

# PETROLEUM DEVELOPMENT CORP Weld County CO

Well Name: **Harvesters Resources 15U-203**

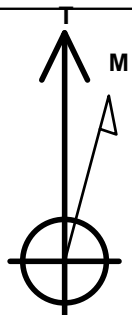
Surface Location: Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W  
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone  
Ground Elevation: 4815.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1423920.23	3206894.85	40.494680	-104.756090	

RKB - 15' WELL @ 4830.0ft (RKB - 15')

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape Point
BHL 500'FSL, 170'FEL	7092.0	-4462.9	378.3	Point



Azimuths to True North  
Magnetic North: 8.60°

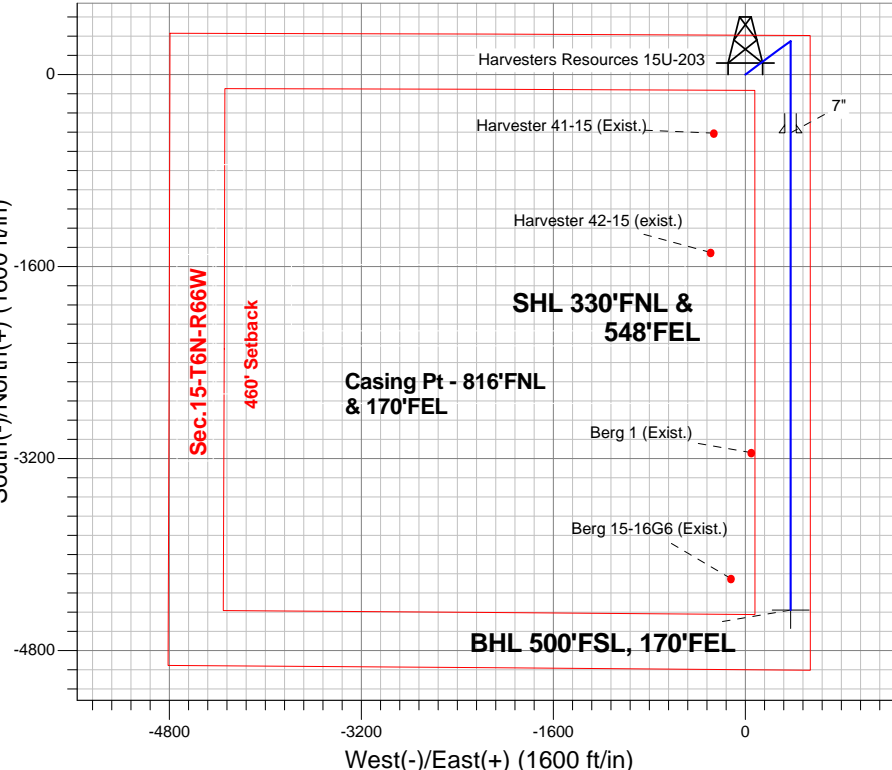
Magnetic Field  
Strength: 52972.2snT  
Dip Angle: 67.06°  
Date: 6/11/2013  
Model: IGRF2010

Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W  
Harvesters Resources 15U-203  
Plan #1 (6-11-13)  
9:39, June 11 2013

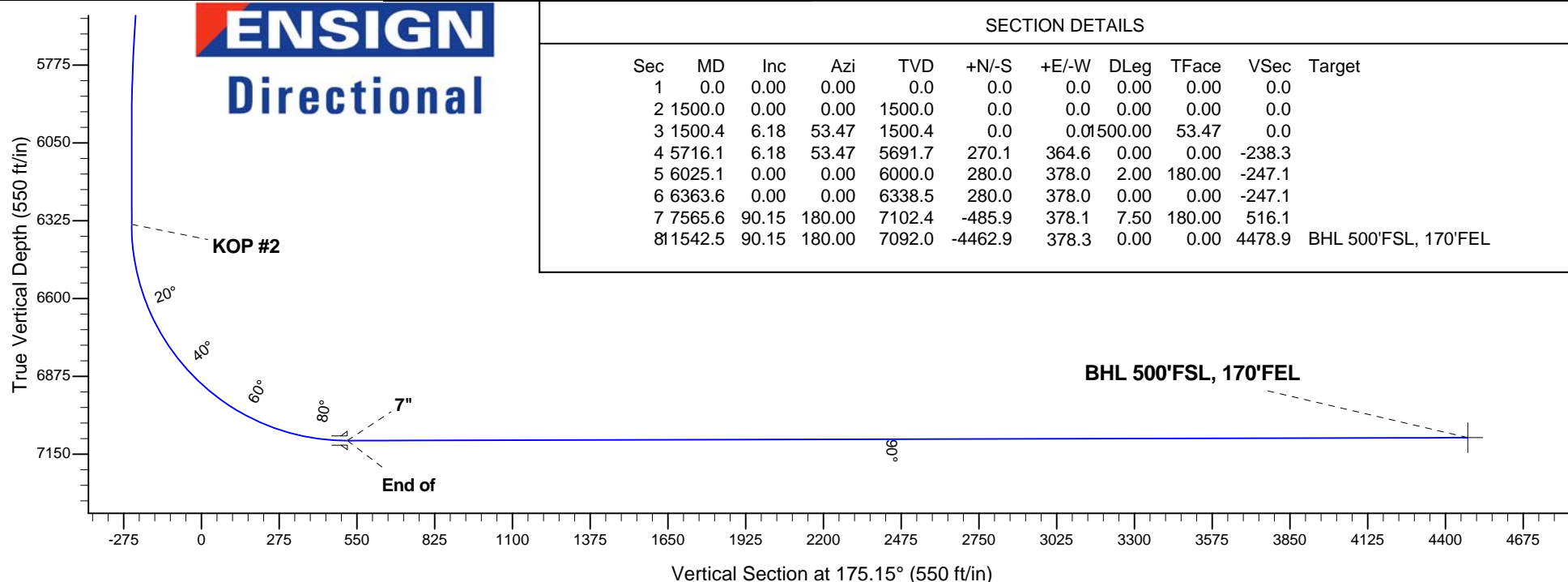
## ANNOTATIONS

TVD	MD	Annotation
1500.0	1500.0	KOP #1
6338.5	6363.6	KOP #2
7102.4	7565.6	End of

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



**ENSIGN**  
Directional



## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1500.0	0.00	0.00	1500.0	0.0	0.0	0.00	0.00	0.0	
3	1500.4	6.18	53.47	1500.4	0.0	0.0	1500.00	53.47	0.0	
4	5716.1	6.18	53.47	5691.7	270.1	364.6	0.00	0.00	-238.3	
5	6025.1	0.00	0.00	6000.0	280.0	378.0	2.00	180.00	-247.1	
6	6363.6	0.00	0.00	6338.5	280.0	378.0	0.00	0.00	-247.1	
7	7565.6	90.15	180.00	7102.4	-485.9	378.1	7.50	180.00	516.1	
8	1542.5	90.15	180.00	7092.0	-4462.9	378.3	0.00	0.00	4478.9	BHL 500'FSL, 170'FEL



## **Directional**

# **PETROLEUM DEVELOPMENT CORP Weld County CO**

**SEC.15-T6N-R66W**

**Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W**

**Harvesters Resources 15U-203**

**Wellbore #1**

**Plan: Plan #1 (6-11-13)**

## **Standard Planning Report**

**11 June, 2013**

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Harvesters Resources 15U-203
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Project:</b>	SEC.15-T6N-R66W	<b>MD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Site:</b>	Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Harvesters Resources 15U-203	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (6-11-13)		

<b>Project</b>	SEC.15-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		
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W					
Site Position:		Northing:		1,423,919.73ft	
From:	Lat/Long	Easting:		3,206,833.67ft	
Position Uncertainty:		Slot Radius:		Grid Convergence:	
0.0 ft		"		40.494680 -104.756310 0.48 °	

Well	Harvesters Resources 15U-203					
Well Position	+N/-S	0.0 ft	Northing:	1,423,920.23 ft	Latitude:	40.494680
	+E/-W	61.2 ft	Easting:	3,206,894.85 ft	Longitude:	-104.756090
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,815.0 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	6/11/2013	8.60	67.06	52,972

<b>Design</b>	Plan #1 (6-11-13)			
<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	175.15

<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	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,500.4	6.18	53.47	1,500.4	0.0	0.0	1,500.00	1,500.00	0.00	53.47	
5,716.1	6.18	53.47	5,691.7	270.1	364.6	0.00	0.00	0.00	0.00	
6,025.1	0.00	0.00	6,000.0	280.0	378.0	2.00	-2.00	0.00	180.00	
6,363.6	0.00	0.00	6,338.5	280.0	378.0	0.00	0.00	0.00	0.00	
7,565.6	90.15	180.00	7,102.4	-485.9	378.1	7.50	7.50	0.00	180.00	
11,542.5	90.15	180.00	7,092.0	-4,462.9	378.3	0.00	0.00	0.00	0.00	BHL 500'FSL, 170°F

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Harvesters Resources 15U-203
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Project:</b>	SEC.15-T6N-R66W	<b>MD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Site:</b>	Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Harvesters Resources 15U-203	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (6-11-13)		

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
40.0	0.00	0.00	40.0	0.0	0.0	0.0	0.00	0.00	0.00
80.0	0.00	0.00	80.0	0.0	0.0	0.0	0.00	0.00	0.00
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00
160.0	0.00	0.00	160.0	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
240.0	0.00	0.00	240.0	0.0	0.0	0.0	0.00	0.00	0.00
280.0	0.00	0.00	280.0	0.0	0.0	0.0	0.00	0.00	0.00
320.0	0.00	0.00	320.0	0.0	0.0	0.0	0.00	0.00	0.00
360.0	0.00	0.00	360.0	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
440.0	0.00	0.00	440.0	0.0	0.0	0.0	0.00	0.00	0.00
480.0	0.00	0.00	480.0	0.0	0.0	0.0	0.00	0.00	0.00
520.0	0.00	0.00	520.0	0.0	0.0	0.0	0.00	0.00	0.00
560.0	0.00	0.00	560.0	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
640.0	0.00	0.00	640.0	0.0	0.0	0.0	0.00	0.00	0.00
680.0	0.00	0.00	680.0	0.0	0.0	0.0	0.00	0.00	0.00
720.0	0.00	0.00	720.0	0.0	0.0	0.0	0.00	0.00	0.00
760.0	0.00	0.00	760.0	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
840.0	0.00	0.00	840.0	0.0	0.0	0.0	0.00	0.00	0.00
880.0	0.00	0.00	880.0	0.0	0.0	0.0	0.00	0.00	0.00
920.0	0.00	0.00	920.0	0.0	0.0	0.0	0.00	0.00	0.00
960.0	0.00	0.00	960.0	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
1,040.0	0.00	0.00	1,040.0	0.0	0.0	0.0	0.00	0.00	0.00
1,080.0	0.00	0.00	1,080.0	0.0	0.0	0.0	0.00	0.00	0.00
1,120.0	0.00	0.00	1,120.0	0.0	0.0	0.0	0.00	0.00	0.00
1,160.0	0.00	0.00	1,160.0	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
1,240.0	0.00	0.00	1,240.0	0.0	0.0	0.0	0.00	0.00	0.00
1,280.0	0.00	0.00	1,280.0	0.0	0.0	0.0	0.00	0.00	0.00
1,320.0	0.00	0.00	1,320.0	0.0	0.0	0.0	0.00	0.00	0.00
1,360.0	0.00	0.00	1,360.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,440.0	0.00	0.00	1,440.0	0.0	0.0	0.0	0.00	0.00	0.00
1,480.0	0.00	0.00	1,480.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
<b>KOP #1</b>									
1,500.4	6.18	53.47	1,500.4	0.0	0.0	0.0	1,500.00	1,500.00	0.00
1,520.0	6.18	53.47	1,519.9	1.3	1.7	-1.1	0.00	0.00	0.00
1,560.0	6.18	53.47	1,559.7	3.8	5.2	-3.4	0.00	0.00	0.00
1,600.0	6.18	53.47	1,599.4	6.4	8.6	-5.6	0.00	0.00	0.00
1,640.0	6.18	53.47	1,639.2	9.0	12.1	-7.9	0.00	0.00	0.00
1,680.0	6.18	53.47	1,679.0	11.5	15.5	-10.2	0.00	0.00	0.00
1,720.0	6.18	53.47	1,718.7	14.1	19.0	-12.4	0.00	0.00	0.00
1,760.0	6.18	53.47	1,758.5	16.6	22.5	-14.7	0.00	0.00	0.00
1,800.0	6.18	53.47	1,798.3	19.2	25.9	-16.9	0.00	0.00	0.00
1,840.0	6.18	53.47	1,838.0	21.8	29.4	-19.2	0.00	0.00	0.00
1,880.0	6.18	53.47	1,877.8	24.3	32.8	-21.5	0.00	0.00	0.00
1,920.0	6.18	53.47	1,917.6	26.9	36.3	-23.7	0.00	0.00	0.00

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<b>Project:</b>	SEC.15-T6N-R66W	<b>MD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Site:</b>	Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Harvesters Resources 15U-203	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (6-11-13)		

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)
1,960.0	6.18	53.47	1,957.3	29.5	39.8	-26.0	0.00	0.00	0.00
2,000.0	6.18	53.47	1,997.1	32.0	43.2	-28.3	0.00	0.00	0.00
2,040.0	6.18	53.47	2,036.9	34.6	46.7	-30.5	0.00	0.00	0.00
2,080.0	6.18	53.47	2,076.6	37.1	50.1	-32.8	0.00	0.00	0.00
2,120.0	6.18	53.47	2,116.4	39.7	53.6	-35.0	0.00	0.00	0.00
2,160.0	6.18	53.47	2,156.2	42.3	57.1	-37.3	0.00	0.00	0.00
2,200.0	6.18	53.47	2,195.9	44.8	60.5	-39.6	0.00	0.00	0.00
2,240.0	6.18	53.47	2,235.7	47.4	64.0	-41.8	0.00	0.00	0.00
2,280.0	6.18	53.47	2,275.5	50.0	67.4	-44.1	0.00	0.00	0.00
2,320.0	6.18	53.47	2,315.2	52.5	70.9	-46.3	0.00	0.00	0.00
2,360.0	6.18	53.47	2,355.0	55.1	74.4	-48.6	0.00	0.00	0.00
2,400.0	6.18	53.47	2,394.8	57.6	77.8	-50.9	0.00	0.00	0.00
2,440.0	6.18	53.47	2,434.5	60.2	81.3	-53.1	0.00	0.00	0.00
2,480.0	6.18	53.47	2,474.3	62.8	84.7	-55.4	0.00	0.00	0.00
2,520.0	6.18	53.47	2,514.1	65.3	88.2	-57.6	0.00	0.00	0.00
2,560.0	6.18	53.47	2,553.8	67.9	91.7	-59.9	0.00	0.00	0.00
2,600.0	6.18	53.47	2,593.6	70.5	95.1	-62.2	0.00	0.00	0.00
2,640.0	6.18	53.47	2,633.4	73.0	98.6	-64.4	0.00	0.00	0.00
2,680.0	6.18	53.47	2,673.1	75.6	102.0	-66.7	0.00	0.00	0.00
2,720.0	6.18	53.47	2,712.9	78.1	105.5	-69.0	0.00	0.00	0.00
2,760.0	6.18	53.47	2,752.7	80.7	109.0	-71.2	0.00	0.00	0.00
2,800.0	6.18	53.47	2,792.4	83.3	112.4	-73.5	0.00	0.00	0.00
2,840.0	6.18	53.47	2,832.2	85.8	115.9	-75.7	0.00	0.00	0.00
2,880.0	6.18	53.47	2,872.0	88.4	119.3	-78.0	0.00	0.00	0.00
2,920.0	6.18	53.47	2,911.8	91.0	122.8	-80.3	0.00	0.00	0.00
2,960.0	6.18	53.47	2,951.5	93.5	126.3	-82.5	0.00	0.00	0.00
3,000.0	6.18	53.47	2,991.3	96.1	129.7	-84.8	0.00	0.00	0.00
3,040.0	6.18	53.47	3,031.1	98.6	133.2	-87.0	0.00	0.00	0.00
3,080.0	6.18	53.47	3,070.8	101.2	136.6	-89.3	0.00	0.00	0.00
3,120.0	6.18	53.47	3,110.6	103.8	140.1	-91.6	0.00	0.00	0.00
3,160.0	6.18	53.47	3,150.4	106.3	143.6	-93.8	0.00	0.00	0.00
3,200.0	6.18	53.47	3,190.1	108.9	147.0	-96.1	0.00	0.00	0.00
3,240.0	6.18	53.47	3,229.9	111.5	150.5	-98.4	0.00	0.00	0.00
3,280.0	6.18	53.47	3,269.7	114.0	153.9	-100.6	0.00	0.00	0.00
3,320.0	6.18	53.47	3,309.4	116.6	157.4	-102.9	0.00	0.00	0.00
3,360.0	6.18	53.47	3,349.2	119.1	160.8	-105.1	0.00	0.00	0.00
3,400.0	6.18	53.47	3,389.0	121.7	164.3	-107.4	0.00	0.00	0.00
3,440.0	6.18	53.47	3,428.7	124.3	167.8	-109.7	0.00	0.00	0.00
3,480.0	6.18	53.47	3,468.5	126.8	171.2	-111.9	0.00	0.00	0.00
3,520.0	6.18	53.47	3,508.3	129.4	174.7	-114.2	0.00	0.00	0.00
3,560.0	6.18	53.47	3,548.0	132.0	178.1	-116.4	0.00	0.00	0.00
3,600.0	6.18	53.47	3,587.8	134.5	181.6	-118.7	0.00	0.00	0.00
3,640.0	6.18	53.47	3,627.6	137.1	185.1	-121.0	0.00	0.00	0.00
3,680.0	6.18	53.47	3,667.3	139.6	188.5	-123.2	0.00	0.00	0.00
3,720.0	6.18	53.47	3,707.1	142.2	192.0	-125.5	0.00	0.00	0.00
3,760.0	6.18	53.47	3,746.9	144.8	195.4	-127.7	0.00	0.00	0.00
3,800.0	6.18	53.47	3,786.6	147.3	198.9	-130.0	0.00	0.00	0.00
3,840.0	6.18	53.47	3,826.4	149.9	202.4	-132.3	0.00	0.00	0.00
3,880.0	6.18	53.47	3,866.2	152.5	205.8	-134.5	0.00	0.00	0.00
3,920.0	6.18	53.47	3,905.9	155.0	209.3	-136.8	0.00	0.00	0.00
3,960.0	6.18	53.47	3,945.7	157.6	212.7	-139.1	0.00	0.00	0.00
4,000.0	6.18	53.47	3,985.5	160.1	216.2	-141.3	0.00	0.00	0.00

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<b>Project:</b>	SEC.15-T6N-R66W	<b>MD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Site:</b>	Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Harvesters Resources 15U-203	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (6-11-13)		

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)
4,040.0	6.18	53.47	4,025.2	162.7	219.7	-143.6	0.00	0.00	0.00
4,080.0	6.18	53.47	4,065.0	165.3	223.1	-145.8	0.00	0.00	0.00
4,120.0	6.18	53.47	4,104.8	167.8	226.6	-148.1	0.00	0.00	0.00
4,160.0	6.18	53.47	4,144.5	170.4	230.0	-150.4	0.00	0.00	0.00
4,200.0	6.18	53.47	4,184.3	173.0	233.5	-152.6	0.00	0.00	0.00
4,240.0	6.18	53.47	4,224.1	175.5	237.0	-154.9	0.00	0.00	0.00
4,280.0	6.18	53.47	4,263.9	178.1	240.4	-157.1	0.00	0.00	0.00
4,320.0	6.18	53.47	4,303.6	180.7	243.9	-159.4	0.00	0.00	0.00
4,360.0	6.18	53.47	4,343.4	183.2	247.3	-161.7	0.00	0.00	0.00
4,400.0	6.18	53.47	4,383.2	185.8	250.8	-163.9	0.00	0.00	0.00
4,440.0	6.18	53.47	4,422.9	188.3	254.3	-166.2	0.00	0.00	0.00
4,480.0	6.18	53.47	4,462.7	190.9	257.7	-168.4	0.00	0.00	0.00
4,520.0	6.18	53.47	4,502.5	193.5	261.2	-170.7	0.00	0.00	0.00
4,560.0	6.18	53.47	4,542.2	196.0	264.6	-173.0	0.00	0.00	0.00
4,600.0	6.18	53.47	4,582.0	198.6	268.1	-175.2	0.00	0.00	0.00
4,640.0	6.18	53.47	4,621.8	201.2	271.6	-177.5	0.00	0.00	0.00
4,680.0	6.18	53.47	4,661.5	203.7	275.0	-179.8	0.00	0.00	0.00
4,720.0	6.18	53.47	4,701.3	206.3	278.5	-182.0	0.00	0.00	0.00
4,760.0	6.18	53.47	4,741.1	208.8	281.9	-184.3	0.00	0.00	0.00
4,800.0	6.18	53.47	4,780.8	211.4	285.4	-186.5	0.00	0.00	0.00
4,840.0	6.18	53.47	4,820.6	214.0	288.9	-188.8	0.00	0.00	0.00
4,880.0	6.18	53.47	4,860.4	216.5	292.3	-191.1	0.00	0.00	0.00
4,920.0	6.18	53.47	4,900.1	219.1	295.8	-193.3	0.00	0.00	0.00
4,960.0	6.18	53.47	4,939.9	221.7	299.2	-195.6	0.00	0.00	0.00
5,000.0	6.18	53.47	4,979.7	224.2	302.7	-197.8	0.00	0.00	0.00
5,040.0	6.18	53.47	5,019.4	226.8	306.1	-200.1	0.00	0.00	0.00
5,080.0	6.18	53.47	5,059.2	229.3	309.6	-202.4	0.00	0.00	0.00
5,120.0	6.18	53.47	5,099.0	231.9	313.1	-204.6	0.00	0.00	0.00
5,160.0	6.18	53.47	5,138.7	234.5	316.5	-206.9	0.00	0.00	0.00
5,200.0	6.18	53.47	5,178.5	237.0	320.0	-209.2	0.00	0.00	0.00
5,240.0	6.18	53.47	5,218.3	239.6	323.4	-211.4	0.00	0.00	0.00
5,280.0	6.18	53.47	5,258.0	242.2	326.9	-213.7	0.00	0.00	0.00
5,320.0	6.18	53.47	5,297.8	244.7	330.4	-215.9	0.00	0.00	0.00
5,360.0	6.18	53.47	5,337.6	247.3	333.8	-218.2	0.00	0.00	0.00
5,400.0	6.18	53.47	5,377.3	249.8	337.3	-220.5	0.00	0.00	0.00
5,440.0	6.18	53.47	5,417.1	252.4	340.7	-222.7	0.00	0.00	0.00
5,480.0	6.18	53.47	5,456.9	255.0	344.2	-225.0	0.00	0.00	0.00
5,520.0	6.18	53.47	5,496.6	257.5	347.7	-227.2	0.00	0.00	0.00
5,560.0	6.18	53.47	5,536.4	260.1	351.1	-229.5	0.00	0.00	0.00
5,600.0	6.18	53.47	5,576.2	262.7	354.6	-231.8	0.00	0.00	0.00
5,640.0	6.18	53.47	5,616.0	265.2	358.0	-234.0	0.00	0.00	0.00
5,680.0	6.18	53.47	5,655.7	267.8	361.5	-236.3	0.00	0.00	0.00
5,716.1	6.18	53.47	5,691.7	270.1	364.6	-238.3	0.00	0.00	0.00
5,720.0	6.10	53.47	5,695.5	270.3	365.0	-238.5	2.00	-2.00	0.00
5,760.0	5.30	53.47	5,735.3	272.7	368.2	-240.6	2.00	-2.00	0.00
5,800.0	4.50	53.47	5,775.1	274.7	370.9	-242.4	2.00	-2.00	0.00
5,840.0	3.70	53.47	5,815.0	276.4	373.2	-243.9	2.00	-2.00	0.00
5,880.0	2.90	53.47	5,855.0	277.8	375.0	-245.1	2.00	-2.00	0.00
5,920.0	2.10	53.47	5,894.9	278.9	376.5	-246.1	2.00	-2.00	0.00
5,960.0	1.30	53.47	5,934.9	279.6	377.4	-246.7	2.00	-2.00	0.00
6,000.0	0.50	53.47	5,974.9	279.9	377.9	-247.0	2.00	-2.00	0.00
6,025.1	0.00	0.00	6,000.0	280.0	378.0	-247.1	2.00	-2.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Harvesters Resources 15U-203
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Project:</b>	SEC.15-T6N-R66W	<b>MD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Site:</b>	Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Harvesters Resources 15U-203	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (6-11-13)		

