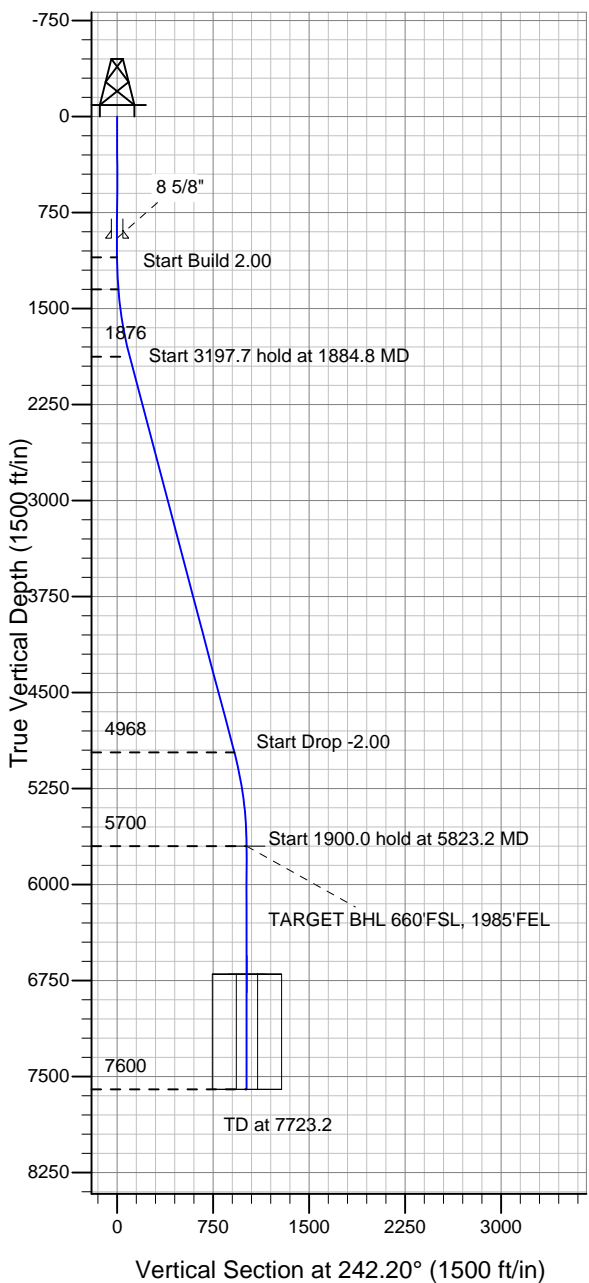


# ENSIGN

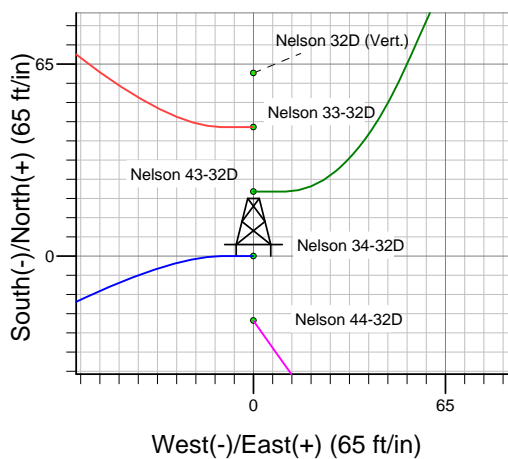
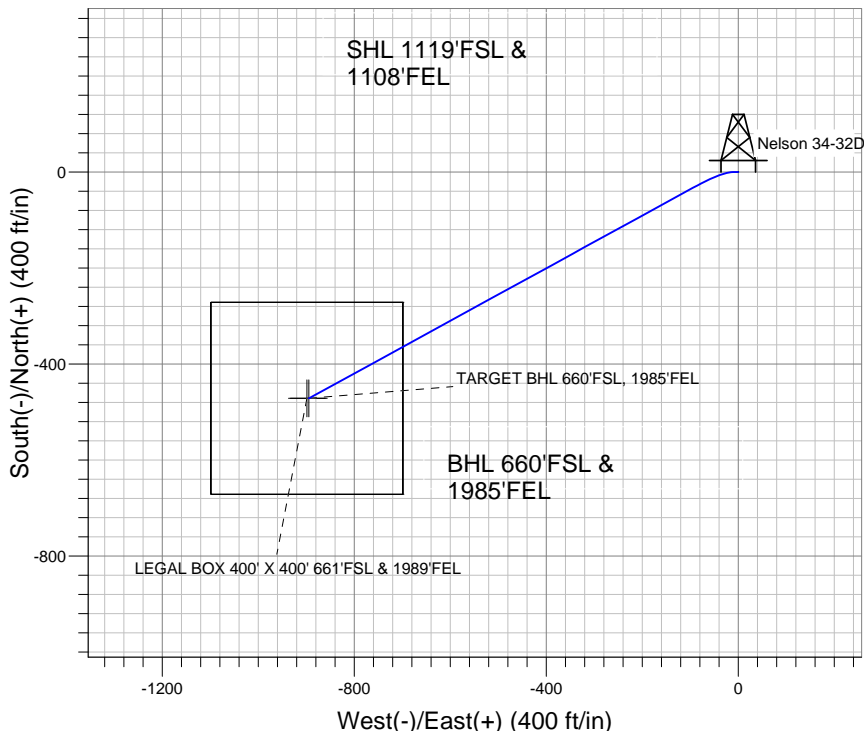
## Directional

### Well Name: Nelson 34-32D

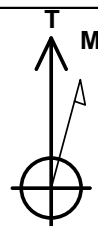
Surface Location: Nelson 33-32D Pad Sec.32-T7N-R66W  
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone  
 Ground Elevation: 4860.0  
 +N/-S +E/-W Northing Easting Latitude Longitude Slot  
 0.0 0.0 1435548.43 3195174.16 40° 31' 36.696 N 104° 47' 52.440 W  
 Original Well Elev WELL @ 4873.0ft (Original Well Elev)



### PETROLEUM DEVELOPMENT CORP Weld County CO



Nelson 33-32D Pad Sec.32-T7N-R66W  
 Nelson 34-32D  
 Plan #2 (1-31-11)  
 17:21, February 04 2011



Azimuths to True North  
 Magnetic North: 8.95°

Magnetic Field  
 Strength: 53237.1nT  
 Dip Angle: 67.16°  
 Date: 1/17/2011  
 Model: IGRF2010

### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 660'FSL, 1985'FEL	5700.0	-471.8	-894.8	40° 31' 32.034 N	104° 48' 4.027 W	Point
LEGAL BOX 400' X 400' 661'FSL & 1989'FEL	6700.0	-471.8	-898.8	40° 31' 32.034 N	104° 48' 4.079 W	Rectangle (Sides: L400.0 W400.0)

### 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	1100.0	0.00	0.00	1100.0	0.0	0.0	0.00	0.00	0.0	
3	1350.0	5.00	270.00	1349.7	0.0	-10.9	2.00	270.00	9.6	
4	1884.8	14.81	241.27	1876.1	-33.0	-94.4	2.00	-41.47	98.9	
5	5082.5	14.81	241.27	4967.5	-426.0	-811.3	0.00	0.00	916.3	
6	5823.2	0.00	0.00	5700.0	-471.8	-894.8	2.00	180.00	1011.5	TARGET BHL 660'FSL, 1985'FEL
7	7723.2	0.00	0.00	7600.0	-471.8	-894.8	0.00	0.00	1011.5	



# **PETROLEUM DEVELOPMENT CORP Weld County CO**

**SEC.32-T7N-R66W**

**Nelson 33-32D Pad Sec.32-T7N-R66W**

**Nelson 34-32D**

**Wellbore #1**

**Plan: Plan #2 (1-31-11)**

## **Standard Planning Report**

**04 February, 2011**

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Nelson 34-32D
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4873.0ft (Original Well Elev)
<b>Project:</b>	SEC.32-T7N-R66W	<b>MD Reference:</b>	WELL @ 4873.0ft (Original Well Elev)
<b>Site:</b>	Nelson 33-32D Pad Sec.32-T7N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Nelson 34-32D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #2 (1-31-11)		

<b>Project</b>	SEC.32-T7N-R66W, Weld County, Colorado		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

