	295.6	-982.2	542.6	510.9	31.67	17.134		
6,600.0	6,562.5	6,655.6	6,561.4	17.3	23.3	89.64	269.0	-982.2	542.6	510.9	31.70	17.117		
6,700.0	6,654.5	6,755.1	6,653.0	17.3	23.2	89.66	230.2	-982.2	542.6	511.0	31.65	17.144		
6,800.0	6,740.5	6,854.7	6,738.8	17.2	23.2	89.68	179.8	-982.2	542.6	511.0	31.59	17.179		
6,900.0	6,819.2	6,954.4	6,817.4	17.2	23.2	89.71	118.7	-982.2	542.6	511.0	31.59	17.179		
7,000.0	6,889.2	7,054.0	6,887.4	17.1	23.1	89.75	47.8	-982.2	542.6	510.9	31.74	17.096		
7,100.0	6,949.2	7,153.7	6,947.6	17.1	23.1	89.79	-31.6	-982.2	542.6	510.5	32.13	16.890		
7,200.0	6,998.4	7,253.5	6,996.9	17.2	23.2	89.83	-118.2	-982.2	542.6	509.8	32.82	16.533		
7,300.0	7,035.7	7,353.3	7,034.6	17.5	23.3	89.88	-210.6	-982.2	542.6	508.7	33.85	16.027		
7,400.0	7,060.6	7,453.2	7,060.0	18.0	23.6	89.93	-307.1	-982.2	542.6	507.4	35.24	15.396		
7,500.0	7,072.7	7,553.1	7,072.5	18.9	24.0	89.98	-406.2	-982.2	542.6	505.6	36.96	14.682		
7,600.0	7,073.7	7,653.1	7,073.7	19.9	24.6	90.00	-506.1	-982.2	542.6	503.6	38.97	13.924		
7,700.0	7,073.4	7,753.1	7,073.4	21.0	25.4	90.00	-606.1	-982.2	542.6	501.4	41.22	13.163		
7,800.0	7,073.0	7,853.1	7,073.0	22.2	26.3	90.00	-706.1	-982.2	542.6	498.9	43.70	12.416		
7,900.0	7,072.7	7,953.1	7,072.7	23.6	27.3	90.00	-806.1	-982.2	542.6	496.2	46.36	11.703		
8,000.0	7,072.3	8,053.1	7,072.3	25.0	28.5	90.00	-906.1	-982.2	542.6	493.4	49.18	11.032		
8,100.0	7,072.0	8,153.1	7,072.0	26.4	29.7	90.00	-1,006.1	-982.2	542.6	490.5	52.14	10.407		
8,200.0	7,071.6	8,253.1	7,071.6	28.0	31.1	90.00	-1,106.1	-982.2	542.6	487.4	55.20	9.830		
8,300.0	7,071.3	8,353.1	7,071.3	29.5	32.5	90.00	-1,206.1	-982.2	542.6	484.2	58.35	9.299		
8,400.0	7,070.9	8,453.1	7,070.9	31.1	33.9	90.00	-1,306.1	-982.2	542.6	481.0	61.58	8.810		
8,500.0	7,070.6	8,553.1	7,070.6	32.8	35.4	90.00	-1,406.1	-982.2	542.6	477.7	64.88	8.362		
8,600.0	7,070.2	8,653.1	7,070.2	34.4	37.0	90.00	-1,506.1	-982.2	542.6	474.3	68.24	7.951		
8,700.0	7,069.9	8,753.1	7,069.9	36.1	38.5	90.00	-1,606.1	-982.2	542.6	470.9	71.65	7.573		
8,800.0	7,069.5	8,853.1	7,069.5	37.9	40.1	90.00	-1,706.1	-982.2	542.6	467.5	75.10	7.225		
8,900.0	7,069.2	8,953.1	7,069.2	39.6	41.8	90.00	-1,806.1	-982.2	542.6	464.0	78.58	6.905		
9,000.0	7,068.8	9,053.1	7,068.8	41.3	43.4	90.00	-1,906.1	-982.2	542.6	460.5	82.10	6.609		
9,100.0	7,068.5	9,153.1	7,068.5	43.1	45.1	90.00	-2,006.1	-982.2	542.6	456.9	85.64	6.335		
9,200.0	7,068.1	9,253.1	7,068.1	44.9	46.8	90.00	-2,106.1	-982.2	542.6	453.4	89.21	6.082		
9,300.0	7,067.8	9,353.1	7,067.8	46.7	48.5	90.00	-2,206.1	-982.2	542.6	449.8	92.81	5.846		
9,400.0	7,067.4	9,453.1	7,067.4	48.5	50.3	90.00	-2,306.1	-982.2	542.6	446.2	96.42	5.627		
9,500.0	7,067.1	9,553.1	7,067.1	50.3	52.0	90.00	-2,406.1	-982.2	542.6	442.5	100.05	5.423		
9,600.0	7,066.7	9,653.1	7,066.7	52.1	53.8	90.00	-2,506.1	-982.2	542.6	438.9	103.69	5.233		
9,700.0	7,066.4	9,753.1	7,066.4	53.9	55.5	90.00	-2,606.1	-982.2	542.6	435.2	107.35	5.054		
9,800.0	7,066.0	9,853.1	7,066.0	55.7	57.3	90.00	-2,706.1	-982.2	542.6	431.6	111.02	4.887		
9,900.0	7,065.7	9,953.1	7,065.7	57.6	59.1	90.00	-2,806.1	-982.2	542.6	427.9	114.70	4.730		
10,000.0	7,065.3	10,053.1	7,065.3	59.4	60.9	90.00	-2,906.1	-982.2	542.6	424.2	118.40	4.583		
10,100.0	7,065.0	10,153.1	7,065.0	61.3	62.7	90.00	-3,006.1	-982.2	542.6	420.5	122.10	4.444		

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 Kindsfater 24J-303
<b>Project:</b>	SEC.24-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Reference Site:</b>	Kindsfater 24J-HZ Pad Sec.24-T6N-R66W	<b>MD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Kindsfater 24J-303	<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 (8-11-14)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Kindsfater 24J-HZ Pad Sec.24-T6N-R66W - Kindsfater 24E-323 - Wellbore #1 - Plan #1 (8-11-14)												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,200.0	7,064.6	10,253.1	7,064.6	63.1	64.5	90.00	-3,106.1	-982.2	542.6	416.8	125.81	4.313	
10,300.0	7,064.3	10,353.1	7,064.3	65.0	66.3	90.00	-3,206.1	-982.2	542.6	413.0	129.53	4.189	
10,400.0	7,063.9	10,453.1	7,063.9	66.8	68.2	90.00	-3,306.1	-982.2	542.6	409.3	133.25	4.072	
10,500.0	7,063.6	10,553.1	7,063.6	68.7	70.0	90.00	-3,406.1	-982.2	542.6	405.6	136.98	3.961	
10,600.0	7,063.3	10,653.1	7,063.2	70.5	71.8	90.00	-3,506.1	-982.2	542.6	401.8	140.72	3.856	
10,700.0	7,062.9	10,753.1	7,062.9	72.4	73.6	90.00	-3,606.1	-982.2	542.6	398.1	144.47	3.756	
10,800.0	7,062.6	10,853.1	7,062.5	74.3	75.5	90.00	-3,706.1	-982.2	542.6	394.4	148.22	3.661	
10,900.0	7,062.2	10,953.1	7,062.2	76.2	77.3	90.00	-3,806.1	-982.2	542.6	390.6	151.97	3.570	
11,000.0	7,061.9	11,053.1	7,061.8	78.0	79.2	90.00	-3,906.1	-982.2	542.6	386.8	155.73	3.484	
11,100.0	7,061.5	11,153.1	7,061.5	79.9	81.0	90.00	-4,006.1	-982.2	542.6	383.1	159.49	3.402	
11,200.0	7,061.2	11,253.1	7,061.1	81.8	82.9	90.00	-4,106.1	-982.2	542.6	379.3	163.26	3.323	
11,300.0	7,060.8	11,353.1	7,060.8	83.7	84.7	90.00	-4,206.1	-982.2	542.6	375.5	167.03	3.248	
11,400.0	7,060.5	11,453.1	7,060.4	85.6	86.6	90.00	-4,306.1	-982.2	542.6	371.8	170.80	3.177	
11,500.0	7,060.1	11,553.1	7,060.1	87.4	88.5	90.00	-4,406.1	-982.2	542.6	368.0	174.57	3.108	
11,524.5	7,060.0	11,577.6	7,060.0	87.8	88.9	90.00	-4,430.6	-982.2	542.6	367.1	175.41	3.093	
11,531.3	7,060.0	11,580.7	7,060.0	87.9	89.0	90.00	-4,433.7	-982.2	542.6	367.0	175.57	3.090 SF	



