

PETROLEUM DEVELOPMENT CORP Weld County CO

Well Name: **Anderson 34M-403**

Surface Location: Anderson 34M-HZ Pad Sec.34-T7N-R66W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
Ground Elevation: 4915.0

<u>+N/-S</u>	<u>+E/-W</u>	<u>Northing</u>	<u>Easting</u>	<u>Latitude</u>	<u>Longitude</u>	<u>Slot</u>
0.0	0.0	1439581.60	3204186.83	40.537730	-104.765360	
Original Well Elev WELL @ 4930.0ft (Original Well Elev)						

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
BHL 500'FSL, 2600'FWL	7370.0	-4470.2	-38.9	Point



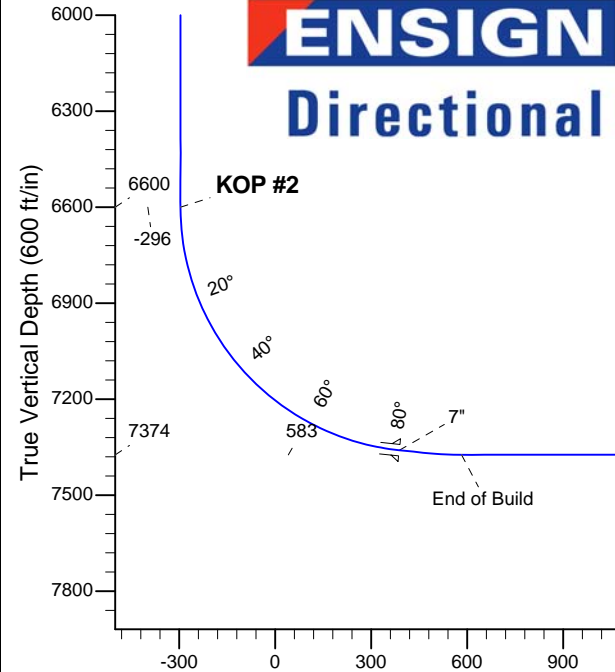
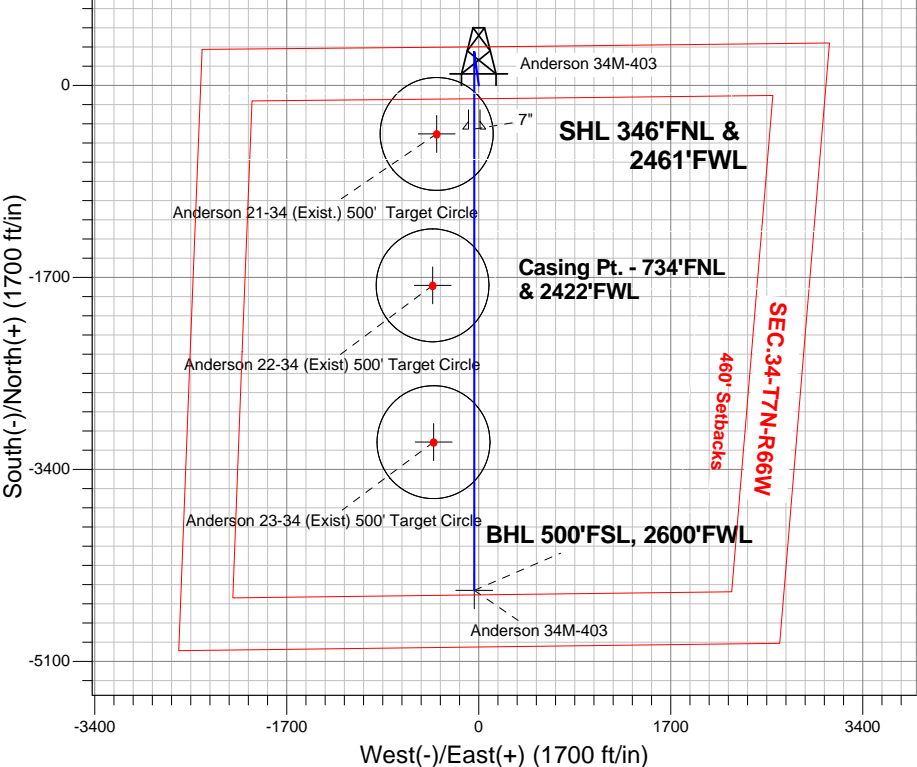
Azimuths to True North
Magnetic North: 8.62°

Magnetic Field
Strength: 53001.2snT
Dip Angle: 67.10°
Date: 5/13/2013
Model: IGRF2010

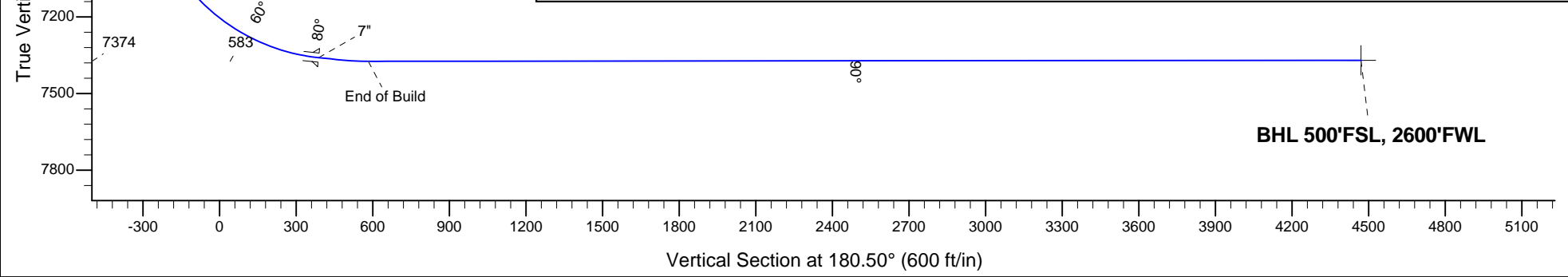
ANNOTATIONS

TVD	MD	Annotation
2000.0	2000.0	KOP #1
6600.2	6613.6	KOP #2
7374.0	7928.8	End of Build

Anderson 34M-HZ Pad Sec.34-T7N-R66W
Anderson 34M-403
Plan #1 (5-13-13)
9:29, May 15 2013



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	2000.0	0.00	0.00	2000.0	0.0	0.0	0.00	0.00	0.0	
3	2263.5	5.27	352.51	2263.2	12.0	-1.6	2.00	352.51	-12.0	
4	5249.8	5.27	352.51	5236.8	284.0	-37.3	0.00	0.00	-283.7	
5	5513.4	0.00	0.00	5500.0	296.0	-38.9	2.00	180.00	-295.7	
6	6613.6	0.00	0.00	6600.2	296.0	-38.9	0.00	0.00	-295.7	
7	7733.6	84.00	180.00	7360.0	-388.1	-38.9	7.50	180.00	388.4	
8	7807.6	84.00	180.00	7367.7	-461.7	-38.9	0.00	0.00	462.0	
9	7928.8	90.06	180.00	7374.0	-582.6	-38.9	5.00	0.00	583.0	
10	11816.3	90.06	180.00	7370.0	-4470.2	-38.9	0.00	0.00	4470.4	BHL 500'FSL, 2600'FWL





Directional

PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.34-T7N-R66W

Anderson 34M-HZ Pad Sec.34-T7N-R66W

Anderson 34M-403

Wellbore #1

Plan: Plan #1 (5-13-13)