<b>Site</b>	Nelson 33-32D Pad Sec.32-T7N-R66W		
<b>Site Position:</b>		<b>Northing:</b>	1,435,592.16 ft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,195,173.82 ft
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	"
		<b>Latitude:</b>	40° 31' 37.128 N
		<b>Longitude:</b>	104° 47' 52.440 W
		<b>Grid Convergence:</b>	0.45 °

<b>Well</b>	Nelson 34-32D		
<b>Well Position</b>	<b>+N/-S</b>	-43.7 ft	<b>Northing:</b>
	<b>+E/-W</b>	0.0 ft	<b>Easting:</b>
<b>Position Uncertainty</b>		0.0 ft	<b>Wellhead Elevation:</b>
			ft
			<b>Latitude:</b>
			40° 31' 36.696 N
			<b>Longitude:</b>
			104° 47' 52.440 W
			<b>Ground Level:</b>
			4,860.0 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	1/17/2011	8.95	67.16	53,237

<b>Design</b>	Plan #2 (1-31-11)			
<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	242.20

<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	
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,350.0	5.00	270.00	1,349.7	0.0	-10.9	2.00	2.00	0.00	270.00	
1,884.8	14.81	241.27	1,876.1	-33.0	-94.4	2.00	1.83	-5.37	-41.47	
5,082.5	14.81	241.27	4,967.5	-426.0	-811.3	0.00	0.00	0.00	0.00	
5,823.2	0.00	0.00	5,700.0	-471.8	-894.8	2.00	-2.00	0.00	180.00	TARGET BHL 660'I
7,723.2	0.00	0.00	7,600.0	-471.8	-894.8	0.00	0.00	0.00	0.00	

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Nelson 34-32D
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4873.0ft (Original Well Elev)
<b>Project:</b>	SEC.32-T7N-R66W	<b>MD Reference:</b>	WELL @ 4873.0ft (Original Well Elev)
<b>Site:</b>	Nelson 33-32D Pad Sec.32-T7N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Nelson 34-32D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #2 (1-31-11)		

#### 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
950.0	0.00	0.00	950.0	0.0	0.0	0.0	0.00	0.00	0.00
8 5/8"									
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
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,120.0	0.40	270.00	1,120.0	0.0	-0.1	0.1	2.00	2.00	0.00
1,160.0	1.20	270.00	1,160.0	0.0	-0.6	0.6	2.00	2.00	0.00
1,200.0	2.00	270.00	1,200.0	0.0	-1.7	1.5	2.00	2.00	0.00
1,240.0	2.80	270.00	1,239.9	0.0	-3.4	3.0	2.00	2.00	0.00
1,280.0	3.60	270.00	1,279.9	0.0	-5.7	5.0	2.00	2.00	0.00
1,320.0	4.40	270.00	1,319.8	0.0	-8.4	7.5	2.00	2.00	0.00
1,350.0	5.00	270.00	1,349.7	0.0	-10.9	9.6	2.00	2.00	0.00
1,360.0	5.15	268.52	1,359.6	0.0	-11.8	10.4	2.00	1.52	-14.75
1,400.0	5.79	263.42	1,399.5	-0.3	-15.6	13.9	2.00	1.59	-12.77
1,440.0	6.46	259.34	1,439.2	-0.9	-19.8	18.0	2.00	1.68	-10.18
1,480.0	7.16	256.05	1,479.0	-2.0	-24.4	22.5	2.00	1.75	-8.24
1,520.0	7.88	253.34	1,518.6	-3.3	-29.5	27.6	2.00	1.79	-6.76
1,560.0	8.61	251.09	1,558.2	-5.1	-34.9	33.3	2.00	1.83	-5.63
1,600.0	9.35	249.19	1,597.7	-7.2	-40.8	39.5	2.00	1.86	-4.75
1,640.0	10.10	247.57	1,637.1	-9.7	-47.1	46.2	2.00	1.88	-4.05
1,680.0	10.86	246.18	1,676.5	-12.6	-53.8	53.4	2.00	1.90	-3.49
1,720.0	11.63	244.96	1,715.7	-15.8	-60.9	61.2	2.00	1.91	-3.04
1,760.0	12.39	243.89	1,754.8	-19.4	-68.4	69.5	2.00	1.92	-2.67
1,800.0	13.17	242.95	1,793.8	-23.4	-76.3	78.4	2.00	1.93	-2.36
1,840.0	13.94	242.11	1,832.7	-27.7	-84.6	87.7	2.00	1.94	-2.10
1,880.0	14.72	241.35	1,871.5	-32.4	-93.3	97.6	2.00	1.94	-1.89
1,884.8	14.81	241.27	1,876.1	-33.0	-94.4	98.9	2.00	1.95	-1.78

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Nelson 34-32D
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4873.0ft (Original Well Elev)
<b>Project:</b>	SEC.32-T7N-R66W	<b>MD Reference:</b>	WELL @ 4873.0ft (Original Well Elev)
<b>Site:</b>	Nelson 33-32D Pad Sec.32-T7N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Nelson 34-32D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #2 (1-31-11)		

## 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)
1,920.0	14.81	241.27	1,910.1	-37.3	-102.3	107.9	0.00	0.00	0.00
1,960.0	14.81	241.27	1,948.8	-42.2	-111.3	118.1	0.00	0.00	0.00
2,000.0	14.81	241.27	1,987.5	-47.1	-120.2	128.3	0.00	0.00	0.00
2,040.0	14.81	241.27	2,026.1	-52.0	-129.2	138.5	0.00	0.00	0.00
2,080.0	14.81	241.27	2,064.8	-57.0	-138.2	148.8	0.00	0.00	0.00
2,120.0	14.81	241.27	2,103.5	-61.9	-147.1	159.0	0.00	0.00	0.00
2,160.0	14.81	241.27	2,142.2	-66.8	-156.1	169.2	0.00	0.00	0.00
2,200.0	14.81	241.27	2,180.8	-71.7	-165.1	179.5	0.00	0.00	0.00
2,240.0	14.81	241.27	2,219.5	-76.6	-174.0	189.7	0.00	0.00	0.00
2,280.0	14.81	241.27	2,258.2	-81.5	-183.0	199.9	0.00	0.00	0.00
2,320.0	14.81	241.27	2,296.8	-86.5	-192.0	210.1	0.00	0.00	0.00
2,360.0	14.81	241.27	2,335.5	-91.4	-200.9	220.4	0.00	0.00	0.00
2,400.0	14.81	241.27	2,374.2	-96.3	-209.9	230.6	0.00	0.00	0.00
2,440.0	14.81	241.27	2,412.9	-101.2	-218.9	240.8	0.00	0.00	0.00
2,480.0	14.81	241.27	2,451.5	-106.1	-227.8	251.0	0.00	0.00	0.00
2,520.0	14.81	241.27	2,490.2	-111.0	-236.8	261.3	0.00	0.00	0.00
2,560.0	14.81	241.27	2,528.9	-116.0	-245.8	271.5	0.00	0.00	0.00
2,600.0	14.81	241.27	2,567.5	-120.9	-254.7	281.7	0.00	0.00	0.00
2,640.0	14.81	241.27	2,606.2	-125.8	-263.7	291.9	0.00	0.00	0.00
2,680.0	14.81	241.27	2,644.9	-130.7	-272.7	302.2	0.00	0.00	0.00
2,720.0	14.81	241.27	2,683.5	-135.6	-281.6	312.4	0.00	0.00	0.00
2,760.0	14.81	241.27	2,722.2	-140.5	-290.6	322.6	0.00	0.00	0.00
2,800.0	14.81	241.27	2,760.9	-145.5	-299.6	332.8	0.00	0.00	0.00
2,840.0	14.81	241.27	2,799.6	-150.4	-308.5	343.1	0.00	0.00	0.00
2,880.0	14.81	241.27	2,838.2	-155.3	-317.5	353.3	0.00	0.00	0.00
2,920.0	14.81	241.27	2,876.9	-160.2	-326.5	363.5	0.00	0.00	0.00
2,960.0	14.81	241.27	2,915.6	-165.1	-335.4	373.7	0.00	0.00	0.00
3,000.0	14.81	241.27	2,954.2	-170.0	-344.4	384.0	0.00	0.00	0.00
3,040.0	14.81	241.27	2,992.9	-175.0	-353.4	394.2	0.00	0.00	0.00
3,080.0	14.81	241.27	3,031.6	-179.9	-362.3	404.4	0.00	0.00	0.00
3,120.0	14.81	241.27	3,070.3	-184.8	-371.3	414.6	0.00	0.00	0.00
3,160.0	14.81	241.27	3,108.9	-189.7	-380.3	424.9	0.00	0.00	0.00
3,200.0	14.81	241.27	3,147.6	-194.6	-389.2	435.1	0.00	0.00	0.00
3,240.0	14.81	241.27	3,186.3	-199.5	-398.2	445.3	0.00	0.00	0.00
3,280.0	14.81	241.27	3,224.9	-204.5	-407.2	455.5	0.00	0.00	0.00
3,320.0	14.81	241.27	3,263.6	-209.4	-416.2	465.8	0.00	0.00	0.00
3,360.0	14.81	241.27	3,302.3	-214.3	-425.1	476.0	0.00	0.00	0.00
3,400.0	14.81	241.27	3,340.9	-219.2	-434.1	486.2	0.00	0.00	0.00
3,440.0	14.81	241.27	3,379.6	-224.1	-443.1	496.4	0.00	0.00	0.00
3,480.0	14.81	241.27	3,418.3	-229.0	-452.0	506.7	0.00	0.00	0.00
3,520.0	14.81	241.27	3,457.0	-234.0	-461.0	516.9	0.00	0.00	0.00
3,560.0	14.81	241.27	3,495.6	-238.9	-470.0	527.1	0.00	0.00	0.00
3,600.0	14.81	241.27	3,534.3	-243.8	-478.9	537.3	0.00	0.00	0.00
3,640.0	14.81	241.27	3,573.0	-248.7	-487.9	547.6	0.00	0.00	0.00
3,680.0	14.81	241.27	3,611.6	-253.6	-496.9	557.8	0.00	0.00	0.00
3,720.0	14.81	241.27	3,650.3	-258.5	-505.8	568.0	0.00	0.00	0.00
3,760.0	14.81	241.27	3,689.0	-263.5	-514.8	578.3	0.00	0.00	0.00
3,800.0	14.81	241.27	3,727.7	-268.4	-523.8	588.5	0.00	0.00	0.00
3,840.0	14.81	241.27	3,766.3	-273.3	-532.7	598.7	0.00	0.00	0.00
3,880.0	14.81	241.27	3,805.0	-278.2	-541.7	608.9	0.00	0.00	0.00
3,920.0	14.81	241.27	3,843.7	-283.1	-550.7	619.2	0.00	0.00	0.00
3,960.0	14.81	241.27	3,882.3	-288.0	-559.6	629.4	0.00	0.00	0.00
4,000.0	14.81	241.27	3,921.0	-293.0	-568.6	639.6	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Nelson 34-32D
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4873.0ft (Original Well Elev)
<b>Project:</b>	SEC.32-T7N-R66W	<b>MD Reference:</b>	WELL @ 4873.0ft (Original Well Elev)
<b>Site:</b>	Nelson 33-32D Pad Sec.32-T7N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Nelson 34-32D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #2 (1-31-11)		