<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Kindsfater 24J-303
<b>Project:</b>	SEC.24-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Reference Site:</b>	Kindsfater 24J-HZ Pad Sec.24-T6N-R66W	<b>MD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Kindsfater 24J-303	<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 (8-11-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Kindsfater 24J-HZ Pad Sec.24-T6N-R66W - Kindsfater 24E-403 - Wellbore #1 - Plan #1 (8-11-14)													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)	Semi Major Axis 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	1.0	1.0	0.0	0.0	-90.00	0.0	-119.6	119.6	119.6	0.00	N/A		
100.0	100.0	101.0	101.0	0.1	0.1	-90.00	0.0	-119.6	119.6	119.4	0.23	526.939		
166.3	166.3	167.3	167.3	0.3	0.3	-90.00	0.0	-119.6	119.6	119.1	0.53	227.771 CC		
200.0	200.0	200.0	200.0	0.3	0.3	-90.00	0.0	-119.6	119.6	119.0	0.67	177.409 ES		
300.0	300.0	297.0	297.0	0.6	0.5	-89.83	0.4	-121.2	121.3	120.2	1.11	109.200		
400.0	400.0	392.8	392.7	0.8	0.8	-89.35	1.4	-125.9	126.2	124.7	1.55	81.276		
500.0	500.0	488.2	487.8	1.0	1.0	-88.62	3.2	-133.8	134.4	132.4	2.01	66.871		
600.0	600.0	583.0	581.9	1.2	1.3	-87.75	5.7	-144.6	145.9	143.4	2.49	58.667		
700.0	700.0	676.9	674.7	1.5	1.6	-86.82	8.8	-158.2	160.7	157.7	2.99	53.799		
800.0	800.0	769.8	766.1	1.7	1.9	-85.90	12.5	-174.7	178.6	175.1	3.51	50.841		
900.0	900.0	861.6	855.7	1.9	2.3	-85.03	16.9	-193.8	199.7	195.6	4.07	49.062		
1,000.0	1,000.0	952.8	944.2	2.1	2.8	-84.23	21.8	-215.5	223.9	219.3	4.66	48.036		
1,100.0	1,100.0	1,049.5	1,037.6	2.4	3.3	-83.51	27.3	-239.6	249.3	244.0	5.30	47.060		
1,200.0	1,200.0	1,146.1	1,131.1	2.6	3.8	-82.92	32.7	-263.7	274.8	268.8	5.94	46.217		
1,300.0	1,300.0	1,243.2	1,224.9	2.8	4.3	-28.00	38.2	-287.9	298.7	293.0	5.73	52.141		
1,400.0	1,399.8	1,341.0	1,319.5	3.0	4.8	-27.83	43.8	-312.3	319.7	313.5	6.20	51.544		
1,500.0	1,499.5	1,439.3	1,414.6	3.3	5.3	-27.96	49.4	-336.8	337.6	330.9	6.69	50.503		
1,600.0	1,598.7	1,538.1	1,510.1	3.5	5.9	-28.39	55.0	-361.4	352.8	345.7	7.18	49.135		
1,700.0	1,698.0	1,637.0	1,605.6	3.7	6.4	-28.90	60.6	-386.0	367.6	360.0	7.69	47.810		
1,800.0	1,797.2	1,735.8	1,701.2	4.0	6.9	-29.38	66.2	-410.7	382.5	374.3	8.21	46.614		
1,900.0	1,896.4	1,834.7	1,796.7	4.3	7.5	-29.81	71.8	-435.3	397.3	388.6	8.73	45.531		
2,000.0	1,995.7	1,933.5	1,892.3	4.6	8.0	-30.22	77.4	-460.0	412.2	402.9	9.25	44.548		
2,100.0	2,094.9	2,032.4	1,987.9	4.9	8.6	-30.60	83.0	-484.6	427.1	417.3	9.78	43.651		
2,200.0	2,194.2	2,131.2	2,083.4	5.1	9.1	-30.95	88.6	-509.2	442.0	431.7	10.32	42.831		
2,300.0	2,293.4	2,230.1	2,179.0	5.4	9.6	-31.28	94.2	-533.9	456.9	446.0	10.86	42.080		
2,400.0	2,392.6	2,328.9	2,274.6	5.7	10.2	-31.59	99.8	-558.5	471.8	460.4	11.40	41.388		
2,500.0	2,491.9	2,427.8	2,370.1	6.0	10.7	-31.88	105.4	-583.2	486.8	474.8	11.95	40.749		
2,600.0	2,591.1	2,526.6	2,465.7	6.3	11.3	-32.15	111.0	-607.8	501.7	489.2	12.49	40.159		
2,700.0	2,690.3	2,625.5	2,561.3	6.6	11.8	-32.41	116.6	-632.4	516.7	503.7	13.04	39.611		
2,800.0	2,789.6	2,724.3	2,656.8	6.9	12.4	-32.65	122.2	-657.1	531.7	518.1	13.60	39.102		
2,900.0	2,888.8	2,823.1	2,752.4	7.2	12.9	-32.88	127.8	-681.7	546.7	532.5	14.15	38.628		
3,000.0	2,988.0	2,922.0	2,847.9	7.6	13.4	-33.09	133.4	-706.3	561.7	547.0	14.71	38.184		
3,100.0	3,087.3	3,020.8	2,943.5	7.9	14.0	-33.30	139.0	-731.0	576.7	561.4	15.27	37.770		
3,200.0	3,186.5	3,119.7	3,039.1	8.2	14.5	-33.49	144.6	-755.6	591.7	575.9	15.83	37.381 SF		

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Kindsfater 24J-303
<b>Project:</b>	SEC.24-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Reference Site:</b>	Kindsfater 24J-HZ Pad Sec.24-T6N-R66W	<b>MD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Kindsfater 24J-303	<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 (8-11-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Kindsfater 24J-HZ Pad Sec.24-T6N-R66W - Kindsfater 24J-243 - Wellbore #1 - Plan #1 (8-11-14)											Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	0.0	0.0	0.0	0.0	-90.01	0.0	-30.6	30.6					
100.0	100.0	99.0	99.0	0.1	0.1	-90.01	0.0	-30.6	30.6	30.4	0.22	136.829		
200.0	200.0	199.0	199.0	0.3	0.3	-90.01	0.0	-30.6	30.6	29.9	0.67	45.534		
300.0	300.0	299.0	299.0	0.6	0.6	-90.01	0.0	-30.6	30.6	29.5	1.12	27.284		
400.0	400.0	399.0	399.0	0.8	0.8	-90.01	0.0	-30.6	30.6	29.0	1.57	19.477		
500.0	500.0	499.0	499.0	1.0	1.0	-90.01	0.0	-30.6	30.6	28.6	2.02	15.144		
600.0	600.0	599.0	599.0	1.2	1.2	-90.01	0.0	-30.6	30.6	28.1	2.47	12.388		
700.0	700.0	699.0	699.0	1.5	1.5	-90.01	0.0	-30.6	30.6	27.7	2.92	10.481		
800.0	800.0	799.0	799.0	1.7	1.7	-90.01	0.0	-30.6	30.6	27.2	3.37	9.082		
900.0	900.0	899.0	899.0	1.9	1.9	-90.01	0.0	-30.6	30.6	26.8	3.82	8.013		
1,000.0	1,000.0	999.0	999.0	2.1	2.1	-90.01	0.0	-30.6	30.6	26.3	4.27	7.169 CC, ES		
1,100.0	1,100.0	1,098.0	1,098.0	2.4	2.3	-88.88	0.6	-32.2	32.2	27.5	4.71	6.834		
1,200.0	1,200.0	1,196.7	1,196.6	2.6	2.6	-86.05	2.5	-36.9	37.0	31.9	5.14	7.196		
1,300.0	1,300.0	1,295.2	1,294.7	2.8	2.8	-29.34	5.7	-44.7	43.7	38.2	5.57	7.851		
1,400.0	1,399.8	1,393.4	1,392.1	3.0	3.0	-28.47	10.2	-55.6	50.7	44.7	5.99	8.466		
1,500.0	1,499.5	1,491.3	1,488.9	3.3	3.3	-28.55	15.9	-69.5	58.0	51.5	6.42	9.033		
1,600.0	1,598.7	1,590.3	1,586.2	3.5	3.6	-29.31	22.6	-86.1	65.1	58.3	6.86	9.495		
1,700.0	1,698.0	1,690.0	1,684.3	3.7	3.9	-30.10	29.5	-103.1	72.1	64.8	7.32	9.845		
1,800.0	1,797.2	1,789.8	1,782.4	4.0	4.3	-30.76	36.5	-120.1	79.1	71.3	7.80	10.141		
1,900.0	1,896.4	1,889.5	1,880.4	4.3	4.6	-31.30	43.4	-137.0	86.1	77.8	8.28	10.393		
2,000.0	1,995.7	1,989.3	1,978.5	4.6	5.0	-31.77	50.3	-154.0	93.1	84.3	8.77	10.608		
2,100.0	2,094.9	2,089.1	2,076.5	4.9	5.4	-32.17	57.2	-171.0	100.1	90.8	9.27	10.792		
2,200.0	2,194.2	2,188.8	2,174.6	5.1	5.7	-32.52	64.1	-188.0	107.1	97.3	9.78	10.952		
2,300.0	2,293.4	2,288.6	2,272.6	5.4	6.1	-32.82	71.0	-204.9	114.1	103.8	10.29	11.090		
2,400.0	2,392.6	2,388.3	2,370.7	5.7	6.5	-33.09	77.9	-221.9	121.1	110.3	10.80	11.212		
2,500.0	2,491.9	2,488.1	2,468.7	6.0	6.9	-33.33	84.9	-238.9	128.1	116.8	11.32	11.318		
2,600.0	2,591.1	2,587.8	2,566.8	6.3	7.3	-33.54	91.8	-255.8	135.1	123.3	11.84	11.412		
2,700.0	2,690.3	2,687.6	2,664.8	6.6	7.7	-33.74	98.7	-272.8	142.2	129.8	12.37	11.496		
2,800.0	2,789.6	2,787.3	2,762.9	6.9	8.1	-33.91	105.6	-289.8	149.2	136.3	12.89	11.570		
2,900.0	2,888.8	2,887.1	2,861.0	7.2	8.5	-34.07	112.5	-306.7	156.2	142.8	13.42	11.636		
3,000.0	2,988.0	2,986.8	2,959.0	7.6	8.9	-34.22	119.4	-323.7	163.2	149.3	13.96	11.696		
3,100.0	3,087.3	3,086.6	3,057.1	7.9	9.3	-34.35	126.4	-340.7	170.2	155.8	14.49	11.750		
3,200.0	3,186.5	3,186.3	3,155.1	8.2	9.7	-34.48	133.3	-357.7	177.3	162.2	15.02	11.799		
3,300.0	3,285.7	3,286.1	3,253.2	8.5	10.1	-34.59	140.2	-374.6	184.3	168.7	15.56	11.843		
3,400.0	3,385.0	3,385.8	3,351.2	8.8	10.5	-34.70	147.1	-391.6	191.3	175.2	16.10	11.884		
3,500.0	3,484.2	3,485.6	3,449.3	9.1	10.9	-34.79	154.0	-408.6	198.4	181.7	16.64	11.920		
3,600.0	3,583.4	3,585.3	3,547.3	9.4	11.3	-34.89	160.9	-425.5	205.4	188.2	17.18	11.954		
3,700.0	3,682.7	3,685.1	3,645.4	9.7	11.7	-34.97	167.9	-442.5	212.4	194.7	17.72	11.985		
3,800.0	3,781.9	3,784.8	3,743.4	10.1	12.1	-35.05	174.8	-459.5	219.4	201.2	18.27	12.014		
3,900.0	3,881.1	3,884.6	3,841.5	10.4	12.6	-35.13	181.7	-476.5	226.5	207.7	18.81	12.040		
4,000.0	3,980.4	3,984.3	3,939.6	10.7	13.0	-35.20	188.6	-493.4	233.5	214.1	19.35	12.065		
4,100.0	4,079.6	4,084.1	4,037.6	11.0	13.4	-35.26	195.5	-510.4	240.5	220.6	19.90	12.088		
4,200.0	4,178.8	4,183.8	4,135.7	11.3	13.8	-35.33	202.4	-527.4	247.6	227.1	20.45	12.109		
4,300.0	4,278.1	4,283.6	4,233.7	11.6	14.2	-35.38	209.3	-544.3	254.6	233.6	20.99	12.128		
4,400.0	4,377.3	4,383.4	4,331.8	12.0	14.6	-35.44	216.3	-561.3	261.6	240.1	21.54	12.147		
4,500.0	4,476.5	4,483.1	4,429.8	12.3	15.0	-35.49	223.2	-578.3	268.7	246.6	22.09	12.164		
4,600.0	4,575.8	4,582.9	4,527.9	12.6	15.4	-35.54	230.1	-595.3	275.7	253.1	22.63	12.180		
4,700.0	4,675.0	4,682.6	4,625.9	12.9	15.8	-35.59	237.0	-612.2	282.7	259.5	23.18	12.195		
4,800.0	4,774.2	4,782.4	4,724.0	13.2	16.3	-35.64	243.9	-629.2	289.7	266.0	23.73	12.209		
4,900.0	4,873.5	4,882.1	4,822.0	13.5	16.7	-35.68	250.8	-646.2	296.8	272.5	24.28	12.222		
5,000.0	4,972.7	4,981.9	4,920.1	13.9	17.1	-35.72	257.8	-663.1	303.8	279.0	24.83	12.235		