Standard Planning Report

15 May, 2013

Database:	Landmark	Local Co-ordinate Reference:	Well Anderson 34M-403
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4930.0ft (Original Well Elev)
Project:	SEC.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (Original Well Elev)
Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	North Reference:	True
Well:	Anderson 34M-403	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (5-13-13)		

Project	SEC.34-T7N-R66W, Weld County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site		Anderson 34M-HZ Pad Sec.34-T7N-R66W			
Site Position:		Northing:	1,439,581.87 ft	Latitude:	40.537730
From:	Lat/Long	Easting:	3,204,217.40 ft	Longitude:	-104.765250
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.47 °

Well	Anderson 34M-403					
Well Position	+N/-S	0.0 ft	Northing:	1,439,581.60 ft	Latitude:	40.537730
	+E/-W	-30.6 ft	Easting:	3,204,186.83 ft	Longitude:	-104.765360
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,915.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/13/2013	8.62	67.10	53,001

Design	Plan #1 (5-13-13)			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	180.50

Plan Sections										
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	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,263.5	5.27	352.51	2,263.2	12.0	-1.6	2.00	2.00	0.00	352.51	
5,249.8	5.27	352.51	5,236.8	284.0	-37.3	0.00	0.00	0.00	0.00	
5,513.4	0.00	0.00	5,500.0	296.0	-38.9	2.00	-2.00	0.00	180.00	
6,613.6	0.00	0.00	6,600.2	296.0	-38.9	0.00	0.00	0.00	0.00	
7,733.6	84.00	180.00	7,360.0	-388.1	-38.9	7.50	7.50	0.00	180.00	
7,807.6	84.00	180.00	7,367.7	-461.7	-38.9	0.00	0.00	0.00	0.00	
7,928.8	90.06	180.00	7,374.0	-582.6	-38.9	5.00	5.00	0.00	0.00	
11,816.3	90.06	180.00	7,370.0	-4,470.2	-38.9	0.00	0.00	0.00	0.00	BHL 500'FSL, 2600

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Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	North Reference:	True
Well:	Anderson 34M-403	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (5-13-13)		

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
Anderson 21-34 (Exist.) 500' Target Circle - Anderson 22-34 (Exist.) 500' Target Circle - Anderson 23-34 (Exist.) 500' Targ									
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
1,520.0	0.00	0.00	1,520.0	0.0	0.0	0.0	0.00	0.00	0.00
1,560.0	0.00	0.00	1,560.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,640.0	0.00	0.00	1,640.0	0.0	0.0	0.0	0.00	0.00	0.00
1,680.0	0.00	0.00	1,680.0	0.0	0.0	0.0	0.00	0.00	0.00
1,720.0	0.00	0.00	1,720.0	0.0	0.0	0.0	0.00	0.00	0.00
1,760.0	0.00	0.00	1,760.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,840.0	0.00	0.00	1,840.0	0.0	0.0	0.0	0.00	0.00	0.00
1,880.0	0.00	0.00	1,880.0	0.0	0.0	0.0	0.00	0.00	0.00
1,920.0	0.00	0.00	1,920.0	0.0	0.0	0.0	0.00	0.00	0.00
1,960.0	0.00	0.00	1,960.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP #1									

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Project:	SEC.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (Original Well Elev)
Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	North Reference:	True
Well:	Anderson 34M-403	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (5-13-13)		

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)
2,040.0	0.80	352.51	2,040.0	0.3	0.0	-0.3	2.00	2.00	0.00
2,080.0	1.60	352.51	2,080.0	1.1	-0.1	-1.1	2.00	2.00	0.00
2,120.0	2.40	352.51	2,120.0	2.5	-0.3	-2.5	2.00	2.00	0.00
2,160.0	3.20	352.51	2,159.9	4.4	-0.6	-4.4	2.00	2.00	0.00
2,200.0	4.00	352.51	2,199.8	6.9	-0.9	-6.9	2.00	2.00	0.00
2,240.0	4.80	352.51	2,239.7	10.0	-1.3	-9.9	2.00	2.00	0.00
2,263.5	5.27	352.51	2,263.2	12.0	-1.6	-12.0	2.00	2.00	0.00
2,280.0	5.27	352.51	2,279.6	13.5	-1.8	-13.5	0.00	0.00	0.00
2,320.0	5.27	352.51	2,319.4	17.2	-2.3	-17.1	0.00	0.00	0.00
2,360.0	5.27	352.51	2,359.2	20.8	-2.7	-20.8	0.00	0.00	0.00
2,400.0	5.27	352.51	2,399.1	24.4	-3.2	-24.4	0.00	0.00	0.00
2,440.0	5.27	352.51	2,438.9	28.1	-3.7	-28.0	0.00	0.00	0.00
2,480.0	5.27	352.51	2,478.7	31.7	-4.2	-31.7	0.00	0.00	0.00
2,520.0	5.27	352.51	2,518.5	35.4	-4.6	-35.3	0.00	0.00	0.00
2,560.0	5.27	352.51	2,558.4	39.0	-5.1	-39.0	0.00	0.00	0.00
2,600.0	5.27	352.51	2,598.2	42.7	-5.6	-42.6	0.00	0.00	0.00
2,640.0	5.27	352.51	2,638.0	46.3	-6.1	-46.2	0.00	0.00	0.00
2,680.0	5.27	352.51	2,677.9	49.9	-6.6	-49.9	0.00	0.00	0.00
2,720.0	5.27	352.51	2,717.7	53.6	-7.0	-53.5	0.00	0.00	0.00
2,760.0	5.27	352.51	2,757.5	57.2	-7.5	-57.2	0.00	0.00	0.00
2,800.0	5.27	352.51	2,797.4	60.9	-8.0	-60.8	0.00	0.00	0.00
2,840.0	5.27	352.51	2,837.2	64.5	-8.5	-64.4	0.00	0.00	0.00
2,880.0	5.27	352.51	2,877.0	68.2	-9.0	-68.1	0.00	0.00	0.00
2,920.0	5.27	352.51	2,916.9	71.8	-9.4	-71.7	0.00	0.00	0.00
2,960.0	5.27	352.51	2,956.7	75.4	-9.9	-75.4	0.00	0.00	0.00
3,000.0	5.27	352.51	2,996.5	79.1	-10.4	-79.0	0.00	0.00	0.00
3,040.0	5.27	352.51	3,036.3	82.7	-10.9	-82.6	0.00	0.00	0.00
3,080.0	5.27	352.51	3,076.2	86.4	-11.4	-86.3	0.00	0.00	0.00
3,120.0	5.27	352.51	3,116.0	90.0	-11.8	-89.9	0.00	0.00	0.00
3,160.0	5.27	352.51	3,155.8	93.7	-12.3	-93.5	0.00	0.00	0.00
3,200.0	5.27	352.51	3,195.7	97.3	-12.8	-97.2	0.00	0.00	0.00
3,240.0	5.27	352.51	3,235.5	100.9	-13.3	-100.8	0.00	0.00	0.00
3,280.0	5.27	352.51	3,275.3	104.6	-13.7	-104.5	0.00	0.00	0.00
3,320.0	5.27	352.51	3,315.2	108.2	-14.2	-108.1	0.00	0.00	0.00
3,360.0	5.27	352.51	3,355.0	111.9	-14.7	-111.7	0.00	0.00	0.00
3,400.0	5.27	352.51	3,394.8	115.5	-15.2	-115.4	0.00	0.00	0.00
3,440.0	5.27	352.51	3,434.7	119.2	-15.7	-119.0	0.00	0.00	0.00
3,480.0	5.27	352.51	3,474.5	122.8	-16.1	-122.7	0.00	0.00	0.00
3,520.0	5.27	352.51	3,514.3	126.4	-16.6	-126.3	0.00	0.00	0.00
3,560.0	5.27	352.51	3,554.1	130.1	-17.1	-129.9	0.00	0.00	0.00
3,600.0	5.27	352.51	3,594.0	133.7	-17.6	-133.6	0.00	0.00	0.00
3,640.0	5.27	352.51	3,633.8	137.4	-18.1	-137.2	0.00	0.00	0.00
3,680.0	5.27	352.51	3,673.6	141.0	-18.5	-140.8	0.00	0.00	0.00
3,720.0	5.27	352.51	3,713.5	144.7	-19.0	-144.5	0.00	0.00	0.00
3,760.0	5.27	352.51	3,753.3	148.3	-19.5	-148.1	0.00	0.00	0.00
3,800.0	5.27	352.51	3,793.1	151.9	-20.0	-151.8	0.00	0.00	0.00
3,840.0	5.27	352.51	3,833.0	155.6	-20.4	-155.4	0.00	0.00	0.00
3,880.0	5.27	352.51	3,872.8	159.2	-20.9	-159.0	0.00	0.00	0.00
3,920.0	5.27	352.51	3,912.6	162.9	-21.4	-162.7	0.00	0.00	0.00
3,960.0	5.27	352.51	3,952.5	166.5	-21.9	-166.3	0.00	0.00	0.00
4,000.0	5.27	352.51	3,992.3	170.2	-22.4	-170.0	0.00	0.00	0.00
4,040.0	5.27	352.51	4,032.1	173.8	-22.8	-173.6	0.00	0.00	0.00
4,080.0	5.27	352.51	4,071.9	177.4	-23.3	-177.2	0.00	0.00	0.00