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	14.81	241.27	3,959.7	-297.9	-577.6	649.8	0.00	0.00	0.00
4,080.0	14.81	241.27	3,998.3	-302.8	-586.5	660.1	0.00	0.00	0.00
4,120.0	14.81	241.27	4,037.0	-307.7	-595.5	670.3	0.00	0.00	0.00
4,160.0	14.81	241.27	4,075.7	-312.6	-604.5	680.5	0.00	0.00	0.00
4,200.0	14.81	241.27	4,114.4	-317.5	-613.4	690.7	0.00	0.00	0.00
4,240.0	14.81	241.27	4,153.0	-322.5	-622.4	701.0	0.00	0.00	0.00
4,280.0	14.81	241.27	4,191.7	-327.4	-631.4	711.2	0.00	0.00	0.00
4,320.0	14.81	241.27	4,230.4	-332.3	-640.3	721.4	0.00	0.00	0.00
4,360.0	14.81	241.27	4,269.0	-337.2	-649.3	731.6	0.00	0.00	0.00
4,400.0	14.81	241.27	4,307.7	-342.1	-658.3	741.9	0.00	0.00	0.00
4,440.0	14.81	241.27	4,346.4	-347.0	-667.2	752.1	0.00	0.00	0.00
4,480.0	14.81	241.27	4,385.1	-352.0	-676.2	762.3	0.00	0.00	0.00
4,520.0	14.81	241.27	4,423.7	-356.9	-685.2	772.5	0.00	0.00	0.00
4,560.0	14.81	241.27	4,462.4	-361.8	-694.1	782.8	0.00	0.00	0.00
4,600.0	14.81	241.27	4,501.1	-366.7	-703.1	793.0	0.00	0.00	0.00
4,640.0	14.81	241.27	4,539.7	-371.6	-712.1	803.2	0.00	0.00	0.00
4,680.0	14.81	241.27	4,578.4	-376.5	-721.1	813.4	0.00	0.00	0.00
4,720.0	14.81	241.27	4,617.1	-381.5	-730.0	823.7	0.00	0.00	0.00
4,760.0	14.81	241.27	4,655.7	-386.4	-739.0	833.9	0.00	0.00	0.00
4,800.0	14.81	241.27	4,694.4	-391.3	-748.0	844.1	0.00	0.00	0.00
4,840.0	14.81	241.27	4,733.1	-396.2	-756.9	854.3	0.00	0.00	0.00
4,880.0	14.81	241.27	4,771.8	-401.1	-765.9	864.6	0.00	0.00	0.00
4,920.0	14.81	241.27	4,810.4	-406.0	-774.9	874.8	0.00	0.00	0.00
4,960.0	14.81	241.27	4,849.1	-411.0	-783.8	885.0	0.00	0.00	0.00
5,000.0	14.81	241.27	4,887.8	-415.9	-792.8	895.2	0.00	0.00	0.00
5,040.0	14.81	241.27	4,926.4	-420.8	-801.8	905.5	0.00	0.00	0.00
5,080.0	14.81	241.27	4,965.1	-425.7	-810.7	915.7	0.00	0.00	0.00
5,082.5	14.81	241.27	4,967.5	-426.0	-811.3	916.3	0.00	0.00	0.00
5,120.0	14.06	241.27	5,003.8	-430.5	-819.5	925.7	2.00	-2.00	0.00
5,160.0	13.26	241.27	5,042.7	-435.1	-827.8	935.1	2.00	-2.00	0.00
5,200.0	12.46	241.27	5,081.7	-439.3	-835.6	944.0	2.00	-2.00	0.00
5,240.0	11.66	241.27	5,120.8	-443.4	-842.9	952.4	2.00	-2.00	0.00
5,280.0	10.86	241.27	5,160.0	-447.1	-849.8	960.2	2.00	-2.00	0.00
5,320.0	10.06	241.27	5,199.4	-450.6	-856.1	967.5	2.00	-2.00	0.00
5,360.0	9.26	241.27	5,238.8	-453.8	-862.0	974.2	2.00	-2.00	0.00
5,400.0	8.46	241.27	5,278.3	-456.8	-867.4	980.4	2.00	-2.00	0.00
5,440.0	7.66	241.27	5,317.9	-459.5	-872.3	986.0	2.00	-2.00	0.00
5,480.0	6.86	241.27	5,357.6	-461.9	-876.8	991.0	2.00	-2.00	0.00
5,520.0	6.06	241.27	5,397.4	-464.1	-880.7	995.5	2.00	-2.00	0.00
5,560.0	5.26	241.27	5,437.2	-466.0	-884.2	999.5	2.00	-2.00	0.00
5,600.0	4.46	241.27	5,477.0	-467.6	-887.2	1,002.9	2.00	-2.00	0.00
5,640.0	3.66	241.27	5,516.9	-469.0	-889.6	1,005.7	2.00	-2.00	0.00
5,680.0	2.86	241.27	5,556.9	-470.1	-891.6	1,008.0	2.00	-2.00	0.00
5,720.0	2.06	241.27	5,596.8	-470.9	-893.2	1,009.7	2.00	-2.00	0.00
5,760.0	1.26	241.27	5,636.8	-471.5	-894.2	1,010.9	2.00	-2.00	0.00
5,800.0	0.46	241.27	5,676.8	-471.8	-894.7	1,011.5	2.00	-2.00	0.00
5,823.2	0.00	0.00	5,700.0	-471.8	-894.8	1,011.5	2.00	-2.00	0.00
TARGET BHL 660'FSL, 1985'FEL									
5,840.0	0.00	0.00	5,716.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
5,880.0	0.00	0.00	5,756.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
5,920.0	0.00	0.00	5,796.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
5,960.0	0.00	0.00	5,836.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
6,000.0	0.00	0.00	5,876.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Nelson 34-32D
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4873.0ft (Original Well Elev)
<b>Project:</b>	SEC.32-T7N-R66W	<b>MD Reference:</b>	WELL @ 4873.0ft (Original Well Elev)
<b>Site:</b>	Nelson 33-32D Pad Sec.32-T7N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Nelson 34-32D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #2 (1-31-11)		