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 Kindsfater 24J-303
<b>Project:</b>	SEC.24-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Reference Site:</b>	Kindsfater 24J-HZ Pad Sec.24-T6N-R66W	<b>MD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Kindsfater 24J-303	<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 (8-11-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Kindsfater 24J-HZ Pad Sec.24-T6N-R66W - Kindsfater 24J-243 - Wellbore #1 - Plan #1 (8-11-14)													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	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.0	5,071.9	5,081.6	5,018.2	14.2	17.5	-35.76		264.7	-680.1	310.8	285.5	25.38	12.246	
5,200.0	5,171.2	5,181.4	5,116.2	14.5	17.9	-35.80		271.6	-697.1	317.9	291.9	25.93	12.258	
5,300.0	5,270.4	5,281.1	5,214.3	14.8	18.3	-35.83		278.5	-714.0	324.9	298.4	26.48	12.268	
5,400.0	5,369.6	5,380.9	5,312.3	15.1	18.7	-35.87		285.4	-731.0	331.9	304.9	27.04	12.278	
5,500.0	5,468.9	5,480.6	5,410.4	15.5	19.2	-35.90		292.3	-748.0	339.0	311.4	27.59	12.288	
5,600.0	5,568.1	5,584.8	5,512.8	15.8	19.6	-35.96		299.4	-765.5	345.9	317.7	28.14	12.292	
5,700.0	5,667.6	5,697.3	5,624.0	16.0	19.9	-36.03		305.8	-781.2	351.8	323.3	28.58	12.309	
5,800.0	5,767.4	5,810.0	5,736.0	16.2	20.1	-35.99		310.6	-792.8	357.0	328.1	28.96	12.326	
5,900.0	5,867.4	5,923.0	5,848.7	16.3	20.4	-35.85		313.7	-800.4	361.4	332.1	29.28	12.344	
6,000.0	5,967.4	6,036.2	5,961.9	16.5	20.5	-90.02		315.1	-803.9	364.3	334.7	29.60	12.308	
6,100.0	6,067.4	6,140.7	6,066.4	16.7	20.7	-90.00		315.2	-804.1	364.5	334.5	29.97	12.163	
6,200.0	6,167.4	6,240.7	6,166.4	16.9	20.8	-90.00		315.2	-804.1	364.5	334.2	30.34	12.012	
6,259.7	6,227.1	6,300.5	6,226.1	17.0	20.9	-90.00		315.2	-804.1	364.5	333.9	30.57	11.923	
6,300.0	6,267.4	6,340.7	6,266.3	17.0	20.9	-90.12		314.4	-804.1	364.5	333.8	30.73	11.862	
6,400.0	6,367.3	6,439.7	6,364.7	17.2	21.0	88.50		303.6	-804.1	364.6	333.5	31.17	11.698	
6,500.0	6,466.3	6,537.4	6,459.5	17.3	21.0	86.98		280.6	-804.1	365.0	333.5	31.47	11.598	
6,600.0	6,562.5	6,633.9	6,549.6	17.3	21.0	85.52		246.1	-804.1	365.6	334.0	31.62	11.563	
6,700.0	6,654.5	6,729.3	6,633.7	17.3	21.0	84.14		201.2	-804.1	366.4	334.8	31.65	11.577	
6,800.0	6,740.5	6,823.8	6,710.8	17.2	20.9	82.87		146.6	-804.1	367.4	335.8	31.61	11.622	
6,900.0	6,819.2	6,917.5	6,780.1	17.2	20.9	81.72		83.6	-804.1	368.4	336.8	31.58	11.665	
7,000.0	6,889.2	7,010.4	6,840.6	17.1	20.9	80.71		13.3	-804.1	369.4	337.7	31.65	11.669	
7,100.0	6,949.2	7,102.7	6,891.8	17.1	20.9	79.85		-63.4	-804.1	370.3	338.4	31.94	11.594	
7,200.0	6,998.4	7,194.4	6,933.3	17.2	21.0	79.16		-145.3	-804.1	371.1	338.6	32.53	11.408	
7,300.0	7,035.7	7,285.8	6,964.5	17.5	21.2	78.64		-231.1	-804.1	371.8	338.3	33.50	11.097	
7,400.0	7,060.6	7,376.9	6,985.2	18.0	21.5	78.29		-319.7	-804.1	372.3	337.4	34.88	10.671	
7,500.0	7,072.7	7,467.8	6,995.2	18.9	21.9	78.12		-410.0	-804.1	372.5	335.8	36.65	10.162	
7,600.0	7,073.7	7,563.7	6,996.0	19.9	22.6	78.11		-505.9	-804.1	372.5	333.8	38.71	9.622	
7,700.0	7,073.4	7,663.7	6,995.7	21.0	23.5	78.12		-605.9	-804.1	372.5	331.5	40.97	9.092	
7,800.0	7,073.0	7,763.7	6,995.4	22.2	24.5	78.13		-705.9	-804.1	372.5	329.0	43.44	8.575	
7,900.0	7,072.7	7,863.7	6,995.1	23.6	25.7	78.14		-805.9	-804.1	372.4	326.4	46.08	8.082	
8,000.0	7,072.3	7,963.7	6,994.9	25.0	27.0	78.15		-905.9	-804.1	372.4	323.6	48.88	7.620	
8,100.0	7,072.0	8,063.7	6,994.6	26.4	28.3	78.16		-1,005.9	-804.1	372.4	320.6	51.80	7.190	
8,200.0	7,071.6	8,163.7	6,994.3	28.0	29.7	78.17		-1,105.9	-804.1	372.4	317.6	54.82	6.793	
8,300.0	7,071.3	8,263.7	6,994.0	29.5	31.2	78.18		-1,205.9	-804.1	372.4	314.5	57.93	6.428	
8,400.0	7,070.9	8,363.7	6,993.7	31.1	32.7	78.19		-1,305.9	-804.1	372.4	311.3	61.12	6.093	
8,500.0	7,070.6	8,463.7	6,993.5	32.8	34.3	78.20		-1,405.9	-804.1	372.4	308.0	64.37	5.785	
8,600.0	7,070.2	8,563.7	6,993.2	34.4	35.9	78.22		-1,505.9	-804.1	372.3	304.7	67.68	5.502	
8,700.0	7,069.9	8,663.7	6,992.9	36.1	37.5	78.23		-1,605.9	-804.1	372.3	301.3	71.03	5.242	
8,800.0	7,069.5	8,763.7	6,992.6	37.9	39.2	78.24		-1,705.9	-804.1	372.3	297.9	74.42	5.003	
8,900.0	7,069.2	8,863.7	6,992.3	39.6	40.8	78.25		-1,805.9	-804.1	372.3	294.4	77.85	4.782	
9,000.0	7,068.8	8,963.7	6,992.1	41.3	42.5	78.26		-1,905.9	-804.1	372.3	291.0	81.31	4.578	
9,100.0	7,068.5	9,063.7	6,991.8	43.1	44.2	78.27		-2,005.9	-804.1	372.3	287.5	84.80	4.390	
9,200.0	7,068.1	9,163.7	6,991.5	44.9	46.0	78.28		-2,105.9	-804.1	372.3	283.9	88.31	4.215	
9,300.0	7,067.8	9,263.7	6,991.2	46.7	47.7	78.29		-2,205.9	-804.1	372.2	280.4	91.85	4.053	
9,400.0	7,067.4	9,363.7	6,991.0	48.5	49.5	78.30		-2,305.9	-804.1	372.2	276.8	95.40	3.902	
9,500.0	7,067.1	9,463.7	6,990.7	50.3	51.3	78.31		-2,405.9	-804.1	372.2	273.2	98.97	3.761	
9,600.0	7,066.7	9,563.7	6,990.4	52.1	53.0	78.32		-2,505.9	-804.1	372.2	269.6	102.55	3.629	
9,700.0	7,066.4	9,663.7	6,990.1	53.9	54.8	78.33		-2,605.9	-804.1	372.2	266.0	106.15	3.506	
9,800.0	7,066.0	9,763.7	6,989.8	55.7	56.6	78.34		-2,705.9	-804.1	372.2	262.4	109.76	3.391	
9,900.0	7,065.7	9,863.7	6,989.6	57.6	58.4	78.35		-2,805.9	-804.1	372.2	258.8	113.38	3.282	
10,000.0	7,065.3	9,963.7	6,989.3	59.4	60.3	78.36		-2,905.9	-804.1	372.1	255.1	117.02	3.180	