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Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	North Reference:	True
Well:	Anderson 34M-403	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (5-13-13)		

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)
4,120.0	5.27	352.51	4,111.8	181.1	-23.8	-180.9	0.00	0.00	0.00
4,160.0	5.27	352.51	4,151.6	184.7	-24.3	-184.5	0.00	0.00	0.00
4,200.0	5.27	352.51	4,191.4	188.4	-24.8	-188.2	0.00	0.00	0.00
4,240.0	5.27	352.51	4,231.3	192.0	-25.2	-191.8	0.00	0.00	0.00
4,280.0	5.27	352.51	4,271.1	195.7	-25.7	-195.4	0.00	0.00	0.00
4,320.0	5.27	352.51	4,310.9	199.3	-26.2	-199.1	0.00	0.00	0.00
4,360.0	5.27	352.51	4,350.8	202.9	-26.7	-202.7	0.00	0.00	0.00
4,400.0	5.27	352.51	4,390.6	206.6	-27.1	-206.3	0.00	0.00	0.00
4,440.0	5.27	352.51	4,430.4	210.2	-27.6	-210.0	0.00	0.00	0.00
4,480.0	5.27	352.51	4,470.3	213.9	-28.1	-213.6	0.00	0.00	0.00
4,520.0	5.27	352.51	4,510.1	217.5	-28.6	-217.3	0.00	0.00	0.00
4,560.0	5.27	352.51	4,549.9	221.2	-29.1	-220.9	0.00	0.00	0.00
4,600.0	5.27	352.51	4,589.7	224.8	-29.5	-224.5	0.00	0.00	0.00
4,640.0	5.27	352.51	4,629.6	228.4	-30.0	-228.2	0.00	0.00	0.00
4,680.0	5.27	352.51	4,669.4	232.1	-30.5	-231.8	0.00	0.00	0.00
4,720.0	5.27	352.51	4,709.2	235.7	-31.0	-235.5	0.00	0.00	0.00
4,760.0	5.27	352.51	4,749.1	239.4	-31.5	-239.1	0.00	0.00	0.00
4,800.0	5.27	352.51	4,788.9	243.0	-31.9	-242.7	0.00	0.00	0.00
4,840.0	5.27	352.51	4,828.7	246.7	-32.4	-246.4	0.00	0.00	0.00
4,880.0	5.27	352.51	4,868.6	250.3	-32.9	-250.0	0.00	0.00	0.00
4,920.0	5.27	352.51	4,908.4	254.0	-33.4	-253.7	0.00	0.00	0.00
4,960.0	5.27	352.51	4,948.2	257.6	-33.9	-257.3	0.00	0.00	0.00
5,000.0	5.27	352.51	4,988.1	261.2	-34.3	-260.9	0.00	0.00	0.00
5,040.0	5.27	352.51	5,027.9	264.9	-34.8	-264.6	0.00	0.00	0.00
5,080.0	5.27	352.51	5,067.7	268.5	-35.3	-268.2	0.00	0.00	0.00
5,120.0	5.27	352.51	5,107.6	272.2	-35.8	-271.8	0.00	0.00	0.00
5,160.0	5.27	352.51	5,147.4	275.8	-36.2	-275.5	0.00	0.00	0.00
5,200.0	5.27	352.51	5,187.2	279.5	-36.7	-279.1	0.00	0.00	0.00
5,240.0	5.27	352.51	5,227.0	283.1	-37.2	-282.8	0.00	0.00	0.00
5,249.8	5.27	352.51	5,236.8	284.0	-37.3	-283.7	0.00	0.00	0.00
5,280.0	4.67	352.51	5,266.9	286.6	-37.7	-286.2	2.00	-2.00	0.00
5,320.0	3.87	352.51	5,306.8	289.5	-38.0	-289.2	2.00	-2.00	0.00
5,360.0	3.07	352.51	5,346.7	291.9	-38.4	-291.6	2.00	-2.00	0.00
5,400.0	2.27	352.51	5,386.7	293.8	-38.6	-293.4	2.00	-2.00	0.00
5,440.0	1.47	352.51	5,426.6	295.1	-38.8	-294.7	2.00	-2.00	0.00
5,480.0	0.67	352.51	5,466.6	295.8	-38.9	-295.5	2.00	-2.00	0.00
5,513.4	0.00	0.00	5,500.0	296.0	-38.9	-295.7	2.00	-2.00	0.00
5,520.0	0.00	0.00	5,506.6	296.0	-38.9	-295.7	0.00	0.00	0.00
5,560.0	0.00	0.00	5,546.6	296.0	-38.9	-295.7	0.00	0.00	0.00
5,600.0	0.00	0.00	5,586.6	296.0	-38.9	-295.7	0.00	0.00	0.00
5,640.0	0.00	0.00	5,626.6	296.0	-38.9	-295.7	0.00	0.00	0.00
5,680.0	0.00	0.00	5,666.6	296.0	-38.9	-295.7	0.00	0.00	0.00
5,720.0	0.00	0.00	5,706.6	296.0	-38.9	-295.7	0.00	0.00	0.00
5,760.0	0.00	0.00	5,746.6	296.0	-38.9	-295.7	0.00	0.00	0.00
5,800.0	0.00	0.00	5,786.6	296.0	-38.9	-295.7	0.00	0.00	0.00
5,840.0	0.00	0.00	5,826.6	296.0	-38.9	-295.7	0.00	0.00	0.00
5,880.0	0.00	0.00	5,866.6	296.0	-38.9	-295.7	0.00	0.00	0.00
5,920.0	0.00	0.00	5,906.6	296.0	-38.9	-295.7	0.00	0.00	0.00
5,960.0	0.00	0.00	5,946.6	296.0	-38.9	-295.7	0.00	0.00	0.00
6,000.0	0.00	0.00	5,986.6	296.0	-38.9	-295.7	0.00	0.00	0.00
6,040.0	0.00	0.00	6,026.6	296.0	-38.9	-295.7	0.00	0.00	0.00
6,080.0	0.00	0.00	6,066.6	296.0	-38.9	-295.7	0.00	0.00	0.00
6,120.0	0.00	0.00	6,106.6	296.0	-38.9	-295.7	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Anderson 34M-403
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4930.0ft (Original Well Elev)
Project:	SEC.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (Original Well Elev)
Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	North Reference:	True
Well:	Anderson 34M-403	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (5-13-13)		