### 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	5,916.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
6,080.0	0.00	0.00	5,956.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
6,120.0	0.00	0.00	5,996.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
6,160.0	0.00	0.00	6,036.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
6,200.0	0.00	0.00	6,076.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
6,240.0	0.00	0.00	6,116.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
6,280.0	0.00	0.00	6,156.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
6,320.0	0.00	0.00	6,196.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
6,360.0	0.00	0.00	6,236.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
6,400.0	0.00	0.00	6,276.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
6,440.0	0.00	0.00	6,316.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
6,480.0	0.00	0.00	6,356.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
6,520.0	0.00	0.00	6,396.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
6,560.0	0.00	0.00	6,436.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
6,600.0	0.00	0.00	6,476.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
6,640.0	0.00	0.00	6,516.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
6,680.0	0.00	0.00	6,556.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
6,720.0	0.00	0.00	6,596.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
6,760.0	0.00	0.00	6,636.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
6,800.0	0.00	0.00	6,676.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
6,823.2	0.00	0.00	6,700.0	-471.8	-894.8	1,011.5	0.00	0.00	0.00
<b>LEGAL BOX 400' X 400' 661'FSL &amp; 1989'FEL</b>									
6,840.0	0.00	0.00	6,716.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
6,880.0	0.00	0.00	6,756.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
6,920.0	0.00	0.00	6,796.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
6,960.0	0.00	0.00	6,836.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
7,000.0	0.00	0.00	6,876.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
7,040.0	0.00	0.00	6,916.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
7,080.0	0.00	0.00	6,956.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
7,120.0	0.00	0.00	6,996.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
7,160.0	0.00	0.00	7,036.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
7,200.0	0.00	0.00	7,076.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
7,240.0	0.00	0.00	7,116.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
7,280.0	0.00	0.00	7,156.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
7,320.0	0.00	0.00	7,196.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
7,360.0	0.00	0.00	7,236.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
7,400.0	0.00	0.00	7,276.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
7,440.0	0.00	0.00	7,316.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
7,480.0	0.00	0.00	7,356.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
7,520.0	0.00	0.00	7,396.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
7,560.0	0.00	0.00	7,436.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
7,600.0	0.00	0.00	7,476.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
7,640.0	0.00	0.00	7,516.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
7,680.0	0.00	0.00	7,556.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
7,720.0	0.00	0.00	7,596.8	-471.8	-894.8	1,011.5	0.00	0.00	0.00
7,723.2	0.00	0.00	7,600.0	-471.8	-894.8	1,011.5	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Nelson 34-32D
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4873.0ft (Original Well Elev)
<b>Project:</b>	SEC.32-T7N-R66W	<b>MD Reference:</b>	WELL @ 4873.0ft (Original Well Elev)
<b>Site:</b>	Nelson 33-32D Pad Sec.32-T7N-R66W	<b>North Reference:</b>	True
<b>Well:</b>	Nelson 34-32D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #2 (1-31-11)		

Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
TARGET BHL 660'FS	0.00	0.00	5,700.0	-471.8	-894.8	1,435,069.58	3,194,283.17	40° 31' 32.034 N	104° 48' 4.027 W
- plan hits target center									
- Point									
LEGAL BOX 400' X 400'	0.00	0.00	6,700.0	-471.8	-898.8	1,435,069.55	3,194,279.16	40° 31' 32.034 N	104° 48' 4.079 W
- plan misses target center by 4.0ft at 6823.2ft MD (6700.0 TVD, -471.8 N, -894.8 E)									
- Rectangle (sides W400.0 H400.0 D900.0)									

Casing Points					
Measured Depth	Vertical Depth	Name		Casing Diameter	Hole Diameter
(ft)	(ft)			(")	(")
950.0	950.0	8 5/8"		8-5/8	12-1/4





## **Directional**

# **PETROLEUM DEVELOPMENT CORP Weld County CO**

**SEC.32-T7N-R66W**

**Nelson 33-32D Pad Sec.32-T7N-R66W**

**Nelson 34-32D**

**Wellbore #1**

**Plan #2 (1-31-11)**

## **Anticollision Report**

**04 February, 2011**



<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Nelson 34-32D
<b>Project:</b>	SEC.32-T7N-R66W	<b>TVD Reference:</b>	WELL @ 4873.0ft (Original Well Elev)
<b>Reference Site:</b>	Nelson 33-32D Pad Sec.32-T7N-R66W	<b>MD Reference:</b>	WELL @ 4873.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Nelson 34-32D	<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 #2 (1-31-11)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Plan #2 (1-31-11)
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria
<b>Interpolation Method:</b>	Stations
<b>Depth Range:</b>	Unlimited
<b>Results Limited by:</b>	Maximum center-center distance of 10,000.0ft
<b>Warning Levels Evaluated at:</b>	2.00 Sigma
<b>Error Model:</b>	ISCWSA
<b>Scan Method:</b>	Closest Approach 3D
<b>Error Surface:</b>	Elliptical Conic

Survey Tool Program		Date	2/4/2011		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	7,723.2	Plan #2 (1-31-11) (Wellbore #1)	MWD	MWD - Standard	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Nelson 33-32D Pad Sec.32-T7N-R66W						
Nelson 43-32D - Wellbore #1 - Plan #2 (1-31-11)	200.0	200.0	21.9	21.2	32.412	CC
Nelson 43-32D - Wellbore #1 - Plan #2 (1-31-11)	300.0	300.0	21.9	20.8	19.669	ES
Nelson 43-32D - Wellbore #1 - Plan #2 (1-31-11)	500.0	498.8	27.0	25.0	13.381	SF
Nelson 44-32D - Wellbore #1 - Plan #2 (1-31-11)	1,100.0	1,100.0	21.9	17.1	4.631	CC
Nelson 44-32D - Wellbore #1 - Plan #2 (1-31-11)	1,200.0	1,200.0	21.9	16.8	4.252	ES
Nelson 44-32D - Wellbore #1 - Plan #2 (1-31-11)	1,300.0	1,299.8	22.9	17.4	4.108	SF