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)
6,040.0	0.00	0.00	6,014.9	280.0	378.0	-247.1	0.00	0.00	0.00
6,080.0	0.00	0.00	6,054.9	280.0	378.0	-247.1	0.00	0.00	0.00
6,120.0	0.00	0.00	6,094.9	280.0	378.0	-247.1	0.00	0.00	0.00
6,160.0	0.00	0.00	6,134.9	280.0	378.0	-247.1	0.00	0.00	0.00
6,200.0	0.00	0.00	6,174.9	280.0	378.0	-247.1	0.00	0.00	0.00
6,240.0	0.00	0.00	6,214.9	280.0	378.0	-247.1	0.00	0.00	0.00
6,280.0	0.00	0.00	6,254.9	280.0	378.0	-247.1	0.00	0.00	0.00
6,320.0	0.00	0.00	6,294.9	280.0	378.0	-247.1	0.00	0.00	0.00
6,360.0	0.00	0.00	6,334.9	280.0	378.0	-247.1	0.00	0.00	0.00
6,363.6	0.00	0.00	6,338.5	280.0	378.0	-247.1	0.00	0.00	0.00
KOP #2									
6,400.0	2.73	180.00	6,374.9	279.1	378.0	-246.2	7.51	7.51	0.00
6,440.0	5.73	180.00	6,414.8	276.2	378.0	-243.3	7.50	7.50	0.00
6,480.0	8.73	180.00	6,454.5	271.1	378.0	-238.2	7.50	7.50	0.00
6,520.0	11.73	180.00	6,493.8	264.0	378.0	-231.2	7.50	7.50	0.00
6,560.0	14.73	180.00	6,532.8	254.9	378.0	-222.0	7.50	7.50	0.00
6,600.0	17.73	180.00	6,571.2	243.7	378.0	-210.9	7.50	7.50	0.00
6,640.0	20.73	180.00	6,608.9	230.5	378.0	-197.8	7.50	7.50	0.00
6,680.0	23.73	180.00	6,645.9	215.4	378.0	-182.7	7.50	7.50	0.00
6,720.0	26.73	180.00	6,682.1	198.3	378.0	-165.7	7.50	7.50	0.00
6,760.0	29.73	180.00	6,717.4	179.4	378.0	-146.9	7.50	7.50	0.00
6,800.0	32.73	180.00	6,751.6	158.7	378.0	-126.2	7.50	7.50	0.00
6,840.0	35.73	180.00	6,784.6	136.2	378.0	-103.8	7.50	7.50	0.00
6,880.0	38.73	180.00	6,816.5	112.0	378.0	-79.7	7.50	7.50	0.00
6,920.0	41.73	180.00	6,847.0	86.2	378.0	-53.9	7.50	7.50	0.00
6,960.0	44.73	180.00	6,876.1	58.8	378.0	-26.6	7.50	7.50	0.00
7,000.0	47.73	180.00	6,903.8	29.9	378.0	2.2	7.50	7.50	0.00
7,040.0	50.73	180.00	6,929.9	-0.4	378.0	32.3	7.50	7.50	0.00
7,080.0	53.73	180.00	6,954.4	-32.0	378.0	63.9	7.50	7.50	0.00
7,120.0	56.73	180.00	6,977.2	-64.9	378.0	96.6	7.50	7.50	0.00
7,160.0	59.73	180.00	6,998.3	-98.9	378.0	130.5	7.50	7.50	0.00
7,200.0	62.73	180.00	7,017.5	-134.0	378.0	165.4	7.50	7.50	0.00
7,240.0	65.73	180.00	7,034.9	-170.0	378.0	201.3	7.50	7.50	0.00
7,280.0	68.73	180.00	7,050.4	-206.9	378.0	238.0	7.50	7.50	0.00
7,320.0	71.73	180.00	7,063.9	-244.5	378.0	275.5	7.50	7.50	0.00
7,360.0	74.73	180.00	7,075.5	-282.8	378.0	313.7	7.50	7.50	0.00
7,400.0	77.73	180.00	7,085.0	-321.6	378.0	352.4	7.50	7.50	0.00
7,440.0	80.73	180.00	7,092.4	-360.9	378.0	391.6	7.50	7.50	0.00
7,480.0	83.73	180.00	7,097.8	-400.6	378.0	431.1	7.50	7.50	0.00
7,520.0	86.73	180.00	7,101.2	-440.4	378.0	470.8	7.50	7.50	0.00
7,560.0	89.73	180.00	7,102.4	-480.4	378.1	510.6	7.50	7.50	0.00
7,565.6	90.15	180.00	7,102.4	-486.0	378.1	516.2	7.45	7.45	0.00
End of - 7"									
7,600.0	90.15	180.00	7,102.3	-520.4	378.1	550.5	0.00	0.00	0.00
7,640.0	90.15	180.00	7,102.2	-560.4	378.1	590.3	0.00	0.00	0.00
7,680.0	90.15	180.00	7,102.1	-600.4	378.1	630.2	0.00	0.00	0.00
7,720.0	90.15	180.00	7,102.0	-640.4	378.1	670.0	0.00	0.00	0.00
7,760.0	90.15	180.00	7,101.9	-680.4	378.1	709.9	0.00	0.00	0.00
7,800.0	90.15	180.00	7,101.8	-720.4	378.1	749.7	0.00	0.00	0.00
7,840.0	90.15	180.00	7,101.7	-760.4	378.1	789.6	0.00	0.00	0.00
7,880.0	90.15	180.00	7,101.6	-800.4	378.1	829.5	0.00	0.00	0.00
7,920.0	90.15	180.00	7,101.5	-840.4	378.1	869.3	0.00	0.00	0.00



<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Harvesters Resources 15U-203
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Project:</b>	SEC.15-T6N-R66W	<b>MD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Site:</b>	Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Harvesters Resources 15U-203	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (6-11-13)		

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)
7,960.0	90.15	180.00	7,101.4	-880.4	378.1	909.2	0.00	0.00	0.00
8,000.0	90.15	180.00	7,101.3	-920.4	378.1	949.0	0.00	0.00	0.00
8,040.0	90.15	180.00	7,101.2	-960.4	378.1	988.9	0.00	0.00	0.00
8,080.0	90.15	180.00	7,101.1	-1,000.4	378.1	1,028.7	0.00	0.00	0.00
8,120.0	90.15	180.00	7,101.0	-1,040.4	378.1	1,068.6	0.00	0.00	0.00
8,160.0	90.15	180.00	7,100.9	-1,080.4	378.1	1,108.5	0.00	0.00	0.00
8,200.0	90.15	180.00	7,100.8	-1,120.4	378.1	1,148.3	0.00	0.00	0.00
8,240.0	90.15	180.00	7,100.6	-1,160.4	378.1	1,188.2	0.00	0.00	0.00
8,280.0	90.15	180.00	7,100.5	-1,200.4	378.1	1,228.0	0.00	0.00	0.00
8,320.0	90.15	180.00	7,100.4	-1,240.4	378.1	1,267.9	0.00	0.00	0.00
8,360.0	90.15	180.00	7,100.3	-1,280.4	378.1	1,307.7	0.00	0.00	0.00
8,400.0	90.15	180.00	7,100.2	-1,320.4	378.1	1,347.6	0.00	0.00	0.00
8,440.0	90.15	180.00	7,100.1	-1,360.4	378.1	1,387.5	0.00	0.00	0.00
8,480.0	90.15	180.00	7,100.0	-1,400.4	378.1	1,427.3	0.00	0.00	0.00
8,520.0	90.15	180.00	7,099.9	-1,440.4	378.1	1,467.2	0.00	0.00	0.00
8,560.0	90.15	180.00	7,099.8	-1,480.4	378.1	1,507.0	0.00	0.00	0.00
8,600.0	90.15	180.00	7,099.7	-1,520.4	378.1	1,546.9	0.00	0.00	0.00
8,640.0	90.15	180.00	7,099.6	-1,560.4	378.1	1,586.7	0.00	0.00	0.00
8,680.0	90.15	180.00	7,099.5	-1,600.4	378.1	1,626.6	0.00	0.00	0.00
8,720.0	90.15	180.00	7,099.4	-1,640.4	378.1	1,666.5	0.00	0.00	0.00
8,760.0	90.15	180.00	7,099.3	-1,680.4	378.1	1,706.3	0.00	0.00	0.00
8,800.0	90.15	180.00	7,099.2	-1,720.4	378.1	1,746.2	0.00	0.00	0.00
8,840.0	90.15	180.00	7,099.1	-1,760.4	378.1	1,786.0	0.00	0.00	0.00
8,880.0	90.15	180.00	7,099.0	-1,800.4	378.1	1,825.9	0.00	0.00	0.00
8,920.0	90.15	180.00	7,098.9	-1,840.4	378.1	1,865.7	0.00	0.00	0.00
8,960.0	90.15	180.00	7,098.8	-1,880.4	378.1	1,905.6	0.00	0.00	0.00
9,000.0	90.15	180.00	7,098.7	-1,920.4	378.2	1,945.5	0.00	0.00	0.00
9,040.0	90.15	180.00	7,098.6	-1,960.4	378.2	1,985.3	0.00	0.00	0.00
9,080.0	90.15	180.00	7,098.4	-2,000.4	378.2	2,025.2	0.00	0.00	0.00
9,120.0	90.15	180.00	7,098.3	-2,040.4	378.2	2,065.0	0.00	0.00	0.00
9,160.0	90.15	180.00	7,098.2	-2,080.4	378.2	2,104.9	0.00	0.00	0.00
9,200.0	90.15	180.00	7,098.1	-2,120.4	378.2	2,144.7	0.00	0.00	0.00
9,240.0	90.15	180.00	7,098.0	-2,160.4	378.2	2,184.6	0.00	0.00	0.00
9,280.0	90.15	180.00	7,097.9	-2,200.4	378.2	2,224.5	0.00	0.00	0.00
9,320.0	90.15	180.00	7,097.8	-2,240.4	378.2	2,264.3	0.00	0.00	0.00
9,360.0	90.15	180.00	7,097.7	-2,280.4	378.2	2,304.2	0.00	0.00	0.00
9,400.0	90.15	180.00	7,097.6	-2,320.4	378.2	2,344.0	0.00	0.00	0.00
9,440.0	90.15	180.00	7,097.5	-2,360.4	378.2	2,383.9	0.00	0.00	0.00
9,480.0	90.15	180.00	7,097.4	-2,400.4	378.2	2,423.7	0.00	0.00	0.00
9,520.0	90.15	180.00	7,097.3	-2,440.4	378.2	2,463.6	0.00	0.00	0.00
9,560.0	90.15	180.00	7,097.2	-2,480.4	378.2	2,503.5	0.00	0.00	0.00
9,600.0	90.15	180.00	7,097.1	-2,520.4	378.2	2,543.3	0.00	0.00	0.00
9,640.0	90.15	180.00	7,097.0	-2,560.4	378.2	2,583.2	0.00	0.00	0.00
9,680.0	90.15	180.00	7,096.9	-2,600.4	378.2	2,623.0	0.00	0.00	0.00
9,720.0	90.15	180.00	7,096.8	-2,640.4	378.2	2,662.9	0.00	0.00	0.00
9,760.0	90.15	180.00	7,096.7	-2,680.4	378.2	2,702.7	0.00	0.00	0.00
9,800.0	90.15	180.00	7,096.6	-2,720.4	378.2	2,742.6	0.00	0.00	0.00
9,840.0	90.15	180.00	7,096.5	-2,760.4	378.2	2,782.5	0.00	0.00	0.00
9,880.0	90.15	180.00	7,096.4	-2,800.4	378.2	2,822.3	0.00	0.00	0.00
9,920.0	90.15	180.00	7,096.2	-2,840.4	378.2	2,862.2	0.00	0.00	0.00
9,960.0	90.15	180.00	7,096.1	-2,880.4	378.2	2,902.0	0.00	0.00	0.00
10,000.0	90.15	180.00	7,096.0	-2,920.4	378.2	2,941.9	0.00	0.00	0.00



<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Harvesters Resources 15U-203
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Project:</b>	SEC.15-T6N-R66W	<b>MD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Site:</b>	Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Harvesters Resources 15U-203	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (6-11-13)		

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)
10,040.0	90.15	180.00	7,095.9	-2,960.4	378.2	2,981.7	0.00	0.00	0.00
10,080.0	90.15	180.00	7,095.8	-3,000.4	378.2	3,021.6	0.00	0.00	0.00
10,120.0	90.15	180.00	7,095.7	-3,040.4	378.2	3,061.5	0.00	0.00	0.00
10,160.0	90.15	180.00	7,095.6	-3,080.4	378.2	3,101.3	0.00	0.00	0.00
10,200.0	90.15	180.00	7,095.5	-3,120.4	378.2	3,141.2	0.00	0.00	0.00
10,240.0	90.15	180.00	7,095.4	-3,160.4	378.2	3,181.0	0.00	0.00	0.00
10,280.0	90.15	180.00	7,095.3	-3,200.4	378.2	3,220.9	0.00	0.00	0.00
10,320.0	90.15	180.00	7,095.2	-3,240.4	378.2	3,260.7	0.00	0.00	0.00
10,360.0	90.15	180.00	7,095.1	-3,280.4	378.2	3,300.6	0.00	0.00	0.00
10,400.0	90.15	180.00	7,095.0	-3,320.4	378.2	3,340.5	0.00	0.00	0.00
10,440.0	90.15	180.00	7,094.9	-3,360.4	378.3	3,380.3	0.00	0.00	0.00
10,480.0	90.15	180.00	7,094.8	-3,400.4	378.3	3,420.2	0.00	0.00	0.00
10,520.0	90.15	180.00	7,094.7	-3,440.4	378.3	3,460.0	0.00	0.00	0.00
10,560.0	90.15	180.00	7,094.6	-3,480.4	378.3	3,499.9	0.00	0.00	0.00
10,600.0	90.15	180.00	7,094.5	-3,520.4	378.3	3,539.7	0.00	0.00	0.00
10,640.0	90.15	180.00	7,094.4	-3,560.4	378.3	3,579.6	0.00	0.00	0.00
10,680.0	90.15	180.00	7,094.3	-3,600.4	378.3	3,619.5	0.00	0.00	0.00
10,720.0	90.15	180.00	7,094.2	-3,640.4	378.3	3,659.3	0.00	0.00	0.00
10,760.0	90.15	180.00	7,094.0	-3,680.4	378.3	3,699.2	0.00	0.00	0.00
10,800.0	90.15	180.00	7,093.9	-3,720.4	378.3	3,739.0	0.00	0.00	0.00
10,840.0	90.15	180.00	7,093.8	-3,760.4	378.3	3,778.9	0.00	0.00	0.00
10,880.0	90.15	180.00	7,093.7	-3,800.4	378.3	3,818.7	0.00	0.00	0.00
10,920.0	90.15	180.00	7,093.6	-3,840.4	378.3	3,858.6	0.00	0.00	0.00
10,960.0	90.15	180.00	7,093.5	-3,880.4	378.3	3,898.5	0.00	0.00	0.00
11,000.0	90.15	180.00	7,093.4	-3,920.4	378.3	3,938.3	0.00	0.00	0.00
11,040.0	90.15	180.00	7,093.3	-3,960.4	378.3	3,978.2	0.00	0.00	0.00
11,080.0	90.15	180.00	7,093.2	-4,000.4	378.3	4,018.0	0.00	0.00	0.00
11,120.0	90.15	180.00	7,093.1	-4,040.4	378.3	4,057.9	0.00	0.00	0.00
11,160.0	90.15	180.00	7,093.0	-4,080.4	378.3	4,097.7	0.00	0.00	0.00
11,200.0	90.15	180.00	7,092.9	-4,120.4	378.3	4,137.6	0.00	0.00	0.00
11,240.0	90.15	180.00	7,092.8	-4,160.4	378.3	4,177.5	0.00	0.00	0.00
11,280.0	90.15	180.00	7,092.7	-4,200.4	378.3	4,217.3	0.00	0.00	0.00
11,320.0	90.15	180.00	7,092.6	-4,240.4	378.3	4,257.2	0.00	0.00	0.00
11,360.0	90.15	180.00	7,092.5	-4,280.4	378.3	4,297.0	0.00	0.00	0.00
11,400.0	90.15	180.00	7,092.4	-4,320.4	378.3	4,336.9	0.00	0.00	0.00
11,440.0	90.15	180.00	7,092.3	-4,360.4	378.3	4,376.7	0.00	0.00	0.00
11,480.0	90.15	180.00	7,092.2	-4,400.4	378.3	4,416.6	0.00	0.00	0.00
11,520.0	90.15	180.00	7,092.1	-4,440.4	378.3	4,456.5	0.00	0.00	0.00
11,542.5	90.15	180.00	7,092.0	-4,462.9	378.3	4,478.9	0.00	0.00	0.00
BHL 500'FSL, 170'FEL									

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
BHL 500'FSL, 170'FE	0.00	0.00	7,092.0	-4,462.9	378.3	1,419,460.84	3,207,310.59	40.482430	-104.754730
- plan hits target center									
- Point									

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Harvesters Resources 15U-203
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Project:</b>	SEC.15-T6N-R66W	<b>MD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Site:</b>	Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Harvesters Resources 15U-203	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (6-11-13)		

#### Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,565.6	7,102.4	7"	7	7-1/2

#### Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,500.0	1,500.0	0.0	0.0	KOP #1
6,363.6	6,338.5	280.0	378.0	KOP #2
7,565.6	7,102.4	-486.0	378.1	End of



## **Directional**

# **PETROLEUM DEVELOPMENT CORP Weld County CO**

**SEC.15-T6N-R66W**

**Harvesters Resources 15UR-HZ Pad**

**Sec.15-T6N-R66W**

**Harvesters Resources 15U-203**

**Wellbore #1**

**Plan #1 (6-11-13)**

## **Anticollision Report**

**11 June, 2013**



<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Harvesters Resources 15U-203
<b>Project:</b>	SEC.15-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Reference Site:</b>	Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W	<b>MD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Harvesters Resources 15U-203	<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 (6-11-13)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Plan #1 (6-11-13)		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	Stations	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 10,000.0ft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma		

<b>Survey Tool Program</b>	<b>Date</b> 6/11/2013			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	11,542.5	Plan #1 (6-11-13) (Wellbore #1)	MWD	MWD - Standard

<b>Summary</b>						
<b>Site Name</b>	<b>Reference Measured Depth (ft)</b>	<b>Offset Measured Depth (ft)</b>	<b>Distance Between Centres (ft)</b>	<b>Distance Between Ellipses (ft)</b>	<b>Separation Factor</b>	<b>Warning</b>
<b>Offset Well - Wellbore - Design</b>						
<b>Existing Wells</b>						
Berg 1 (Exist.) - Wellbore #1 - Wellbore #1	10,231.0	7,042.4	328.2	123.8	1.606	CC, ES, SF
Berg 15-16G6 (Exist.) - Wellbore #1 - Wellbore #1	11,280.2	7,039.7	497.9	273.9	2.223	CC, ES
Berg 15-16G6 (Exist.) - Wellbore #1 - Wellbore #1	11,300.0	7,039.6	498.3	274.0	2.221	SF
Harvester 41-15 (Exist.) - Wellbore #1 - Wellbore #1	1,500.0	1,480.0	553.8	520.9	16.862	CC
Harvester 41-15 (Exist.) - Wellbore #1 - Wellbore #1	7,567.8	7,082.4	639.5	479.1	3.988	ES
Harvester 41-15 (Exist.) - Wellbore #1 - Wellbore #1	7,600.0	7,082.3	640.3	479.6	3.984	SF
Harvester 42-15 (exist.) - Wellbore #1 - Wellbore #1	8,562.3	7,059.8	667.4	492.9	3.824	CC, ES
Harvester 42-15 (exist.) - Wellbore #1 - Wellbore #1	8,600.0	7,059.7	668.5	493.3	3.816	SF
<b>Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W</b>						
Harvesters Resources 15R-323 - Wellbore #1 - Plan #1 (	1,200.0	1,200.0	61.2	56.1	11.914	CC, ES
Harvesters Resources 15R-323 - Wellbore #1 - Plan #1 (	11,542.5	11,623.5	876.6	701.0	4.991	SF
Harvesters Resources 15R-403 - Wellbore #1 - Plan #1 (	800.0	800.0	91.8	88.4	27.498	CC, ES
Harvesters Resources 15R-403 - Wellbore #1 - Plan #1 (	11,542.5	11,719.8	1,217.6	1,043.1	6.978	SF
Harvesters Resources 15U-443 - Wellbore #1 - Plan #1 (	1,500.0	1,500.0	30.6	24.1	4.718	CC, ES
Harvesters Resources 15U-443 - Wellbore #1 - Plan #1 (	11,542.5	11,681.4	492.3	325.6	2.953	SF

<b>Offset Design</b>	Existing Wells - Berg 1 (Exist.) - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 ft
<b>Survey Program:</b>	7300-UNKNOWN												<b>Offset Well Error:</b>	0.0 ft
<b>Reference</b>	<b>Vertical Depth (ft)</b>	<b>Measured Depth (ft)</b>	<b>Offset Vertical Depth (ft)</b>	<b>Semi Major Axis Reference (ft)</b>	<b>Offset (ft)</b>	<b>Highside Toolface (°)</b>	<b>Offset Wellbore Centre +N/-S (ft)</b>	<b>Offset Wellbore Centre +E/-W (ft)</b>	<b>Distance Between Centres (ft)</b>	<b>Distance Between Ellipses (ft)</b>	<b>Minimum Separation (ft)</b>	<b>Separation Factor</b>	<b>Warning</b>	
0.0	0.0	0.0	0.0	0.0	0.0	179.09	-3,151.3	50.1	3,152.2					
100.0	100.0	47.0	47.0	0.1	0.9	179.09	-3,151.3	50.1	3,151.7	3,150.7	1.04	3,043.035		
200.0	200.0	147.0	147.0	0.3	2.9	179.09	-3,151.3	50.1	3,151.7	3,148.5	3.26	966.649		
300.0	300.0	247.0	247.0	0.5	4.9	179.09	-3,151.3	50.1	3,151.7	3,146.3	5.49	574.586		
400.0	400.0	347.0	347.0	0.8	6.9	179.09	-3,151.3	50.1	3,151.7	3,144.0	7.71	408.786		
500.0	500.0	447.0	447.0	1.0	8.9	179.09	-3,151.3	50.1	3,151.7	3,141.8	9.93	317.244		
600.0	600.0	547.0	547.0	1.2	10.9	179.09	-3,151.3	50.1	3,151.7	3,139.6	12.16	259.199		
700.0	700.0	647.0	647.0	1.4	12.9	179.09	-3,151.3	50.1	3,151.7	3,137.4	14.38	219.110		
800.0	800.0	747.0	747.0	1.7	14.9	179.09	-3,151.3	50.1	3,151.7	3,135.1	16.61	189.761		
900.0	900.0	847.0	847.0	1.9	16.9	179.09	-3,151.3	50.1	3,151.7	3,132.9	18.83	167.345		
1,000.0	1,000.0	947.0	947.0	2.1	18.9	179.09	-3,151.3	50.1	3,151.7	3,130.7	21.06	149.666		