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)
6,160.0	0.00	0.00	6,146.6	296.0	-38.9	-295.7	0.00	0.00	0.00
6,200.0	0.00	0.00	6,186.6	296.0	-38.9	-295.7	0.00	0.00	0.00
6,240.0	0.00	0.00	6,226.6	296.0	-38.9	-295.7	0.00	0.00	0.00
6,280.0	0.00	0.00	6,266.6	296.0	-38.9	-295.7	0.00	0.00	0.00
6,320.0	0.00	0.00	6,306.6	296.0	-38.9	-295.7	0.00	0.00	0.00
6,360.0	0.00	0.00	6,346.6	296.0	-38.9	-295.7	0.00	0.00	0.00
6,400.0	0.00	0.00	6,386.6	296.0	-38.9	-295.7	0.00	0.00	0.00
6,440.0	0.00	0.00	6,426.6	296.0	-38.9	-295.7	0.00	0.00	0.00
6,480.0	0.00	0.00	6,466.6	296.0	-38.9	-295.7	0.00	0.00	0.00
6,520.0	0.00	0.00	6,506.6	296.0	-38.9	-295.7	0.00	0.00	0.00
6,560.0	0.00	0.00	6,546.6	296.0	-38.9	-295.7	0.00	0.00	0.00
6,600.0	0.00	0.00	6,586.6	296.0	-38.9	-295.7	0.00	0.00	0.00
6,613.6	0.00	0.00	6,600.2	296.0	-38.9	-295.7	0.00	0.00	0.00
KOP #2									
6,640.0	1.98	180.00	6,626.6	295.5	-38.9	-295.2	7.50	7.50	0.00
6,680.0	4.98	180.00	6,666.5	293.1	-38.9	-292.8	7.50	7.50	0.00
6,720.0	7.98	180.00	6,706.3	288.6	-38.9	-288.3	7.50	7.50	0.00
6,760.0	10.98	180.00	6,745.7	282.0	-38.9	-281.7	7.50	7.50	0.00
6,800.0	13.98	180.00	6,784.8	273.4	-38.9	-273.0	7.50	7.50	0.00
6,840.0	16.98	180.00	6,823.3	262.7	-38.9	-262.3	7.50	7.50	0.00
6,880.0	19.98	180.00	6,861.3	250.0	-38.9	-249.7	7.50	7.50	0.00
6,920.0	22.98	180.00	6,898.5	235.4	-38.9	-235.0	7.50	7.50	0.00
6,960.0	25.98	180.00	6,934.9	218.8	-38.9	-218.5	7.50	7.50	0.00
7,000.0	28.98	180.00	6,970.4	200.3	-38.9	-200.0	7.50	7.50	0.00
7,040.0	31.98	180.00	7,004.8	180.1	-38.9	-179.7	7.50	7.50	0.00
7,080.0	34.98	180.00	7,038.2	158.0	-38.9	-157.7	7.50	7.50	0.00
7,120.0	37.98	180.00	7,070.4	134.2	-38.9	-133.9	7.50	7.50	0.00
7,160.0	40.98	180.00	7,101.2	108.8	-38.9	-108.4	7.50	7.50	0.00
7,200.0	43.98	180.00	7,130.7	81.8	-38.9	-81.4	7.50	7.50	0.00
7,240.0	46.98	180.00	7,158.8	53.3	-38.9	-52.9	7.50	7.50	0.00
7,280.0	49.98	180.00	7,185.3	23.3	-38.9	-23.0	7.50	7.50	0.00
7,320.0	52.98	180.00	7,210.2	-8.0	-38.9	8.3	7.50	7.50	0.00
7,360.0	55.98	180.00	7,233.4	-40.5	-38.9	40.9	7.50	7.50	0.00
7,400.0	58.98	180.00	7,254.9	-74.3	-38.9	74.6	7.50	7.50	0.00
7,440.0	61.98	180.00	7,274.6	-109.1	-38.9	109.4	7.50	7.50	0.00
7,480.0	64.98	180.00	7,292.5	-144.8	-38.9	145.2	7.50	7.50	0.00
7,520.0	67.98	180.00	7,308.4	-181.5	-38.9	181.8	7.50	7.50	0.00
7,560.0	70.98	180.00	7,322.5	-219.0	-38.9	219.3	7.50	7.50	0.00
7,600.0	73.98	180.00	7,334.5	-257.1	-38.9	257.4	7.50	7.50	0.00
7,640.0	76.98	180.00	7,344.5	-295.8	-38.9	296.2	7.50	7.50	0.00
7,680.0	79.98	180.00	7,352.5	-335.0	-38.9	335.3	7.50	7.50	0.00
7,720.0	82.98	180.00	7,358.4	-374.6	-38.9	374.9	7.50	7.50	0.00
7,733.6	84.00	180.00	7,360.0	-388.1	-38.9	388.4	7.50	7.50	0.00
7"									
7,760.0	84.00	180.00	7,362.8	-414.3	-38.9	414.7	0.00	0.00	0.00
7,800.0	84.00	180.00	7,366.9	-454.1	-38.9	454.4	0.00	0.00	0.00
7,807.6	84.00	180.00	7,367.7	-461.7	-38.9	462.0	0.00	0.00	0.00
7,840.0	85.62	180.00	7,370.7	-493.9	-38.9	494.3	5.00	5.00	0.00
7,880.0	87.62	180.00	7,373.0	-533.9	-38.9	534.2	5.00	5.00	0.00
7,920.0	89.62	180.00	7,374.0	-573.9	-38.9	574.2	5.00	5.00	0.00
7,928.8	90.06	180.00	7,374.0	-582.7	-38.9	583.0	4.99	4.99	0.00
End of Build									
7,960.0	90.06	180.00	7,374.0	-613.9	-38.9	614.2	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Anderson 34M-403
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4930.0ft (Original Well Elev)
Project:	SEC.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (Original Well Elev)
Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	North Reference:	True
Well:	Anderson 34M-403	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (5-13-13)		