<b>Offset Design</b>	Nelson 33-32D Pad Sec.32-T7N-R66W - Nelson 43-32D - Wellbore #1 - Plan #2 (1-31-11)											<b>Offset Site Error:</b>	0.0ft
<b>Survey Program:</b>	0-MWD											<b>Offset Well Error:</b>	0.0ft
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	0.00	21.9	0.0	21.9				
100.0	100.0	100.0	100.0	0.1	0.1	0.00	21.9	0.0	21.9	21.6	0.22	97.235	
200.0	200.0	200.0	200.0	0.3	0.3	0.00	21.9	0.0	21.9	21.2	0.67	32.412	CC
227.7	227.7	227.7	227.7	0.4	0.4	0.35	21.9	0.1	21.9	21.1	0.80	27.452	
300.0	300.0	300.0	299.9	0.6	0.6	4.56	21.9	1.7	21.9	20.8	1.11	19.669	ES
400.0	400.0	399.7	399.5	0.8	0.8	17.65	21.9	7.0	22.9	21.4	1.56	14.691	
500.0	500.0	498.8	498.3	1.0	1.0	34.20	22.3	15.1	27.0	25.0	2.02	13.381	SF
600.0	600.0	597.6	596.7	1.2	1.3	42.59	25.7	23.6	35.0	32.5	2.48	14.118	
700.0	700.0	696.1	694.6	1.5	1.5	44.48	32.4	31.8	45.7	42.8	2.97	15.420	
800.0	800.0	794.0	791.6	1.7	1.8	43.17	42.5	39.8	58.8	55.3	3.48	16.918	
900.0	900.0	891.1	887.5	1.9	2.1	40.50	55.7	47.6	74.3	70.3	4.01	18.528	
1,000.0	1,000.0	988.1	982.8	2.1	2.5	37.45	72.0	55.1	92.3	87.7	4.58	20.171	
1,100.0	1,100.0	1,086.2	1,079.2	2.4	2.8	35.14	89.2	62.7	111.0	105.8	5.16	21.498	
1,200.0	1,200.0	1,184.2	1,175.3	2.6	3.2	123.81	106.3	70.3	130.8	125.6	5.21	25.091	
1,300.0	1,299.8	1,281.8	1,271.1	2.8	3.6	123.82	123.4	77.9	152.5	146.8	5.65	26.997	
1,350.0	1,349.7	1,330.5	1,318.9	2.9	3.8	124.17	131.9	81.7	164.1	158.2	5.87	27.959	
1,400.0	1,399.5	1,378.9	1,366.4	3.0	3.9	131.29	140.4	85.4	176.3	170.2	6.08	28.979	
1,500.0	1,498.8	1,475.1	1,460.8	3.2	4.3	141.08	157.2	92.9	203.3	196.8	6.51	31.230	
1,600.0	1,597.7	1,570.3	1,554.3	3.5	4.7	147.43	173.9	100.3	233.6	226.7	6.94	33.685	
1,700.0	1,696.1	1,664.4	1,646.6	3.7	5.1	151.87	190.3	107.5	267.2	259.9	7.36	36.305	
1,800.0	1,793.8	1,757.2	1,737.8	4.1	5.5	155.16	206.6	114.7	304.1	296.4	7.79	39.066	

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 Nelson 34-32D
<b>Project:</b>	SEC.32-T7N-R66W	<b>TVD Reference:</b>	WELL @ 4873.0ft (Original Well Elev)
<b>Reference Site:</b>	Nelson 33-32D Pad Sec.32-T7N-R66W	<b>MD Reference:</b>	WELL @ 4873.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Nelson 34-32D	<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 #2 (1-31-11)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Nelson 33-32D Pad Sec.32-T7N-R66W - Nelson 43-32D - Wellbore #1 - Plan #2 (1-31-11)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
1,884.8	1,876.1	1,835.0	1,814.0	4.4	5.8	157.36	220.2	120.8	338.0	329.8	8.14	41.505		
1,900.0	1,890.8	1,848.7	1,827.6	4.5	5.8	157.48	222.6	121.8	344.2	336.0	8.22	41.898		
2,000.0	1,987.5	1,939.8	1,916.9	4.9	6.2	158.15	238.5	128.9	385.5	376.8	8.70	44.290		
2,100.0	2,084.2	2,030.8	2,006.2	5.3	6.6	158.69	254.4	135.9	426.8	417.6	9.20	46.388		
2,200.0	2,180.8	2,121.8	2,095.5	5.8	7.0	159.13	270.3	143.0	468.2	458.5	9.71	48.238		
2,300.0	2,277.5	2,212.8	2,184.9	6.3	7.3	159.51	286.3	150.0	509.5	499.3	10.21	49.879		
2,400.0	2,374.2	2,303.8	2,274.2	6.8	7.7	159.82	302.2	157.1	550.9	540.2	10.73	51.342		
2,500.0	2,470.9	2,394.8	2,363.5	7.3	8.1	160.10	318.1	164.1	592.3	581.0	11.25	52.652		
2,600.0	2,567.5	2,485.8	2,452.8	7.8	8.5	160.33	334.0	171.2	633.7	621.9	11.77	53.830		
2,700.0	2,664.2	2,576.8	2,542.1	8.3	8.8	160.54	350.0	178.2	675.1	662.8	12.30	54.895		
2,800.0	2,760.9	2,667.8	2,631.5	8.8	9.2	160.73	365.9	185.3	716.5	703.6	12.83	55.861		
2,900.0	2,857.6	2,758.8	2,720.8	9.3	9.6	160.89	381.8	192.3	757.9	744.5	13.36	56.741		
3,000.0	2,954.2	2,849.8	2,810.1	9.9	10.0	161.04	397.7	199.4	799.3	785.4	13.89	57.545		
3,100.0	3,050.9	2,940.8	2,899.4	10.4	10.4	161.17	413.7	206.5	840.7	826.3	14.42	58.282		
3,200.0	3,147.6	3,031.8	2,988.7	10.9	10.7	161.29	429.6	213.5	882.1	867.2	14.96	58.960		
3,300.0	3,244.3	3,122.8	3,078.1	11.5	11.1	161.40	445.5	220.6	923.6	908.1	15.50	59.586		
3,400.0	3,340.9	3,213.8	3,167.4	12.0	11.5	161.50	461.4	227.6	965.0	949.0	16.04	60.165		
3,500.0	3,437.6	3,304.8	3,256.7	12.5	11.9	161.59	477.3	234.7	1,006.4	989.9	16.58	60.701		
3,600.0	3,534.3	3,395.8	3,346.0	13.1	12.3	161.68	493.3	241.7	1,047.9	1,030.7	17.12	61.200		
3,700.0	3,631.0	3,486.8	3,435.3	13.6	12.6	161.75	509.2	248.8	1,089.3	1,071.6	17.66	61.665		
3,800.0	3,727.7	3,577.8	3,524.7	14.2	13.0	161.83	525.1	255.8	1,130.7	1,112.5	18.21	62.098		
3,900.0	3,824.3	3,668.8	3,614.0	14.7	13.4	161.89	541.0	262.9	1,172.2	1,153.4	18.75	62.504		
4,000.0	3,921.0	3,759.8	3,703.3	15.2	13.8	161.96	557.0	269.9	1,213.6	1,194.3	19.30	62.884		
4,100.0	4,017.7	3,850.8	3,792.6	15.8	14.1	162.01	572.9	277.0	1,255.1	1,235.2	19.85	63.241		
4,200.0	4,114.4	3,941.8	3,881.9	16.3	14.5	162.07	588.8	284.0	1,296.5	1,276.1	20.39	63.577		
4,300.0	4,211.0	4,032.8	3,971.3	16.9	14.9	162.12	604.7	291.1	1,337.9	1,317.0	20.94	63.893		
4,400.0	4,307.7	4,123.8	4,060.6	17.4	15.3	162.17	620.6	298.1	1,379.4	1,357.9	21.49	64.192		
4,500.0	4,404.4	4,214.8	4,149.9	18.0	15.7	162.21	636.6	305.2	1,420.8	1,398.8	22.04	64.474		
4,600.0	4,501.1	4,305.8	4,239.2	18.5	16.0	162.26	652.5	312.2	1,462.3	1,439.7	22.59	64.740		
4,700.0	4,597.7	4,396.8	4,328.5	19.1	16.4	162.30	668.4	319.3	1,503.7	1,480.6	23.14	64.993		
4,800.0	4,694.4	4,487.8	4,417.9	19.6	16.8	162.34	684.3	326.3	1,545.2	1,521.5	23.69	65.232		
4,900.0	4,791.1	4,639.4	4,567.0	20.2	17.3	162.43	700.7	337.1	1,585.5	1,561.2	24.35	65.127		
5,000.0	4,887.8	4,835.7	4,762.0	20.7	17.8	162.69	729.7	346.4	1,620.5	1,595.5	25.02	64.779		
5,082.5	4,967.5	5,004.0	4,930.1	21.2	18.1	163.04	738.0	350.1	1,644.8	1,619.2	25.54	64.398		
5,100.0	4,984.5	5,040.4	4,966.4	21.2	18.2	163.15	738.6	350.4	1,649.3	1,623.6	25.67	64.246		
5,200.0	5,081.7	5,155.7	5,081.7	21.6	18.3	163.56	738.8	350.4	1,671.7	1,645.5	26.27	63.642		
5,300.0	5,179.7	5,253.7	5,179.7	22.0	18.4	163.86	738.8	350.4	1,690.8	1,664.0	26.81	63.059		
5,400.0	5,278.3	5,352.3	5,278.3	22.3	18.6	164.10	738.8	350.4	1,706.6	1,679.3	27.32	62.462		
5,500.0	5,377.5	5,451.5	5,377.5	22.5	18.7	164.29	738.8	350.4	1,719.2	1,691.4	27.79	61.852		
5,600.0	5,477.0	5,551.0	5,477.0	22.7	18.8	164.42	738.8	350.4	1,728.3	1,700.1	28.23	61.227		
5,700.0	5,576.8	5,650.8	5,576.8	22.9	19.0	164.51	738.8	350.4	1,734.1	1,705.5	28.62	60.587		
5,800.0	5,676.8	5,750.8	5,676.8	23.0	19.1	164.54	738.8	350.4	1,736.6	1,707.6	28.98	59.931		
5,823.2	5,700.0	5,774.0	5,700.0	23.0	19.1	45.81	738.8	350.4	1,736.7	1,707.6	29.05	59.774		
5,900.0	5,776.8	5,850.8	5,776.8	23.1	19.2	45.81	738.8	350.4	1,736.7	1,707.4	29.33	59.220		
6,000.0	5,876.8	5,950.8	5,876.8	23.2	19.4	45.81	738.8	350.4	1,736.7	1,707.0	29.68	58.508		
6,100.0	5,976.8	6,050.8	5,976.8	23.3	19.5	45.81	738.8	350.4	1,736.7	1,706.7	30.04	57.809		
6,200.0	6,076.8	6,150.8	6,076.8	23.5	19.7	45.81	738.8	350.4	1,736.7	1,706.3	30.40	57.121		
6,300.0	6,176.8	6,250.8	6,176.8	23.6	19.8	45.81	738.8	350.4	1,736.7	1,705.9	30.77	56.446		
6,400.0	6,276.8	6,350.8	6,276.8	23.7	20.0	45.81	738.8	350.4	1,736.7	1,705.6	31.13	55.782		
6,500.0	6,376.8	6,450.8	6,376.8	23.8	20.1	45.81	738.8	350.4	1,736.7	1,705.2	31.50	55.130		
6,600.0	6,476.8	6,550.8	6,476.8	23.9	20.3	45.81	738.8	350.4	1,736.7	1,704.8	31.87	54.489		