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 Kindsfater 24J-303
<b>Project:</b>	SEC.24-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Reference Site:</b>	Kindsfater 24J-HZ Pad Sec.24-T6N-R66W	<b>MD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Kindsfater 24J-303	<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 (8-11-14)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Kindsfater 24J-HZ Pad Sec.24-T6N-R66W - Kindsfater 24J-243 - Wellbore #1 - Plan #1 (8-11-14)												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	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
10,100.0	7,065.0	10,063.7	6,989.0	61.3	62.1	78.37	-3,005.9	-804.1	372.1	251.5	120.66	3.084	
10,200.0	7,064.6	10,163.7	6,988.7	63.1	63.9	78.38	-3,105.9	-804.1	372.1	247.8	124.31	2.994	
10,300.0	7,064.3	10,263.7	6,988.4	65.0	65.7	78.39	-3,205.9	-804.1	372.1	244.1	127.96	2.908	
10,400.0	7,063.9	10,363.7	6,988.2	66.8	67.6	78.40	-3,305.9	-804.1	372.1	240.5	131.63	2.827	
10,500.0	7,063.6	10,463.7	6,987.9	68.7	69.4	78.42	-3,405.9	-804.1	372.1	236.8	135.30	2.750	
10,600.0	7,063.3	10,563.7	6,987.6	70.5	71.3	78.43	-3,505.9	-804.1	372.1	233.1	138.98	2.677	
10,700.0	7,062.9	10,663.7	6,987.3	72.4	73.1	78.44	-3,605.9	-804.1	372.0	229.4	142.66	2.608	
10,800.0	7,062.6	10,763.7	6,987.0	74.3	75.0	78.45	-3,705.9	-804.1	372.0	225.7	146.35	2.542	
10,900.0	7,062.2	10,863.7	6,986.8	76.2	76.8	78.46	-3,805.9	-804.1	372.0	222.0	150.04	2.479	
11,000.0	7,061.9	10,963.7	6,986.5	78.0	78.7	78.47	-3,905.9	-804.1	372.0	218.3	153.74	2.420	
11,100.0	7,061.5	11,063.7	6,986.2	79.9	80.6	78.48	-4,005.9	-804.1	372.0	214.5	157.44	2.363	
11,200.0	7,061.2	11,163.7	6,985.9	81.8	82.4	78.49	-4,105.9	-804.1	372.0	210.8	161.15	2.308	
11,300.0	7,060.8	11,263.7	6,985.6	83.7	84.3	78.50	-4,205.9	-804.1	372.0	207.1	164.86	2.256	
11,400.0	7,060.5	11,363.7	6,985.4	85.6	86.2	78.51	-4,305.9	-804.1	371.9	203.4	168.57	2.206	
11,500.0	7,060.1	11,463.7	6,985.1	87.4	87.8	78.52	-4,405.9	-804.1	371.9	199.9	172.05	2.162	
11,531.3	7,060.0	11,495.0	6,985.0	87.9	88.3	78.52	-4,437.2	-804.1	371.9	198.9	172.99	2.150 SF	