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)
8,000.0	90.06	180.00	7,373.9	-653.9	-38.9	654.2	0.00	0.00	0.00
8,040.0	90.06	180.00	7,373.9	-693.9	-38.9	694.2	0.00	0.00	0.00
8,080.0	90.06	180.00	7,373.8	-733.9	-38.9	734.2	0.00	0.00	0.00
8,120.0	90.06	180.00	7,373.8	-773.9	-38.9	774.2	0.00	0.00	0.00
8,160.0	90.06	180.00	7,373.8	-813.9	-38.9	814.2	0.00	0.00	0.00
8,200.0	90.06	180.00	7,373.7	-853.9	-38.9	854.2	0.00	0.00	0.00
8,240.0	90.06	180.00	7,373.7	-893.9	-38.9	894.2	0.00	0.00	0.00
8,280.0	90.06	180.00	7,373.6	-933.9	-38.9	934.2	0.00	0.00	0.00
8,320.0	90.06	180.00	7,373.6	-973.9	-38.9	974.2	0.00	0.00	0.00
8,360.0	90.06	180.00	7,373.6	-1,013.9	-38.9	1,014.2	0.00	0.00	0.00
8,400.0	90.06	180.00	7,373.5	-1,053.9	-38.9	1,054.2	0.00	0.00	0.00
8,440.0	90.06	180.00	7,373.5	-1,093.9	-38.9	1,094.2	0.00	0.00	0.00
8,480.0	90.06	180.00	7,373.4	-1,133.9	-38.9	1,134.2	0.00	0.00	0.00
8,520.0	90.06	180.00	7,373.4	-1,173.9	-38.9	1,174.2	0.00	0.00	0.00
8,560.0	90.06	180.00	7,373.4	-1,213.9	-38.9	1,214.2	0.00	0.00	0.00
8,600.0	90.06	180.00	7,373.3	-1,253.9	-38.9	1,254.2	0.00	0.00	0.00
8,640.0	90.06	180.00	7,373.3	-1,293.9	-38.9	1,294.2	0.00	0.00	0.00
8,680.0	90.06	180.00	7,373.2	-1,333.9	-38.9	1,334.2	0.00	0.00	0.00
8,720.0	90.06	180.00	7,373.2	-1,373.9	-38.9	1,374.2	0.00	0.00	0.00
8,760.0	90.06	180.00	7,373.1	-1,413.9	-38.9	1,414.1	0.00	0.00	0.00
8,800.0	90.06	180.00	7,373.1	-1,453.9	-38.9	1,454.1	0.00	0.00	0.00
8,840.0	90.06	180.00	7,373.1	-1,493.9	-38.9	1,494.1	0.00	0.00	0.00
8,880.0	90.06	180.00	7,373.0	-1,533.9	-38.9	1,534.1	0.00	0.00	0.00
8,920.0	90.06	180.00	7,373.0	-1,573.9	-38.9	1,574.1	0.00	0.00	0.00
8,960.0	90.06	180.00	7,372.9	-1,613.9	-38.9	1,614.1	0.00	0.00	0.00
9,000.0	90.06	180.00	7,372.9	-1,653.9	-38.9	1,654.1	0.00	0.00	0.00
9,040.0	90.06	180.00	7,372.9	-1,693.9	-38.9	1,694.1	0.00	0.00	0.00
9,080.0	90.06	180.00	7,372.8	-1,733.9	-38.9	1,734.1	0.00	0.00	0.00
9,120.0	90.06	180.00	7,372.8	-1,773.9	-38.9	1,774.1	0.00	0.00	0.00
9,160.0	90.06	180.00	7,372.7	-1,813.9	-38.9	1,814.1	0.00	0.00	0.00
9,200.0	90.06	180.00	7,372.7	-1,853.9	-38.9	1,854.1	0.00	0.00	0.00
9,240.0	90.06	180.00	7,372.7	-1,893.9	-38.9	1,894.1	0.00	0.00	0.00
9,280.0	90.06	180.00	7,372.6	-1,933.9	-38.9	1,934.1	0.00	0.00	0.00
9,320.0	90.06	180.00	7,372.6	-1,973.9	-38.9	1,974.1	0.00	0.00	0.00
9,360.0	90.06	180.00	7,372.5	-2,013.9	-38.9	2,014.1	0.00	0.00	0.00
9,400.0	90.06	180.00	7,372.5	-2,053.9	-38.9	2,054.1	0.00	0.00	0.00
9,440.0	90.06	180.00	7,372.4	-2,093.9	-38.9	2,094.1	0.00	0.00	0.00
9,480.0	90.06	180.00	7,372.4	-2,133.9	-38.9	2,134.1	0.00	0.00	0.00
9,520.0	90.06	180.00	7,372.4	-2,173.9	-38.9	2,174.1	0.00	0.00	0.00
9,560.0	90.06	180.00	7,372.3	-2,213.9	-38.9	2,214.1	0.00	0.00	0.00
9,600.0	90.06	180.00	7,372.3	-2,253.9	-38.9	2,254.1	0.00	0.00	0.00
9,640.0	90.06	180.00	7,372.2	-2,293.9	-38.9	2,294.1	0.00	0.00	0.00
9,680.0	90.06	180.00	7,372.2	-2,333.9	-38.9	2,334.1	0.00	0.00	0.00
9,720.0	90.06	180.00	7,372.2	-2,373.9	-38.9	2,374.1	0.00	0.00	0.00
9,760.0	90.06	180.00	7,372.1	-2,413.9	-38.9	2,414.1	0.00	0.00	0.00
9,800.0	90.06	180.00	7,372.1	-2,453.9	-38.9	2,454.1	0.00	0.00	0.00
9,840.0	90.06	180.00	7,372.0	-2,493.9	-38.9	2,494.1	0.00	0.00	0.00
9,880.0	90.06	180.00	7,372.0	-2,533.9	-38.9	2,534.1	0.00	0.00	0.00
9,920.0	90.06	180.00	7,372.0	-2,573.9	-38.9	2,574.1	0.00	0.00	0.00
9,960.0	90.06	180.00	7,371.9	-2,613.9	-38.9	2,614.1	0.00	0.00	0.00
10,000.0	90.06	180.00	7,371.9	-2,653.9	-38.9	2,654.1	0.00	0.00	0.00
10,040.0	90.06	180.00	7,371.8	-2,693.9	-38.9	2,694.1	0.00	0.00	0.00
10,080.0	90.06	180.00	7,371.8	-2,733.9	-38.9	2,734.1	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Anderson 34M-403
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4930.0ft (Original Well Elev)
Project:	SEC.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (Original Well Elev)
Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	North Reference:	True
Well:	Anderson 34M-403	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (5-13-13)		