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 Nelson 34-32D
<b>Project:</b>	SEC.32-T7N-R66W	<b>TVD Reference:</b>	WELL @ 4873.0ft (Original Well Elev)
<b>Reference Site:</b>	Nelson 33-32D Pad Sec.32-T7N-R66W	<b>MD Reference:</b>	WELL @ 4873.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Nelson 34-32D	<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 #2 (1-31-11)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design										Nelson 33-32D Pad Sec.32-T7N-R66W - Nelson 43-32D - Wellbore #1 - Plan #2 (1-31-11)				Offset Site Error:	0.0 ft
Survey Program: 0-MWD														Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance								
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
6,700.0	6,576.8	6,650.8	6,576.8	24.1	20.4	45.81	738.8	350.4	1,736.7	1,704.5	32.24	53.860			
6,800.0	6,676.8	6,750.8	6,676.8	24.2	20.6	45.81	738.8	350.4	1,736.7	1,704.1	32.62	53.242			
6,900.0	6,776.8	6,850.8	6,776.8	24.3	20.7	45.81	738.8	350.4	1,736.7	1,703.7	32.99	52.635			
7,000.0	6,876.8	6,950.8	6,876.8	24.4	20.9	45.81	738.8	350.4	1,736.7	1,703.3	33.37	52.039			
7,100.0	6,976.8	7,050.8	6,976.8	24.6	21.0	45.81	738.8	350.4	1,736.7	1,702.9	33.75	51.454			
7,200.0	7,076.8	7,150.8	7,076.8	24.7	21.2	45.81	738.8	350.4	1,736.7	1,702.6	34.13	50.879			
7,300.0	7,176.8	7,250.8	7,176.8	24.8	21.4	45.81	738.8	350.4	1,736.7	1,702.2	34.52	50.315			
7,400.0	7,276.8	7,350.8	7,276.8	24.9	21.5	45.81	738.8	350.4	1,736.7	1,701.8	34.90	49.760			
7,500.0	7,376.8	7,450.8	7,376.8	25.1	21.7	45.81	738.8	350.4	1,736.7	1,701.4	35.29	49.216			
7,600.0	7,476.8	7,550.8	7,476.8	25.2	21.8	45.81	738.8	350.4	1,736.7	1,701.0	35.67	48.681			
7,700.0	7,576.8	7,650.8	7,576.8	25.3	22.0	45.81	738.8	350.4	1,736.7	1,700.7	36.01	48.225			
7,723.2	7,600.0	7,674.0	7,600.0	25.4	22.0	45.81	738.8	350.4	1,736.7	1,700.6	36.08	48.135			