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Kindsfater 24J-303
<b>Project:</b>	SEC.24-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Reference Site:</b>	Kindsfater 24J-HZ Pad Sec.24-T6N-R66W	<b>MD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Kindsfater 24J-303	<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 (8-11-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Kindsfater 24J-HZ Pad Sec.24-T6N-R66W - Kindsfater 24J-403 - Wellbore #1 - Plan #1 (8-11-14)												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)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.00	0.0	30.6	30.6				
100.0	100.0	99.0	99.0	0.1	0.1	90.00	0.0	30.6	30.6	30.4	0.22	136.829	
200.0	200.0	199.0	199.0	0.3	0.3	90.00	0.0	30.6	30.6	29.9	0.67	45.534	
300.0	300.0	299.0	299.0	0.6	0.6	90.00	0.0	30.6	30.6	29.5	1.12	27.284	
400.0	400.0	399.0	399.0	0.8	0.8	90.00	0.0	30.6	30.6	29.0	1.57	19.477	
500.0	500.0	499.0	499.0	1.0	1.0	90.00	0.0	30.6	30.6	28.6	2.02	15.144	
600.0	600.0	599.0	599.0	1.2	1.2	90.00	0.0	30.6	30.6	28.1	2.47	12.388	
700.0	700.0	699.0	699.0	1.5	1.5	90.00	0.0	30.6	30.6	27.7	2.92	10.481	
800.0	800.0	799.0	799.0	1.7	1.7	90.00	0.0	30.6	30.6	27.2	3.37	9.082	
900.0	900.0	899.0	899.0	1.9	1.9	90.00	0.0	30.6	30.6	26.8	3.82	8.013	
1,000.0	1,000.0	999.0	999.0	2.1	2.1	90.00	0.0	30.6	30.6	26.3	4.27	7.169	
1,100.0	1,100.0	1,099.0	1,099.0	2.4	2.4	90.00	0.0	30.6	30.6	25.9	4.72	6.486	
1,200.0	1,200.0	1,199.0	1,199.0	2.6	2.6	90.00	0.0	30.6	30.6	25.4	5.17	5.922 CC, ES	
1,300.0	1,300.0	1,299.0	1,299.0	2.8	2.8	146.16	0.0	30.6	32.0	26.4	5.61	5.711	
1,400.0	1,399.8	1,398.8	1,398.8	3.0	3.0	150.70	0.0	30.6	36.5	30.5	6.04	6.040	
1,500.0	1,499.5	1,498.5	1,498.5	3.3	3.3	156.15	0.0	30.6	44.3	37.8	6.47	6.846	
1,600.0	1,598.7	1,597.7	1,597.7	3.5	3.5	161.07	0.0	30.6	55.3	48.4	6.90	8.018	
1,700.0	1,698.0	1,699.0	1,699.0	3.7	3.7	163.86	1.3	29.4	65.7	58.3	7.34	8.943	
1,800.0	1,797.2	1,800.9	1,800.8	4.0	3.9	164.65	5.2	25.8	73.0	65.2	7.78	9.371	
1,900.0	1,896.4	1,903.2	1,902.7	4.3	4.2	164.09	11.8	19.8	77.1	68.8	8.23	9.360	
2,000.0	1,995.7	2,004.2	2,003.0	4.6	4.4	162.55	20.6	11.7	78.6	69.9	8.69	9.043	
2,100.0	2,094.9	2,104.2	2,102.2	4.9	4.6	160.96	29.5	3.6	79.9	70.7	9.15	8.726	
2,200.0	2,194.2	2,204.2	2,201.4	5.1	4.9	159.42	38.4	-4.6	81.2	71.6	9.62	8.438	
2,300.0	2,293.4	2,304.1	2,300.7	5.4	5.2	157.94	47.3	-12.7	82.6	72.5	10.10	8.176	
2,400.0	2,392.6	2,404.1	2,399.9	5.7	5.4	156.50	56.2	-20.9	84.0	73.5	10.59	7.937	
2,500.0	2,491.9	2,504.1	2,499.1	6.0	5.7	155.12	65.1	-29.1	85.5	74.5	11.08	7.717	
2,600.0	2,591.1	2,604.0	2,598.4	6.3	6.0	153.78	74.0	-37.2	87.1	75.5	11.59	7.516	
2,700.0	2,690.3	2,704.0	2,697.6	6.6	6.3	152.49	82.9	-45.4	88.7	76.6	12.10	7.330	
2,800.0	2,789.6	2,804.0	2,796.8	6.9	6.6	151.25	91.8	-53.6	90.3	77.7	12.62	7.159	
2,900.0	2,888.8	2,903.9	2,896.1	7.2	6.8	150.05	100.7	-61.7	92.0	78.8	13.14	7.000	
3,000.0	2,988.0	3,003.9	2,995.3	7.6	7.1	148.90	109.7	-69.9	93.7	80.0	13.67	6.853	
3,100.0	3,087.3	3,103.9	3,094.6	7.9	7.4	147.78	118.6	-78.0	95.5	81.2	14.21	6.716	
3,200.0	3,186.5	3,203.9	3,193.8	8.2	7.7	146.71	127.5	-86.2	97.2	82.5	14.76	6.589	
3,300.0	3,285.7	3,303.8	3,293.0	8.5	8.0	145.68	136.4	-94.4	99.1	83.8	15.31	6.471	
3,400.0	3,385.0	3,403.8	3,392.3	8.8	8.3	144.68	145.3	-102.5	100.9	85.1	15.87	6.361	
3,500.0	3,484.2	3,503.8	3,491.5	9.1	8.6	143.72	154.2	-110.7	102.8	86.4	16.43	6.257	
3,600.0	3,583.4	3,603.7	3,590.7	9.4	8.9	142.80	163.1	-118.8	104.7	87.7	17.00	6.161	
3,700.0	3,682.7	3,703.7	3,690.0	9.7	9.2	141.90	172.0	-127.0	106.6	89.1	17.57	6.071	
3,800.0	3,781.9	3,803.7	3,789.2	10.1	9.5	141.05	180.9	-135.2	108.6	90.5	18.14	5.986	
3,900.0	3,881.1	3,903.6	3,888.4	10.4	9.8	140.22	189.8	-143.3	110.6	91.9	18.72	5.906	
4,000.0	3,980.4	4,003.6	3,987.7	10.7	10.1	139.42	198.7	-151.5	112.6	93.3	19.31	5.831	
4,100.0	4,079.6	4,103.6	4,086.9	11.0	10.4	138.64	207.6	-159.7	114.6	94.7	19.90	5.761	
4,200.0	4,178.8	4,203.5	4,186.1	11.3	10.7	137.90	216.6	-167.8	116.7	96.2	20.49	5.695	
4,300.0	4,278.1	4,303.5	4,285.4	11.6	11.0	137.18	225.5	-176.0	118.7	97.7	21.08	5.632	
4,400.0	4,377.3	4,403.5	4,384.6	12.0	11.4	136.49	234.4	-184.1	120.8	99.1	21.68	5.573	
4,500.0	4,476.5	4,503.4	4,483.8	12.3	11.7	135.82	243.3	-192.3	122.9	100.6	22.28	5.518	
4,600.0	4,575.8	4,603.4	4,583.1	12.6	12.0	135.17	252.2	-200.5	125.0	102.2	22.88	5.465	
4,700.0	4,675.0	4,703.4	4,682.3	12.9	12.3	134.54	261.1	-208.6	127.2	103.7	23.48	5.415	
4,800.0	4,774.2	4,803.3	4,781.5	13.2	12.6	133.94	270.0	-216.8	129.3	105.2	24.09	5.368	
4,900.0	4,873.5	4,903.3	4,880.8	13.5	12.9	133.35	278.9	-225.0	131.5	106.8	24.70	5.323	
5,000.0	4,972.7	5,003.3	4,980.0	13.9	13.2	132.78	287.8	-233.1	133.7	108.3	25.31	5.281	

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 Kindsfater 24J-303
<b>Project:</b>	SEC.24-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Reference Site:</b>	Kindsfater 24J-HZ Pad Sec.24-T6N-R66W	<b>MD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Kindsfater 24J-303	<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 (8-11-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Kindsfater 24J-HZ Pad Sec.24-T6N-R66W - Kindsfater 24J-403 - Wellbore #1 - Plan #1 (8-11-14)												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	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.0	5,071.9	5,103.2	5,079.3	14.2	13.5	132.24	296.7	-241.3	135.8	109.9	25.92	5.240	
5,200.0	5,171.2	5,202.6	5,177.9	14.5	13.8	131.74	305.5	-249.3	138.1	111.6	26.52	5.206	
5,300.0	5,270.4	5,300.0	5,274.8	14.8	14.0	132.12	312.4	-255.6	141.6	114.6	26.99	5.245	
5,400.0	5,369.6	5,397.4	5,372.1	15.1	14.2	133.59	316.8	-259.7	146.8	119.5	27.35	5.369	
5,500.0	5,468.9	5,494.2	5,468.8	15.5	14.4	135.97	318.8	-261.5	154.0	126.4	27.60	5.582	
5,600.0	5,568.1	5,592.5	5,567.1	15.8	14.6	138.91	318.9	-261.6	163.0	135.2	27.79	5.866	
5,700.0	5,667.6	5,692.0	5,666.6	16.0	14.7	141.17	318.9	-261.6	170.6	142.6	28.01	6.090	
5,800.0	5,767.4	5,791.8	5,766.4	16.2	14.9	142.54	318.9	-261.6	175.6	147.3	28.27	6.211	
5,900.0	5,867.4	5,891.7	5,866.4	16.3	15.1	143.13	318.9	-261.6	177.9	149.3	28.57	6.226	
6,000.0	5,967.4	5,991.7	5,966.4	16.5	15.3	88.81	318.9	-261.6	178.0	149.1	28.93	6.154	
6,100.0	6,067.4	6,091.7	6,066.4	16.7	15.5	88.81	318.9	-261.6	178.0	148.7	29.32	6.072	
6,200.0	6,167.4	6,191.7	6,166.4	16.9	15.7	88.81	318.9	-261.6	178.0	148.3	29.71	5.992	
6,300.0	6,267.4	6,291.7	6,266.4	17.0	15.9	88.81	318.9	-261.6	178.0	147.9	30.11	5.913	
6,331.7	6,299.1	6,323.5	6,298.1	17.1	15.9	-91.31	318.9	-261.6	178.0	147.8	30.23	5.889	
6,400.0	6,367.3	6,391.7	6,366.3	17.2	16.1	-91.88	318.9	-261.6	178.1	147.6	30.53	5.833	
6,500.0	6,466.3	6,492.6	6,467.0	17.3	16.2	-94.42	312.7	-261.6	178.5	147.6	30.94	5.771	
6,600.0	6,562.5	6,594.7	6,567.1	17.3	16.2	-96.88	293.1	-261.6	179.3	148.1	31.16	5.755	
6,700.0	6,654.5	6,697.9	6,664.6	17.3	16.2	-99.22	259.8	-261.6	180.3	149.1	31.19	5.781	
6,800.0	6,740.5	6,802.0	6,757.7	17.2	16.2	-101.38	213.3	-261.6	181.6	150.5	31.09	5.841	
6,900.0	6,819.2	6,907.2	6,844.4	17.2	16.2	-103.32	153.8	-261.6	182.9	152.0	30.92	5.916	
7,000.0	6,889.2	7,013.3	6,922.8	17.1	16.1	-105.02	82.4	-261.6	184.3	153.5	30.81	5.983	
7,100.0	6,949.2	7,120.3	6,990.9	17.1	16.1	-106.43	0.1	-261.6	185.6	154.7	30.87	6.011	
7,200.0	6,998.4	7,227.9	7,047.3	17.2	16.1	-107.55	-91.4	-261.6	186.7	155.4	31.28	5.970	
7,300.0	7,035.7	7,336.0	7,090.4	17.5	16.5	-108.35	-190.5	-261.6	187.6	155.5	32.10	5.842	
7,400.0	7,060.6	7,444.5	7,119.2	18.0	17.3	-108.84	-295.0	-261.6	188.1	154.6	33.43	5.625	
7,500.0	7,072.7	7,553.2	7,132.9	18.9	18.3	-108.99	-402.8	-261.6	188.3	153.0	35.26	5.338	
7,509.0	7,073.2	7,563.0	7,133.4	19.0	18.4	-108.98	-412.6	-261.6	188.2	152.8	35.45	5.310	
7,600.0	7,073.7	7,656.3	7,134.4	19.9	19.4	-109.11	-505.8	-261.6	188.4	151.1	37.34	5.046	
7,700.0	7,073.4	7,756.3	7,134.9	21.0	20.5	-109.36	-605.8	-261.6	188.7	149.2	39.52	4.775	
7,800.0	7,073.0	7,856.3	7,135.4	22.2	21.8	-109.61	-705.8	-261.6	189.0	147.1	41.89	4.511	
7,900.0	7,072.7	7,956.3	7,136.0	23.6	23.1	-109.86	-805.8	-261.6	189.3	144.8	44.43	4.260	
8,000.0	7,072.3	8,056.3	7,136.5	25.0	24.6	-110.10	-905.8	-261.6	189.6	142.5	47.10	4.025	
8,100.0	7,072.0	8,156.3	7,137.0	26.4	26.1	-110.35	-1,005.8	-261.6	189.9	140.0	49.89	3.806	
8,200.0	7,071.6	8,256.2	7,137.5	28.0	27.6	-110.60	-1,105.8	-261.6	190.2	137.4	52.76	3.605	
8,300.0	7,071.3	8,356.2	7,138.1	29.5	29.2	-110.84	-1,205.8	-261.6	190.5	134.8	55.71	3.419	
8,400.0	7,070.9	8,456.2	7,138.6	31.1	30.8	-111.09	-1,305.8	-261.6	190.8	132.1	58.72	3.249	
8,500.0	7,070.6	8,556.2	7,139.1	32.8	32.5	-111.33	-1,405.8	-261.6	191.1	129.3	61.78	3.094	
8,600.0	7,070.2	8,656.2	7,139.6	34.4	34.1	-111.58	-1,505.8	-261.6	191.4	126.6	64.88	2.951	
8,700.0	7,069.9	8,756.2	7,140.2	36.1	35.9	-111.82	-1,605.8	-261.6	191.8	123.7	68.02	2.819	
8,800.0	7,069.5	8,856.2	7,140.7	37.9	37.6	-112.06	-1,705.7	-261.6	192.1	120.9	71.19	2.698	
8,900.0	7,069.2	8,956.2	7,141.2	39.6	39.3	-112.30	-1,805.7	-261.6	192.4	118.0	74.37	2.587	
9,000.0	7,068.8	9,056.2	7,141.7	41.3	41.1	-112.54	-1,905.7	-261.6	192.8	115.2	77.58	2.485	
9,100.0	7,068.5	9,156.2	7,142.2	43.1	42.9	-112.78	-2,005.7	-261.6	193.1	112.3	80.80	2.390	
9,200.0	7,068.1	9,256.2	7,142.8	44.9	44.6	-113.02	-2,105.7	-261.6	193.4	109.4	84.03	2.302	
9,300.0	7,067.8	9,356.2	7,143.3	46.7	46.4	-113.25	-2,205.7	-261.6	193.8	106.5	87.28	2.220	
9,400.0	7,067.4	9,456.2	7,143.8	48.5	48.3	-113.49	-2,305.7	-261.6	194.1	103.6	90.52	2.144	
9,500.0	7,067.1	9,556.2	7,144.3	50.3	50.1	-113.73	-2,405.7	-261.6	194.5	100.7	93.78	2.074	
9,600.0	7,066.7	9,656.2	7,144.9	52.1	51.9	-113.96	-2,505.7	-261.6	194.8	97.8	97.03	2.008	
9,700.0	7,066.4	9,756.2	7,145.4	53.9	53.7	-114.19	-2,605.7	-261.6	195.2	94.9	100.29	1.946	
9,800.0	7,066.0	9,856.2	7,145.9	55.7	55.6	-114.43	-2,705.7	-261.6	195.6	92.0	103.55	1.889	
9,900.0	7,065.7	9,956.2	7,146.4	57.6	57.4	-114.66	-2,805.7	-261.6	195.9	89.1	106.80	1.834	