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)
10,120.0	90.06	180.00	7,371.7	-2,773.9	-38.9	2,774.1	0.00	0.00	0.00
10,160.0	90.06	180.00	7,371.7	-2,813.9	-38.9	2,814.1	0.00	0.00	0.00
10,200.0	90.06	180.00	7,371.7	-2,853.9	-38.9	2,854.1	0.00	0.00	0.00
10,240.0	90.06	180.00	7,371.6	-2,893.9	-38.9	2,894.1	0.00	0.00	0.00
10,280.0	90.06	180.00	7,371.6	-2,933.9	-38.9	2,934.1	0.00	0.00	0.00
10,320.0	90.06	180.00	7,371.5	-2,973.9	-38.9	2,974.1	0.00	0.00	0.00
10,360.0	90.06	180.00	7,371.5	-3,013.9	-38.9	3,014.1	0.00	0.00	0.00
10,400.0	90.06	180.00	7,371.5	-3,053.9	-38.9	3,054.1	0.00	0.00	0.00
10,440.0	90.06	180.00	7,371.4	-3,093.9	-38.9	3,094.1	0.00	0.00	0.00
10,480.0	90.06	180.00	7,371.4	-3,133.9	-38.9	3,134.1	0.00	0.00	0.00
10,520.0	90.06	180.00	7,371.3	-3,173.9	-38.9	3,174.1	0.00	0.00	0.00
10,560.0	90.06	180.00	7,371.3	-3,213.9	-38.9	3,214.1	0.00	0.00	0.00
10,600.0	90.06	180.00	7,371.3	-3,253.9	-38.9	3,254.1	0.00	0.00	0.00
10,640.0	90.06	180.00	7,371.2	-3,293.9	-38.9	3,294.1	0.00	0.00	0.00
10,680.0	90.06	180.00	7,371.2	-3,333.9	-38.9	3,334.1	0.00	0.00	0.00
10,720.0	90.06	180.00	7,371.1	-3,373.9	-38.9	3,374.1	0.00	0.00	0.00
10,760.0	90.06	180.00	7,371.1	-3,413.9	-38.9	3,414.1	0.00	0.00	0.00
10,800.0	90.06	180.00	7,371.0	-3,453.9	-38.9	3,454.1	0.00	0.00	0.00
10,840.0	90.06	180.00	7,371.0	-3,493.9	-38.9	3,494.1	0.00	0.00	0.00
10,880.0	90.06	180.00	7,371.0	-3,533.9	-38.9	3,534.1	0.00	0.00	0.00
10,920.0	90.06	180.00	7,370.9	-3,573.9	-38.9	3,574.1	0.00	0.00	0.00
10,960.0	90.06	180.00	7,370.9	-3,613.9	-38.9	3,614.1	0.00	0.00	0.00
11,000.0	90.06	180.00	7,370.8	-3,653.9	-38.9	3,654.1	0.00	0.00	0.00
11,040.0	90.06	180.00	7,370.8	-3,693.9	-38.9	3,694.1	0.00	0.00	0.00
11,080.0	90.06	180.00	7,370.8	-3,733.9	-38.9	3,734.1	0.00	0.00	0.00
11,120.0	90.06	180.00	7,370.7	-3,773.9	-38.9	3,774.1	0.00	0.00	0.00
11,160.0	90.06	180.00	7,370.7	-3,813.9	-38.9	3,814.1	0.00	0.00	0.00
11,200.0	90.06	180.00	7,370.6	-3,853.9	-38.9	3,854.1	0.00	0.00	0.00
11,240.0	90.06	180.00	7,370.6	-3,893.9	-38.9	3,894.1	0.00	0.00	0.00
11,280.0	90.06	180.00	7,370.6	-3,933.9	-38.9	3,934.1	0.00	0.00	0.00
11,320.0	90.06	180.00	7,370.5	-3,973.9	-38.9	3,974.1	0.00	0.00	0.00
11,360.0	90.06	180.00	7,370.5	-4,013.9	-38.9	4,014.0	0.00	0.00	0.00
11,400.0	90.06	180.00	7,370.4	-4,053.9	-38.9	4,054.0	0.00	0.00	0.00
11,440.0	90.06	180.00	7,370.4	-4,093.9	-38.9	4,094.0	0.00	0.00	0.00
11,480.0	90.06	180.00	7,370.3	-4,133.9	-38.9	4,134.0	0.00	0.00	0.00
11,520.0	90.06	180.00	7,370.3	-4,173.9	-38.9	4,174.0	0.00	0.00	0.00
11,560.0	90.06	180.00	7,370.3	-4,213.9	-38.9	4,214.0	0.00	0.00	0.00
11,600.0	90.06	180.00	7,370.2	-4,253.9	-38.9	4,254.0	0.00	0.00	0.00
11,640.0	90.06	180.00	7,370.2	-4,293.9	-38.9	4,294.0	0.00	0.00	0.00
11,680.0	90.06	180.00	7,370.1	-4,333.9	-38.9	4,334.0	0.00	0.00	0.00
11,720.0	90.06	180.00	7,370.1	-4,373.9	-38.9	4,374.0	0.00	0.00	0.00
11,760.0	90.06	180.00	7,370.1	-4,413.9	-38.9	4,414.0	0.00	0.00	0.00
11,800.0	90.06	180.00	7,370.0	-4,453.9	-38.9	4,454.0	0.00	0.00	0.00
11,816.3	90.06	180.00	7,370.0	-4,470.2	-38.9	4,470.4	0.00	0.00	0.00
BHL 500'FSL, 2600'FWL									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,733.6	7,360.0	7"	7	7-1/2

Database:	Landmark	Local Co-ordinate Reference:	Well Anderson 34M-403
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4930.0ft (Original Well Elev)
Project:	SEC.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (Original Well Elev)
Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	North Reference:	True
Well:	Anderson 34M-403	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (5-13-13)		

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
2,000.0	2,000.0	0.0	0.0	KOP #1
6,613.6	6,600.2	296.0	-38.9	KOP #2
7,928.8	7,374.0	-582.7	-38.9	End of Build



Directional

PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.34-T7N-R66W

Anderson 34M-HZ Pad Sec.34-T7N-R66W

Anderson 34M-403

Wellbore #1

Plan #1 (5-13-13)

Anticollision Report

15 May, 2013



Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34M-403
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4930.0ft (Original Well Elev)
Reference Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (5-13-13)	Offset TVD Reference:	Offset Datum

Reference	Plan #1 (5-13-13)		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date 5/15/2013			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	11,816.2	Plan #1 (5-13-13) (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Anderson (Existing Wells) Sec.34-T7N-R66W						
Anderson 21-34 (Exist) - Wellbore #1 - Wellbore #1	7,775.6	7,379.4	333.6	167.3	2.007	CC, ES, SF
Anderson 22-34 (Exist.) - Wellbore #1 - Wellbore #1	9,116.7	7,387.8	369.7	183.3	1.983	CC, ES, SF
Anderson 23-34 (Exist) - Wellbore #1 - Wellbore #1	10,504.8	7,386.4	361.4	149.7	1.707	CC, ES, SF
Anderson 34M-HZ Pad Sec.34-T7N-R66W						
Anderson 34M-303 - Wellbore #1 - Plan #1 (5-13-13)	1,200.0	1,200.0	30.6	25.4	5.914	CC, ES
Anderson 34M-303 - Wellbore #1 - Plan #1 (5-13-13)	11,817.1	11,758.6	304.4	134.6	1.793	SF
Anderson 34M-343 - Wellbore #1 - Plan #1 (5-13-13)	1,000.0	1,000.0	30.6	26.3	7.159	CC, ES
Anderson 34M-343 - Wellbore #1 - Plan #1 (5-13-13)	11,817.1	11,766.5	347.6	178.6	2.057	SF

Offset Design Anderson (Existing Wells) Sec.34-T7N-R66W - Anderson 21-34 (Exist) - Wellbore #1 - Wellbore #1											
Survey Program: 7800-UNKNOWN											
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)
0.0	0.0	15.0	15.0	0.0	0.3	-139.09	-429.9	-372.5	568.8	568.5	0.30
100.0	100.0	115.0	115.0	0.1	2.3	-139.09	-429.9	-372.5	568.8	566.4	2.41
200.0	200.0	215.0	215.0	0.3	4.3	-139.09	-429.9	-372.5	568.8	564.2	4.64
300.0	300.0	315.0	315.0	0.6	6.3	-139.09	-429.9	-372.5	568.8	561.9	6.86
400.0	400.0	415.0	415.0	0.8	8.3	-139.09	-429.9	-372.5	568.8	559.7	9.09
500.0	500.0	515.0	515.0	1.0	10.3	-139.09	-429.9	-372.5	568.8	557.5	11.31
600.0	600.0	615.0	615.0	1.2	12.3	-139.09	-429.9	-372.5	568.8	555.3	13.54
700.0	700.0	715.0	715.0	1.5	14.3	-139.09	-429.9	-372.5	568.8	553.0	15.76
800.0	800.0	815.0	815.0	1.7	16.3	-139.09	-429.9	-372.5	568.8	550.8	17.99
900.0	900.0	915.0	915.0	1.9	18.3	-139.09	-429.9	-372.5	568.8	548.6	20.21
1,000.0	1,000.0	1,015.0	1,015.0	2.1	20.3	-139.09	-429.9	-372.5	568.8	546.4	22.44
1,100.0	1,100.0	1,115.0	1,115.0	2.4	22.3	-139.09	-429.9	-372.5	568.8	544.1	24.66
1,200.0	1,200.0	1,215.0	1,215.0	2.6	24.3	-139.09	-429.9	-372.5	568.8	541.9	26.88
1,300.0	1,300.0	1,315.0	1,315.0	2.8	26.3	-139.09	-429.9	-372.5	568.8	539.7	29.11
1,400.0	1,400.0	1,415.0	1,415.0	3.0	28.3	-139.09	-429.9	-372.5	568.8	537.5	31.33
1,500.0	1,500.0	1,515.0	1,515.0	3.3	30.3	-139.09	-429.9	-372.5	568.8	535.2	33.56
1,600.0	1,600.0	1,615.0	1,615.0	3.5	32.3	-139.09	-429.9	-372.5	568.8	533.0	35.78
1,700.0	1,700.0	1,715.0	1,715.0	3.7	34.3	-139.09	-429.9	-372.5	568.8	530.8	38.01