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Nelson 34-32D
<b>Project:</b>	SEC.32-T7N-R66W	<b>TVD Reference:</b>	WELL @ 4873.0ft (Original Well Elev)
<b>Reference Site:</b>	Nelson 33-32D Pad Sec.32-T7N-R66W	<b>MD Reference:</b>	WELL @ 4873.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Nelson 34-32D	<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 #2 (1-31-11)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Nelson 33-32D Pad Sec.32-T7N-R66W - Nelson 44-32D - Wellbore #1 - Plan #2 (1-31-11)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	180.00	180.00	-21.9	0.0	21.9				
100.0	100.0	100.0	100.0	0.1	0.1	180.00	180.00	-21.9	0.0	21.9	21.6	0.22	97.253	
200.0	200.0	200.0	200.0	0.3	0.3	180.00	180.00	-21.9	0.0	21.9	21.2	0.67	32.418	
300.0	300.0	300.0	300.0	0.6	0.6	180.00	180.00	-21.9	0.0	21.9	20.7	1.12	19.451	
400.0	400.0	400.0	400.0	0.8	0.8	180.00	180.00	-21.9	0.0	21.9	20.3	1.57	13.893	
500.0	500.0	500.0	500.0	1.0	1.0	180.00	180.00	-21.9	0.0	21.9	19.8	2.02	10.806	
600.0	600.0	600.0	600.0	1.2	1.2	180.00	180.00	-21.9	0.0	21.9	19.4	2.47	8.841	
700.0	700.0	700.0	700.0	1.5	1.5	180.00	180.00	-21.9	0.0	21.9	18.9	2.92	7.481	
800.0	800.0	800.0	800.0	1.7	1.7	180.00	180.00	-21.9	0.0	21.9	18.5	3.37	6.484	
900.0	900.0	900.0	900.0	1.9	1.9	180.00	180.00	-21.9	0.0	21.9	18.0	3.82	5.721	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	180.00	180.00	-21.9	0.0	21.9	17.6	4.27	5.119	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	180.00	180.00	-21.9	0.0	21.9	17.1	4.72	4.631 CC	
1,127.7	1,127.7	1,127.7	1,127.7	2.4	2.4	-90.35	-90.35	-21.9	0.0	21.9	17.0	4.84	4.516	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-94.56	-94.56	-21.9	0.0	21.9	16.8	5.16	4.252 ES	
1,300.0	1,299.8	1,299.8	1,299.8	2.8	2.8	-107.67	-107.67	-21.9	0.0	22.9	17.4	5.59	4.108 SF	
1,350.0	1,349.7	1,349.7	1,349.7	2.9	2.9	-116.42	-116.42	-21.9	0.0	24.4	18.6	5.80	4.210	
1,400.0	1,399.5	1,399.5	1,399.5	3.0	3.0	-119.14	-119.14	-21.9	0.0	26.6	20.6	6.01	4.425	
1,500.0	1,498.8	1,498.8	1,498.8	3.2	3.3	-128.79	-128.79	-21.9	0.0	33.1	26.7	6.43	5.148	
1,600.0	1,597.7	1,597.7	1,597.7	3.5	3.5	-139.07	-139.07	-21.9	0.0	43.3	36.5	6.83	6.345	
1,700.0	1,696.1	1,694.7	1,694.7	3.7	3.7	-146.10	-146.10	-23.1	0.9	58.9	51.7	7.21	8.166	
1,800.0	1,793.8	1,790.7	1,790.5	4.1	3.8	-149.38	-149.38	-27.0	3.7	80.1	72.5	7.58	10.571	
1,884.8	1,876.1	1,871.0	1,870.6	4.4	4.0	-150.42	-150.42	-32.3	7.4	102.0	94.1	7.90	12.902	
1,900.0	1,890.8	1,885.3	1,884.8	4.5	4.0	-150.80	-150.80	-33.4	8.2	106.2	98.2	7.97	13.329	
2,000.0	1,987.5	1,978.7	1,977.6	4.9	4.2	-152.04	-152.04	-42.2	14.5	135.1	126.7	8.41	16.065	
2,100.0	2,084.2	2,071.2	2,069.1	5.3	4.4	-151.93	-151.93	-53.4	22.4	165.8	156.9	8.89	18.646	
2,200.0	2,180.8	2,164.4	2,160.9	5.8	4.7	-151.19	-151.19	-66.7	31.9	198.0	188.6	9.41	21.033	
2,300.0	2,277.5	2,259.0	2,254.0	6.3	4.9	-150.58	-150.58	-80.5	41.6	230.3	220.4	9.96	23.135	
2,400.0	2,374.2	2,353.6	2,347.0	6.8	5.2	-150.13	-150.13	-94.2	51.4	262.7	252.2	10.52	24.973	
2,500.0	2,470.9	2,448.2	2,440.1	7.3	5.5	-149.77	-149.77	-108.0	61.2	295.1	284.0	11.10	26.581	
2,600.0	2,567.5	2,542.8	2,533.2	7.8	5.8	-149.48	-149.48	-121.7	71.0	327.5	315.8	11.70	27.995	
2,700.0	2,664.2	2,637.4	2,626.3	8.3	6.1	-149.24	-149.24	-135.5	80.8	359.9	347.6	12.31	29.242	
2,800.0	2,760.9	2,732.0	2,719.3	8.8	6.4	-149.05	-149.05	-149.3	90.5	392.3	379.4	12.93	30.344	
2,900.0	2,857.6	2,826.6	2,812.4	9.3	6.8	-148.88	-148.88	-163.0	100.3	424.7	411.2	13.56	31.323	
3,000.0	2,954.2	2,921.2	2,905.5	9.9	7.1	-148.74	-148.74	-176.8	110.1	457.2	443.0	14.20	32.196	
3,100.0	3,050.9	3,015.8	2,998.6	10.4	7.4	-148.61	-148.61	-190.6	119.9	489.6	474.7	14.85	32.977	
3,200.0	3,147.6	3,110.4	3,091.6	10.9	7.8	-148.50	-148.50	-204.3	129.7	522.0	506.5	15.50	33.679	
3,300.0	3,244.3	3,205.0	3,184.7	11.5	8.1	-148.41	-148.41	-218.1	139.4	554.4	538.3	16.16	34.312	
3,400.0	3,340.9	3,299.6	3,277.8	12.0	8.5	-148.32	-148.32	-231.9	149.2	586.8	570.0	16.82	34.885	
3,500.0	3,437.6	3,394.2	3,370.9	12.5	8.8	-148.25	-148.25	-245.6	159.0	619.3	601.8	17.49	35.405	
3,600.0	3,534.3	3,488.8	3,463.9	13.1	9.2	-148.18	-148.18	-259.4	168.8	651.7	633.5	18.16	35.879	
3,700.0	3,631.0	3,583.4	3,557.0	13.6	9.6	-148.11	-148.11	-273.2	178.6	684.1	665.3	18.84	36.312	
3,800.0	3,727.7	3,678.0	3,650.1	14.2	9.9	-148.06	-148.06	-286.9	188.3	716.6	697.0	19.52	36.709	
3,900.0	3,824.3	3,772.5	3,743.2	14.7	10.3	-148.01	-148.01	-300.7	198.1	749.0	728.8	20.20	37.074	
4,000.0	3,921.0	3,867.1	3,836.2	15.2	10.7	-147.96	-147.96	-314.5	207.9	781.4	760.5	20.89	37.410	
4,100.0	4,017.7	3,961.7	3,929.3	15.8	11.0	-147.91	-147.91	-328.2	217.7	813.8	792.3	21.57	37.721	
4,200.0	4,114.4	4,056.3	4,022.4	16.3	11.4	-147.87	-147.87	-342.0	227.5	846.3	824.0	22.26	38.009	
4,300.0	4,211.0	4,150.9	4,115.5	16.9	11.8	-147.84	-147.84	-355.8	237.2	878.7	855.7	22.96	38.277	
4,400.0	4,307.7	4,245.5	4,208.5	17.4	12.2	-147.80	-147.80	-369.5	247.0	911.1	887.5	23.65	38.525	
4,500.0	4,404.4	4,340.1	4,301.6	18.0	12.5	-147.77	-147.77	-383.3	256.8	943.6	919.2	24.35	38.757	
4,600.0	4,501.1	4,434.7	4,394.7	18.5	12.9	-147.74	-147.74	-397.1	266.6	976.0	950.9	25.04	38.974	
4,700.0	4,597.7	4,529.3	4,487.8	19.1	13.3	-147.71	-147.71	-410.8	276.4	1,008.4	982.7	25.74	39.177	