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 Kindsfater 24J-303
<b>Project:</b>	SEC.24-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Reference Site:</b>	Kindsfater 24J-HZ Pad Sec.24-T6N-R66W	<b>MD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Kindsfater 24J-303	<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 (8-11-14)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Kindsfater 24J-HZ Pad Sec.24-T6N-R66W - Kindsfater 24J-403 - Wellbore #1 - Plan #1 (8-11-14)												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	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	7,065.3	10,056.2	7,147.0	59.4	59.2	-114.89	-2,905.7	-261.6	196.3	86.2	110.05	1.783	
10,100.0	7,065.0	10,156.2	7,147.5	61.3	61.1	-115.12	-3,005.7	-261.6	196.7	83.3	113.31	1.736	
10,200.0	7,064.6	10,256.2	7,148.0	63.1	63.0	-115.35	-3,105.7	-261.6	197.0	80.5	116.55	1.690	
10,300.0	7,064.3	10,356.2	7,148.5	65.0	64.8	-115.58	-3,205.7	-261.6	197.4	77.6	119.79	1.648	
10,400.0	7,063.9	10,456.2	7,149.1	66.8	66.7	-115.81	-3,305.7	-261.6	197.8	74.8	123.03	1.608	
10,500.0	7,063.6	10,556.2	7,149.6	68.7	68.5	-116.03	-3,405.7	-261.6	198.2	71.9	126.26	1.569	
10,600.0	7,063.3	10,656.2	7,150.1	70.5	70.4	-116.26	-3,505.7	-261.6	198.5	69.1	129.48	1.533	
10,700.0	7,062.9	10,756.2	7,150.6	72.4	72.3	-116.49	-3,605.6	-261.6	198.9	66.2	132.70	1.499	Level 3
10,800.0	7,062.6	10,856.2	7,151.1	74.3	74.2	-116.71	-3,705.6	-261.6	199.3	63.4	135.91	1.467	Level 3
10,900.0	7,062.2	10,956.1	7,151.7	76.2	76.0	-116.93	-3,805.6	-261.6	199.7	60.6	139.11	1.436	Level 3
11,000.0	7,061.9	11,056.1	7,152.2	78.0	77.9	-117.16	-3,905.6	-261.6	200.1	57.8	142.31	1.406	Level 3
11,100.0	7,061.5	11,156.1	7,152.7	79.9	79.8	-117.38	-4,005.6	-261.6	200.5	55.0	145.49	1.378	Level 3
11,200.0	7,061.2	11,256.1	7,153.2	81.8	81.7	-117.60	-4,105.6	-261.6	200.9	52.3	148.67	1.352	Level 3
11,300.0	7,060.8	11,356.1	7,153.8	83.7	83.6	-117.82	-4,205.6	-261.6	201.3	49.5	151.84	1.326	Level 3
11,400.0	7,060.5	11,456.1	7,154.3	85.6	85.5	-118.04	-4,305.6	-261.6	201.7	46.8	154.99	1.302	Level 3
11,500.0	7,060.1	11,556.1	7,154.8	87.4	87.3	-118.26	-4,405.6	-261.6	202.2	44.0	158.14	1.278	Level 3
11,531.3	7,060.0	11,587.4	7,155.0	87.9	87.9	-118.32	-4,436.9	-261.6	202.3	43.3	159.02	1.272	Level 3, SF