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34M-403
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4930.0ft (Original Well Elev)
Reference Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (5-13-13)	Offset TVD Reference:	Offset Datum

Offset Design Anderson (Existing Wells) Sec.34-T7N-R66W - Anderson 21-34 (Exist) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 7800-UNKNOWN													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
1,800.0	1,800.0	1,815.0	1,815.0	3.9	36.3	-139.09	-139.09	-429.9	-372.5	568.8	528.6	40.23	14.137	
1,900.0	1,900.0	1,915.0	1,915.0	4.2	38.3	-139.09	-139.09	-429.9	-372.5	568.8	526.3	42.46	13.397	
2,000.0	2,000.0	2,015.0	2,015.0	4.4	40.3	-139.09	-139.09	-429.9	-372.5	568.8	524.1	44.68	12.730	
2,100.0	2,100.0	2,115.0	2,115.0	4.6	42.3	-131.72	-131.72	-429.9	-372.5	570.0	523.1	46.89	12.154	
2,200.0	2,199.8	2,214.8	2,214.8	4.8	44.3	-132.06	-132.06	-429.9	-372.5	573.5	524.4	49.08	11.685	
2,263.5	2,263.2	2,278.2	2,278.2	5.0	45.6	-132.39	-132.39	-429.9	-372.5	576.9	526.5	50.44	11.437	
2,300.0	2,299.5	2,314.5	2,314.5	5.1	46.3	-132.63	-132.63	-429.9	-372.5	579.2	527.9	51.25	11.301	
2,400.0	2,399.1	2,414.1	2,414.1	5.3	48.3	-133.29	-133.29	-429.9	-372.5	585.5	532.0	53.46	10.951	
2,500.0	2,498.6	2,513.6	2,513.6	5.5	50.3	-133.94	-133.94	-429.9	-372.5	591.8	536.1	55.68	10.629	
2,600.0	2,598.2	2,613.2	2,613.2	5.8	52.3	-134.57	-134.57	-429.9	-372.5	598.2	540.3	57.90	10.332	
2,700.0	2,697.8	2,712.8	2,712.8	6.0	54.3	-135.19	-135.19	-429.9	-372.5	604.7	544.6	60.12	10.059	
2,800.0	2,797.4	2,812.4	2,812.4	6.2	56.2	-135.79	-135.79	-429.9	-372.5	611.3	549.0	62.34	9.806	
2,900.0	2,896.9	2,911.9	2,911.9	6.5	58.2	-136.38	-136.38	-429.9	-372.5	617.9	553.4	64.56	9.571	
3,000.0	2,996.5	3,011.5	3,011.5	6.7	60.2	-136.96	-136.96	-429.9	-372.5	624.6	557.8	66.79	9.352	
3,100.0	3,096.1	3,111.1	3,111.1	7.0	62.2	-137.53	-137.53	-429.9	-372.5	631.4	562.4	69.01	9.149	
3,200.0	3,195.7	3,210.7	3,210.7	7.2	64.2	-138.09	-138.09	-429.9	-372.5	638.2	567.0	71.24	8.959	
3,300.0	3,295.2	3,310.2	3,310.2	7.5	66.2	-138.63	-138.63	-429.9	-372.5	645.1	571.6	73.46	8.781	
3,400.0	3,394.8	3,409.8	3,409.8	7.8	68.2	-139.16	-139.16	-429.9	-372.5	652.0	576.3	75.69	8.615	
3,500.0	3,494.4	3,509.4	3,509.4	8.0	70.2	-139.69	-139.69	-429.9	-372.5	659.0	581.1	77.91	8.458	
3,600.0	3,594.0	3,609.0	3,609.0	8.3	72.2	-140.20	-140.20	-429.9	-372.5	666.0	585.9	80.14	8.311	
3,700.0	3,693.6	3,708.6	3,708.6	8.5	74.2	-140.70	-140.70	-429.9	-372.5	673.1	590.8	82.36	8.173	
3,800.0	3,793.1	3,808.1	3,808.1	8.8	76.2	-141.19	-141.19	-429.9	-372.5	680.3	595.7	84.59	8.042	
3,900.0	3,892.7	3,907.7	3,907.7	9.1	78.2	-141.66	-141.66	-429.9	-372.5	687.5	600.7	86.81	7.919	
4,000.0	3,992.3	4,007.3	4,007.3	9.3	80.1	-142.13	-142.13	-429.9	-372.5	694.7	605.7	89.04	7.802	
4,100.0	4,091.9	4,106.9	4,106.9	9.6	82.1	-142.59	-142.59	-429.9	-372.5	702.0	610.7	91.27	7.692	
4,200.0	4,191.4	4,206.4	4,206.4	9.9	84.1	-143.04	-143.04	-429.9	-372.5	709.3	615.8	93.49	7.587	
4,300.0	4,291.0	4,306.0	4,306.0	10.1	86.1	-143.48	-143.48	-429.9	-372.5	716.7	621.0	95.72	7.488	
4,400.0	4,390.6	4,405.6	4,405.6	10.4	88.1	-143.92	-143.92	-429.9	-372.5	724.1	626.2	97.94	7.393	
4,500.0	4,490.2	4,505.2	4,505.2	10.7	90.1	-144.34	-144.34	-429.9	-372.5	731.6	631.4	100.17	7.304	
4,600.0	4,589.7	4,604.7	4,604.7	10.9	92.1	-144.75	-144.75	-429.9	-372.5	739.1	636.7	102.39	7.218	
4,700.0	4,689.3	4,704.3	4,704.3	11.2	94.1	-145.16	-145.16	-429.9	-372.5	746.6	642.0	104.61	7.137	
4,800.0	4,788.9	4,803.9	4,803.9	11.5	96.1	-145.56	-145.56	-429.9	-372.5	754.2	647.3	106.84	7.059	
4,900.0	4,888.5	4,903.5	4,903.5	11.7	98.1	-145.95	-145.95	-429.9	-372.5	761.8	652.7	109.06	6.985	
5,000.0	4,988.1	5,003.1	5,003.1	12.0	100.1	-146.33	-146.33	-429.9	-372.5	769.4	658.1	111.29	6.914	
5,100.0	5,087.6	5,102.6	5,102.6	12.3	102.1	-146.71	-146.71	-429.9	-372.5	777.1	663.6	113.51	6.846	
5,200.0	5,187.2	5,202.2	5,202.2	12.6	104.0	-147.07	-147.07	-429.9	-372.5	784.8	669.0	115.73	6.781	
5,249.8	5,236.8	5,251.8	5,251.8	12.7	105.0	-147.25	-147.25	-429.9	-372.5	788.6	671.8	116.84	6.750	
5,300.0	5,286.8	5,301.8	5,301.8	12.8	106.0	-147.46	-147.46	-429.9	-372.5	792.1	674.1	118.05	6.710	
5,400.0	5,386.7	5,401.7	5,401.7	13.0	108.0	-147.73	-147.73	-429.9	-372.5	797.0	676.6	120.37	6.621	
5,500.0	5,486.6	5,501.6	5,501.6	13.2	110.0	-147.83	-147.83	-429.9	-372.5	798.8	676.2	122.59	6.516	
5,513.4	5,500.0	5,515.0	5,515.0	13.2	110.3	-155.32	-155.32	-429.9	-372.5	798.9	676.0	122.88	6.501	
5,600.0	5,586.6	5,601.6	5,601.6	13.4	112.0	-155.32	-155.32	-429.9	-372.5	798.9	674.1	124.78	6.402	
5,700.0	5,686.6	5,701.6	5,701.6	13.6	114.0	-155.32	-155.32	-429.9	-372.5	798.9	671.9	126.99	6.291	
5,800.0	5,786.6	5,801.6	5,801.6	13.8	116.0	-155.32	-155.32	-429.9	-372.5	798.9	669.7	129.21	6.183	
5,900.0	5,886.6	5,901.6	5,901.6	14.0	118.0	-155.32	-155.32	-429.9	-372.5	798.9	667.4	131.43	6.078	
6,000.0	5,986.6	6,001.6	6,001.6	14.2	120.0	-155.32	-155.32	-429.9	-372.5	798.9	665.2	133.64	5.978	
6,100.0	6,086.6	6,101.6	6,101.6	14.4	122.0	-155.32	-155.32	-429.9	-372.5	798.9	663.0	135.86	5.880	
6,200.0	6,186.6	6,201.6	6,201.6	14.6	124.0	-155.32	-155.32	-429.9	-372.5	798.9	660.8	138.08	5.786	
6,300.0	6,286.6	6,301.6	6,301.6	14.8	126.0	-155.32	-155.32	-429.9	-372.5	798.9	658.6	140.29	5.694	
6,400.0	6,386.6	6,401.6	6,401.6	15.0	128.0	-155.32	-155.32	-429.9	-372.5	798.9	656.3	142.51	5.606	
6,500.0	6,486.6	6,501.6	6,501.6	15.2	130.0	-155.32	-155.32	-429.9	-372.5	798.9	654.1	144.73	5.520	