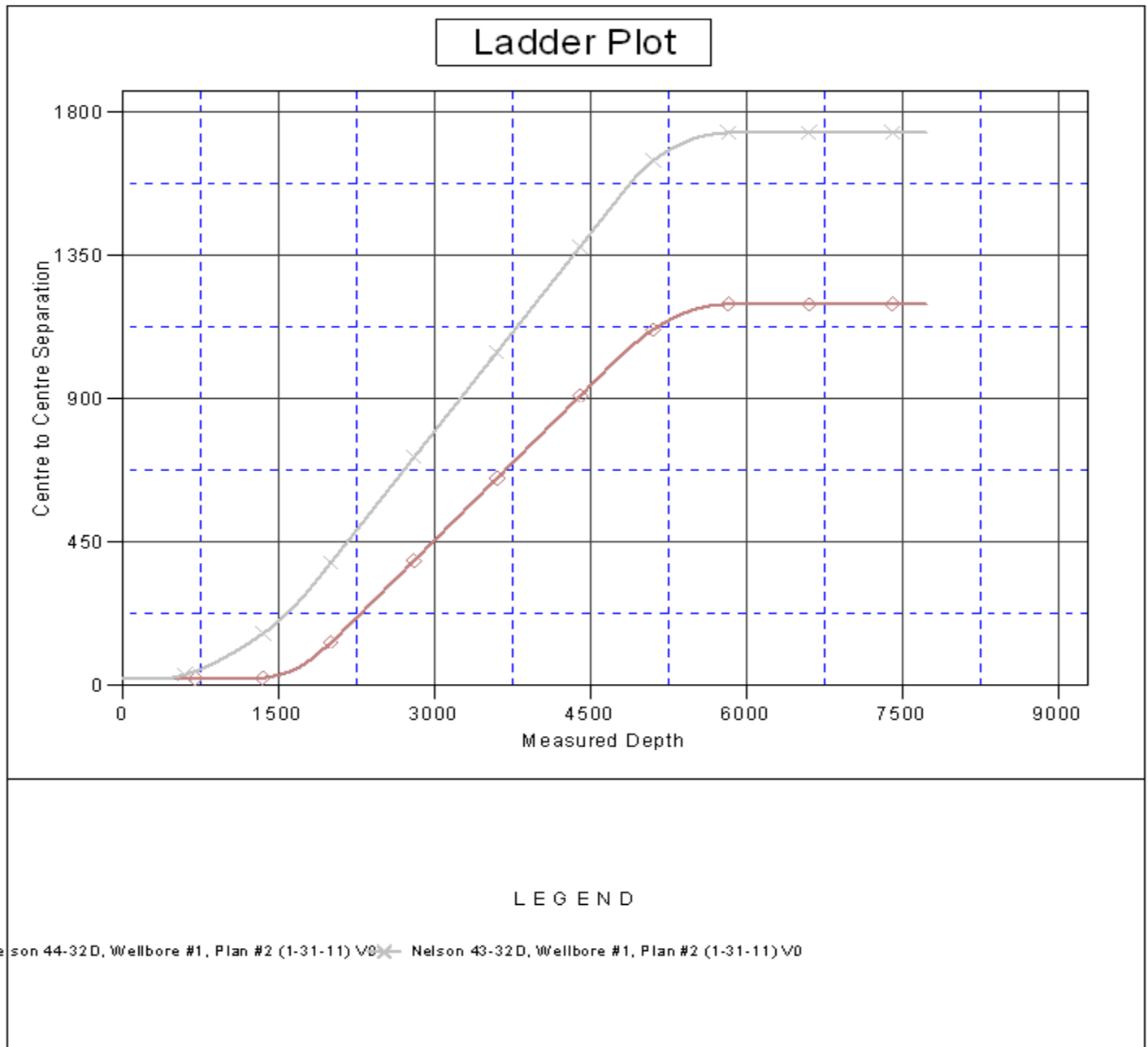
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Nelson 34-32D
<b>Project:</b>	SEC.32-T7N-R66W	<b>TVD Reference:</b>	WELL @ 4873.0ft (Original Well Elev)
<b>Reference Site:</b>	Nelson 33-32D Pad Sec.32-T7N-R66W	<b>MD Reference:</b>	WELL @ 4873.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Nelson 34-32D	<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 #2 (1-31-11)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Nelson 33-32D Pad Sec.32-T7N-R66W - Nelson 44-32D - Wellbore #1 - Plan #2 (1-31-11)													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)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
4,800.0	4,694.4	4,650.6	4,607.5	19.6	13.7	-147.79	-426.4	287.5	1,039.6	1,013.2	26.44	39.320		
4,900.0	4,791.1	4,773.9	4,730.0	20.2	14.0	-148.10	-438.1	295.7	1,068.4	1,041.3	27.07	39.465		
5,000.0	4,887.8	4,898.5	4,854.3	20.7	14.2	-148.63	-445.4	301.0	1,094.7	1,067.0	27.65	39.586		
5,082.5	4,967.5	5,002.1	4,957.8	21.2	14.4	-149.21	-448.2	302.9	1,114.5	1,086.4	28.09	39.679		
5,100.0	4,984.5	5,024.1	4,979.8	21.2	14.5	-149.39	-448.4	303.1	1,118.4	1,090.2	28.18	39.684		
5,200.0	5,081.7	5,126.0	5,081.7	21.6	14.6	-150.22	-448.5	303.1	1,138.7	1,110.1	28.65	39.746		
5,300.0	5,179.7	5,224.0	5,179.7	22.0	14.8	-150.88	-448.5	303.1	1,156.1	1,127.0	29.08	39.753		
5,400.0	5,278.3	5,322.7	5,278.3	22.3	14.9	-151.41	-448.5	303.1	1,170.6	1,141.1	29.49	39.697		
5,500.0	5,377.5	5,421.8	5,377.5	22.5	15.1	-151.82	-448.5	303.1	1,182.0	1,152.1	29.86	39.580		
5,600.0	5,477.0	5,521.3	5,477.0	22.7	15.2	-152.12	-448.5	303.1	1,190.4	1,160.2	30.21	39.405		
5,700.0	5,576.8	5,621.2	5,576.8	22.9	15.4	-152.30	-448.5	303.1	1,195.8	1,165.2	30.53	39.173		
5,800.0	5,676.8	5,721.1	5,676.8	23.0	15.5	-152.38	-448.5	303.1	1,198.0	1,167.2	30.81	38.884		
5,823.2	5,700.0	5,744.3	5,700.0	23.0	15.6	88.88	-448.5	303.1	1,198.1	1,167.2	30.87	38.806		
5,900.0	5,776.8	5,821.1	5,776.8	23.1	15.7	88.88	-448.5	303.1	1,198.1	1,167.0	31.12	38.501		
6,000.0	5,876.8	5,921.1	5,876.8	23.2	15.8	88.88	-448.5	303.1	1,198.1	1,166.7	31.44	38.113		
6,100.0	5,976.8	6,021.1	5,976.8	23.3	16.0	88.88	-448.5	303.1	1,198.1	1,166.4	31.76	37.728		
6,200.0	6,076.8	6,121.1	6,076.8	23.5	16.2	88.88	-448.5	303.1	1,198.1	1,166.0	32.08	37.347		
6,300.0	6,176.8	6,221.1	6,176.8	23.6	16.3	88.88	-448.5	303.1	1,198.1	1,165.7	32.41	36.971		
6,400.0	6,276.8	6,321.1	6,276.8	23.7	16.5	88.88	-448.5	303.1	1,198.1	1,165.4	32.74	36.599		
6,500.0	6,376.8	6,421.1	6,376.8	23.8	16.7	88.88	-448.5	303.1	1,198.1	1,165.0	33.07	36.232		
6,600.0	6,476.8	6,521.1	6,476.8	23.9	16.8	88.88	-448.5	303.1	1,198.1	1,164.7	33.40	35.868		
6,700.0	6,576.8	6,621.1	6,576.8	24.1	17.0	88.88	-448.5	303.1	1,198.1	1,164.4	33.74	35.509		
6,800.0	6,676.8	6,721.1	6,676.8	24.2	17.2	88.88	-448.5	303.1	1,198.1	1,164.0	34.08	35.155		
6,900.0	6,776.8	6,821.1	6,776.8	24.3	17.4	88.88	-448.5	303.1	1,198.1	1,163.7	34.42	34.805		
7,000.0	6,876.8	6,921.1	6,876.8	24.4	17.5	88.88	-448.5	303.1	1,198.1	1,163.3	34.77	34.460		
7,100.0	6,976.8	7,021.1	6,976.8	24.6	17.7	88.88	-448.5	303.1	1,198.1	1,163.0	35.12	34.119		
7,200.0	7,076.8	7,121.1	7,076.8	24.7	17.9	88.88	-448.5	303.1	1,198.1	1,162.6	35.47	33.783		
7,300.0	7,176.8	7,221.1	7,176.8	24.8	18.1	88.88	-448.5	303.1	1,198.1	1,162.3	35.82	33.451		
7,400.0	7,276.8	7,321.1	7,276.8	24.9	18.2	88.88	-448.5	303.1	1,198.1	1,161.9	36.17	33.123		
7,500.0	7,376.8	7,421.1	7,376.8	25.1	18.4	88.88	-448.5	303.1	1,198.1	1,161.6	36.53	32.800		
7,600.0	7,476.8	7,521.1	7,476.8	25.2	18.6	88.88	-448.5	303.1	1,198.1	1,161.2	36.89	32.482		
7,700.0	7,576.8	7,621.1	7,576.8	25.3	18.8	88.88	-448.5	303.1	1,198.1	1,160.9	37.25	32.168		
7,714.7	7,591.5	7,635.9	7,591.5	25.4	18.8	88.88	-448.5	303.1	1,198.1	1,160.8	37.30	32.122		
7,723.2	7,600.0	7,642.3	7,598.0	25.4	18.8	88.88	-448.5	303.1	1,198.1	1,160.8	37.33	32.099		

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Nelson 34-32D
<b>Project:</b>	SEC.32-T7N-R66W	<b>TVD Reference:</b>	WELL @ 4873.0ft (Original Well Elev)
<b>Reference Site:</b>	Nelson 33-32D Pad Sec.32-T7N-R66W	<b>MD Reference:</b>	WELL @ 4873.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Nelson 34-32D	<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 #2 (1-31-11)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4873.0ft (Original Well Elev) Coordinates are relative to: Nelson 34-32D  
 Offset Depths are relative to Offset Datum  
 Central Meridian is 105° 30' 0.000 W °  
 Coordinate System is US State Plane 1983, Colorado Northern Zone  
 Grid Convergence at Surface is: 0.45°



<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well Nelson 34-32D
<b>Project:</b>	SEC.32-T7N-R66W	<b>TVD Reference:</b>	WELL @ 4873.0ft (Original Well Elev)
<b>Reference Site:</b>	Nelson 33-32D Pad Sec.32-T7N-R66W	<b>MD Reference:</b>	WELL @ 4873.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Nelson 34-32D	<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 #2 (1-31-11)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4873.0ft (Original Well Elev) Coordinates are relative to: Nelson 34-32D  
 Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone  
 Central Meridian is 105° 30' 0.000 W ° Grid Convergence at Surface is: 0.45°