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 Harvesters Resources 15U-203
<b>Project:</b>	SEC.15-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Reference Site:</b>	Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W	<b>MD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Harvesters Resources 15U-203	<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 (6-11-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Existing Wells - Berg 1 (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error: 0.0 ft	
Survey Program: 7300-UNKNOWN													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
1,100.0	1,100.0	1,047.0	1,047.0	2.3	20.9	179.09	-3,151.3	50.1	3,151.7	3,128.5	23.28	135.365		
1,200.0	1,200.0	1,147.0	1,147.0	2.6	22.9	179.09	-3,151.3	50.1	3,151.7	3,126.2	25.51	123.559		
1,300.0	1,300.0	1,247.0	1,247.0	2.8	24.9	179.09	-3,151.3	50.1	3,151.7	3,124.0	27.73	113.647		
1,400.0	1,400.0	1,347.0	1,347.0	3.0	26.9	179.09	-3,151.3	50.1	3,151.7	3,121.8	29.96	105.207		
1,500.0	1,500.0	1,447.0	1,447.0	3.2	28.9	179.09	-3,151.3	50.1	3,151.7	3,119.6	32.18	97.934		
1,500.4	1,500.4	1,447.4	1,447.4	3.2	28.9	125.46	-3,151.3	50.1	3,151.8	3,119.6	32.13	98.092		
1,600.0	1,599.4	1,546.4	1,546.4	3.5	30.9	125.62	-3,151.3	50.1	3,158.0	3,123.7	34.33	92.000		
1,700.0	1,698.8	1,645.8	1,645.8	3.7	32.9	125.78	-3,151.3	50.1	3,164.3	3,127.8	36.54	86.601		
1,800.0	1,798.3	1,745.3	1,745.3	3.9	34.9	125.93	-3,151.3	50.1	3,170.6	3,131.9	38.76	81.805		
1,900.0	1,897.7	1,844.7	1,844.7	4.2	36.9	126.09	-3,151.3	50.1	3,177.0	3,136.0	40.98	77.518		
2,000.0	1,997.1	1,944.1	1,944.1	4.4	38.9	126.25	-3,151.3	50.1	3,183.4	3,140.2	43.21	73.666		
2,100.0	2,096.5	2,043.5	2,043.5	4.7	40.9	126.40	-3,151.3	50.1	3,189.8	3,144.3	45.45	70.186		
2,200.0	2,195.9	2,142.9	2,142.9	5.0	42.9	126.56	-3,151.3	50.1	3,196.2	3,148.5	47.68	67.029		
2,300.0	2,295.4	2,242.4	2,242.4	5.2	44.8	126.71	-3,151.3	50.1	3,202.6	3,152.7	49.92	64.151		
2,400.0	2,394.8	2,341.8	2,341.8	5.5	46.8	126.86	-3,151.3	50.1	3,209.1	3,156.9	52.17	61.518		
2,500.0	2,494.2	2,441.2	2,441.2	5.8	48.8	127.02	-3,151.3	50.1	3,215.6	3,161.2	54.41	59.101		
2,600.0	2,593.6	2,540.6	2,540.6	6.0	50.8	127.17	-3,151.3	50.1	3,222.1	3,165.5	56.65	56.874		
2,700.0	2,693.0	2,640.0	2,640.0	6.3	52.8	127.32	-3,151.3	50.1	3,228.7	3,169.8	58.90	54.816		
2,800.0	2,792.4	2,739.4	2,739.4	6.6	54.8	127.47	-3,151.3	50.1	3,235.2	3,174.1	61.15	52.908		
2,900.0	2,891.9	2,838.9	2,838.9	6.9	56.8	127.62	-3,151.3	50.1	3,241.8	3,178.4	63.40	51.135		
3,000.0	2,991.3	2,938.3	2,938.3	7.2	58.8	127.77	-3,151.3	50.1	3,248.4	3,182.8	65.65	49.484		
3,100.0	3,090.7	3,037.7	3,037.7	7.5	60.8	127.92	-3,151.3	50.1	3,255.0	3,187.1	67.90	47.942		
3,200.0	3,190.1	3,137.1	3,137.1	7.7	62.7	128.07	-3,151.3	50.1	3,261.7	3,191.5	70.15	46.498		
3,300.0	3,289.5	3,236.5	3,236.5	8.0	64.7	128.22	-3,151.3	50.1	3,268.4	3,196.0	72.40	45.145		
3,400.0	3,389.0	3,336.0	3,336.0	8.3	66.7	128.37	-3,151.3	50.1	3,275.1	3,200.4	74.65	43.873		
3,500.0	3,488.4	3,435.4	3,435.4	8.6	68.7	128.51	-3,151.3	50.1	3,281.8	3,204.9	76.90	42.676		
3,600.0	3,587.8	3,534.8	3,534.8	8.9	70.7	128.66	-3,151.3	50.1	3,288.5	3,209.4	79.15	41.547		
3,700.0	3,687.2	3,634.2	3,634.2	9.2	72.7	128.80	-3,151.3	50.1	3,295.3	3,213.9	81.40	40.480		
3,800.0	3,786.6	3,733.6	3,733.6	9.5	74.7	128.95	-3,151.3	50.1	3,302.0	3,218.4	83.66	39.471		
3,900.0	3,886.1	3,833.1	3,833.1	9.8	76.7	129.09	-3,151.3	50.1	3,308.8	3,222.9	85.91	38.516		
4,000.0	3,985.5	3,932.5	3,932.5	10.1	78.6	129.24	-3,151.3	50.1	3,315.7	3,227.5	88.16	37.609		
4,100.0	4,084.9	4,031.9	4,031.9	10.4	80.6	129.38	-3,151.3	50.1	3,322.5	3,232.1	90.41	36.748		
4,200.0	4,184.3	4,131.3	4,131.3	10.6	82.6	129.52	-3,151.3	50.1	3,329.4	3,236.7	92.67	35.928		
4,300.0	4,283.7	4,230.7	4,230.7	10.9	84.6	129.67	-3,151.3	50.1	3,336.3	3,241.3	94.92	35.148		
4,400.0	4,383.2	4,330.2	4,330.2	11.2	86.6	129.81	-3,151.3	50.1	3,343.2	3,246.0	97.17	34.405		
4,500.0	4,482.6	4,429.6	4,429.6	11.5	88.6	129.95	-3,151.3	50.1	3,350.1	3,250.7	99.42	33.695		
4,600.0	4,582.0	4,529.0	4,529.0	11.8	90.6	130.09	-3,151.3	50.1	3,357.0	3,255.3	101.68	33.017		
4,700.0	4,681.4	4,628.4	4,628.4	12.1	92.6	130.23	-3,151.3	50.1	3,364.0	3,260.1	103.93	32.368		
4,800.0	4,780.8	4,727.8	4,727.8	12.4	94.6	130.37	-3,151.3	50.1	3,371.0	3,264.8	106.18	31.747		
4,900.0	4,880.3	4,827.3	4,827.3	12.7	96.5	130.51	-3,151.3	50.1	3,378.0	3,269.5	108.43	31.153		
5,000.0	4,979.7	4,926.7	4,926.7	13.0	98.5	130.64	-3,151.3	50.1	3,385.0	3,274.3	110.68	30.582		
5,100.0	5,079.1	5,026.1	5,026.1	13.3	100.5	130.78	-3,151.3	50.1	3,392.0	3,279.1	112.94	30.035		
5,200.0	5,178.5	5,125.5	5,125.5	13.6	102.5	130.92	-3,151.3	50.1	3,399.1	3,283.9	115.19	29.509		
5,300.0	5,277.9	5,224.9	5,224.9	13.9	104.5	131.05	-3,151.3	50.1	3,406.2	3,288.8	117.44	29.004		
5,400.0	5,377.3	5,324.3	5,324.3	14.2	106.5	131.19	-3,151.3	50.1	3,413.3	3,293.6	119.69	28.518		
5,500.0	5,476.8	5,423.8	5,423.8	14.5	108.5	131.33	-3,151.3	50.1	3,420.4	3,298.5	121.94	28.050		
5,600.0	5,576.2	5,523.2	5,523.2	14.8	110.5	131.46	-3,151.3	50.1	3,427.6	3,303.4	124.19	27.599		
5,700.0	5,675.6	5,622.6	5,622.6	15.1	112.5	131.59	-3,151.3	50.1	3,434.7	3,308.3	126.44	27.164		
5,716.1	5,691.7	5,638.7	5,638.7	15.1	112.8	131.62	-3,151.3	50.1	3,435.9	3,309.1	126.81	27.095		
5,800.0	5,775.1	5,722.1	5,722.1	15.3	114.4	131.79	-3,151.3	50.1	3,441.1	3,312.3	128.80	26.717		

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 Harvesters Resources 15U-203
<b>Project:</b>	SEC.15-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Reference Site:</b>	Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W	<b>MD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Harvesters Resources 15U-203	<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 (6-11-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Existing Wells - Berg 1 (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error: 0.0 ft	
Survey Program: 7300-UNKNOWN													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis		Distance							Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,900.0	5,875.0	5,822.0	5,822.0	15.5	116.4	131.93	-3,151.3	50.1	3,445.2	3,314.1	131.08	26.283		
6,000.0	5,974.9	5,921.9	5,921.9	15.7	118.4	131.99	-3,151.3	50.1	3,446.9	3,313.6	133.28	25.862		
6,025.1	6,000.0	5,947.0	5,947.0	15.7	118.9	-174.54	-3,151.3	50.1	3,447.0	3,313.2	133.82	25.759		
6,100.0	6,074.9	6,021.9	6,021.9	15.9	120.4	-174.54	-3,151.3	50.1	3,447.0	3,311.5	135.45	25.449		
6,200.0	6,174.9	6,121.9	6,121.9	16.0	122.4	-174.54	-3,151.3	50.1	3,447.0	3,309.3	137.64	25.043		
6,300.0	6,274.9	6,221.9	6,221.9	16.2	124.4	-174.54	-3,151.3	50.1	3,447.0	3,307.1	139.84	24.650		
6,363.6	6,338.5	6,285.5	6,285.5	16.3	125.7	-174.54	-3,151.3	50.1	3,447.0	3,305.7	141.24	24.406		
6,400.0	6,374.9	6,321.9	6,321.9	16.4	126.4	5.47	-3,151.3	50.1	3,446.1	3,304.3	141.84	24.295		
6,450.0	6,424.7	6,371.7	6,371.7	16.5	127.4	5.51	-3,151.3	50.1	3,442.1	3,300.0	142.15	24.215		
6,500.0	6,474.2	6,421.2	6,421.2	16.5	128.4	5.57	-3,151.3	50.1	3,434.9	3,293.1	141.83	24.218		
6,550.0	6,523.1	6,470.1	6,470.1	16.5	129.4	5.67	-3,151.3	50.1	3,424.4	3,283.6	140.89	24.305		
6,600.0	6,571.2	6,518.2	6,518.2	16.6	130.4	5.79	-3,151.3	50.1	3,410.9	3,271.5	139.33	24.481		
6,650.0	6,618.2	6,565.2	6,565.2	16.6	131.3	5.96	-3,151.3	50.1	3,394.2	3,257.0	137.13	24.752		
6,700.0	6,664.1	6,611.1	6,611.1	16.6	132.2	6.17	-3,151.3	50.1	3,374.4	3,240.1	134.30	25.126		
6,750.0	6,708.6	6,655.6	6,655.6	16.6	133.1	6.42	-3,151.3	50.1	3,351.8	3,220.9	130.86	25.613		
6,800.0	6,751.6	6,698.6	6,698.6	16.5	134.0	6.72	-3,151.3	50.1	3,326.2	3,199.4	126.83	26.227		
6,850.0	6,792.7	6,739.7	6,739.7	16.5	134.8	7.09	-3,151.3	50.1	3,298.0	3,175.8	122.22	26.984		
6,900.0	6,831.9	6,778.9	6,778.9	16.5	135.6	7.53	-3,151.3	50.1	3,267.1	3,150.0	117.08	27.905		
6,950.0	6,869.0	6,816.0	6,816.0	16.5	136.3	8.07	-3,151.3	50.1	3,233.8	3,122.3	111.46	29.014		
7,000.0	6,903.8	6,850.8	6,850.8	16.5	137.0	8.72	-3,151.3	50.1	3,198.1	3,092.7	105.42	30.337		
7,050.0	6,936.2	6,883.2	6,883.2	16.5	137.7	9.52	-3,151.3	50.1	3,160.2	3,061.1	99.07	31.898		
7,100.0	6,966.0	6,913.0	6,913.0	16.6	138.3	10.51	-3,151.3	50.1	3,120.3	3,027.7	92.57	33.709		
7,150.0	6,993.2	6,940.2	6,940.2	16.6	138.8	11.75	-3,151.3	50.1	3,078.6	2,992.4	86.14	35.738		
7,200.0	7,017.5	6,964.5	6,964.5	16.7	139.3	13.35	-3,151.3	50.1	3,035.2	2,955.0	80.19	37.848		
7,250.0	7,039.0	6,986.0	6,986.0	16.9	139.7	15.47	-3,151.3	50.1	2,990.3	2,914.9	75.40	39.661		
7,300.0	7,057.4	7,004.4	7,004.4	17.1	140.1	18.35	-3,151.3	50.1	2,944.1	2,871.2	72.90	40.384		
7,350.0	7,072.8	7,019.8	7,019.8	17.4	140.4	22.45	-3,151.3	50.1	2,896.8	2,822.2	74.58	38.842		
7,400.0	7,085.0	7,032.0	7,032.0	17.8	140.6	28.63	-3,151.3	50.1	2,848.7	2,765.6	83.08	34.288		
7,450.0	7,094.0	7,041.0	7,041.0	18.2	140.8	38.55	-3,151.3	50.1	2,799.8	2,698.3	101.55	27.570		
7,500.0	7,099.8	7,046.8	7,046.8	18.7	140.9	55.33	-3,151.3	50.1	2,750.5	2,619.3	131.18	20.968		
7,550.0	7,102.3	7,049.3	7,049.3	19.2	141.0	81.75	-3,151.3	50.1	2,701.0	2,543.2	157.74	17.123		
7,565.6	7,102.4	7,049.4	7,049.4	19.3	141.0	91.22	-3,151.3	50.1	2,685.5	2,525.8	159.68	16.818		
7,600.0	7,102.3	7,049.3	7,049.3	19.7	141.0	91.20	-3,151.3	50.1	2,651.3	2,491.3	160.05	16.566		
7,700.0	7,102.1	7,049.1	7,049.1	20.8	141.0	91.16	-3,151.3	50.1	2,552.1	2,390.9	161.21	15.831		
7,800.0	7,101.8	7,048.8	7,048.8	22.1	141.0	91.11	-3,151.3	50.1	2,453.0	2,290.5	162.48	15.097		
7,900.0	7,101.5	7,048.5	7,048.5	23.4	141.0	91.07	-3,151.3	50.1	2,353.9	2,190.1	163.84	14.367		
8,000.0	7,101.3	7,048.3	7,048.3	24.9	141.0	91.02	-3,151.3	50.1	2,254.9	2,089.7	165.27	13.644		
8,100.0	7,101.0	7,048.0	7,048.0	26.3	141.0	90.97	-3,151.3	50.1	2,156.1	1,989.3	166.77	12.928		
8,200.0	7,100.8	7,047.8	7,047.8	27.9	141.0	90.93	-3,151.3	50.1	2,057.3	1,889.0	168.32	12.222		
8,300.0	7,100.5	7,047.5	7,047.5	29.5	140.9	90.88	-3,151.3	50.1	1,958.6	1,788.7	169.92	11.527		
8,400.0	7,100.2	7,047.2	7,047.2	31.1	140.9	90.84	-3,151.3	50.1	1,860.1	1,688.6	171.55	10.843		
8,500.0	7,100.0	7,047.0	7,047.0	32.7	140.9	90.79	-3,151.3	50.1	1,761.8	1,588.6	173.22	10.171		
8,600.0	7,099.7	7,046.7	7,046.7	34.4	140.9	90.75	-3,151.3	50.1	1,663.6	1,488.7	174.91	9.512		
8,700.0	7,099.4	7,046.4	7,046.4	36.1	140.9	90.70	-3,151.3	50.1	1,565.7	1,389.1	176.62	8.865		
8,800.0	7,099.2	7,046.2	7,046.2	37.8	140.9	90.65	-3,151.3	50.1	1,468.1	1,289.7	178.35	8.231		
8,900.0	7,098.9	7,045.9	7,045.9	39.6	140.9	90.61	-3,151.3	50.1	1,370.8	1,190.7	180.10	7.611		
9,000.0	7,098.7	7,045.7	7,045.7	41.3	140.9	90.56	-3,151.3	50.1	1,273.9	1,092.1	181.87	7.005		
9,100.0	7,098.4	7,045.4	7,045.4	43.1	140.9	90.52	-3,151.3	50.1	1,177.6	993.9	183.65	6.412		
9,200.0	7,098.1	7,045.1	7,045.1	44.9	140.9	90.47	-3,151.3	50.1	1,081.9	896.5	185.44	5.834		
9,300.0	7,097.9	7,044.9	7,044.9	46.7	140.9	90.43	-3,151.3	50.1	987.1	799.9	187.24	5.272		
9,400.0	7,097.6	7,044.6	7,044.6	48.5	140.9	90.38	-3,151.3	50.1	893.4	704.4	189.05	4.726		

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 Harvesters Resources 15U-203
<b>Project:</b>	SEC.15-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Reference Site:</b>	Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W	<b>MD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Harvesters Resources 15U-203	<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 (6-11-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Existing Wells - Berg 1 (Exist.) - Wellbore #1 - Wellbore #1														Offset Site Error: 0.0 ft
Survey Program: 7300-UNKNOWN														Offset Well Error: 0.0 ft
Reference	Offset	Semi Major Axis		Distance		Warning								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
9,500.0	7,097.3	7,044.3	7,044.3	50.3	140.9	90.33	-3,151.3	50.1	801.2	610.4	190.87	4.198		
9,600.0	7,097.1	7,044.1	7,044.1	52.1	140.9	90.29	-3,151.3	50.1	711.2	518.5	192.69	3.691		
9,700.0	7,096.8	7,043.8	7,043.8	53.9	140.9	90.24	-3,151.3	50.1	624.2	429.7	194.52	3.209		
9,800.0	7,096.6	7,043.6	7,043.6	55.8	140.9	90.20	-3,151.3	50.1	541.7	345.3	196.36	2.759		
9,900.0	7,096.3	7,043.3	7,043.3	57.6	140.9	90.15	-3,151.3	50.1	466.1	267.9	198.20	2.351		
10,000.0	7,096.0	7,043.0	7,043.0	59.4	140.9	90.11	-3,151.3	50.1	401.3	201.2	200.05	2.006		
10,100.0	7,095.8	7,042.8	7,042.8	61.3	140.9	90.06	-3,151.3	50.1	353.3	151.4	201.90	1.750		
10,200.0	7,095.5	7,042.5	7,042.5	63.2	140.9	90.01	-3,151.3	50.1	329.6	125.9	203.75	1.618		
10,231.0	7,095.4	7,042.4	7,042.4	63.7	140.8	90.00	-3,151.3	50.1	328.2	123.8	204.33	1.606 CC, ES, SF		
10,300.0	7,095.3	7,042.3	7,042.3	65.0	140.8	89.97	-3,151.3	50.1	335.4	129.7	205.61	1.631		
10,400.0	7,095.0	7,042.0	7,042.0	66.9	140.8	89.92	-3,151.3	50.1	369.1	161.7	207.47	1.779		
10,500.0	7,094.7	7,041.7	7,041.7	68.7	140.8	89.88	-3,151.3	50.1	424.4	215.0	209.34	2.027		
10,600.0	7,094.5	7,041.5	7,041.5	70.6	140.8	89.83	-3,151.3	50.1	493.9	282.6	211.21	2.338		
10,700.0	7,094.2	7,041.2	7,041.2	72.5	140.8	89.79	-3,151.3	50.1	572.5	359.4	213.08	2.687		
10,800.0	7,093.9	7,040.9	7,040.9	74.3	140.8	89.74	-3,151.3	50.1	656.9	441.9	214.95	3.056		
10,900.0	7,093.7	7,040.7	7,040.7	76.2	140.8	89.69	-3,151.3	50.1	745.2	528.4	216.82	3.437		
11,000.0	7,093.4	7,040.4	7,040.4	78.1	140.8	89.65	-3,151.3	50.1	836.1	617.4	218.70	3.823		
11,100.0	7,093.2	7,040.2	7,040.2	80.0	140.8	89.60	-3,151.3	50.1	928.9	708.4	220.57	4.211		
11,200.0	7,092.9	7,039.9	7,039.9	81.9	140.8	89.56	-3,151.3	50.1	1,023.1	800.7	222.45	4.599		
11,300.0	7,092.6	7,039.6	7,039.6	83.8	140.8	89.51	-3,151.3	50.1	1,118.3	893.9	224.34	4.985		
11,400.0	7,092.4	7,039.4	7,039.4	85.6	140.8	89.47	-3,151.3	50.1	1,214.2	988.0	226.22	5.368		
11,500.0	7,092.1	7,039.1	7,039.1	87.5	140.8	89.42	-3,151.3	50.1	1,310.8	1,082.7	228.10	5.747		
11,542.5	7,092.0	7,039.0	7,039.0	88.3	140.8	89.40	-3,151.3	50.1	1,352.0	1,123.1	228.90	5.906		



<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Harvesters Resources 15U-203
<b>Project:</b>	SEC.15-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Reference Site:</b>	Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W	<b>MD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Harvesters Resources 15U-203	<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 (6-11-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Existing Wells - Berg 15-16G6 (Exist.) - Wellbore #1 - Wellbore #1											Offset Site Error: 0.0 ft	
Survey Program: 7300-UNKNOWN													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-178.37	-4,200.6	-119.6	4,202.6					
100.0	100.0	47.0	47.0	0.1	0.9	-178.37	-4,200.6	-119.6	4,202.3	4,201.2	1.04	4,057.338		
200.0	200.0	147.0	147.0	0.3	2.9	-178.37	-4,200.6	-119.6	4,202.3	4,199.0	3.26	1,288.851		
300.0	300.0	247.0	247.0	0.5	4.9	-178.37	-4,200.6	-119.6	4,202.3	4,196.8	5.49	766.106		
400.0	400.0	347.0	347.0	0.8	6.9	-178.37	-4,200.6	-119.6	4,202.3	4,194.6	7.71	545.042		
500.0	500.0	447.0	447.0	1.0	8.9	-178.37	-4,200.6	-119.6	4,202.3	4,192.3	9.93	422.987		
600.0	600.0	547.0	547.0	1.2	10.9	-178.37	-4,200.6	-119.6	4,202.3	4,190.1	12.16	345.596		
700.0	700.0	647.0	647.0	1.4	12.9	-178.37	-4,200.6	-119.6	4,202.3	4,187.9	14.38	292.144		
800.0	800.0	747.0	747.0	1.7	14.9	-178.37	-4,200.6	-119.6	4,202.3	4,185.7	16.61	253.011		
900.0	900.0	847.0	847.0	1.9	16.9	-178.37	-4,200.6	-119.6	4,202.3	4,183.5	18.83	223.124		
1,000.0	1,000.0	947.0	947.0	2.1	18.9	-178.37	-4,200.6	-119.6	4,202.3	4,181.2	21.06	199.552		
1,100.0	1,100.0	1,047.0	1,047.0	2.3	20.9	-178.37	-4,200.6	-119.6	4,202.3	4,179.0	23.28	180.484		
1,200.0	1,200.0	1,147.0	1,147.0	2.6	22.9	-178.37	-4,200.6	-119.6	4,202.3	4,176.8	25.51	164.743		
1,300.0	1,300.0	1,247.0	1,247.0	2.8	24.9	-178.37	-4,200.6	-119.6	4,202.3	4,174.6	27.73	151.527		
1,400.0	1,400.0	1,347.0	1,347.0	3.0	26.9	-178.37	-4,200.6	-119.6	4,202.3	4,172.3	29.96	140.274		
1,500.0	1,500.0	1,447.0	1,447.0	3.2	28.9	-178.37	-4,200.6	-119.6	4,202.3	4,170.1	32.18	130.577		
1,500.4	1,500.4	1,447.4	1,447.4	3.2	28.9	128.00	-4,200.6	-119.6	4,202.3	4,170.2	32.12	130.819		
1,600.0	1,599.4	1,546.4	1,546.4	3.5	30.9	128.11	-4,200.6	-119.6	4,208.9	4,174.6	34.32	122.645		
1,700.0	1,698.8	1,645.8	1,645.8	3.7	32.9	128.23	-4,200.6	-119.6	4,215.6	4,179.1	36.53	115.402		
1,800.0	1,798.3	1,745.3	1,745.3	3.9	34.9	128.34	-4,200.6	-119.6	4,222.3	4,183.5	38.75	108.967		
1,900.0	1,897.7	1,844.7	1,844.7	4.2	36.9	128.46	-4,200.6	-119.6	4,229.0	4,188.0	40.97	103.216		
2,000.0	1,997.1	1,944.1	1,944.1	4.4	38.9	128.57	-4,200.6	-119.6	4,235.7	4,192.5	43.20	98.048		
2,100.0	2,096.5	2,043.5	2,043.5	4.7	40.9	128.68	-4,200.6	-119.6	4,242.5	4,197.0	45.43	93.379		
2,200.0	2,195.9	2,142.9	2,142.9	5.0	42.9	128.80	-4,200.6	-119.6	4,249.2	4,201.6	47.67	89.142		
2,300.0	2,295.4	2,242.4	2,242.4	5.2	44.8	128.91	-4,200.6	-119.6	4,256.0	4,206.1	49.91	85.281		
2,400.0	2,394.8	2,341.8	2,341.8	5.5	46.8	129.02	-4,200.6	-119.6	4,262.8	4,210.7	52.15	81.747		
2,500.0	2,494.2	2,441.2	2,441.2	5.8	48.8	129.13	-4,200.6	-119.6	4,269.6	4,215.2	54.39	78.503		
2,600.0	2,593.6	2,540.6	2,540.6	6.0	50.8	129.24	-4,200.6	-119.6	4,276.4	4,219.8	56.63	75.514		
2,700.0	2,693.0	2,640.0	2,640.0	6.3	52.8	129.35	-4,200.6	-119.6	4,283.3	4,224.4	58.88	72.751		
2,800.0	2,792.4	2,739.4	2,739.4	6.6	54.8	129.47	-4,200.6	-119.6	4,290.1	4,229.0	61.12	70.189		
2,900.0	2,891.9	2,838.9	2,838.9	6.9	56.8	129.58	-4,200.6	-119.6	4,297.0	4,233.6	63.37	67.809		
3,000.0	2,991.3	2,938.3	2,938.3	7.2	58.8	129.69	-4,200.6	-119.6	4,303.9	4,238.3	65.62	65.591		
3,100.0	3,090.7	3,037.7	3,037.7	7.5	60.8	129.80	-4,200.6	-119.6	4,310.8	4,242.9	67.87	63.520		
3,200.0	3,190.1	3,137.1	3,137.1	7.7	62.7	129.90	-4,200.6	-119.6	4,317.7	4,247.6	70.11	61.581		
3,300.0	3,289.5	3,236.5	3,236.5	8.0	64.7	130.01	-4,200.6	-119.6	4,324.7	4,252.3	72.36	59.762		
3,400.0	3,389.0	3,336.0	3,336.0	8.3	66.7	130.12	-4,200.6	-119.6	4,331.6	4,257.0	74.61	58.053		
3,500.0	3,488.4	3,435.4	3,435.4	8.6	68.7	130.23	-4,200.6	-119.6	4,338.6	4,261.7	76.86	56.444		
3,600.0	3,587.8	3,534.8	3,534.8	8.9	70.7	130.34	-4,200.6	-119.6	4,345.6	4,266.4	79.12	54.927		
3,700.0	3,687.2	3,634.2	3,634.2	9.2	72.7	130.45	-4,200.6	-119.6	4,352.6	4,271.2	81.37	53.493		
3,800.0	3,786.6	3,733.6	3,733.6	9.5	74.7	130.55	-4,200.6	-119.6	4,359.6	4,276.0	83.62	52.137		
3,900.0	3,886.1	3,833.1	3,833.1	9.8	76.7	130.66	-4,200.6	-119.6	4,366.6	4,280.7	85.87	50.852		
4,000.0	3,985.5	3,932.5	3,932.5	10.1	78.6	130.77	-4,200.6	-119.6	4,373.6	4,285.5	88.12	49.632		
4,100.0	4,084.9	4,031.9	4,031.9	10.4	80.6	130.87	-4,200.6	-119.6	4,380.7	4,290.3	90.37	48.474		
4,200.0	4,184.3	4,131.3	4,131.3	10.6	82.6	130.98	-4,200.6	-119.6	4,387.8	4,295.2	92.62	47.372		
4,300.0	4,283.7	4,230.7	4,230.7	10.9	84.6	131.09	-4,200.6	-119.6	4,394.9	4,300.0	94.88	46.322		
4,400.0	4,383.2	4,330.2	4,330.2	11.2	86.6	131.19	-4,200.6	-119.6	4,402.0	4,304.8	97.13	45.321		
4,500.0	4,482.6	4,429.6	4,429.6	11.5	88.6	131.30	-4,200.6	-119.6	4,409.1	4,309.7	99.38	44.366		
4,600.0	4,582.0	4,529.0	4,529.0	11.8	90.6	131.40	-4,200.6	-119.6	4,416.2	4,314.6	101.63	43.453		
4,700.0	4,681.4	4,628.4	4,628.4	12.1	92.6	131.50	-4,200.6	-119.6	4,423.4	4,319.5	103.88	42.580		
4,800.0	4,780.8	4,727.8	4,727.8	12.4	94.6	131.61	-4,200.6	-119.6	4,430.5	4,324.4	106.14	41.744		
4,900.0	4,880.3	4,827.3	4,827.3	12.7	96.5	131.71	-4,200.6	-119.6	4,437.7	4,329.3	108.39	40.943		