<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Kindsfater 24J-303
<b>Project:</b>	SEC.24-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Reference Site:</b>	Kindsfater 24J-HZ Pad Sec.24-T6N-R66W	<b>MD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Kindsfater 24J-303	<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 (8-11-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Kindsfater 24JM-HZ Pad Sec.24-T6N-R66W - Kindsfater 24J-223 - Wellbore #1 - Plan #1 (8-11-14)													
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	89.52	3.6	436.8	436.8				
100.0	100.0	99.0	99.0	0.1	0.1	89.52	3.6	436.8	436.8	436.6	0.22	1,952.994	
200.0	200.0	199.0	199.0	0.3	0.3	89.52	3.6	436.8	436.8	436.1	0.67	649.915	
300.0	300.0	299.0	299.0	0.6	0.6	89.52	3.6	436.8	436.8	435.7	1.12	389.428	
400.0	400.0	399.0	399.0	0.8	0.8	89.52	3.6	436.8	436.8	435.2	1.57	278.004	
500.0	500.0	499.0	499.0	1.0	1.0	89.52	3.6	436.8	436.8	434.8	2.02	216.156	
600.0	600.0	599.0	599.0	1.2	1.2	89.52	3.6	436.8	436.8	434.3	2.47	176.820	
700.0	700.0	699.0	699.0	1.5	1.5	89.52	3.6	436.8	436.8	433.9	2.92	149.596	
800.0	800.0	799.0	799.0	1.7	1.7	89.52	3.6	436.8	436.8	433.4	3.37	129.636	
900.0	900.0	899.0	899.0	1.9	1.9	89.52	3.6	436.8	436.8	433.0	3.82	114.376	
1,000.0	1,000.0	999.0	999.0	2.1	2.1	89.52	3.6	436.8	436.8	432.5	4.27	102.330	
1,100.0	1,100.0	1,099.0	1,099.0	2.4	2.4	89.52	3.6	436.8	436.8	432.1	4.72	92.580	
1,200.0	1,200.0	1,199.0	1,199.0	2.6	2.6	89.52	3.6	436.8	436.8	431.6	5.17	84.526 CC	
1,300.0	1,300.0	1,299.0	1,299.0	2.8	2.8	144.00	3.6	436.8	438.2	432.6	5.61	78.113	
1,400.0	1,399.8	1,398.8	1,398.8	3.0	3.0	144.35	3.6	436.8	442.4	436.4	6.04	73.202	
1,500.0	1,499.5	1,512.8	1,512.8	3.3	3.3	144.86	5.0	435.0	448.0	441.5	6.50	68.920	
1,600.0	1,598.7	1,627.3	1,627.1	3.5	3.5	145.31	9.0	429.5	452.9	445.9	6.96	65.079	
1,700.0	1,698.0	1,742.2	1,741.4	3.7	3.8	145.50	15.7	420.3	454.9	447.5	7.44	61.173	
1,800.0	1,797.2	1,844.4	1,842.8	4.0	4.1	145.48	23.2	410.0	454.9	447.0	7.90	57.579	
1,900.0	1,896.4	1,944.4	1,942.0	4.3	4.3	145.46	30.6	399.9	454.9	446.5	8.37	54.354	
2,000.0	1,995.7	2,044.4	2,041.2	4.6	4.6	145.44	37.9	389.8	454.8	446.0	8.84	51.425	
2,100.0	2,094.9	2,144.4	2,140.4	4.9	4.8	145.42	45.3	379.7	454.7	445.4	9.33	48.761	
2,200.0	2,194.2	2,244.4	2,239.6	5.1	5.1	145.40	52.7	369.6	454.7	444.9	9.81	46.333	
2,300.0	2,293.4	2,344.4	2,338.9	5.4	5.4	145.37	60.1	359.6	454.6	444.3	10.31	44.112	
2,400.0	2,392.6	2,444.4	2,438.1	5.7	5.7	145.35	67.4	349.5	454.6	443.8	10.80	42.078	
2,500.0	2,491.9	2,544.4	2,537.3	6.0	6.0	145.33	74.8	339.4	454.5	443.2	11.30	40.210	
2,600.0	2,591.1	2,644.4	2,636.5	6.3	6.3	145.31	82.2	329.3	454.5	442.7	11.81	38.489	
2,700.0	2,690.3	2,744.4	2,735.7	6.6	6.6	145.29	89.6	319.2	454.4	442.1	12.31	36.901	
2,800.0	2,789.6	2,844.4	2,834.9	6.9	6.9	145.26	96.9	309.1	454.4	441.5	12.82	35.432	
2,900.0	2,888.8	2,944.4	2,934.1	7.2	7.2	145.24	104.3	299.0	454.3	441.0	13.34	34.069	
3,000.0	2,988.0	3,044.4	3,033.4	7.6	7.5	145.22	111.7	288.9	454.3	440.4	13.85	32.801	
3,100.0	3,087.3	3,144.4	3,132.6	7.9	7.8	145.20	119.1	278.8	454.2	439.8	14.36	31.621	
3,200.0	3,186.5	3,244.4	3,231.8	8.2	8.1	145.18	126.4	268.7	454.1	439.3	14.88	30.519	
3,300.0	3,285.7	3,344.4	3,331.0	8.5	8.4	145.15	133.8	258.6	454.1	438.7	15.40	29.488	
3,400.0	3,385.0	3,444.4	3,430.2	8.8	8.7	145.13	141.2	248.5	454.0	438.1	15.92	28.521	
3,500.0	3,484.2	3,544.4	3,529.4	9.1	9.0	145.11	148.6	238.5	454.0	437.5	16.44	27.614	
3,600.0	3,583.4	3,644.4	3,628.7	9.4	9.3	145.09	155.9	228.4	453.9	437.0	16.96	26.761	
3,700.0	3,682.7	3,744.4	3,727.9	9.7	9.7	145.06	163.3	218.3	453.9	436.4	17.49	25.957	
3,800.0	3,781.9	3,844.4	3,827.1	10.1	10.0	145.04	170.7	208.2	453.8	435.8	18.01	25.198	
3,900.0	3,881.1	3,944.4	3,926.3	10.4	10.3	145.02	178.1	198.1	453.8	435.2	18.54	24.482	
4,000.0	3,980.4	4,044.4	4,025.5	10.7	10.6	145.00	185.4	188.0	453.7	434.7	19.06	23.803	
4,100.0	4,079.6	4,144.4	4,124.7	11.0	10.9	144.98	192.8	177.9	453.7	434.1	19.59	23.160	
4,200.0	4,178.8	4,244.4	4,223.9	11.3	11.2	144.95	200.2	167.8	453.6	433.5	20.12	22.550	
4,300.0	4,278.1	4,344.4	4,323.2	11.6	11.5	144.93	207.6	157.7	453.6	432.9	20.64	21.971	
4,400.0	4,377.3	4,444.4	4,422.4	12.0	11.9	144.91	214.9	147.6	453.5	432.3	21.17	21.420	
4,500.0	4,476.5	4,544.4	4,521.6	12.3	12.2	144.89	222.3	137.5	453.4	431.7	21.70	20.895	
4,600.0	4,575.8	4,644.4	4,620.8	12.6	12.5	144.86	229.7	127.5	453.4	431.2	22.23	20.394	
4,700.0	4,675.0	4,744.4	4,720.0	12.9	12.8	144.84	237.1	117.4	453.3	430.6	22.76	19.917	
4,800.0	4,774.2	4,844.4	4,819.2	13.2	13.1	144.82	244.4	107.3	453.3	430.0	23.29	19.460	
4,900.0	4,873.5	4,944.4	4,918.5	13.5	13.5	144.80	251.8	97.2	453.2	429.4	23.82	19.024	
5,000.0	4,972.7	5,044.4	5,017.7	13.9	13.8	144.78	259.2	87.1	453.2	428.8	24.36	18.606	

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 Kindsfater 24J-303
<b>Project:</b>	SEC.24-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Reference Site:</b>	Kindsfater 24J-HZ Pad Sec.24-T6N-R66W	<b>MD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Kindsfater 24J-303	<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 (8-11-14)	<b>Offset TVD Reference:</b>	Offset Datum