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 Harvesters Resources 15U-203
<b>Project:</b>	SEC.15-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Reference Site:</b>	Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W	<b>MD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Harvesters Resources 15U-203	<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 (6-11-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Existing Wells - Berg 15-16G6 (Exist.) - Wellbore #1 - Wellbore #1												Offset Site Error: 0.0 ft	
Survey Program: 7300-UNKNOWN												Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.0	4,979.7	4,926.7	4,926.7	13.0	98.5	131.81	-4,200.6	-119.6	4,444.9	4,334.3	110.64	40.175	
5,100.0	5,079.1	5,026.1	5,026.1	13.3	100.5	131.92	-4,200.6	-119.6	4,452.1	4,339.2	112.89	39.437	
5,200.0	5,178.5	5,125.5	5,125.5	13.6	102.5	132.02	-4,200.6	-119.6	4,459.3	4,344.2	115.14	38.729	
5,300.0	5,277.9	5,224.9	5,224.9	13.9	104.5	132.12	-4,200.6	-119.6	4,466.6	4,349.2	117.39	38.048	
5,400.0	5,377.3	5,324.3	5,324.3	14.2	106.5	132.22	-4,200.6	-119.6	4,473.8	4,354.2	119.65	37.392	
5,500.0	5,476.8	5,423.8	5,423.8	14.5	108.5	132.33	-4,200.6	-119.6	4,481.1	4,359.2	121.90	36.761	
5,600.0	5,576.2	5,523.2	5,523.2	14.8	110.5	132.43	-4,200.6	-119.6	4,488.4	4,364.2	124.15	36.153	
5,700.0	5,675.6	5,622.6	5,622.6	15.1	112.5	132.53	-4,200.6	-119.6	4,495.6	4,369.2	126.40	35.567	
5,716.1	5,691.7	5,638.7	5,638.7	15.1	112.8	132.54	-4,200.6	-119.6	4,496.8	4,370.1	126.76	35.474	
5,800.0	5,775.1	5,722.1	5,722.1	15.3	114.4	132.70	-4,200.6	-119.6	4,502.1	4,373.4	128.76	34.965	
5,900.0	5,875.0	5,822.0	5,822.0	15.5	116.4	132.81	-4,200.6	-119.6	4,506.3	4,375.2	131.04	34.388	
6,000.0	5,974.9	5,921.9	5,921.9	15.7	118.4	132.86	-4,200.6	-119.6	4,508.1	4,374.8	133.25	33.833	
6,025.1	6,000.0	5,947.0	5,947.0	15.7	118.9	-173.66	-4,200.6	-119.6	4,508.1	4,374.3	133.79	33.697	
6,100.0	6,074.9	6,021.9	6,021.9	15.9	120.4	-173.66	-4,200.6	-119.6	4,508.1	4,372.7	135.42	33.291	
6,200.0	6,174.9	6,121.9	6,121.9	16.0	122.4	-173.66	-4,200.6	-119.6	4,508.1	4,370.5	137.61	32.760	
6,300.0	6,274.9	6,221.9	6,221.9	16.2	124.4	-173.66	-4,200.6	-119.6	4,508.1	4,368.3	139.81	32.245	
6,363.6	6,338.5	6,285.5	6,285.5	16.3	125.7	-173.66	-4,200.6	-119.6	4,508.1	4,366.9	141.20	31.926	
6,400.0	6,374.9	6,321.9	6,321.9	16.4	126.4	6.35	-4,200.6	-119.6	4,507.3	4,365.5	141.81	31.783	
6,450.0	6,424.7	6,371.7	6,371.7	16.5	127.4	6.39	-4,200.6	-119.6	4,503.3	4,361.2	142.12	31.687	
6,500.0	6,474.2	6,421.2	6,421.2	16.5	128.4	6.46	-4,200.6	-119.6	4,496.1	4,354.2	141.81	31.705	
6,550.0	6,523.1	6,470.1	6,470.1	16.5	129.4	6.57	-4,200.6	-119.6	4,485.6	4,344.8	140.88	31.841	
6,600.0	6,571.2	6,518.2	6,518.2	16.6	130.4	6.71	-4,200.6	-119.6	4,472.1	4,332.7	139.32	32.100	
6,650.0	6,618.2	6,565.2	6,565.2	16.6	131.3	6.89	-4,200.6	-119.6	4,455.4	4,318.3	137.13	32.490	
6,700.0	6,664.1	6,611.1	6,611.1	16.6	132.2	7.12	-4,200.6	-119.6	4,435.7	4,301.4	134.32	33.022	
6,750.0	6,708.6	6,655.6	6,655.6	16.6	133.1	7.40	-4,200.6	-119.6	4,413.1	4,282.1	130.91	33.711	
6,800.0	6,751.6	6,698.6	6,698.6	16.5	134.0	7.73	-4,200.6	-119.6	4,387.6	4,260.7	126.91	34.573	
6,850.0	6,792.7	6,739.7	6,739.7	16.5	134.8	8.14	-4,200.6	-119.6	4,359.4	4,237.0	122.34	35.632	
6,900.0	6,831.9	6,778.9	6,778.9	16.5	135.6	8.63	-4,200.6	-119.6	4,328.5	4,211.3	117.26	36.914	
6,950.0	6,869.0	6,816.0	6,816.0	16.5	136.3	9.21	-4,200.6	-119.6	4,295.3	4,183.5	111.72	38.448	
7,000.0	6,903.8	6,850.8	6,850.8	16.5	137.0	9.93	-4,200.6	-119.6	4,259.6	4,153.8	105.79	40.265	
7,050.0	6,936.2	6,883.2	6,883.2	16.5	137.7	10.80	-4,200.6	-119.6	4,221.8	4,122.2	99.60	42.389	
7,100.0	6,966.0	6,913.0	6,913.0	16.6	138.3	11.88	-4,200.6	-119.6	4,182.0	4,088.7	93.31	44.818	
7,150.0	6,993.2	6,940.2	6,940.2	16.6	138.8	13.23	-4,200.6	-119.6	4,140.3	4,053.1	87.20	47.480	
7,200.0	7,017.5	6,964.5	6,964.5	16.7	139.3	14.96	-4,200.6	-119.6	4,097.0	4,015.3	81.71	50.139	
7,250.0	7,039.0	6,986.0	6,986.0	16.9	139.7	17.24	-4,200.6	-119.6	4,052.1	3,974.6	77.57	52.237	
7,300.0	7,057.4	7,004.4	7,004.4	17.1	140.1	20.32	-4,200.6	-119.6	4,006.0	3,930.1	75.98	52.728	
7,350.0	7,072.8	7,019.8	7,019.8	17.4	140.4	24.68	-4,200.6	-119.6	3,958.8	3,880.1	78.73	50.285	
7,400.0	7,085.0	7,032.0	7,032.0	17.8	140.6	31.14	-4,200.6	-119.6	3,910.7	3,822.5	88.21	44.332	
7,450.0	7,094.0	7,041.0	7,041.0	18.2	140.8	41.28	-4,200.6	-119.6	3,862.0	3,755.0	106.93	36.117	
7,500.0	7,099.8	7,046.8	7,046.8	18.7	140.9	57.75	-4,200.6	-119.6	3,812.7	3,678.0	134.77	28.291	
7,550.0	7,102.3	7,049.3	7,049.3	19.2	141.0	82.43	-4,200.6	-119.6	3,763.2	3,605.2	158.01	23.817	
7,565.6	7,102.4	7,049.4	7,049.4	19.3	141.0	91.12	-4,200.6	-119.6	3,747.8	3,588.1	159.68	23.470	
7,600.0	7,102.3	7,049.3	7,049.3	19.7	141.0	91.11	-4,200.6	-119.6	3,713.7	3,553.6	160.05	23.203	
7,700.0	7,102.1	7,049.1	7,049.1	20.8	141.0	91.08	-4,200.6	-119.6	3,614.6	3,453.4	161.21	22.421	
7,800.0	7,101.8	7,048.8	7,048.8	22.1	141.0	91.05	-4,200.6	-119.6	3,515.6	3,353.1	162.48	21.637	
7,900.0	7,101.5	7,048.5	7,048.5	23.4	141.0	91.02	-4,200.6	-119.6	3,416.6	3,252.8	163.84	20.853	
8,000.0	7,101.3	7,048.3	7,048.3	24.9	141.0	90.99	-4,200.6	-119.6	3,317.7	3,152.5	165.28	20.074	
8,100.0	7,101.0	7,048.0	7,048.0	26.3	141.0	90.96	-4,200.6	-119.6	3,218.9	3,052.1	166.77	19.301	
8,200.0	7,100.8	7,047.8	7,047.8	27.9	141.0	90.93	-4,200.6	-119.6	3,120.2	2,951.8	168.32	18.537	
8,300.0	7,100.5	7,047.5	7,047.5	29.5	140.9	90.90	-4,200.6	-119.6	3,021.5	2,851.6	169.92	17.782	

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 Harvesters Resources 15U-203
<b>Project:</b>	SEC.15-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Reference Site:</b>	Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W	<b>MD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Harvesters Resources 15U-203	<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 (6-11-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Existing Wells - Berg 15-16G6 (Exist.) - Wellbore #1 - Wellbore #1														Offset Site Error:	0.0 ft
Survey Program: 7300-UNKNOWN														Offset Well Error:	0.0 ft
Reference	Offset	Semi Major Axis		Distance											
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
8,400.0	7,100.2	7,047.2	7,047.2	31.1	140.9	90.87	-4,200.6	-119.6	2,922.9	2,751.3	171.55	17.038			
8,500.0	7,100.0	7,047.0	7,047.0	32.7	140.9	90.84	-4,200.6	-119.6	2,824.4	2,651.2	173.21	16.306			
8,600.0	7,099.7	7,046.7	7,046.7	34.4	140.9	90.81	-4,200.6	-119.6	2,726.0	2,551.1	174.91	15.586			
8,700.0	7,099.4	7,046.4	7,046.4	36.1	140.9	90.78	-4,200.6	-119.6	2,627.8	2,451.2	176.62	14.878			
8,800.0	7,099.2	7,046.2	7,046.2	37.8	140.9	90.75	-4,200.6	-119.6	2,529.7	2,351.3	178.35	14.183			
8,900.0	7,098.9	7,045.9	7,045.9	39.6	140.9	90.72	-4,200.6	-119.6	2,431.7	2,251.6	180.10	13.502			
9,000.0	7,098.7	7,045.7	7,045.7	41.3	140.9	90.69	-4,200.6	-119.6	2,333.9	2,152.0	181.87	12.833			
9,100.0	7,098.4	7,045.4	7,045.4	43.1	140.9	90.66	-4,200.6	-119.6	2,236.3	2,052.7	183.65	12.177			
9,200.0	7,098.1	7,045.1	7,045.1	44.9	140.9	90.63	-4,200.6	-119.6	2,138.9	1,953.5	185.44	11.534			
9,300.0	7,097.9	7,044.9	7,044.9	46.7	140.9	90.60	-4,200.6	-119.6	2,041.8	1,854.6	187.24	10.905			
9,400.0	7,097.6	7,044.6	7,044.6	48.5	140.9	90.57	-4,200.6	-119.6	1,945.0	1,755.9	189.05	10.288			
9,500.0	7,097.3	7,044.3	7,044.3	50.3	140.9	90.54	-4,200.6	-119.6	1,848.5	1,657.6	190.87	9.685			
9,600.0	7,097.1	7,044.1	7,044.1	52.1	140.9	90.51	-4,200.6	-119.6	1,752.4	1,559.7	192.69	9.094			
9,700.0	7,096.8	7,043.8	7,043.8	53.9	140.9	90.48	-4,200.6	-119.6	1,656.8	1,462.2	194.52	8.517			
9,800.0	7,096.6	7,043.6	7,043.6	55.8	140.9	90.45	-4,200.6	-119.6	1,561.7	1,365.3	196.36	7.953			
9,900.0	7,096.3	7,043.3	7,043.3	57.6	140.9	90.42	-4,200.6	-119.6	1,467.2	1,269.0	198.20	7.403			
10,000.0	7,096.0	7,043.0	7,043.0	59.4	140.9	90.39	-4,200.6	-119.6	1,373.6	1,173.5	200.05	6.866			
10,100.0	7,095.8	7,042.8	7,042.8	61.3	140.9	90.36	-4,200.6	-119.6	1,280.9	1,079.0	201.90	6.344			
10,200.0	7,095.5	7,042.5	7,042.5	63.2	140.9	90.33	-4,200.6	-119.6	1,189.4	985.7	203.76	5.837			
10,300.0	7,095.3	7,042.3	7,042.3	65.0	140.8	90.30	-4,200.6	-119.6	1,099.4	893.8	205.62	5.347			
10,400.0	7,095.0	7,042.0	7,042.0	66.9	140.8	90.27	-4,200.6	-119.6	1,011.3	803.8	207.48	4.874			
10,500.0	7,094.7	7,041.7	7,041.7	68.7	140.8	90.24	-4,200.6	-119.6	925.5	716.2	209.35	4.421			
10,600.0	7,094.5	7,041.5	7,041.5	70.6	140.8	90.20	-4,200.6	-119.6	843.0	631.7	211.21	3.991			
10,700.0	7,094.2	7,041.2	7,041.2	72.5	140.8	90.17	-4,200.6	-119.6	764.5	551.5	213.08	3.588			
10,800.0	7,093.9	7,040.9	7,040.9	74.3	140.8	90.14	-4,200.6	-119.6	691.7	476.8	214.96	3.218			
10,900.0	7,093.7	7,040.7	7,040.7	76.2	140.8	90.11	-4,200.6	-119.6	626.5	409.6	216.83	2.889			
11,000.0	7,093.4	7,040.4	7,040.4	78.1	140.8	90.08	-4,200.6	-119.6	571.3	352.6	218.71	2.612			
11,100.0	7,093.2	7,040.2	7,040.2	80.0	140.8	90.05	-4,200.6	-119.6	529.5	308.9	220.59	2.400			
11,200.0	7,092.9	7,039.9	7,039.9	81.9	140.8	90.02	-4,200.6	-119.6	504.3	281.9	222.47	2.267			
11,280.2	7,092.7	7,039.7	7,039.7	83.4	140.8	90.00	-4,200.6	-119.6	497.9	273.9	223.98	2.223 CC, ES			
11,300.0	7,092.6	7,039.6	7,039.6	83.8	140.8	89.99	-4,200.6	-119.6	498.3	274.0	224.35	2.221 SF			
11,400.0	7,092.4	7,039.4	7,039.4	85.6	140.8	89.96	-4,200.6	-119.6	512.1	285.9	226.24	2.264			
11,500.0	7,092.1	7,039.1	7,039.1	87.5	140.8	89.93	-4,200.6	-119.6	544.3	316.2	228.12	2.386			
11,542.5	7,092.0	7,039.0	7,039.0	88.3	140.8	89.92	-4,200.6	-119.6	562.8	333.9	228.92	2.458			

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Harvesters Resources 15U-203
<b>Project:</b>	SEC.15-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Reference Site:</b>	Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W	<b>MD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Harvesters Resources 15U-203	<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 (6-11-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Existing Wells - Harvester 41-15 (Exist.) - Wellbore #1 - Wellbore #1												Offset Site Error: 0.0 ft	
Survey Program: 7300-UNKNOWN														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 (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)					
0.0	0.0	0.0	0.0	0.0	0.0	-151.83	-488.2	-261.4	554.1						
100.0	100.0	80.0	80.0	0.1	1.6	-151.83	-488.2	-261.4	553.8	552.1	1.70	326.576			
200.0	200.0	180.0	180.0	0.3	3.6	-151.83	-488.2	-261.4	553.8	549.9	3.92	141.254			
300.0	300.0	280.0	280.0	0.5	5.6	-151.83	-488.2	-261.4	553.8	547.6	6.15	90.116			
400.0	400.0	380.0	380.0	0.8	7.6	-151.83	-488.2	-261.4	553.8	545.4	8.37	66.163			
500.0	500.0	480.0	480.0	1.0	9.6	-151.83	-488.2	-261.4	553.8	543.2	10.59	52.269			
600.0	600.0	580.0	580.0	1.2	11.6	-151.83	-488.2	-261.4	553.8	541.0	12.82	43.198			
700.0	700.0	680.0	680.0	1.4	13.6	-151.83	-488.2	-261.4	553.8	538.7	15.04	36.810			
800.0	800.0	780.0	780.0	1.7	15.6	-151.83	-488.2	-261.4	553.8	536.5	17.27	32.068			
900.0	900.0	880.0	880.0	1.9	17.6	-151.83	-488.2	-261.4	553.8	534.3	19.49	28.408			
1,000.0	1,000.0	980.0	980.0	2.1	19.6	-151.83	-488.2	-261.4	553.8	532.1	21.72	25.498			
1,100.0	1,100.0	1,080.0	1,080.0	2.3	21.6	-151.83	-488.2	-261.4	553.8	529.8	23.94	23.129			
1,200.0	1,200.0	1,180.0	1,180.0	2.6	23.6	-151.83	-488.2	-261.4	553.8	527.6	26.17	21.163			
1,300.0	1,300.0	1,280.0	1,280.0	2.8	25.6	-151.83	-488.2	-261.4	553.8	525.4	28.39	19.504			
1,400.0	1,400.0	1,380.0	1,380.0	3.0	27.6	-151.83	-488.2	-261.4	553.8	523.2	30.62	18.087			
1,500.0	1,500.0	1,480.0	1,480.0	3.2	29.6	-151.83	-488.2	-261.4	553.8	520.9	32.84	16.862 CC			
1,500.4	1,500.4	1,480.4	1,480.4	3.2	29.6	154.57	-488.2	-261.4	553.8	521.1	32.70	16.936			
1,600.0	1,599.4	1,579.4	1,579.4	3.5	31.6	155.04	-488.2	-261.4	563.5	528.6	34.89	16.153			
1,700.0	1,698.8	1,678.8	1,678.8	3.7	33.6	155.49	-488.2	-261.4	573.3	536.2	37.08	15.459			
1,800.0	1,798.3	1,778.3	1,778.3	3.9	35.6	155.93	-488.2	-261.4	583.1	543.8	39.29	14.843			
1,900.0	1,897.7	1,877.7	1,877.7	4.2	37.6	156.36	-488.2	-261.4	593.0	551.5	41.49	14.291			
2,000.0	1,997.1	1,977.1	1,977.1	4.4	39.5	156.77	-488.2	-261.4	602.9	559.2	43.70	13.796			
2,100.0	2,096.5	2,076.5	2,076.5	4.7	41.5	157.16	-488.2	-261.4	612.8	566.9	45.91	13.348			
2,200.0	2,195.9	2,175.9	2,175.9	5.0	43.5	157.55	-488.2	-261.4	622.7	574.6	48.12	12.942			
2,300.0	2,295.4	2,275.4	2,275.4	5.2	45.5	157.92	-488.2	-261.4	632.7	582.4	50.33	12.571			
2,400.0	2,394.8	2,374.8	2,374.8	5.5	47.5	158.28	-488.2	-261.4	642.7	590.1	52.54	12.232			
2,500.0	2,494.2	2,474.2	2,474.2	5.8	49.5	158.63	-488.2	-261.4	652.7	597.9	54.75	11.921			
2,600.0	2,593.6	2,573.6	2,573.6	6.0	51.5	158.97	-488.2	-261.4	662.7	605.8	56.96	11.634			
2,700.0	2,693.0	2,673.0	2,673.0	6.3	53.5	159.30	-488.2	-261.4	672.8	613.6	59.18	11.369			
2,800.0	2,792.4	2,772.4	2,772.4	6.6	55.4	159.61	-488.2	-261.4	682.9	621.5	61.39	11.123			
2,900.0	2,891.9	2,871.9	2,871.9	6.9	57.4	159.92	-488.2	-261.4	693.0	629.4	63.61	10.895			
3,000.0	2,991.3	2,971.3	2,971.3	7.2	59.4	160.22	-488.2	-261.4	703.1	637.3	65.82	10.682			
3,100.0	3,090.7	3,070.7	3,070.7	7.5	61.4	160.52	-488.2	-261.4	713.3	645.2	68.03	10.484			
3,200.0	3,190.1	3,170.1	3,170.1	7.7	63.4	160.80	-488.2	-261.4	723.4	653.2	70.25	10.298			
3,300.0	3,289.5	3,269.5	3,269.5	8.0	65.4	161.08	-488.2	-261.4	733.6	661.1	72.46	10.124			
3,400.0	3,389.0	3,369.0	3,369.0	8.3	67.4	161.35	-488.2	-261.4	743.8	669.1	74.68	9.960			
3,500.0	3,488.4	3,468.4	3,468.4	8.6	69.4	161.61	-488.2	-261.4	754.0	677.1	76.89	9.806			
3,600.0	3,587.8	3,567.8	3,567.8	8.9	71.4	161.86	-488.2	-261.4	764.2	685.1	79.11	9.661			
3,700.0	3,687.2	3,667.2	3,667.2	9.2	73.3	162.11	-488.2	-261.4	774.5	693.2	81.32	9.523			
3,800.0	3,786.6	3,766.6	3,766.6	9.5	75.3	162.35	-488.2	-261.4	784.7	701.2	83.54	9.394			
3,900.0	3,886.1	3,866.1	3,866.1	9.8	77.3	162.59	-488.2	-261.4	795.0	709.2	85.75	9.271			
4,000.0	3,985.5	3,965.5	3,965.5	10.1	79.3	162.82	-488.2	-261.4	805.3	717.3	87.97	9.154			
4,100.0	4,084.9	4,064.9	4,064.9	10.4	81.3	163.04	-488.2	-261.4	815.6	725.4	90.18	9.044			
4,200.0	4,184.3	4,164.3	4,164.3	10.6	83.3	163.26	-488.2	-261.4	825.9	733.5	92.40	8.938			
4,300.0	4,283.7	4,263.7	4,263.7	10.9	85.3	163.47	-488.2	-261.4	836.2	741.6	94.61	8.838			
4,400.0	4,383.2	4,363.2	4,363.2	11.2	87.3	163.68	-488.2	-261.4	846.5	749.7	96.83	8.743			
4,500.0	4,482.6	4,462.6	4,462.6	11.5	89.3	163.88	-488.2	-261.4	856.9	757.8	99.04	8.652			
4,600.0	4,582.0	4,562.0	4,562.0	11.8	91.2	164.08	-488.2	-261.4	867.2	766.0	101.26	8.565			
4,700.0	4,681.4	4,661.4	4,661.4	12.1	93.2	164.27	-488.2	-261.4	877.6	774.1	103.47	8.481			
4,800.0	4,780.8	4,760.8	4,760.8	12.4	95.2	164.46	-488.2	-261.4	887.9	782.3	105.69	8.402			
4,900.0	4,880.3	4,860.3	4,860.3	12.7	97.2	164.64	-488.2	-261.4	898.3	790.4	107.90	8.325			

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 Harvesters Resources 15U-203
<b>Project:</b>	SEC.15-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Reference Site:</b>	Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W	<b>MD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Harvesters Resources 15U-203	<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 (6-11-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Existing Wells - Harvester 41-15 (Exist.) - Wellbore #1 - Wellbore #1											Offset Site Error:		0.0 ft	
Survey Program: 7300-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)					
5,000.0	4,979.7	4,959.7	4,959.7	13.0	99.2	164.82	-488.2	-261.4	908.7	798.6	110.12	8.252				
5,100.0	5,079.1	5,059.1	5,059.1	13.3	101.2	165.00	-488.2	-261.4	919.1	806.8	112.33	8.182				
5,200.0	5,178.5	5,158.5	5,158.5	13.6	103.2	165.17	-488.2	-261.4	929.5	815.0	114.54	8.115				
5,300.0	5,277.9	5,257.9	5,257.9	13.9	105.2	165.34	-488.2	-261.4	939.9	823.2	116.76	8.050				
5,400.0	5,377.3	5,357.3	5,357.3	14.2	107.1	165.50	-488.2	-261.4	950.3	831.4	118.97	7.988				
5,500.0	5,476.8	5,456.8	5,456.8	14.5	109.1	165.66	-488.2	-261.4	960.8	839.6	121.19	7.928				
5,600.0	5,576.2	5,556.2	5,556.2	14.8	111.1	165.82	-488.2	-261.4	971.2	847.8	123.40	7.870				
5,700.0	5,675.6	5,655.6	5,655.6	15.1	113.1	165.97	-488.2	-261.4	981.7	856.0	125.62	7.815				
5,716.1	5,691.7	5,671.7	5,671.7	15.1	113.4	166.00	-488.2	-261.4	983.3	857.4	125.97	7.806				
5,800.0	5,775.1	5,755.1	5,755.1	15.3	115.1	166.14	-488.2	-261.4	990.9	862.8	128.11	7.735				
5,900.0	5,875.0	5,855.0	5,855.0	15.5	117.1	166.25	-488.2	-261.4	996.8	866.3	130.50	7.639				
6,000.0	5,974.9	5,954.9	5,954.9	15.7	119.1	166.30	-488.2	-261.4	999.4	866.6	132.75	7.528				
6,025.1	6,000.0	5,980.0	5,980.0	15.7	119.6	-140.23	-488.2	-261.4	999.5	866.2	133.29	7.499				
6,100.0	6,074.9	6,054.9	6,054.9	15.9	121.1	-140.23	-488.2	-261.4	999.5	864.6	134.93	7.408				
6,200.0	6,174.9	6,154.9	6,154.9	16.0	123.1	-140.23	-488.2	-261.4	999.5	862.4	137.14	7.288				
6,300.0	6,274.9	6,254.9	6,254.9	16.2	125.1	-140.23	-488.2	-261.4	999.5	860.1	139.35	7.173				
6,363.6	6,338.5	6,318.5	6,318.5	16.3	126.4	-140.23	-488.2	-261.4	999.5	858.7	140.75	7.101				
6,400.0	6,374.9	6,354.9	6,354.9	16.4	127.1	39.84	-488.2	-261.4	998.8	857.4	141.43	7.063				
6,450.0	6,424.7	6,404.7	6,404.7	16.5	128.1	40.14	-488.2	-261.4	995.7	853.7	142.03	7.011				
6,500.0	6,474.2	6,454.2	6,454.2	16.5	129.1	40.68	-488.2	-261.4	990.2	847.9	142.29	6.959				
6,550.0	6,523.1	6,503.1	6,503.1	16.5	130.1	41.48	-488.2	-261.4	982.2	840.0	142.23	6.906				
6,600.0	6,571.2	6,551.2	6,551.2	16.6	131.0	42.53	-488.2	-261.4	971.9	830.0	141.91	6.849				
6,650.0	6,618.2	6,598.2	6,598.2	16.6	132.0	43.86	-488.2	-261.4	959.3	817.9	141.41	6.784				
6,700.0	6,664.1	6,644.1	6,644.1	16.6	132.9	45.48	-488.2	-261.4	944.6	803.8	140.84	6.707				
6,750.0	6,708.6	6,688.6	6,688.6	16.6	133.8	47.39	-488.2	-261.4	928.0	787.7	140.32	6.613				
6,800.0	6,751.6	6,731.6	6,731.6	16.5	134.6	49.61	-488.2	-261.4	909.6	769.6	139.98	6.498				
6,850.0	6,792.7	6,772.7	6,772.7	16.5	135.5	52.13	-488.2	-261.4	889.6	749.6	139.98	6.355				
6,900.0	6,831.9	6,811.9	6,811.9	16.5	136.2	54.96	-488.2	-261.4	868.3	727.9	140.43	6.183				
6,950.0	6,869.0	6,849.0	6,849.0	16.5	137.0	58.07	-488.2	-261.4	846.0	704.6	141.41	5.983				
7,000.0	6,903.8	6,883.8	6,883.8	16.5	137.7	61.42	-488.2	-261.4	823.0	680.0	142.93	5.758				
7,050.0	6,936.2	6,916.2	6,916.2	16.5	138.3	64.95	-488.2	-261.4	799.6	654.6	144.92	5.517				
7,100.0	6,966.0	6,946.0	6,946.0	16.6	138.9	68.59	-488.2	-261.4	776.1	628.9	147.23	5.272				
7,150.0	6,993.2	6,973.2	6,973.2	16.6	139.5	72.23	-488.2	-261.4	753.2	603.5	149.65	5.033				
7,200.0	7,017.5	6,997.5	6,997.5	16.7	140.0	75.76	-488.2	-261.4	731.0	579.1	151.98	4.810				
7,250.0	7,039.0	7,019.0	7,019.0	16.9	140.4	79.09	-488.2	-261.4	710.3	556.2	154.06	4.610				
7,300.0	7,057.4	7,037.4	7,037.4	17.1	140.7	82.10	-488.2	-261.4	691.3	535.5	155.78	4.438				
7,350.0	7,072.8	7,052.8	7,052.8	17.4	141.1	84.70	-488.2	-261.4	674.7	517.5	157.13	4.294				
7,400.0	7,085.0	7,065.0	7,065.0	17.8	141.3	86.83	-488.2	-261.4	660.8	502.7	158.17	4.178				
7,450.0	7,094.0	7,074.0	7,074.0	18.2	141.5	88.44	-488.2	-261.4	650.2	491.2	158.97	4.090				
7,500.0	7,099.8	7,079.8	7,079.8	18.7	141.6	89.50	-488.2	-261.4	643.1	483.5	159.61	4.029				
7,550.0	7,102.3	7,082.3	7,082.3	19.2	141.6	89.97	-488.2	-261.4	639.7	479.6	160.18	3.994				
7,565.6	7,102.4	7,082.4	7,082.4	19.3	141.6	90.00	-488.2	-261.4	639.5	479.2	160.35	3.988				
7,567.8	7,102.4	7,082.4	7,082.4	19.4	141.6	90.00	-488.2	-261.4	639.5	479.1	160.37	3.988 ES				
7,600.0	7,102.3	7,082.3	7,082.3	19.7	141.6	89.99	-488.2	-261.4	640.3	479.6	160.72	3.984 SF				
7,700.0	7,102.1	7,082.1	7,082.1	20.8	141.6	89.97	-488.2	-261.4	653.0	491.2	161.87	4.034				
7,800.0	7,101.8	7,081.8	7,081.8	22.1	141.6	89.95	-488.2	-261.4	680.4	517.2	163.14	4.170				
7,900.0	7,101.5	7,081.5	7,081.5	23.4	141.6	89.92	-488.2	-261.4	720.7	556.2	164.50	4.381				
8,000.0	7,101.3	7,081.3	7,081.3	24.9	141.6	89.90	-488.2	-261.4	771.9	605.9	165.93	4.652				
8,100.0	7,101.0	7,081.0	7,081.0	26.3	141.6	89.88	-488.2	-261.4	832.0	664.6	167.43	4.969				
8,200.0	7,100.8	7,080.8	7,080.8	27.9	141.6	89.85	-488.2	-261.4	899.3	730.3	168.98	5.322				

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 Harvesters Resources 15U-203
<b>Project:</b>	SEC.15-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Reference Site:</b>	Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W	<b>MD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Harvesters Resources 15U-203	<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 (6-11-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Existing Wells - Harvester 41-15 (Exist.) - Wellbore #1 - Wellbore #1											Offset Site Error:		0.0 ft	
Survey Program: 7300-UNKNOWN														Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor				
8,300.0	7,100.5	7,080.5	7,080.5	29.5	141.6	89.83	-488.2	-261.4	972.2	801.6	170.57	5.700				
8,400.0	7,100.2	7,080.2	7,080.2	31.1	141.6	89.80	-488.2	-261.4	1,049.6	877.4	172.20	6.095				
8,500.0	7,100.0	7,080.0	7,080.0	32.7	141.6	89.78	-488.2	-261.4	1,130.5	956.6	173.87	6.502				
8,600.0	7,099.7	7,079.7	7,079.7	34.4	141.6	89.76	-488.2	-261.4	1,214.3	1,038.7	175.56	6.917				
8,700.0	7,099.4	7,079.4	7,079.4	36.1	141.6	89.73	-488.2	-261.4	1,300.4	1,123.1	177.27	7.336				
8,800.0	7,099.2	7,079.2	7,079.2	37.8	141.6	89.71	-488.2	-261.4	1,388.3	1,209.3	179.00	7.756				
8,900.0	7,098.9	7,078.9	7,078.9	39.6	141.6	89.69	-488.2	-261.4	1,477.8	1,297.0	180.75	8.176				
9,000.0	7,098.7	7,078.7	7,078.7	41.3	141.6	89.66	-488.2	-261.4	1,568.5	1,386.0	182.51	8.594				
9,100.0	7,098.4	7,078.4	7,078.4	43.1	141.6	89.64	-488.2	-261.4	1,660.3	1,476.0	184.29	9.009				
9,200.0	7,098.1	7,078.1	7,078.1	44.9	141.6	89.62	-488.2	-261.4	1,753.0	1,567.0	186.08	9.421				
9,300.0	7,097.9	7,077.9	7,077.9	46.7	141.6	89.59	-488.2	-261.4	1,846.5	1,658.6	187.88	9.828				
9,400.0	7,097.6	7,077.6	7,077.6	48.5	141.6	89.57	-488.2	-261.4	1,940.6	1,750.9	189.69	10.231				
9,500.0	7,097.3	7,077.3	7,077.3	50.3	141.5	89.55	-488.2	-261.4	2,035.3	1,843.8	191.51	10.628				
9,600.0	7,097.1	7,077.1	7,077.1	52.1	141.5	89.52	-488.2	-261.4	2,130.5	1,937.2	193.33	11.020				
9,700.0	7,096.8	7,076.8	7,076.8	53.9	141.5	89.50	-488.2	-261.4	2,226.1	2,030.9	195.16	11.406				
9,800.0	7,096.6	7,076.6	7,076.6	55.8	141.5	89.48	-488.2	-261.4	2,322.0	2,125.0	197.00	11.787				
9,900.0	7,096.3	7,076.3	7,076.3	57.6	141.5	89.45	-488.2	-261.4	2,418.3	2,219.5	198.84	12.162				
10,000.0	7,096.0	7,076.0	7,076.0	59.4	141.5	89.43	-488.2	-261.4	2,514.9	2,314.2	200.68	12.532				
10,100.0	7,095.8	7,075.8	7,075.8	61.3	141.5	89.41	-488.2	-261.4	2,611.7	2,409.2	202.53	12.895				
10,200.0	7,095.5	7,075.5	7,075.5	63.2	141.5	89.38	-488.2	-261.4	2,708.8	2,504.4	204.39	13.253				
10,300.0	7,095.3	7,075.3	7,075.3	65.0	141.5	89.36	-488.2	-261.4	2,806.1	2,599.8	206.25	13.605				
10,400.0	7,095.0	7,075.0	7,075.0	66.9	141.5	89.34	-488.2	-261.4	2,903.5	2,695.4	208.11	13.952				
10,500.0	7,094.7	7,074.7	7,074.7	68.7	141.5	89.31	-488.2	-261.4	3,001.2	2,791.2	209.97	14.293				
10,600.0	7,094.5	7,074.5	7,074.5	70.6	141.5	89.29	-488.2	-261.4	3,098.9	2,887.1	211.84	14.629				
10,700.0	7,094.2	7,074.2	7,074.2	72.5	141.5	89.27	-488.2	-261.4	3,196.9	2,983.1	213.71	14.959				
10,800.0	7,093.9	7,073.9	7,073.9	74.3	141.5	89.24	-488.2	-261.4	3,294.9	3,079.3	215.58	15.284				
10,900.0	7,093.7	7,073.7	7,073.7	76.2	141.5	89.22	-488.2	-261.4	3,393.0	3,175.6	217.45	15.603				
11,000.0	7,093.4	7,073.4	7,073.4	78.1	141.5	89.19	-488.2	-261.4	3,491.3	3,272.0	219.33	15.918				
11,100.0	7,093.2	7,073.2	7,073.2	80.0	141.5	89.17	-488.2	-261.4	3,589.7	3,368.5	221.21	16.227				
11,200.0	7,092.9	7,072.9	7,072.9	81.9	141.5	89.15	-488.2	-261.4	3,688.1	3,465.0	223.09	16.532				
11,300.0	7,092.6	7,072.6	7,072.6	83.8	141.5	89.12	-488.2	-261.4	3,786.6	3,561.7	224.97	16.832				
11,400.0	7,092.4	7,072.4	7,072.4	85.6	141.4	89.10	-488.2	-261.4	3,885.2	3,658.4	226.85	17.127				
11,500.0	7,092.1	7,072.1	7,072.1	87.5	141.4	89.08	-488.2	-261.4	3,983.9	3,755.2	228.74	17.417				
11,542.5	7,092.0	7,072.0	7,072.0	88.3	141.4	89.07	-488.2	-261.4	4,025.9	3,796.3	229.54	17.539				



<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Harvesters Resources 15U-203
<b>Project:</b>	SEC.15-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Reference Site:</b>	Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W	<b>MD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Harvesters Resources 15U-203	<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 (6-11-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Existing Wells - Harvester 42-15 (exist.) - Wellbore #1 - Wellbore #1												Offset Site Error: 0.0 ft	
Survey Program: 7300-UNKNOWN														Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
0.0	0.0	0.0	0.0	0.0	0.0	-168.96	-1,482.8	-289.3	1,511.3						
100.0	100.0	60.0	60.0	0.1	1.2	-168.96	-1,482.8	-289.3	1,510.7	1,509.4	1.30	1,165.932			
200.0	200.0	160.0	160.0	0.3	3.2	-168.96	-1,482.8	-289.3	1,510.7	1,507.2	3.52	429.124			
300.0	300.0	260.0	260.0	0.5	5.2	-168.96	-1,482.8	-289.3	1,510.7	1,505.0	5.75	262.952			
400.0	400.0	360.0	360.0	0.8	7.2	-168.96	-1,482.8	-289.3	1,510.7	1,502.8	7.97	189.551			
500.0	500.0	460.0	460.0	1.0	9.2	-168.96	-1,482.8	-289.3	1,510.7	1,500.5	10.19	148.186			
600.0	600.0	560.0	560.0	1.2	11.2	-168.96	-1,482.8	-289.3	1,510.7	1,498.3	12.42	121.641			
700.0	700.0	660.0	660.0	1.4	13.2	-168.96	-1,482.8	-289.3	1,510.7	1,496.1	14.64	103.161			
800.0	800.0	760.0	760.0	1.7	15.2	-168.96	-1,482.8	-289.3	1,510.7	1,493.9	16.87	89.556			
900.0	900.0	860.0	860.0	1.9	17.2	-168.96	-1,482.8	-289.3	1,510.7	1,491.6	19.09	79.121			
1,000.0	1,000.0	960.0	960.0	2.1	19.2	-168.96	-1,482.8	-289.3	1,510.7	1,489.4	21.32	70.864			
1,100.0	1,100.0	1,060.0	1,060.0	2.3	21.2	-168.96	-1,482.8	-289.3	1,510.7	1,487.2	23.54	64.168			
1,200.0	1,200.0	1,160.0	1,160.0	2.6	23.2	-168.96	-1,482.8	-289.3	1,510.7	1,485.0	25.77	58.628			
1,300.0	1,300.0	1,260.0	1,260.0	2.8	25.2	-168.96	-1,482.8	-289.3	1,510.7	1,482.7	27.99	53.968			
1,400.0	1,400.0	1,360.0	1,360.0	3.0	27.2	-168.96	-1,482.8	-289.3	1,510.7	1,480.5	30.22	49.995			
1,500.0	1,500.0	1,460.0	1,460.0	3.2	29.2	-168.96	-1,482.8	-289.3	1,510.7	1,478.3	32.44	46.566			
1,500.4	1,500.4	1,460.4	1,460.4	3.2	29.2	137.40	-1,482.8	-289.3	1,510.7	1,478.4	32.35	46.696			
1,600.0	1,599.4	1,559.4	1,559.4	3.5	31.2	137.68	-1,482.8	-289.3	1,518.7	1,484.1	34.54	43.963			
1,700.0	1,698.8	1,658.8	1,658.8	3.7	33.2	137.95	-1,482.8	-289.3	1,526.7	1,489.9	36.75	41.540			
1,800.0	1,798.3	1,758.3	1,758.3	3.9	35.2	138.22	-1,482.8	-289.3	1,534.7	1,495.7	38.96	39.388			
1,900.0	1,897.7	1,857.7	1,857.7	4.2	37.2	138.48	-1,482.8	-289.3	1,542.8	1,501.6	41.18	37.464			
2,000.0	1,997.1	1,957.1	1,957.1	4.4	39.1	138.74	-1,482.8	-289.3	1,550.9	1,507.5	43.40	35.734			
2,100.0	2,096.5	2,056.5	2,056.5	4.7	41.1	139.00	-1,482.8	-289.3	1,559.0	1,513.4	45.62	34.171			
2,200.0	2,195.9	2,155.9	2,155.9	5.0	43.1	139.26	-1,482.8	-289.3	1,567.1	1,519.3	47.85	32.752			
2,300.0	2,295.4	2,255.4	2,255.4	5.2	45.1	139.52	-1,482.8	-289.3	1,575.3	1,525.3	50.08	31.459			
2,400.0	2,394.8	2,354.8	2,354.8	5.5	47.1	139.77	-1,482.8	-289.3	1,583.6	1,531.3	52.30	30.276			
2,500.0	2,494.2	2,454.2	2,454.2	5.8	49.1	140.02	-1,482.8	-289.3	1,591.8	1,537.3	54.53	29.189			
2,600.0	2,593.6	2,553.6	2,553.6	6.0	51.1	140.27	-1,482.8	-289.3	1,600.1	1,543.3	56.76	28.188			
2,700.0	2,693.0	2,653.0	2,653.0	6.3	53.1	140.51	-1,482.8	-289.3	1,608.4	1,549.4	59.00	27.263			
2,800.0	2,792.4	2,752.4	2,752.4	6.6	55.0	140.75	-1,482.8	-289.3	1,616.7	1,555.5	61.23	26.405			
2,900.0	2,891.9	2,851.9	2,851.9	6.9	57.0	140.99	-1,482.8	-289.3	1,625.1	1,561.6	63.46	25.608			
3,000.0	2,991.3	2,951.3	2,951.3	7.2	59.0	141.23	-1,482.8	-289.3	1,633.5	1,567.8	65.69	24.865			
3,100.0	3,090.7	3,050.7	3,050.7	7.5	61.0	141.46	-1,482.8	-289.3	1,641.9	1,574.0	67.93	24.172			
3,200.0	3,190.1	3,150.1	3,150.1	7.7	63.0	141.70	-1,482.8	-289.3	1,650.4	1,580.2	70.16	23.523			
3,300.0	3,289.5	3,249.5	3,249.5	8.0	65.0	141.93	-1,482.8	-289.3	1,658.9	1,586.5	72.39	22.914			
3,400.0	3,389.0	3,349.0	3,349.0	8.3	67.0	142.15	-1,482.8	-289.3	1,667.4	1,592.7	74.63	22.342			
3,500.0	3,488.4	3,448.4	3,448.4	8.6	69.0	142.38	-1,482.8	-289.3	1,675.9	1,599.0	76.86	21.804			
3,600.0	3,587.8	3,547.8	3,547.8	8.9	71.0	142.60	-1,482.8	-289.3	1,684.5	1,605.4	79.10	21.296			
3,700.0	3,687.2	3,647.2	3,647.2	9.2	72.9	142.82	-1,482.8	-289.3	1,693.0	1,611.7	81.33	20.817			
3,800.0	3,786.6	3,746.6	3,746.6	9.5	74.9	143.04	-1,482.8	-289.3	1,701.6	1,618.1	83.56	20.363			
3,900.0	3,886.1	3,846.1	3,846.1	9.8	76.9	143.26	-1,482.8	-289.3	1,710.3	1,624.5	85.80	19.934			
4,000.0	3,985.5	3,945.5	3,945.5	10.1	78.9	143.47	-1,482.8	-289.3	1,718.9	1,630.9	88.03	19.526			
4,100.0	4,084.9	4,044.9	4,044.9	10.4	80.9	143.68	-1,482.8	-289.3	1,727.6	1,637.3	90.26	19.139			
4,200.0	4,184.3	4,144.3	4,144.3	10.6	82.9	143.89	-1,482.8	-289.3	1,736.3	1,643.8	92.50	18.771			
4,300.0	4,283.7	4,243.7	4,243.7	10.9	84.9	144.10	-1,482.8	-289.3	1,745.0	1,650.3	94.73	18.421			
4,400.0	4,383.2	4,343.2	4,343.2	11.2	86.9	144.31	-1,482.8	-289.3	1,753.8	1,656.8	96.96	18.087			
4,500.0	4,482.6	4,442.6	4,442.6	11.5	88.9	144.51	-1,482.8	-289.3	1,762.5	1,663.3	99.20	17.768			
4,600.0	4,582.0	4,542.0	4,542.0	11.8	90.8	144.71	-1,482.8	-289.3	1,771.3	1,669.9	101.43	17.464			
4,700.0	4,681.4	4,641.4	4,641.4	12.1	92.8	144.91	-1,482.8	-289.3	1,780.1	1,676.5	103.66	17.173			
4,800.0	4,780.8	4,740.8	4,740.8	12.4	94.8	145.11	-1,482.8	-289.3	1,789.0	1,683.1	105.89	16.894			
4,900.0	4,880.3	4,840.3	4,840.3	12.7	96.8	145.31	-1,482.8	-289.3	1,797.8	1,689.7	108.12	16.628			