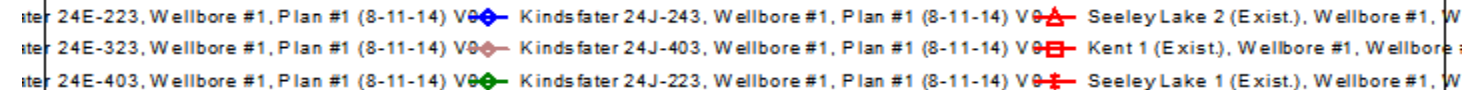
Offset Design Kindsfater 24JM-HZ Pad Sec.24-T6N-R66W - Kindsfater 24J-223 - Wellbore #1 - Plan #1 (8-11-14)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis	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	5,071.9	5,144.4	5,116.9	14.2	14.1	144.75		266.6	77.0	453.1	428.2	24.89	18.206	
5,200.0	5,171.2	5,244.4	5,216.1	14.5	14.4	144.73		273.9	66.9	453.1	427.7	25.42	17.823	
5,300.0	5,270.4	5,344.4	5,315.3	14.8	14.7	144.71		281.3	56.8	453.0	427.1	25.95	17.454	
5,400.0	5,369.6	5,444.4	5,414.5	15.1	15.0	144.69		288.7	46.7	453.0	426.5	26.49	17.101	
5,500.0	5,468.9	5,544.4	5,513.8	15.5	15.4	144.66		296.1	36.6	452.9	425.9	27.02	16.761	
5,600.0	5,568.1	5,644.4	5,613.0	15.8	15.7	144.64		303.4	26.5	452.8	425.2	27.55	16.433	
5,700.0	5,667.6	5,736.3	5,704.3	16.0	15.9	144.48		309.8	17.8	451.3	423.3	27.99	16.122	
5,800.0	5,767.4	5,825.0	5,792.7	16.2	16.1	144.29		314.4	11.5	449.4	421.0	28.37	15.842	
5,900.0	5,867.4	5,913.8	5,881.3	16.3	16.3	144.08		317.4	7.4	447.2	418.5	28.70	15.581	
6,000.0	5,967.4	6,002.7	5,970.1	16.5	16.4	89.54		318.8	5.6	445.2	416.2	29.03	15.336	
6,050.2	6,017.6	6,049.2	6,016.6	16.6	16.5	89.53		318.8	5.5	445.1	415.9	29.21	15.238	
6,100.0	6,067.4	6,098.9	6,066.4	16.7	16.6	89.53		318.8	5.5	445.1	415.7	29.39	15.142	
6,200.0	6,167.4	6,198.9	6,166.4	16.9	16.8	89.53		318.8	5.5	445.1	415.3	29.78	14.945	
6,300.0	6,267.4	6,299.1	6,266.5	17.0	16.9	89.75		317.2	5.5	445.1	414.9	30.13	14.774	
6,322.2	6,289.6	6,321.3	6,288.6	17.1	16.9	-90.05		315.4	5.5	445.1	414.9	30.17	14.754	
6,400.0	6,367.3	6,398.1	6,364.6	17.2	17.0	-88.85		304.2	5.5	445.2	414.9	30.25	14.718	
6,500.0	6,466.3	6,495.5	6,458.6	17.3	17.0	-87.33		279.2	5.5	445.6	415.3	30.21	14.747	
6,600.0	6,562.5	6,591.5	6,547.5	17.3	17.0	-85.87		243.1	5.5	446.2	416.1	30.10	14.825	
6,700.0	6,654.5	6,686.2	6,630.1	17.3	17.0	-84.49		196.8	5.5	447.2	417.2	29.97	14.921	
6,800.0	6,740.5	6,779.8	6,705.4	17.2	16.9	-83.20		141.4	5.5	448.2	418.4	29.88	15.001	
6,900.0	6,819.2	6,872.3	6,772.7	17.2	16.9	-82.04		77.9	5.5	449.4	419.5	29.90	15.030	
7,000.0	6,889.2	6,964.0	6,831.3	17.1	16.8	-81.01		7.5	5.5	450.6	420.5	30.09	14.975	
7,100.0	6,949.2	7,054.9	6,880.7	17.1	16.9	-80.12		-68.7	5.5	451.8	421.3	30.50	14.812	
7,200.0	6,998.4	7,145.2	6,920.4	17.2	17.0	-79.40		-149.8	5.5	452.8	421.6	31.18	14.525	
7,300.0	7,035.7	7,235.0	6,950.2	17.5	17.4	-78.83		-234.4	5.5	453.7	421.5	32.13	14.118	
7,400.0	7,060.6	7,324.5	6,969.8	18.0	17.9	-78.44		-321.7	5.5	454.3	420.9	33.38	13.611	
7,500.0	7,072.7	7,413.7	6,979.0	18.9	18.7	-78.22		-410.4	5.5	454.6	419.8	34.88	13.034	
7,600.0	7,073.7	7,509.6	6,979.9	19.9	19.7	-78.22		-506.2	5.5	454.6	417.9	36.79	12.359	
7,700.0	7,073.4	7,609.6	6,980.0	21.0	20.9	-78.27		-606.2	5.5	454.6	415.5	39.06	11.638	
7,800.0	7,073.0	7,709.6	6,980.1	22.2	22.1	-78.33		-706.2	5.5	454.5	412.9	41.55	10.938	
7,900.0	7,072.7	7,809.6	6,980.2	23.6	23.5	-78.39		-806.2	5.5	454.4	410.1	44.23	10.273	
8,000.0	7,072.3	7,909.6	6,980.3	25.0	24.9	-78.44		-906.2	5.5	454.3	407.2	47.06	9.654	
8,100.0	7,072.0	8,009.6	6,980.4	26.4	26.3	-78.50		-1,006.2	5.5	454.2	404.2	50.02	9.081	
8,200.0	7,071.6	8,109.6	6,980.5	28.0	27.9	-78.55		-1,106.2	5.5	454.1	401.0	53.08	8.555	
8,300.0	7,071.3	8,209.6	6,980.6	29.5	29.5	-78.61		-1,206.2	5.5	454.0	397.8	56.24	8.073	
8,400.0	7,070.9	8,309.6	6,980.7	31.1	31.1	-78.67		-1,306.2	5.5	453.9	394.5	59.47	7.633	
8,500.0	7,070.6	8,409.6	6,980.8	32.8	32.7	-78.72		-1,406.2	5.5	453.8	391.1	62.76	7.231	
8,600.0	7,070.2	8,509.6	6,980.9	34.4	34.4	-78.78		-1,506.2	5.5	453.8	387.6	66.11	6.864	
8,700.0	7,069.9	8,609.6	6,981.0	36.1	36.1	-78.83		-1,606.2	5.5	453.7	384.2	69.50	6.527	
8,800.0	7,069.5	8,709.6	6,981.1	37.9	37.8	-78.89		-1,706.2	5.5	453.6	380.6	72.94	6.219	
8,900.0	7,069.2	8,809.6	6,981.2	39.6	39.6	-78.95		-1,806.2	5.5	453.5	377.1	76.41	5.935	
9,000.0	7,068.8	8,909.6	6,981.3	41.3	41.3	-79.00		-1,906.2	5.5	453.4	373.5	79.91	5.674	
9,100.0	7,068.5	9,009.6	6,981.5	43.1	43.1	-79.06		-2,006.2	5.5	453.3	369.9	83.44	5.433	
9,200.0	7,068.1	9,109.6	6,981.6	44.9	44.9	-79.12		-2,106.2	5.5	453.2	366.2	86.99	5.210	
9,300.0	7,067.8	9,209.6	6,981.7	46.7	46.6	-79.17		-2,206.2	5.5	453.2	362.6	90.56	5.004	
9,400.0	7,067.4	9,309.6	6,981.8	48.5	48.4	-79.23		-2,306.2	5.5	453.1	358.9	94.16	4.812	
9,500.0	7,067.1	9,409.6	6,981.9	50.3	50.3	-79.29		-2,406.2	5.5	453.0	355.2	97.77	4.633	
9,600.0	7,066.7	9,509.6	6,982.0	52.1	52.1	-79.34		-2,506.2	5.5	452.9	351.5	101.39	4.467	
9,700.0	7,066.4	9,609.6	6,982.1	53.9	53.9	-79.40		-2,606.2	5.5	452.8	347.8	105.03	4.311	
9,800.0	7,066.0	9,709.6	6,982.2	55.7	55.7	-79.45		-2,706.2	5.5	452.7	344.1	108.68	4.166	
9,900.0	7,065.7	9,809.6	6,982.3	57.6	57.6	-79.51		-2,806.2	5.5	452.7	340.3	112.34	4.029	

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 Kindsfater 24J-303
<b>Project:</b>	SEC.24-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Reference Site:</b>	Kindsfater 24J-HZ Pad Sec.24-T6N-R66W	<b>MD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Kindsfater 24J-303	<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 (8-11-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design      Kindsfater 24JM-HZ Pad Sec.24-T6N-R66W - Kindsfater 24J-223 - Wellbore #1 - Plan #1 (8-11-14)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
10,000.0	7,065.3	9,909.5	6,982.4	59.4	59.4	-79.57	-2,906.2	5.5	452.6	336.6	116.02	3.901		
10,100.0	7,065.0	10,009.5	6,982.5	61.3	61.3	-79.62	-3,006.2	5.5	452.5	332.8	119.70	3.780		
10,200.0	7,064.6	10,109.5	6,982.6	63.1	63.1	-79.68	-3,106.2	5.5	452.4	329.0	123.39	3.666		
10,300.0	7,064.3	10,209.5	6,982.7	65.0	65.0	-79.74	-3,206.2	5.5	452.3	325.2	127.09	3.559		
10,400.0	7,063.9	10,309.5	6,982.8	66.8	66.8	-79.79	-3,306.2	5.5	452.3	321.5	130.80	3.458		
10,500.0	7,063.6	10,409.5	6,982.9	68.7	68.7	-79.85	-3,406.2	5.5	452.2	317.7	134.51	3.362		
10,600.0	7,063.3	10,509.5	6,983.0	70.5	70.6	-79.91	-3,506.2	5.5	452.1	313.9	138.23	3.271		
10,700.0	7,062.9	10,609.5	6,983.1	72.4	72.4	-79.96	-3,606.2	5.5	452.0	310.1	141.96	3.184		
10,800.0	7,062.6	10,709.5	6,983.2	74.3	74.3	-80.02	-3,706.2	5.5	451.9	306.2	145.69	3.102		
10,900.0	7,062.2	10,809.5	6,983.3	76.2	76.2	-80.08	-3,806.2	5.5	451.9	302.4	149.43	3.024		
11,000.0	7,061.9	10,909.5	6,983.4	78.0	78.1	-80.13	-3,906.2	5.5	451.8	298.6	153.17	2.950		
11,100.0	7,061.5	11,009.5	6,983.5	79.9	79.9	-80.19	-4,006.2	5.5	451.7	294.8	156.92	2.879		
11,200.0	7,061.2	11,109.5	6,983.6	81.8	81.8	-80.25	-4,106.2	5.5	451.6	291.0	160.67	2.811		
11,300.0	7,060.8	11,209.5	6,983.8	83.7	83.7	-80.30	-4,206.2	5.5	451.6	287.1	164.43	2.746		
11,400.0	7,060.5	11,309.5	6,983.9	85.6	85.6	-80.36	-4,306.2	5.5	451.5	283.3	168.19	2.684		
11,500.0	7,060.1	11,409.5	6,984.0	87.4	87.5	-80.42	-4,406.2	5.5	451.4	279.5	171.95	2.625		
11,531.3	7,060.0	11,440.8	6,984.0	87.9	88.1	-80.44	-4,437.4	5.5	451.4	278.4	173.01	2.609 ES, SF		

Reference Depths are relative to WELL @ 4779.0ft (RKB - 15')	Coordinates are relative to: Kindsfater 24J-303
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.500000 °	Grid Convergence at Surface is: 0.50°



<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Kindsfater 24J-303
<b>Project:</b>	SEC.24-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Reference Site:</b>	Kindsfater 24J-HZ Pad Sec.24-T6N-R66W	<b>MD Reference:</b>	WELL @ 4779.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Kindsfater 24J-303	<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 (8-11-14)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4779.0ft (RKB - 15')

Offset Depths are relative to Offset Datum

Central Meridian is -105.500000 °

Coordinates are relative to: Kindsfater 24J-303

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.50°