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 Harvesters Resources 15U-203
<b>Project:</b>	SEC.15-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Reference Site:</b>	Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W	<b>MD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Harvesters Resources 15U-203	<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 (6-11-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Existing Wells - Harvester 42-15 (exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 7300-UNKNOWN													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
5,000.0	4,979.7	4,939.7	4,939.7	13.0	98.8	145.50	-1,482.8	-289.3	1,806.7	1,696.4	110.36	16.372		
5,100.0	5,079.1	5,039.1	5,039.1	13.3	100.8	145.69	-1,482.8	-289.3	1,815.6	1,703.0	112.59	16.126		
5,200.0	5,178.5	5,138.5	5,138.5	13.6	102.8	145.88	-1,482.8	-289.3	1,824.5	1,709.7	114.82	15.891		
5,300.0	5,277.9	5,237.9	5,237.9	13.9	104.8	146.07	-1,482.8	-289.3	1,833.5	1,716.4	117.05	15.664		
5,400.0	5,377.3	5,337.3	5,337.3	14.2	106.7	146.26	-1,482.8	-289.3	1,842.4	1,723.1	119.28	15.446		
5,500.0	5,476.8	5,436.8	5,436.8	14.5	108.7	146.44	-1,482.8	-289.3	1,851.4	1,729.9	121.51	15.237		
5,600.0	5,576.2	5,536.2	5,536.2	14.8	110.7	146.62	-1,482.8	-289.3	1,860.4	1,736.7	123.74	15.035		
5,700.0	5,675.6	5,635.6	5,635.6	15.1	112.7	146.80	-1,482.8	-289.3	1,869.4	1,743.4	125.97	14.840		
5,716.1	5,691.7	5,651.7	5,651.7	15.1	113.0	146.83	-1,482.8	-289.3	1,870.9	1,744.5	126.33	14.810		
5,800.0	5,775.1	5,735.1	5,735.1	15.3	114.7	147.04	-1,482.8	-289.3	1,877.4	1,749.0	128.39	14.623		
5,900.0	5,875.0	5,835.0	5,835.0	15.5	116.7	147.19	-1,482.8	-289.3	1,882.5	1,751.8	130.72	14.401		
6,000.0	5,974.9	5,934.9	5,934.9	15.7	118.7	147.26	-1,482.8	-289.3	1,884.7	1,751.8	132.95	14.177		
6,025.1	6,000.0	5,960.0	5,960.0	15.7	119.2	-159.27	-1,482.8	-289.3	1,884.8	1,751.4	133.49	14.120		
6,100.0	6,074.9	6,034.9	6,034.9	15.9	120.7	-159.27	-1,482.8	-289.3	1,884.8	1,749.7	135.12	13.949		
6,200.0	6,174.9	6,134.9	6,134.9	16.0	122.7	-159.27	-1,482.8	-289.3	1,884.8	1,747.5	137.33	13.725		
6,300.0	6,274.9	6,234.9	6,234.9	16.2	124.7	-159.27	-1,482.8	-289.3	1,884.8	1,745.3	139.53	13.509		
6,363.6	6,338.5	6,298.5	6,298.5	16.3	126.0	-159.27	-1,482.8	-289.3	1,884.8	1,743.9	140.93	13.374		
6,400.0	6,374.9	6,334.9	6,334.9	16.4	126.7	20.77	-1,482.8	-289.3	1,884.0	1,742.5	141.55	13.310		
6,450.0	6,424.7	6,384.7	6,384.7	16.5	127.7	20.91	-1,482.8	-289.3	1,880.3	1,738.3	141.94	13.247		
6,500.0	6,474.2	6,434.2	6,434.2	16.5	128.7	21.18	-1,482.8	-289.3	1,873.5	1,731.7	141.79	13.213		
6,550.0	6,523.1	6,483.1	6,483.1	16.5	129.7	21.57	-1,482.8	-289.3	1,863.7	1,722.6	141.10	13.208		
6,600.0	6,571.2	6,531.2	6,531.2	16.6	130.6	22.09	-1,482.8	-289.3	1,850.9	1,711.0	139.90	13.230		
6,650.0	6,618.2	6,578.2	6,578.2	16.6	131.6	22.76	-1,482.8	-289.3	1,835.3	1,697.1	138.21	13.279		
6,700.0	6,664.1	6,624.1	6,624.1	16.6	132.5	23.59	-1,482.8	-289.3	1,816.9	1,680.8	136.09	13.351		
6,750.0	6,708.6	6,668.6	6,668.6	16.6	133.4	24.59	-1,482.8	-289.3	1,795.7	1,662.1	133.59	13.441		
6,800.0	6,751.6	6,711.6	6,711.6	16.5	134.2	25.80	-1,482.8	-289.3	1,771.9	1,641.1	130.83	13.544		
6,850.0	6,792.7	6,752.7	6,752.7	16.5	135.1	27.23	-1,482.8	-289.3	1,745.6	1,617.7	127.93	13.645		
6,900.0	6,831.9	6,791.9	6,791.9	16.5	135.8	28.93	-1,482.8	-289.3	1,717.0	1,591.9	125.07	13.728		
6,950.0	6,869.0	6,829.0	6,829.0	16.5	136.6	30.92	-1,482.8	-289.3	1,686.2	1,563.7	122.48	13.767		
7,000.0	6,903.8	6,863.8	6,863.8	16.5	137.3	33.27	-1,482.8	-289.3	1,653.3	1,532.8	120.45	13.726		
7,050.0	6,936.2	6,896.2	6,896.2	16.5	137.9	36.01	-1,482.8	-289.3	1,618.5	1,499.2	119.31	13.565		
7,100.0	6,966.0	6,926.0	6,926.0	16.6	138.5	39.21	-1,482.8	-289.3	1,582.1	1,462.7	119.41	13.249		
7,150.0	6,993.2	6,953.2	6,953.2	16.6	139.1	42.93	-1,482.8	-289.3	1,544.1	1,423.1	121.04	12.757		
7,200.0	7,017.5	6,977.5	6,977.5	16.7	139.6	47.20	-1,482.8	-289.3	1,504.9	1,380.5	124.36	12.101		
7,250.0	7,039.0	6,999.0	6,999.0	16.9	140.0	52.07	-1,482.8	-289.3	1,464.5	1,335.2	129.30	11.327		
7,300.0	7,057.4	7,017.4	7,017.4	17.1	140.3	57.50	-1,482.8	-289.3	1,423.3	1,287.8	135.47	10.506		
7,350.0	7,072.8	7,032.8	7,032.8	17.4	140.7	63.43	-1,482.8	-289.3	1,381.5	1,239.3	142.21	9.715		
7,400.0	7,085.0	7,045.0	7,045.0	17.8	140.9	69.71	-1,482.8	-289.3	1,339.2	1,190.6	148.66	9.009		
7,450.0	7,094.0	7,054.0	7,054.0	18.2	141.1	76.14	-1,482.8	-289.3	1,296.8	1,142.8	154.03	8.419		
7,500.0	7,099.8	7,059.8	7,059.8	18.7	141.2	82.47	-1,482.8	-289.3	1,254.5	1,096.8	157.76	7.952		
7,550.0	7,102.3	7,062.3	7,062.3	19.2	141.2	88.46	-1,482.8	-289.3	1,212.5	1,052.8	159.69	7.593		
7,565.6	7,102.4	7,062.4	7,062.4	19.3	141.2	90.22	-1,482.8	-289.3	1,199.6	1,039.6	159.95	7.500		
7,600.0	7,102.3	7,062.3	7,062.3	19.7	141.2	90.22	-1,482.8	-289.3	1,171.1	1,010.8	160.32	7.305		
7,700.0	7,102.1	7,062.1	7,062.1	20.8	141.2	90.19	-1,482.8	-289.3	1,090.4	929.0	161.48	6.753		
7,800.0	7,101.8	7,061.8	7,061.8	22.1	141.2	90.17	-1,482.8	-289.3	1,013.2	850.5	162.75	6.226		
7,900.0	7,101.5	7,061.5	7,061.5	23.4	141.2	90.15	-1,482.8	-289.3	940.3	776.2	164.10	5.730		
8,000.0	7,101.3	7,061.3	7,061.3	24.9	141.2	90.13	-1,482.8	-289.3	872.7	707.2	165.54	5.272		
8,100.0	7,101.0	7,061.0	7,061.0	26.3	141.2	90.10	-1,482.8	-289.3	811.9	644.9	167.04	4.861		
8,200.0	7,100.8	7,060.8	7,060.8	27.9	141.2	90.08	-1,482.8	-289.3	759.4	590.8	168.59	4.505		
8,300.0	7,100.5	7,060.5	7,060.5	29.5	141.2	90.06	-1,482.8	-289.3	717.1	546.9	170.18	4.214		

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 Harvesters Resources 15U-203
<b>Project:</b>	SEC.15-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Reference Site:</b>	Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W	<b>MD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Harvesters Resources 15U-203	<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 (6-11-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Existing Wells - Harvester 42-15 (exist.) - Wellbore #1 - Wellbore #1											Offset Site Error: 0.0 ft	
Survey Program: 7300-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		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
8,400.0	7,100.2	7,060.2	7,060.2	31.1	141.2	90.04	-1,482.8	-289.3	686.9	515.0	171.81	3.998	3.824 CC, ES 3.816 SF	
8,500.0	7,100.0	7,060.0	7,060.0	32.7	141.2	90.01	-1,482.8	-289.3	670.3	496.8	173.47	3.864		
8,562.3	7,099.8	7,059.8	7,059.8	33.8	141.2	90.00	-1,482.8	-289.3	667.4	492.9	174.53			
8,600.0	7,099.7	7,059.7	7,059.7	34.4	141.2	89.99	-1,482.8	-289.3	668.5	493.3	175.16			
8,700.0	7,099.4	7,059.4	7,059.4	36.1	141.2	89.97	-1,482.8	-289.3	681.4	504.6	176.88	3.853		
8,800.0	7,099.2	7,059.2	7,059.2	37.8	141.2	89.95	-1,482.8	-289.3	708.4	529.8	178.61	3.966		
8,900.0	7,098.9	7,058.9	7,058.9	39.6	141.2	89.92	-1,482.8	-289.3	747.9	567.6	180.36	4.147		
9,000.0	7,098.7	7,058.7	7,058.7	41.3	141.2	89.90	-1,482.8	-289.3	798.1	616.0	182.12	4.382		
9,100.0	7,098.4	7,058.4	7,058.4	43.1	141.2	89.88	-1,482.8	-289.3	857.0	673.1	183.90	4.660		
9,200.0	7,098.1	7,058.1	7,058.1	44.9	141.2	89.86	-1,482.8	-289.3	923.0	737.4	185.69	4.971		
9,300.0	7,097.9	7,057.9	7,057.9	46.7	141.2	89.83	-1,482.8	-289.3	994.8	807.3	187.49	5.306		
9,400.0	7,097.6	7,057.6	7,057.6	48.5	141.2	89.81	-1,482.8	-289.3	1,071.0	881.7	189.30	5.658		
9,500.0	7,097.3	7,057.3	7,057.3	50.3	141.1	89.79	-1,482.8	-289.3	1,150.9	959.8	191.12	6.022		
9,600.0	7,097.1	7,057.1	7,057.1	52.1	141.1	89.77	-1,482.8	-289.3	1,233.7	1,040.8	192.94	6.394		
9,700.0	7,096.8	7,056.8	7,056.8	53.9	141.1	89.74	-1,482.8	-289.3	1,319.0	1,124.2	194.77	6.772		
9,800.0	7,096.6	7,056.6	7,056.6	55.8	141.1	89.72	-1,482.8	-289.3	1,406.1	1,209.5	196.61	7.152		
9,900.0	7,096.3	7,056.3	7,056.3	57.6	141.1	89.70	-1,482.8	-289.3	1,494.9	1,296.5	198.45	7.533		
10,000.0	7,096.0	7,056.0	7,056.0	59.4	141.1	89.68	-1,482.8	-289.3	1,585.0	1,384.7	200.30	7.913		
10,100.0	7,095.8	7,055.8	7,055.8	61.3	141.1	89.65	-1,482.8	-289.3	1,676.2	1,474.1	202.15	8.292		
10,200.0	7,095.5	7,055.5	7,055.5	63.2	141.1	89.63	-1,482.8	-289.3	1,768.4	1,564.4	204.00	8.669		
10,300.0	7,095.3	7,055.3	7,055.3	65.0	141.1	89.61	-1,482.8	-289.3	1,861.4	1,655.5	205.86	9.042		
10,400.0	7,095.0	7,055.0	7,055.0	66.9	141.1	89.59	-1,482.8	-289.3	1,955.1	1,747.4	207.72	9.412		
10,500.0	7,094.7	7,054.7	7,054.7	68.7	141.1	89.56	-1,482.8	-289.3	2,049.4	1,839.8	209.59	9.778		
10,600.0	7,094.5	7,054.5	7,054.5	70.6	141.1	89.54	-1,482.8	-289.3	2,144.2	1,932.7	211.45	10.140		
10,700.0	7,094.2	7,054.2	7,054.2	72.5	141.1	89.52	-1,482.8	-289.3	2,239.4	2,026.1	213.32	10.498		
10,800.0	7,093.9	7,053.9	7,053.9	74.3	141.1	89.50	-1,482.8	-289.3	2,335.1	2,119.9	215.20	10.851		
10,900.0	7,093.7	7,053.7	7,053.7	76.2	141.1	89.47	-1,482.8	-289.3	2,431.1	2,214.0	217.07	11.199		
11,000.0	7,093.4	7,053.4	7,053.4	78.1	141.1	89.45	-1,482.8	-289.3	2,527.4	2,308.4	218.95	11.543		
11,100.0	7,093.2	7,053.2	7,053.2	80.0	141.1	89.43	-1,482.8	-289.3	2,623.9	2,403.1	220.83	11.882		
11,200.0	7,092.9	7,052.9	7,052.9	81.9	141.1	89.41	-1,482.8	-289.3	2,720.8	2,498.1	222.71	12.217		
11,300.0	7,092.6	7,052.6	7,052.6	83.8	141.1	89.38	-1,482.8	-289.3	2,817.8	2,593.2	224.59	12.547		
11,400.0	7,092.4	7,052.4	7,052.4	85.6	141.0	89.36	-1,482.8	-289.3	2,915.1	2,688.6	226.47	12.872		
11,500.0	7,092.1	7,052.1	7,052.1	87.5	141.0	89.34	-1,482.8	-289.3	3,012.5	2,784.1	228.36	13.192		
11,542.5	7,092.0	7,052.0	7,052.0	88.3	141.0	89.33	-1,482.8	-289.3	3,054.0	2,824.8	229.16	13.327		

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Harvesters Resources 15U-203
<b>Project:</b>	SEC.15-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Reference Site:</b>	Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W	<b>MD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Harvesters Resources 15U-203	<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 (6-11-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W - Harvesters Resources 15R-323 - Wellbore #										Offset Site Error:		0.0 ft
Survey Program: 0-MWD												Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-90.00	0.0	-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	0.19	320.275		
200.0	200.0	200.0	200.0	0.3	0.3	-90.00	0.0	-61.2	61.2	60.5	0.64	95.521		
300.0	300.0	300.0	300.0	0.5	0.5	-90.00	0.0	-61.2	61.2	60.1	1.09	56.131		
400.0	400.0	400.0	400.0	0.8	0.8	-90.00	0.0	-61.2	61.2	59.6	1.54	39.742		
500.0	500.0	500.0	500.0	1.0	1.0	-90.00	0.0	-61.2	61.2	59.2	1.99	30.761		
600.0	600.0	600.0	600.0	1.2	1.2	-90.00	0.0	-61.2	61.2	58.8	2.44	25.091		
700.0	700.0	700.0	700.0	1.4	1.4	-90.00	0.0	-61.2	61.2	58.3	2.89	21.186		
800.0	800.0	800.0	800.0	1.7	1.7	-90.00	0.0	-61.2	61.2	57.9	3.34	18.332		
900.0	900.0	900.0	900.0	1.9	1.9	-90.00	0.0	-61.2	61.2	57.4	3.79	16.156		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-90.00	0.0	-61.2	61.2	57.0	4.24	14.442		
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	-90.00	0.0	-61.2	61.2	56.5	4.69	13.057		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-90.00	0.0	-61.2	61.2	56.1	5.14	11.914 CC, ES		
1,300.0	1,300.0	1,298.2	1,298.2	2.8	2.8	-89.17	0.9	-62.6	62.6	57.1	5.58	11.234		
1,400.0	1,400.0	1,396.2	1,396.0	3.0	3.0	-86.89	3.6	-66.8	67.1	61.0	6.01	11.152		
1,500.0	1,500.0	1,493.7	1,493.2	3.2	3.2	-83.72	8.1	-73.8	74.6	68.1	6.46	11.554		
1,500.4	1,500.4	1,494.1	1,493.6	3.2	3.2	-136.63	8.1	-73.9	74.7	68.2	6.45	11.580		
1,600.0	1,599.4	1,589.8	1,588.6	3.5	3.5	-137.92	14.3	-83.4	93.0	86.2	6.87	13.535		
1,700.0	1,698.8	1,687.9	1,685.8	3.7	3.7	-138.51	21.2	-94.2	112.6	105.3	7.31	15.403		
1,800.0	1,798.3	1,785.9	1,783.1	3.9	4.0	-138.92	28.2	-105.1	132.2	124.4	7.75	17.043		
1,900.0	1,897.7	1,884.0	1,880.3	4.2	4.2	-139.23	35.1	-115.9	151.7	143.5	8.21	18.486		
2,000.0	1,997.1	1,982.1	1,977.5	4.4	4.5	-139.47	42.0	-126.7	171.3	162.6	8.67	19.762		
2,100.0	2,096.5	2,080.1	2,074.7	4.7	4.8	-139.65	49.0	-137.5	190.9	181.7	9.14	20.893		
2,200.0	2,195.9	2,178.2	2,171.9	5.0	5.1	-139.81	55.9	-148.3	210.5	200.9	9.61	21.904		
2,300.0	2,295.4	2,276.3	2,269.2	5.2	5.4	-139.94	62.9	-159.1	230.0	220.0	10.08	22.810		
2,400.0	2,394.8	2,374.3	2,366.4	5.5	5.7	-140.04	69.8	-169.9	249.6	239.1	10.57	23.625		
2,500.0	2,494.2	2,472.4	2,463.6	5.8	6.0	-140.13	76.7	-180.7	269.2	258.1	11.05	24.362		
2,600.0	2,593.6	2,570.5	2,560.8	6.0	6.3	-140.21	83.7	-191.5	288.8	277.2	11.54	25.031		
2,700.0	2,693.0	2,668.5	2,658.0	6.3	6.6	-140.28	90.6	-202.3	308.4	296.3	12.03	25.640		
2,800.0	2,792.4	2,766.6	2,755.3	6.6	6.9	-140.34	97.6	-213.1	327.9	315.4	12.52	26.196		
2,900.0	2,891.9	2,864.6	2,852.5	6.9	7.2	-140.40	104.5	-223.9	347.5	334.5	13.01	26.706		
3,000.0	2,991.3	2,962.7	2,949.7	7.2	7.5	-140.45	111.4	-234.7	367.1	353.6	13.51	27.175		
3,100.0	3,090.7	3,060.8	3,046.9	7.5	7.8	-140.49	118.4	-245.5	386.7	372.7	14.01	27.607		
3,200.0	3,190.1	3,158.8	3,144.1	7.7	8.2	-140.53	125.3	-256.3	406.3	391.8	14.51	28.007		
3,300.0	3,289.5	3,256.9	3,241.4	8.0	8.5	-140.57	132.2	-267.1	425.8	410.8	15.01	28.378		
3,400.0	3,389.0	3,355.0	3,338.6	8.3	8.8	-140.60	139.2	-277.9	445.4	429.9	15.51	28.723		
3,500.0	3,488.4	3,453.0	3,435.8	8.6	9.1	-140.63	146.1	-288.7	465.0	449.0	16.01	29.044		
3,600.0	3,587.8	3,551.1	3,533.0	8.9	9.4	-140.66	153.1	-299.5	484.6	468.1	16.51	29.344		
3,700.0	3,687.2	3,649.2	3,630.2	9.2	9.7	-140.68	160.0	-310.3	504.2	487.2	17.02	29.624		
3,800.0	3,786.6	3,747.2	3,727.4	9.5	10.1	-140.70	166.9	-321.1	523.8	506.2	17.52	29.887		
3,900.0	3,886.1	3,845.3	3,824.7	9.8	10.4	-140.73	173.9	-331.9	543.3	525.3	18.03	30.134		
4,000.0	3,985.5	3,943.3	3,921.9	10.1	10.7	-140.75	180.8	-342.7	562.9	544.4	18.54	30.366		
4,100.0	4,084.9	4,041.4	4,019.1	10.4	11.0	-140.76	187.8	-353.5	582.5	563.5	19.05	30.585		
4,200.0	4,184.3	4,139.5	4,116.3	10.6	11.3	-140.78	194.7	-364.4	602.1	582.5	19.55	30.791		
4,300.0	4,283.7	4,237.5	4,213.5	10.9	11.7	-140.80	201.6	-375.2	621.7	601.6	20.06	30.987		
4,400.0	4,383.2	4,335.6	4,310.8	11.2	12.0	-140.81	208.6	-386.0	641.3	620.7	20.57	31.171		
4,500.0	4,482.6	4,433.7	4,408.0	11.5	12.3	-140.83	215.5	-396.8	660.8	639.8	21.08	31.346		
4,600.0	4,582.0	4,531.7	4,505.2	11.8	12.6	-140.84	222.4	-407.6	680.4	658.8	21.59	31.512		
4,700.0	4,681.4	4,629.8	4,602.4	12.1	12.9	-140.86	229.4	-418.4	700.0	677.9	22.10	31.670		
4,800.0	4,780.8	4,727.9	4,699.6	12.4	13.3	-140.87	236.3	-429.2	719.6	697.0	22.61	31.820		
4,900.0	4,880.3	4,825.9	4,796.9	12.7	13.6	-140.88	243.3	-440.0	739.2	716.1	23.13	31.963		

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 Harvesters Resources 15U-203
<b>Project:</b>	SEC.15-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Reference Site:</b>	Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W	<b>MD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Harvesters Resources 15U-203	<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 (6-11-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W - Harvesters Resources 15R-323 - Wellbore #										Offset Site Error:		0.0 ft	
Survey Program: 0-MWD												Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
5,000.0	4,979.7	4,924.0	4,894.1	13.0	13.9	-140.89	250.2	-450.8	758.8	735.1	23.64	32.099			
5,100.0	5,079.1	5,022.0	4,991.3	13.3	14.2	-140.90	257.1	-461.6	778.3	754.2	24.15	32.229			
5,200.0	5,178.5	5,120.1	5,088.5	13.6	14.6	-140.91	264.1	-472.4	797.9	773.3	24.66	32.354			
5,300.0	5,277.9	5,238.2	5,205.7	13.9	14.9	-140.96	271.8	-484.4	816.8	791.6	25.19	32.420			
5,400.0	5,377.3	5,369.5	5,336.6	14.2	15.2	-141.21	277.5	-493.3	832.0	806.3	25.71	32.365			
5,500.0	5,476.8	5,501.9	5,468.9	14.5	15.4	-141.67	279.9	-497.0	843.3	817.1	26.20	32.187			
5,600.0	5,576.2	5,609.2	5,576.2	14.8	15.5	-142.14	280.0	-497.2	851.9	825.3	26.65	31.963			
5,700.0	5,675.6	5,708.6	5,675.6	15.1	15.7	-142.58	280.0	-497.2	860.5	833.4	27.11	31.742			
5,716.1	5,691.7	5,724.6	5,691.7	15.1	15.7	-142.65	280.0	-497.2	861.9	834.7	27.18	31.707			
5,800.0	5,775.1	5,808.1	5,775.1	15.3	15.9	-143.04	280.0	-497.2	868.1	840.5	27.58	31.473			
5,900.0	5,875.0	5,907.9	5,875.0	15.5	16.1	-143.34	280.0	-497.2	873.0	845.0	28.01	31.172			
6,000.0	5,974.9	6,007.9	5,974.9	15.7	16.2	-143.47	280.0	-497.2	875.1	846.7	28.40	30.818			
6,025.1	6,000.0	6,033.0	6,000.0	15.7	16.3	-90.00	280.0	-497.2	875.2	846.7	28.49	30.721			
6,100.0	6,074.9	6,107.9	6,074.9	15.9	16.4	-90.00	280.0	-497.2	875.2	846.4	28.77	30.416			
6,200.0	6,174.9	6,207.9	6,174.9	16.0	16.6	-90.00	280.0	-497.2	875.2	846.0	29.17	30.002			
6,300.0	6,274.9	6,307.9	6,274.9	16.2	16.8	-90.00	280.0	-497.2	875.2	845.6	29.57	29.597			
6,363.6	6,338.5	6,371.5	6,338.5	16.3	16.9	-90.00	280.0	-497.2	875.2	845.4	29.82	29.345			
6,368.5	6,343.4	6,376.4	6,343.4	16.4	16.9	90.00	280.0	-497.2	875.2	845.3	29.84	29.327			
6,400.0	6,374.9	6,407.9	6,374.9	16.4	17.0	90.06	280.0	-497.2	875.2	845.2	29.96	29.212			
6,450.0	6,424.7	6,457.8	6,424.8	16.5	17.0	90.32	280.0	-497.2	875.2	845.1	30.12	29.060			
6,500.0	6,474.2	6,508.0	6,475.0	16.5	17.1	90.66	277.9	-497.2	875.2	845.0	30.24	28.944			
6,550.0	6,523.1	6,558.6	6,525.3	16.5	17.2	91.00	272.4	-497.2	875.3	845.0	30.32	28.869			
6,600.0	6,571.2	6,609.5	6,575.4	16.6	17.2	91.33	263.6	-497.2	875.4	845.0	30.37	28.823			
6,650.0	6,618.2	6,660.9	6,625.2	16.6	17.2	91.66	251.4	-497.2	875.5	845.2	30.40	28.802			
6,700.0	6,664.1	6,712.5	6,674.5	16.6	17.2	91.98	235.7	-497.2	875.7	845.3	30.41	28.800			
6,750.0	6,708.6	6,764.5	6,722.8	16.6	17.2	92.30	216.5	-497.2	875.9	845.5	30.40	28.809			
6,800.0	6,751.6	6,816.9	6,770.1	16.5	17.2	92.60	194.0	-497.2	876.1	845.7	30.40	28.820			
6,850.0	6,792.7	6,869.7	6,816.0	16.5	17.2	92.90	168.1	-497.1	876.3	845.9	30.40	28.824			
6,900.0	6,831.9	6,922.7	6,860.3	16.5	17.2	93.18	138.9	-497.1	876.5	846.1	30.42	28.810			
6,950.0	6,869.0	6,976.1	6,902.8	16.5	17.2	93.45	106.5	-497.1	876.7	846.3	30.48	28.767			
7,000.0	6,903.8	7,029.9	6,943.0	16.5	17.2	93.71	71.0	-497.1	877.0	846.4	30.58	28.682			
7,050.0	6,936.2	7,083.9	6,981.0	16.5	17.2	93.95	32.5	-497.1	877.2	846.5	30.73	28.546			
7,100.0	6,966.0	7,138.2	7,016.2	16.6	17.2	94.17	-8.8	-497.1	877.4	846.5	30.95	28.349			
7,150.0	6,993.2	7,192.8	7,048.6	16.6	17.2	94.37	-52.8	-497.0	877.6	846.4	31.25	28.083			
7,200.0	7,017.5	7,247.7	7,077.9	16.7	17.3	94.55	-99.1	-497.0	877.8	846.2	31.64	27.747			
7,250.0	7,039.0	7,302.7	7,103.9	16.9	17.4	94.71	-147.6	-497.0	878.0	845.9	32.12	27.334			
7,300.0	7,057.4	7,358.0	7,126.4	17.1	17.5	94.85	-198.1	-497.0	878.2	845.5	32.71	26.851			
7,350.0	7,072.8	7,413.4	7,145.3	17.4	17.8	94.97	-250.2	-497.0	878.3	844.9	33.39	26.304			
7,400.0	7,085.0	7,469.0	7,160.4	17.8	18.1	95.06	-303.7	-496.9	878.4	844.2	34.17	25.705			
7,450.0	7,094.0	7,524.7	7,171.5	18.2	18.5	95.13	-358.2	-496.9	878.5	843.4	35.05	25.063			
7,500.0	7,099.8	7,580.5	7,178.7	18.7	19.0	95.17	-413.5	-496.9	878.5	842.5	36.02	24.392			
7,550.0	7,102.3	7,636.3	7,181.8	19.2	19.5	95.19	-469.2	-496.9	878.5	841.5	37.06	23.704			
7,565.6	7,102.4	7,653.6	7,181.9	19.3	19.7	95.19	-486.6	-496.9	878.5	841.1	37.40	23.490			
7,600.0	7,102.3	7,688.1	7,181.8	19.7	20.0	95.19	-521.1	-496.8	878.5	840.4	38.14	23.034			
7,700.0	7,102.1	7,788.1	7,181.4	20.8	21.2	95.18	-621.1	-496.8	878.5	838.0	40.45	21.716			
7,800.0	7,101.8	7,888.1	7,181.0	22.1	22.4	95.17	-721.1	-496.8	878.4	835.4	42.98	20.438			
7,900.0	7,101.5	7,988.1	7,180.6	23.4	23.7	95.16	-821.1	-496.7	878.4	832.7	45.69	19.225			
8,000.0	7,101.3	8,088.1	7,180.2	24.9	25.1	95.15	-921.1	-496.7	878.3	829.8	48.55	18.091			
8,100.0	7,101.0	8,188.1	7,179.8	26.3	26.6	95.15	-1,021.1	-496.6	878.3	826.7	51.54	17.041			
8,200.0	7,100.8	8,288.1	7,179.4	27.9	28.1	95.14	-1,121.1	-496.6	878.2	823.6	54.63	16.076			

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 Harvesters Resources 15U-203
<b>Project:</b>	SEC.15-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Reference Site:</b>	Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W	<b>MD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Harvesters Resources 15U-203	<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 (6-11-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W - Harvesters Resources 15R-323 - Wellbore #										Offset Site Error:		0.0 ft
Survey Program: 0-MWD												Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,300.0	7,100.5	8,388.1	7,179.0	29.5	29.7	95.13	-1,221.1	-496.5	878.2	820.3	57.81	15.190		
8,400.0	7,100.2	8,488.1	7,178.6	31.1	31.3	95.12	-1,321.1	-496.5	878.1	817.0	61.07	14.379		
8,500.0	7,100.0	8,588.1	7,178.2	32.7	32.9	95.11	-1,421.1	-496.5	878.1	813.7	64.39	13.636		
8,600.0	7,099.7	8,688.1	7,177.8	34.4	34.6	95.10	-1,521.1	-496.4	878.0	810.3	67.77	12.956		
8,700.0	7,099.4	8,788.1	7,177.4	36.1	36.3	95.09	-1,621.1	-496.4	878.0	806.8	71.19	12.333		
8,800.0	7,099.2	8,888.1	7,177.0	37.8	38.0	95.08	-1,721.1	-496.3	877.9	803.3	74.65	11.760		
8,900.0	7,098.9	8,988.1	7,176.6	39.6	39.7	95.08	-1,821.1	-496.3	877.9	799.7	78.15	11.233		
9,000.0	7,098.7	9,088.1	7,176.2	41.3	41.5	95.07	-1,921.1	-496.2	877.8	796.1	81.68	10.748		
9,100.0	7,098.4	9,188.1	7,175.8	43.1	43.2	95.06	-2,021.1	-496.2	877.8	792.5	85.23	10.299		
9,200.0	7,098.1	9,288.1	7,175.4	44.9	45.0	95.05	-2,121.1	-496.2	877.7	788.9	88.81	9.884		
9,300.0	7,097.9	9,388.1	7,175.0	46.7	46.8	95.04	-2,221.1	-496.1	877.7	785.3	92.41	9.498		
9,400.0	7,097.6	9,488.1	7,174.6	48.5	48.6	95.03	-2,321.1	-496.1	877.6	781.6	96.02	9.140		
9,500.0	7,097.3	9,588.1	7,174.2	50.3	50.4	95.02	-2,421.1	-496.0	877.6	777.9	99.66	8.806		
9,600.0	7,097.1	9,688.1	7,173.8	52.1	52.2	95.01	-2,521.1	-496.0	877.5	774.2	103.30	8.495		
9,700.0	7,096.8	9,788.1	7,173.4	53.9	54.0	95.00	-2,621.1	-495.9	877.5	770.5	106.96	8.204		
9,800.0	7,096.6	9,888.1	7,173.0	55.8	55.9	95.00	-2,721.1	-495.9	877.4	766.8	110.64	7.931		
9,900.0	7,096.3	9,988.1	7,172.6	57.6	57.7	94.99	-2,821.1	-495.9	877.4	763.1	114.32	7.675		
10,000.0	7,096.0	10,088.1	7,172.2	59.4	59.6	94.98	-2,921.1	-495.8	877.3	759.3	118.01	7.434		
10,100.0	7,095.8	10,188.1	7,171.8	61.3	61.4	94.97	-3,021.1	-495.8	877.3	755.6	121.72	7.208		
10,200.0	7,095.5	10,288.1	7,171.4	63.2	63.3	94.96	-3,121.1	-495.7	877.2	751.8	125.43	6.994		
10,300.0	7,095.3	10,388.1	7,171.0	65.0	65.1	94.95	-3,221.1	-495.7	877.2	748.1	129.14	6.792		
10,400.0	7,095.0	10,488.1	7,170.6	66.9	67.0	94.94	-3,321.1	-495.6	877.1	744.3	132.87	6.602		
10,500.0	7,094.7	10,588.1	7,170.2	68.7	68.8	94.93	-3,421.1	-495.6	877.1	740.5	136.60	6.421		
10,600.0	7,094.5	10,688.1	7,169.8	70.6	70.7	94.92	-3,521.1	-495.6	877.1	736.7	140.34	6.250		
10,700.0	7,094.2	10,788.1	7,169.4	72.5	72.6	94.92	-3,621.1	-495.5	877.0	732.9	144.08	6.087		
10,800.0	7,093.9	10,888.1	7,168.9	74.3	74.4	94.91	-3,721.1	-495.5	877.0	729.1	147.82	5.932		
10,900.0	7,093.7	10,988.1	7,168.5	76.2	76.3	94.90	-3,821.0	-495.4	876.9	725.3	151.58	5.785		
11,000.0	7,093.4	11,088.1	7,168.1	78.1	78.2	94.89	-3,921.0	-495.4	876.9	721.5	155.33	5.645		
11,100.0	7,093.2	11,188.1	7,167.7	80.0	80.1	94.88	-4,021.0	-495.3	876.8	717.7	159.09	5.511		
11,200.0	7,092.9	11,288.1	7,167.3	81.9	81.9	94.87	-4,121.0	-495.3	876.8	713.9	162.85	5.384		
11,300.0	7,092.6	11,388.1	7,166.9	83.8	83.8	94.86	-4,221.0	-495.3	876.7	710.1	166.62	5.262		
11,400.0	7,092.4	11,488.1	7,166.5	85.6	85.7	94.85	-4,321.0	-495.2	876.7	706.3	170.39	5.145		
11,500.0	7,092.1	11,588.1	7,166.1	87.5	87.6	94.84	-4,421.0	-495.2	876.6	702.5	174.16	5.033		
11,532.1	7,092.0	11,620.2	7,166.0	88.1	88.2	94.84	-4,453.1	-495.2	876.6	701.2	175.37	4.998		
11,542.5	7,092.0	11,623.5	7,166.0	88.3	88.3	94.84	-4,456.5	-495.2	876.6	701.0	175.63	4.991 SF		

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Harvesters Resources 15U-203
<b>Project:</b>	SEC.15-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Reference Site:</b>	Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W	<b>MD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Harvesters Resources 15U-203	<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 (6-11-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W - Harvesters Resources 15R-403 - Wellbore #										Offset Site Error:		0.0 ft
Survey Program: 0-MWD												Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-90.00	0.0	-91.8	91.8					
100.0	100.0	100.0	100.0	0.1	0.1	-90.00	0.0	-91.8	91.8	91.6	0.19	480.412		
200.0	200.0	200.0	200.0	0.3	0.3	-90.00	0.0	-91.8	91.8	91.1	0.64	143.281		
300.0	300.0	300.0	300.0	0.5	0.5	-90.00	0.0	-91.8	91.8	90.7	1.09	84.196		
400.0	400.0	400.0	400.0	0.8	0.8	-90.00	0.0	-91.8	91.8	90.2	1.54	59.613		
500.0	500.0	500.0	500.0	1.0	1.0	-90.00	0.0	-91.8	91.8	89.8	1.99	46.141		
600.0	600.0	600.0	600.0	1.2	1.2	-90.00	0.0	-91.8	91.8	89.3	2.44	37.636		
700.0	700.0	700.0	700.0	1.4	1.4	-90.00	0.0	-91.8	91.8	88.9	2.89	31.778		
800.0	800.0	800.0	800.0	1.7	1.7	-90.00	0.0	-91.8	91.8	88.4	3.34	27.498	CC, ES	
900.0	900.0	897.1	897.0	1.9	1.9	-89.64	0.6	-93.3	93.4	89.6	3.77	24.747		
1,000.0	1,000.0	993.9	993.7	2.1	2.1	-88.64	2.3	-97.9	98.1	93.9	4.21	23.336		
1,100.0	1,100.0	1,090.3	1,089.8	2.3	2.3	-87.17	5.2	-105.5	106.1	101.5	4.65	22.832		
1,200.0	1,200.0	1,186.0	1,184.9	2.6	2.5	-85.45	9.2	-116.1	117.4	112.3	5.11	22.984		
1,300.0	1,300.0	1,282.6	1,280.4	2.8	2.8	-83.69	14.3	-129.4	131.7	126.1	5.59	23.556		
1,400.0	1,400.0	1,381.4	1,378.0	3.0	3.1	-82.18	19.7	-143.6	146.6	140.6	6.09	24.062		
1,500.0	1,500.0	1,480.2	1,475.6	3.2	3.4	-80.95	25.1	-157.9	161.7	155.1	6.61	24.469		
1,500.4	1,500.4	1,480.6	1,476.0	3.2	3.4	-133.58	25.2	-157.9	161.8	155.3	6.42	25.191		
1,600.0	1,599.4	1,577.6	1,571.8	3.5	3.7	-135.05	30.5	-171.9	184.2	177.3	6.85	26.869		
1,700.0	1,698.8	1,674.9	1,668.0	3.7	4.1	-136.20	35.8	-185.9	206.7	199.4	7.30	28.325		
1,800.0	1,798.3	1,772.2	1,764.2	3.9	4.4	-137.13	41.1	-199.9	229.4	221.6	7.75	29.583		
1,900.0	1,897.7	1,869.6	1,860.4	4.2	4.7	-137.89	46.4	-213.8	252.1	243.9	8.21	30.685		
2,000.0	1,997.1	1,966.9	1,956.5	4.4	5.1	-138.53	51.8	-227.8	274.8	266.1	8.68	31.652		
2,100.0	2,096.5	2,064.3	2,052.7	4.7	5.4	-139.07	57.1	-241.8	297.6	288.4	9.15	32.505		
2,200.0	2,195.9	2,161.6	2,148.9	5.0	5.7	-139.53	62.4	-255.8	320.3	310.7	9.63	33.262		
2,300.0	2,295.4	2,259.0	2,245.1	5.2	6.1	-139.93	67.7	-269.8	343.1	333.0	10.11	33.937		
2,400.0	2,394.8	2,356.3	2,341.3	5.5	6.4	-140.28	73.1	-283.8	365.9	355.3	10.59	34.542		
2,500.0	2,494.2	2,453.6	2,437.5	5.8	6.8	-140.59	78.4	-297.8	388.7	377.7	11.08	35.087		
2,600.0	2,593.6	2,551.0	2,533.6	6.0	7.1	-140.87	83.7	-311.8	411.6	400.0	11.57	35.579		
2,700.0	2,693.0	2,648.3	2,629.8	6.3	7.5	-141.11	89.0	-325.8	434.4	422.4	12.06	36.027		
2,800.0	2,792.4	2,745.7	2,726.0	6.6	7.8	-141.34	94.4	-339.8	457.3	444.7	12.55	36.434		
2,900.0	2,891.9	2,843.0	2,822.2	6.9	8.2	-141.54	99.7	-353.8	480.1	467.1	13.04	36.807		
3,000.0	2,991.3	2,940.3	2,918.4	7.2	8.5	-141.72	105.0	-367.8	503.0	489.4	13.54	37.149		
3,100.0	3,090.7	3,037.7	3,014.6	7.5	8.9	-141.89	110.3	-381.8	525.8	511.8	14.04	37.464		
3,200.0	3,190.1	3,135.0	3,110.7	7.7	9.2	-142.04	115.7	-395.8	548.7	534.1	14.53	37.755		
3,300.0	3,289.5	3,232.4	3,206.9	8.0	9.6	-142.18	121.0	-409.8	571.5	556.5	15.03	38.023		
3,400.0	3,389.0	3,329.7	3,303.1	8.3	9.9	-142.31	126.3	-423.8	594.4	578.9	15.53	38.273		
3,500.0	3,488.4	3,427.1	3,399.3	8.6	10.3	-142.43	131.7	-437.8	617.3	601.2	16.03	38.505		
3,600.0	3,587.8	3,524.4	3,495.5	8.9	10.6	-142.54	137.0	-451.8	640.2	623.6	16.53	38.721		
3,700.0	3,687.2	3,621.7	3,591.6	9.2	11.0	-142.64	142.3	-465.8	663.0	646.0	17.03	38.924		
3,800.0	3,786.6	3,719.1	3,687.8	9.5	11.3	-142.74	147.6	-479.8	685.9	668.4	17.54	39.113		
3,900.0	3,886.1	3,816.4	3,784.0	9.8	11.7	-142.83	153.0	-493.8	708.8	690.7	18.04	39.290		
4,000.0	3,985.5	3,913.8	3,880.2	10.1	12.1	-142.92	158.3	-507.8	731.7	713.1	18.54	39.457		
4,100.0	4,084.9	4,011.1	3,976.4	10.4	12.4	-143.00	163.6	-521.8	754.5	735.5	19.05	39.614		
4,200.0	4,184.3	4,108.4	4,072.6	10.6	12.8	-143.07	168.9	-535.8	777.4	757.9	19.55	39.762		
4,300.0	4,283.7	4,205.8	4,168.7	10.9	13.1	-143.14	174.3	-549.8	800.3	780.3	20.06	39.901		
4,400.0	4,383.2	4,303.1	4,264.9	11.2	13.5	-143.21	179.6	-563.8	823.2	802.6	20.56	40.033		
4,500.0	4,482.6	4,400.5	4,361.1	11.5	13.8	-143.27	184.9	-577.8	846.1	825.0	21.07	40.158		
4,600.0	4,582.0	4,497.8	4,457.3	11.8	14.2	-143.33	190.2	-591.8	869.0	847.4	21.58	40.276		
4,700.0	4,681.4	4,595.2	4,553.5	12.1	14.6	-143.39	195.6	-605.8	891.9	869.8	22.08	40.389		
4,800.0	4,780.8	4,692.5	4,649.7	12.4	14.9	-143.44	200.9	-619.8	914.7	892.2	22.59	40.496		
4,900.0	4,880.3	4,789.8	4,745.8	12.7	15.3	-143.50	206.2	-633.8	937.6	914.5	23.10	40.597		

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 Harvesters Resources 15U-203
<b>Project:</b>	SEC.15-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Reference Site:</b>	Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W	<b>MD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Harvesters Resources 15U-203	<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 (6-11-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W - Harvesters Resources 15R-403 - Wellbore #										Offset Site Error:		0.0 ft
Survey Program: 0-MWD												Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
5,000.0	4,979.7	4,887.2	4,842.0	13.0	15.6	-143.54	211.5	-647.8	960.5	936.9	23.60	40.694		
5,100.0	5,079.1	4,984.5	4,938.2	13.3	16.0	-143.59	216.9	-661.8	983.4	959.3	24.11	40.786		
5,200.0	5,178.5	5,081.9	5,034.4	13.6	16.3	-143.64	222.2	-675.8	1,006.3	981.7	24.62	40.874		
5,300.0	5,277.9	5,179.2	5,130.6	13.9	16.7	-143.68	227.5	-689.8	1,029.2	1,004.1	25.13	40.958		
5,400.0	5,377.3	5,276.5	5,226.7	14.2	17.1	-143.72	232.8	-703.8	1,052.1	1,026.5	25.64	41.038		
5,500.0	5,476.8	5,373.9	5,322.9	14.5	17.4	-143.76	238.2	-717.8	1,075.0	1,048.8	26.15	41.115		
5,600.0	5,576.2	5,471.2	5,419.1	14.8	17.8	-143.79	243.5	-731.8	1,097.9	1,071.2	26.65	41.189		
5,700.0	5,675.6	5,568.6	5,515.3	15.1	18.1	-143.83	248.8	-745.8	1,120.8	1,093.6	27.16	41.259		
5,716.1	5,691.7	5,584.3	5,530.8	15.1	18.2	-143.84	249.7	-748.1	1,124.5	1,097.2	27.25	41.270		
5,800.0	5,775.1	5,666.1	5,611.7	15.3	18.5	-144.05	254.2	-759.9	1,142.7	1,115.0	27.71	41.235		
5,900.0	5,875.0	5,764.2	5,708.6	15.5	18.8	-144.17	259.5	-774.0	1,161.9	1,133.7	28.21	41.185		
6,000.0	5,974.9	5,862.8	5,806.0	15.7	19.2	-144.17	264.9	-788.2	1,178.3	1,149.7	28.68	41.089		
6,025.1	6,000.0	5,887.6	5,830.5	15.7	19.3	-90.67	266.3	-791.7	1,182.0	1,153.2	28.79	41.058		
6,100.0	6,074.9	5,990.2	5,932.0	15.9	19.6	-90.41	271.6	-805.6	1,192.2	1,163.1	29.17	40.877		
6,200.0	6,174.9	6,153.3	6,094.3	16.0	20.0	-90.13	277.4	-820.9	1,201.6	1,171.9	29.68	40.489		
6,300.0	6,274.9	6,317.8	6,258.6	16.2	20.3	-90.01	279.9	-827.5	1,205.6	1,175.5	30.16	39.973		
6,363.6	6,338.5	6,397.7	6,338.5	16.3	20.4	-90.00	280.0	-827.8	1,205.8	1,175.4	30.42	39.633		
6,367.9	6,342.8	6,402.0	6,342.8	16.4	20.4	90.00	280.0	-827.8	1,205.8	1,175.3	30.44	39.613		
6,400.0	6,374.9	6,434.1	6,374.9	16.4	20.4	90.05	280.0	-827.8	1,205.8	1,175.2	30.55	39.466		
6,450.0	6,424.7	6,483.9	6,424.7	16.5	20.5	90.23	280.0	-827.8	1,205.8	1,175.1	30.70	39.275		
6,500.0	6,474.2	6,533.4	6,474.2	16.5	20.6	90.57	280.0	-827.8	1,205.8	1,175.0	30.83	39.116		
6,550.0	6,523.1	6,583.2	6,524.0	16.5	20.6	91.03	279.3	-827.8	1,206.0	1,175.1	30.93	38.996		
6,600.0	6,571.2	6,634.0	6,574.7	16.6	20.7	91.49	275.5	-827.8	1,206.2	1,175.2	30.99	38.920		
6,650.0	6,618.2	6,685.5	6,625.7	16.6	20.7	91.96	268.2	-827.8	1,206.5	1,175.5	31.03	38.881		
6,700.0	6,664.1	6,737.8	6,676.8	16.6	20.8	92.42	257.4	-827.8	1,206.9	1,175.8	31.05	38.872		
6,750.0	6,708.6	6,790.8	6,727.7	16.6	20.8	92.87	242.8	-827.8	1,207.3	1,176.3	31.05	38.883		
6,800.0	6,751.6	6,844.6	6,778.3	16.5	20.8	93.31	224.4	-827.8	1,207.9	1,176.8	31.05	38.905		
6,850.0	6,792.7	6,899.2	6,828.1	16.5	20.8	93.74	202.2	-827.8	1,208.4	1,177.4	31.04	38.926		
6,900.0	6,831.9	6,954.5	6,876.9	16.5	20.8	94.16	176.1	-827.7	1,209.0	1,178.0	31.06	38.932		
6,950.0	6,869.0	7,010.7	6,924.3	16.5	20.8	94.56	146.0	-827.7	1,209.7	1,178.6	31.09	38.908		
7,000.0	6,903.8	7,067.6	6,970.0	16.5	20.8	94.95	112.1	-827.7	1,210.4	1,179.2	31.16	38.838		
7,050.0	6,936.2	7,125.3	7,013.7	16.5	20.8	95.31	74.3	-827.7	1,211.0	1,179.7	31.29	38.706		
7,100.0	6,966.0	7,183.8	7,054.8	16.6	20.8	95.65	32.8	-827.7	1,211.7	1,180.2	31.48	38.497		
7,150.0	6,993.2	7,243.0	7,093.1	16.6	20.8	95.96	-12.3	-827.7	1,212.4	1,180.6	31.74	38.200		
7,200.0	7,017.5	7,302.8	7,128.2	16.7	20.8	96.25	-60.7	-827.7	1,213.0	1,180.9	32.09	37.805		
7,250.0	7,039.0	7,363.3	7,159.7	16.9	20.9	96.50	-112.3	-827.7	1,213.5	1,181.0	32.54	37.299		
7,300.0	7,057.4	7,424.3	7,187.2	17.1	21.0	96.72	-166.8	-827.6	1,214.1	1,181.0	33.09	36.690		
7,350.0	7,072.8	7,485.8	7,210.4	17.4	21.1	96.90	-223.7	-827.6	1,214.5	1,180.7	33.75	35.985		
7,400.0	7,085.0	7,547.7	7,229.1	17.8	21.3	97.05	-282.7	-827.6	1,214.8	1,180.3	34.52	35.197		
7,450.0	7,094.0	7,609.9	7,243.1	18.2	21.6	97.16	-343.3	-827.6	1,215.1	1,179.7	35.39	34.331		
7,500.0	7,099.8	7,672.1	7,252.0	18.7	21.9	97.23	-404.9	-827.6	1,215.3	1,178.9	36.36	33.419		
7,550.0	7,102.3	7,722.1	7,257.2	19.2	22.2	97.34	-454.5	-827.5	1,215.6	1,178.3	37.31	32.584		
7,565.6	7,102.4	7,737.6	7,258.9	19.3	22.4	97.39	-469.9	-827.5	1,215.8	1,178.2	37.61	32.328		
7,600.0	7,102.3	7,776.1	7,262.5	19.7	22.6	97.57	-508.3	-827.5	1,216.2	1,177.9	38.36	31.709		
7,700.0	7,102.1	7,888.5	7,266.0	20.8	23.7	97.74	-620.6	-827.5	1,216.6	1,175.9	40.73	29.871		
7,800.0	7,101.8	7,988.5	7,266.1	22.1	24.7	97.76	-720.6	-827.4	1,216.7	1,173.4	43.21	28.155		
7,900.0	7,101.5	8,088.5	7,266.2	23.4	25.9	97.78	-820.6	-827.4	1,216.7	1,170.8	45.87	26.522		
8,000.0	7,101.3	8,188.5	7,266.3	24.9	27.2	97.80	-920.6	-827.4	1,216.7	1,168.0	48.69	24.989		
8,100.0	7,101.0	8,288.5	7,266.4	26.3	28.5	97.81	-1,020.6	-827.3	1,216.7	1,165.1	51.63	23.565		
8,200.0	7,100.8	8,388.5	7,266.5	27.9	29.9	97.83	-1,120.6	-827.3	1,216.8	1,162.1	54.68	22.251		

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 Harvesters Resources 15U-203
<b>Project:</b>	SEC.15-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Reference Site:</b>	Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W	<b>MD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Harvesters Resources 15U-203	<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 (6-11-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W - Harvesters Resources 15R-403 - Wellbore #										Offset Site Error:		0.0 ft
Survey Program: 0-MWD												Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
8,300.0	7,100.5	8,488.5	7,266.6	29.5	31.4	97.85	-1,220.6	-827.3	1,216.8	1,158.9	57.82	21.043		
8,400.0	7,100.2	8,588.5	7,266.7	31.1	32.9	97.86	-1,320.6	-827.2	1,216.8	1,155.8	61.04	19.934		
8,500.0	7,100.0	8,688.5	7,266.8	32.7	34.5	97.88	-1,420.6	-827.2	1,216.8	1,152.5	64.33	18.917		
8,600.0	7,099.7	8,788.5	7,266.9	34.4	36.1	97.90	-1,520.6	-827.2	1,216.8	1,149.2	67.66	17.984		
8,700.0	7,099.4	8,888.5	7,267.0	36.1	37.7	97.92	-1,620.6	-827.1	1,216.9	1,145.8	71.05	17.127		
8,800.0	7,099.2	8,988.5	7,267.1	37.8	39.3	97.93	-1,720.6	-827.1	1,216.9	1,142.4	74.48	16.339		
8,900.0	7,098.9	9,088.5	7,267.2	39.6	41.0	97.95	-1,820.6	-827.1	1,216.9	1,139.0	77.94	15.614		
9,000.0	7,098.7	9,188.5	7,267.3	41.3	42.7	97.97	-1,920.6	-827.0	1,216.9	1,135.5	81.43	14.944		
9,100.0	7,098.4	9,288.5	7,267.5	43.1	44.4	97.99	-2,020.6	-827.0	1,217.0	1,132.0	84.95	14.325		
9,200.0	7,098.1	9,388.5	7,267.6	44.9	46.2	98.00	-2,120.6	-827.0	1,217.0	1,128.5	88.50	13.751		
9,300.0	7,097.9	9,488.5	7,267.7	46.7	47.9	98.02	-2,220.6	-826.9	1,217.0	1,124.9	92.06	13.219		
9,400.0	7,097.6	9,588.5	7,267.8	48.5	49.7	98.04	-2,320.6	-826.9	1,217.0	1,121.4	95.65	12.724		
9,500.0	7,097.3	9,688.5	7,267.9	50.3	51.4	98.05	-2,420.6	-826.9	1,217.1	1,117.8	99.25	12.263		
9,600.0	7,097.1	9,788.5	7,268.0	52.1	53.2	98.07	-2,520.6	-826.8	1,217.1	1,114.2	102.87	11.832		
9,700.0	7,096.8	9,888.5	7,268.1	53.9	55.0	98.09	-2,620.6	-826.8	1,217.1	1,110.6	106.50	11.429		
9,800.0	7,096.6	9,988.5	7,268.2	55.8	56.8	98.11	-2,720.6	-826.8	1,217.1	1,107.0	110.14	11.051		
9,900.0	7,096.3	10,088.5	7,268.3	57.6	58.6	98.12	-2,820.6	-826.7	1,217.2	1,103.4	113.79	10.697		
10,000.0	7,096.0	10,188.5	7,268.4	59.4	60.4	98.14	-2,920.6	-826.7	1,217.2	1,099.7	117.45	10.363		
10,100.0	7,095.8	10,288.5	7,268.5	61.3	62.3	98.16	-3,020.6	-826.7	1,217.2	1,096.1	121.12	10.050		
10,200.0	7,095.5	10,388.5	7,268.6	63.2	64.1	98.18	-3,120.6	-826.6	1,217.2	1,092.4	124.80	9.754		
10,300.0	7,095.3	10,488.5	7,268.7	65.0	65.9	98.19	-3,220.6	-826.6	1,217.3	1,088.8	128.49	9.474		
10,400.0	7,095.0	10,588.5	7,268.8	66.9	67.8	98.21	-3,320.6	-826.6	1,217.3	1,085.1	132.18	9.209		
10,500.0	7,094.7	10,688.5	7,268.9	68.7	69.6	98.23	-3,420.6	-826.5	1,217.3	1,081.4	135.88	8.959		
10,600.0	7,094.5	10,788.5	7,269.0	70.6	71.4	98.24	-3,520.6	-826.5	1,217.3	1,077.8	139.58	8.721		
10,700.0	7,094.2	10,888.5	7,269.1	72.5	73.3	98.26	-3,620.6	-826.5	1,217.4	1,074.1	143.29	8.496		
10,800.0	7,093.9	10,988.5	7,269.2	74.3	75.1	98.28	-3,720.6	-826.4	1,217.4	1,070.4	147.01	8.281		
10,900.0	7,093.7	11,088.5	7,269.3	76.2	77.0	98.30	-3,820.6	-826.4	1,217.4	1,066.7	150.72	8.077		
11,000.0	7,093.4	11,188.5	7,269.4	78.1	78.9	98.31	-3,920.6	-826.4	1,217.4	1,063.0	154.45	7.883		
11,100.0	7,093.2	11,288.5	7,269.5	80.0	80.7	98.33	-4,020.6	-826.3	1,217.5	1,059.3	158.17	7.697		
11,200.0	7,092.9	11,388.5	7,269.7	81.9	82.6	98.35	-4,120.6	-826.3	1,217.5	1,055.6	161.90	7.520		
11,300.0	7,092.6	11,488.5	7,269.8	83.8	84.5	98.36	-4,220.6	-826.3	1,217.5	1,051.9	165.64	7.351		
11,400.0	7,092.4	11,588.5	7,269.9	85.6	86.3	98.38	-4,320.6	-826.2	1,217.6	1,048.2	169.37	7.189		
11,500.0	7,092.1	11,688.5	7,270.0	87.5	88.2	98.40	-4,420.6	-826.2	1,217.6	1,044.5	173.11	7.034		
11,516.7	7,092.1	11,705.2	7,270.0	87.8	88.5	98.40	-4,437.3	-826.2	1,217.6	1,043.8	173.73	7.008		
11,542.5	7,092.0	11,719.8	7,270.0	88.3	88.8	98.40	-4,451.9	-826.2	1,217.6	1,043.1	174.49	6.978 SF		

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Harvesters Resources 15U-203
<b>Project:</b>	SEC.15-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Reference Site:</b>	Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W	<b>MD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Harvesters Resources 15U-203	<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 (6-11-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W - Harvesters Resources 15U-443 - Wellbore #										Offset Site Error:		0.0 ft
Survey Program: 0-MWD												Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-90.00	0.0	-30.6	30.6					
100.0	100.0	100.0	100.0	0.1	0.1	-90.00	0.0	-30.6	30.6	30.4	0.19	160.137		
200.0	200.0	200.0	200.0	0.3	0.3	-90.00	0.0	-30.6	30.6	30.0	0.64	47.760		
300.0	300.0	300.0	300.0	0.5	0.5	-90.00	0.0	-30.6	30.6	29.5	1.09	28.065		
400.0	400.0	400.0	400.0	0.8	0.8	-90.00	0.0	-30.6	30.6	29.1	1.54	19.871		
500.0	500.0	500.0	500.0	1.0	1.0	-90.00	0.0	-30.6	30.6	28.6	1.99	15.380		
600.0	600.0	600.0	600.0	1.2	1.2	-90.00	0.0	-30.6	30.6	28.2	2.44	12.545		
700.0	700.0	700.0	700.0	1.4	1.4	-90.00	0.0	-30.6	30.6	27.7	2.89	10.593		
800.0	800.0	800.0	800.0	1.7	1.7	-90.00	0.0	-30.6	30.6	27.3	3.34	9.166		
900.0	900.0	900.0	900.0	1.9	1.9	-90.00	0.0	-30.6	30.6	26.8	3.79	8.078		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-90.00	0.0	-30.6	30.6	26.4	4.24	7.221		
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.3	-90.00	0.0	-30.6	30.6	25.9	4.69	6.528		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-90.00	0.0	-30.6	30.6	25.5	5.14	5.957		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-90.00	0.0	-30.6	30.6	25.0	5.59	5.478		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-90.00	0.0	-30.6	30.6	24.6	6.03	5.070		
1,500.0	1,500.0	1,500.0	1,500.0	3.2	3.2	-90.00	0.0	-30.6	30.6	24.1	6.48	4.718 CC, ES		
1,500.4	1,500.4	1,500.4	1,500.4	3.2	3.2	-143.34	0.0	-30.6	30.6	24.1	6.47	4.730		
1,600.0	1,599.4	1,599.4	1,599.4	3.5	3.5	-152.59	0.0	-30.6	39.7	32.8	6.90	5.759		
1,700.0	1,698.8	1,698.8	1,698.8	3.7	3.7	-158.33	0.0	-30.6	49.6	42.2	7.34	6.755		
1,800.0	1,798.3	1,798.3	1,798.3	3.9	3.9	-162.14	0.0	-30.6	59.7	51.9	7.78	7.677		
1,900.0	1,897.7	1,897.7	1,897.7	4.2	4.1	-164.84	0.0	-30.6	70.0	61.8	8.22	8.521		
2,000.0	1,997.1	1,997.1	1,997.1	4.4	4.4	-166.85	0.0	-30.6	80.5	71.8	8.66	9.290		
2,100.0	2,096.5	2,097.3	2,097.2	4.7	4.6	-167.38	1.6	-30.9	90.6	81.5	9.11	9.946		
2,200.0	2,195.9	2,197.5	2,197.4	5.0	4.8	-165.85	6.7	-31.8	99.9	90.4	9.56	10.458		
2,300.0	2,295.4	2,297.5	2,297.0	5.2	5.0	-162.81	15.1	-33.4	108.8	98.7	10.01	10.863		
2,400.0	2,394.8	2,396.9	2,395.9	5.5	5.3	-159.69	24.6	-35.2	117.7	107.2	10.48	11.236		
2,500.0	2,494.2	2,496.3	2,494.9	5.8	5.5	-157.02	34.1	-36.9	127.0	116.0	10.95	11.595		
2,600.0	2,593.6	2,595.7	2,593.8	6.0	5.7	-154.71	43.6	-38.7	136.5	125.0	11.43	11.938		
2,700.0	2,693.0	2,695.2	2,692.7	6.3	6.0	-152.71	53.0	-40.4	146.2	134.2	11.92	12.261		
2,800.0	2,792.4	2,794.6	2,791.7	6.6	6.2	-150.96	62.5	-42.2	156.0	143.6	12.42	12.566		
2,900.0	2,891.9	2,894.0	2,890.6	6.9	6.5	-149.41	72.0	-44.0	166.0	153.1	12.91	12.852		
3,000.0	2,991.3	2,993.4	2,989.6	7.2	6.7	-148.04	81.5	-45.7	176.1	162.6	13.42	13.121		
3,100.0	3,090.7	3,092.8	3,088.5	7.5	7.0	-146.82	91.0	-47.5	186.2	172.3	13.93	13.372		
3,200.0	3,190.1	3,192.2	3,187.4	7.7	7.2	-145.73	100.5	-49.3	196.5	182.0	14.44	13.608		
3,300.0	3,289.5	3,291.6	3,286.4	8.0	7.5	-144.75	109.9	-51.0	206.8	191.8	14.95	13.829		
3,400.0	3,389.0	3,391.0	3,385.3	8.3	7.8	-143.85	119.4	-52.8	217.1	201.7	15.47	14.037		
3,500.0	3,488.4	3,490.4	3,484.3	8.6	8.0	-143.04	128.9	-54.5	227.5	211.5	15.99	14.232		
3,600.0	3,587.8	3,589.8	3,583.2	8.9	8.3	-142.31	138.4	-56.3	238.0	221.5	16.51	14.415		
3,700.0	3,687.2	3,689.2	3,682.1	9.2	8.5	-141.63	147.9	-58.1	248.5	231.4	17.03	14.587		
3,800.0	3,786.6	3,788.6	3,781.1	9.5	8.8	-141.01	157.4	-59.8	259.0	241.4	17.56	14.750		
3,900.0	3,886.1	3,888.0	3,880.0	9.8	9.1	-140.43	166.8	-61.6	269.5	251.4	18.08	14.903		
4,000.0	3,985.5	3,987.5	3,979.0	10.1	9.3	-139.90	176.3	-63.3	280.1	261.5	18.61	15.048		
4,100.0	4,084.9	4,086.9	4,077.9	10.4	9.6	-139.41	185.8	-65.1	290.7	271.5	19.14	15.185		
4,200.0	4,184.3	4,186.3	4,176.8	10.6	9.9	-138.95	195.3	-66.9	301.3	281.6	19.67	15.314		
4,300.0	4,283.7	4,285.7	4,275.8	10.9	10.1	-138.53	204.8	-68.6	311.9	291.7	20.20	15.437		
4,400.0	4,383.2	4,385.1	4,374.7	11.2	10.4	-138.13	214.3	-70.4	322.6	301.8	20.74	15.554		
4,500.0	4,482.6	4,484.5	4,473.6	11.5	10.7	-137.76	223.7	-72.1	333.2	311.9	21.27	15.665		
4,600.0	4,582.0	4,583.9	4,572.6	11.8	11.0	-137.41	233.2	-73.9	343.9	322.1	21.81	15.770		
4,700.0	4,681.4	4,683.3	4,671.5	12.1	11.2	-137.08	242.7	-75.7	354.6	332.2	22.34	15.871		
4,800.0	4,780.8	4,782.7	4,770.5	12.4	11.5	-136.77	252.2	-77.4	365.3	342.4	22.88	15.966		
4,900.0	4,880.3	4,882.1	4,869.4	12.7	11.8	-136.48	261.7	-79.2	376.0	352.5	23.41	16.057		

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 Harvesters Resources 15U-203
<b>Project:</b>	SEC.15-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Reference Site:</b>	Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W	<b>MD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Harvesters Resources 15U-203	<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 (6-11-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W - Harvesters Resources 15U-443 - Wellbore #										Offset Site Error:		0.0 ft
Survey Program: 0-MWD												Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,979.7	4,983.5	4,970.3	13.0	12.0	-136.26	270.9	-80.9	386.5	362.6	23.94	16.148		
5,100.0	5,079.1	5,087.3	5,073.9	13.3	12.3	-136.49	277.3	-82.1	396.2	371.8	24.40	16.237		
5,200.0	5,178.5	5,191.0	5,177.6	13.6	12.4	-137.21	279.9	-82.6	404.8	380.0	24.83	16.305		
5,300.0	5,277.9	5,291.3	5,277.9	13.9	12.6	-138.22	280.0	-82.6	412.9	387.6	25.25	16.353		
5,400.0	5,377.3	5,390.8	5,377.3	14.2	12.8	-139.20	280.0	-82.6	421.0	395.3	25.68	16.390		
5,500.0	5,476.8	5,490.2	5,476.8	14.5	13.0	-140.13	280.0	-82.6	429.2	403.1	26.12	16.430		
5,600.0	5,576.2	5,589.6	5,576.2	14.8	13.2	-141.04	280.0	-82.6	437.5	411.0	26.56	16.473		
5,700.0	5,675.6	5,689.0	5,675.6	15.1	13.4	-141.90	280.0	-82.6	446.0	419.0	27.00	16.519		
5,716.1	5,691.7	5,705.1	5,691.7	15.1	13.5	-142.04	280.0	-82.6	447.3	420.3	27.07	16.527		
5,800.0	5,775.1	5,788.6	5,775.1	15.3	13.6	-142.72	280.0	-82.6	453.5	426.1	27.43	16.532		
5,900.0	5,875.0	5,888.4	5,875.0	15.5	13.8	-143.24	280.0	-82.6	458.4	430.6	27.83	16.473		
6,000.0	5,974.9	5,988.3	5,974.9	15.7	14.0	-143.46	280.0	-82.6	460.5	432.3	28.20	16.331		
6,025.1	6,000.0	6,013.4	6,000.0	15.7	14.1	-90.00	280.0	-82.6	460.6	432.3	28.29	16.282		
6,100.0	6,074.9	6,088.3	6,074.9	15.9	14.3	-90.00	280.0	-82.6	460.6	432.0	28.58	16.115		
6,200.0	6,174.9	6,188.3	6,174.9	16.0	14.5	-90.00	280.0	-82.6	460.6	431.6	28.99	15.888		
6,300.0	6,274.9	6,288.3	6,274.9	16.2	14.7	-90.00	280.0	-82.6	460.6	431.2	29.40	15.667		
6,363.6	6,338.5	6,351.9	6,338.5	16.3	14.8	-90.00	280.0	-82.6	460.6	430.9	29.66	15.530		
6,369.3	6,344.2	6,357.6	6,344.2	16.4	14.8	90.01	280.0	-82.6	460.6	430.9	29.68	15.518		
6,400.0	6,374.9	6,388.3	6,374.9	16.4	14.9	90.11	280.0	-82.6	460.6	430.8	29.80	15.456		
6,450.0	6,424.7	6,438.1	6,424.7	16.5	15.0	90.61	280.0	-82.6	460.6	430.6	29.98	15.363		
6,500.0	6,474.2	6,487.6	6,474.2	16.5	15.1	91.49	280.0	-82.6	460.8	430.6	30.16	15.279		
6,550.0	6,523.1	6,537.4	6,524.0	16.5	15.2	92.68	279.3	-82.6	461.1	430.8	30.31	15.213		
6,600.0	6,571.2	6,588.2	6,574.6	16.6	15.2	93.90	275.5	-82.6	461.7	431.3	30.42	15.178		
6,650.0	6,618.2	6,639.7	6,625.6	16.6	15.3	95.11	268.3	-82.6	462.5	432.0	30.49	15.168		
6,700.0	6,664.1	6,692.0	6,676.7	16.6	15.3	96.30	257.4	-82.6	463.5	433.0	30.53	15.182		
6,750.0	6,708.6	6,745.0	6,727.6	16.6	15.3	97.47	242.8	-82.6	464.7	434.1	30.54	15.215		
6,800.0	6,751.6	6,798.7	6,778.2	16.5	15.3	98.61	224.4	-82.6	466.0	435.5	30.53	15.266		
6,850.0	6,792.7	6,853.3	6,828.0	16.5	15.4	99.72	202.2	-82.6	467.5	437.0	30.50	15.329		
6,900.0	6,831.9	6,908.6	6,876.8	16.5	15.4	100.78	176.1	-82.6	469.1	438.6	30.47	15.397		
6,950.0	6,869.0	6,964.8	6,924.2	16.5	15.4	101.80	146.1	-82.5	470.8	440.3	30.44	15.465		
7,000.0	6,903.8	7,021.7	6,969.9	16.5	15.4	102.76	112.2	-82.5	472.5	442.1	30.44	15.522		
7,050.0	6,936.2	7,079.4	7,013.5	16.5	15.4	103.67	74.4	-82.5	474.2	443.8	30.48	15.561		
7,100.0	6,966.0	7,137.8	7,054.7	16.6	15.5	104.51	33.0	-82.5	476.0	445.4	30.57	15.570		
7,150.0	6,993.2	7,197.0	7,093.0	16.6	15.6	105.28	-12.1	-82.5	477.6	446.9	30.73	15.542		
7,200.0	7,017.5	7,256.8	7,128.1	16.7	15.7	105.98	-60.5	-82.5	479.2	448.2	30.99	15.464		
7,250.0	7,039.0	7,317.3	7,159.5	16.9	16.0	106.60	-112.1	-82.4	480.7	449.3	31.35	15.332		
7,300.0	7,057.4	7,378.3	7,187.1	17.1	16.2	107.14	-166.5	-82.4	482.0	450.2	31.83	15.144		
7,350.0	7,072.8	7,439.8	7,210.3	17.4	16.6	107.59	-223.4	-82.4	483.1	450.7	32.43	14.897		
7,400.0	7,085.0	7,501.6	7,229.1	17.8	17.0	107.95	-282.4	-82.4	484.0	450.9	33.16	14.597		
7,450.0	7,094.0	7,563.9	7,243.0	18.2	17.5	108.22	-343.0	-82.3	484.7	450.7	34.02	14.246		
7,500.0	7,099.8	7,626.2	7,252.0	18.7	18.1	108.39	-404.6	-82.3	485.1	450.1	35.01	13.859		
7,550.0	7,102.3	7,676.1	7,257.2	19.2	18.6	108.63	-454.3	-82.3	486.0	450.0	35.97	13.511		
7,565.6	7,102.4	7,691.6	7,258.8	19.3	18.7	108.76	-469.7	-82.3	486.5	450.2	36.27	13.412		
7,600.0	7,102.3	7,730.1	7,262.5	19.7	19.2	109.18	-508.0	-82.3	487.5	450.6	36.97	13.189		
7,700.0	7,102.1	7,842.5	7,266.0	20.8	20.5	109.60	-620.4	-82.2	488.6	449.4	39.24	12.451		
7,800.0	7,101.8	7,942.5	7,266.1	22.1	21.7	109.64	-720.4	-82.2	488.7	447.0	41.66	11.732		
7,900.0	7,101.5	8,042.5	7,266.2	23.4	23.1	109.69	-820.4	-82.1	488.8	444.6	44.23	11.050		
8,000.0	7,101.3	8,142.5	7,266.3	24.9	24.5	109.73	-920.4	-82.1	488.9	441.9	46.95	10.412		
8,100.0	7,101.0	8,242.5	7,266.4	26.3	26.0	109.77	-1,020.4	-82.1	489.0	439.2	49.79	9.821		
8,200.0	7,100.8	8,342.5	7,266.5	27.9	27.6	109.81	-1,120.4	-82.0	489.1	436.3	52.72	9.276		

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 Harvesters Resources 15U-203
<b>Project:</b>	SEC.15-T6N-R66W	<b>TVD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Reference Site:</b>	Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W	<b>MD Reference:</b>	WELL @ 4830.0ft (RKB - 15')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Harvesters Resources 15U-203	<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 (6-11-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design											Harvesters Resources 15UR-HZ Pad Sec.15-T6N-R66W - Harvesters Resources 15U-443 - Wellbore #			Offset Site Error:		0.0 ft
Survey Program: 0-MWD														Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor				
8,300.0	7,100.5	8,442.5	7,266.6	29.5	29.2	109.85	-1,220.4	-82.0	489.2	433.4	55.74	8.775				
8,400.0	7,100.2	8,542.5	7,266.7	31.1	30.8	109.89	-1,320.4	-81.9	489.3	430.4	58.83	8.316				
8,500.0	7,100.0	8,642.5	7,266.8	32.7	32.5	109.94	-1,420.4	-81.9	489.3	427.4	61.98	7.896				
8,600.0	7,099.7	8,742.5	7,266.9	34.4	34.2	109.98	-1,520.4	-81.9	489.4	424.3	65.17	7.510				
8,700.0	7,099.4	8,842.5	7,267.0	36.1	35.9	110.02	-1,620.4	-81.8	489.5	421.1	68.41	7.156				
8,800.0	7,099.2	8,942.5	7,267.1	37.8	37.6	110.06	-1,720.4	-81.8	489.6	417.9	71.69	6.830				
8,900.0	7,098.9	9,042.5	7,267.2	39.6	39.4	110.10	-1,820.4	-81.7	489.7	414.7	75.00	6.530				
9,000.0	7,098.7	9,142.5	7,267.3	41.3	41.1	110.14	-1,920.4	-81.7	489.8	411.5	78.33	6.253				
9,100.0	7,098.4	9,242.5	7,267.4	43.1	42.9	110.19	-2,020.4	-81.7	489.9	408.2	81.69	5.997				
9,200.0	7,098.1	9,342.5	7,267.6	44.9	44.7	110.23	-2,120.4	-81.6	490.0	404.9	85.07	5.760				
9,300.0	7,097.9	9,442.5	7,267.7	46.7	46.5	110.27	-2,220.4	-81.6	490.1	401.6	88.47	5.540				
9,400.0	7,097.6	9,542.5	7,267.8	48.5	48.3	110.31	-2,320.4	-81.5	490.2	398.3	91.89	5.335				
9,500.0	7,097.3	9,642.5	7,267.9	50.3	50.1	110.35	-2,420.4	-81.5	490.3	395.0	95.31	5.144				
9,600.0	7,097.1	9,742.5	7,268.0	52.1	52.0	110.39	-2,520.4	-81.5	490.4	391.6	98.75	4.966				
9,700.0	7,096.8	9,842.5	7,268.1	53.9	53.8	110.44	-2,620.4	-81.4	490.5	388.3	102.21	4.799				
9,800.0	7,096.6	9,942.5	7,268.2	55.8	55.6	110.48	-2,720.4	-81.4	490.6	384.9	105.67	4.643				
9,900.0	7,096.3	10,042.5	7,268.3	57.6	57.5	110.52	-2,820.4	-81.3	490.7	381.5	109.14	4.496				
10,000.0	7,096.0	10,142.5	7,268.4	59.4	59.3	110.56	-2,920.4	-81.3	490.8	378.2	112.62	4.358				
10,100.0	7,095.8	10,242.5	7,268.5	61.3	61.2	110.60	-3,020.4	-81.3	490.9	374.8	116.10	4.228				
10,200.0	7,095.5	10,342.5	7,268.6	63.2	63.0	110.64	-3,120.4	-81.2	491.0	371.4	119.59	4.105				
10,300.0	7,095.3	10,442.5	7,268.7	65.0	64.9	110.68	-3,220.4	-81.2	491.1	368.0	123.09	3.990				
10,400.0	7,095.0	10,542.5	7,268.8	66.9	66.8	110.73	-3,320.4	-81.1	491.2	364.6	126.59	3.880				
10,500.0	7,094.7	10,642.5	7,268.9	68.7	68.6	110.77	-3,420.4	-81.1	491.3	361.2	130.09	3.776				
10,600.0	7,094.5	10,742.5	7,269.0	70.6	70.5	110.81	-3,520.4	-81.0	491.4	357.8	133.60	3.678				
10,700.0	7,094.2	10,842.5	7,269.1	72.5	72.4	110.85	-3,620.4	-81.0	491.5	354.3	137.12	3.584				
10,800.0	7,093.9	10,942.5	7,269.2	74.3	74.3	110.89	-3,720.4	-81.0	491.6	350.9	140.63	3.495				
10,900.0	7,093.7	11,042.5	7,269.3	76.2	76.2	110.93	-3,820.4	-80.9	491.7	347.5	144.15	3.411				
11,000.0	7,093.4	11,142.5	7,269.4	78.1	78.0	110.97	-3,920.4	-80.9	491.8	344.1	147.67	3.330				
11,100.0	7,093.2	11,242.5	7,269.5	80.0	79.9	111.01	-4,020.4	-80.8	491.9	340.7	151.19	3.253				
11,200.0	7,092.9	11,342.5	7,269.6	81.9	81.8	111.06	-4,120.4	-80.8	492.0	337.2	154.72	3.180				
11,300.0	7,092.6	11,442.5	7,269.7	83.8	83.7	111.10	-4,220.4	-80.8	492.1	333.8	158.24	3.110				
11,400.0	7,092.4	11,542.5	7,269.9	85.6	85.6	111.14	-4,320.4	-80.7	492.2	330.4	161.77	3.042				
11,500.0	7,092.1	11,642.5	7,270.0	87.5	87.5	111.18	-4,420.4	-80.7	492.3	327.0	165.30	2.978				
11,517.6	7,092.1	11,660.1	7,270.0	87.9	87.8	111.19	-4,437.9	-80.7	492.3	326.4	165.92	2.967				
11,542.5	7,092.0	11,681.4	7,270.0	88.3	88.2	111.20	-4,459.2	-80.7	492.3	325.6	166.73	2.953 SF				

Reference Depths are relative to WELL @ 4830.0ft (RKB - 15')	Coordinates are relative to: Harvesters Resources 15U-203
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: 0.48°



Coordinates are relative to: Harvesters Resources 15U-203  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.48°