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34M-403
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4930.0ft (Original Well Elev)
Reference Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (5-13-13)	Offset TVD Reference:	Offset Datum

Offset Design Anderson (Existing Wells) Sec.34-T7N-R66W - Anderson 21-34 (Exist) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 7800-UNKNOWN													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
6,600.0	6,586.6	6,601.6	6,601.6	15.4	132.0	-155.32		-429.9	-372.5	798.9	651.9	146.95	5.436	
6,613.6	6,600.2	6,615.2	6,615.2	15.4	132.3	-155.32		-429.9	-372.5	798.9	651.6	147.25	5.425	
6,650.0	6,636.6	6,651.6	6,651.6	15.5	133.0	24.73		-429.9	-372.5	798.1	650.2	147.89	5.396	
6,700.0	6,686.4	6,701.4	6,701.4	15.6	134.0	24.97		-429.9	-372.5	794.4	646.1	148.31	5.357	
6,750.0	6,735.9	6,750.9	6,750.9	15.6	135.0	25.40		-429.9	-372.5	787.8	639.6	148.21	5.316	
6,800.0	6,784.8	6,799.8	6,799.8	15.6	136.0	26.05		-429.9	-372.5	778.4	630.7	147.62	5.273	
6,850.0	6,832.9	6,847.9	6,847.9	15.7	137.0	26.92		-429.9	-372.5	766.0	619.5	146.56	5.227	
6,900.0	6,880.0	6,895.0	6,895.0	15.7	137.9	28.05		-429.9	-372.5	751.0	605.9	145.10	5.176	
6,950.0	6,925.9	6,940.9	6,940.9	15.7	138.8	29.45		-429.9	-372.5	733.3	589.9	143.34	5.116	
7,000.0	6,970.4	6,985.4	6,985.4	15.7	139.7	31.18		-429.9	-372.5	713.1	571.7	141.40	5.043	
7,050.0	7,013.3	7,028.3	7,028.3	15.7	140.6	33.26		-429.9	-372.5	690.5	551.0	139.48	4.950	
7,100.0	7,054.4	7,069.4	7,069.4	15.7	141.4	35.75		-429.9	-372.5	665.8	528.0	137.81	4.831	
7,150.0	7,093.6	7,108.6	7,108.6	15.7	142.2	38.71		-429.9	-372.5	639.1	502.4	136.69	4.676	
7,200.0	7,130.7	7,145.7	7,145.7	15.7	142.9	42.18		-429.9	-372.5	610.8	474.4	136.43	4.477	
7,250.0	7,165.5	7,180.5	7,180.5	15.8	143.6	46.19		-429.9	-372.5	581.1	443.7	137.33	4.231	
7,300.0	7,197.9	7,212.9	7,212.9	15.8	144.3	50.74		-429.9	-372.5	550.3	410.8	139.56	3.943	
7,350.0	7,227.8	7,242.8	7,242.8	15.9	144.9	55.79		-429.9	-372.5	519.0	376.0	143.05	3.628	
7,400.0	7,254.9	7,269.9	7,269.9	16.1	145.4	61.21		-429.9	-372.5	487.6	340.1	147.45	3.307	
7,450.0	7,279.3	7,294.3	7,294.3	16.3	145.9	66.80		-429.9	-372.5	456.7	304.5	152.17	3.001	
7,500.0	7,300.7	7,315.7	7,315.7	16.5	146.3	72.30		-429.9	-372.5	427.1	270.6	156.56	2.728	
7,550.0	7,319.1	7,334.1	7,334.1	16.8	146.7	77.40		-429.9	-372.5	399.8	239.7	160.12	2.497	
7,600.0	7,334.5	7,349.5	7,349.5	17.1	147.0	81.87		-429.9	-372.5	375.7	213.0	162.66	2.309	
7,650.0	7,346.7	7,361.7	7,361.7	17.5	147.2	85.47		-429.9	-372.5	356.0	191.7	164.28	2.167	
7,700.0	7,355.7	7,370.7	7,370.7	17.9	147.4	88.09		-429.9	-372.5	341.9	176.7	165.26	2.069	
7,733.6	7,360.0	7,375.0	7,375.0	18.2	147.5	89.25		-429.9	-372.5	336.2	170.5	165.72	2.029	
7,775.6	7,364.4	7,379.4	7,379.4	18.6	147.6	90.00		-429.9	-372.5	333.6	167.3	166.23	2.007	CC, ES, SF
7,807.6	7,367.7	7,382.7	7,382.7	19.0	147.7	90.57		-429.9	-372.5	335.1	168.5	166.60	2.011	
7,900.0	7,373.7	7,388.7	7,388.7	20.0	147.8	90.51		-429.9	-372.5	355.9	188.1	167.72	2.122	
7,928.8	7,374.0	7,389.0	7,389.0	20.3	147.8	89.97		-429.9	-372.5	366.9	198.8	168.06	2.183	
8,000.0	7,373.9	7,388.9	7,388.9	21.1	147.8	89.96		-429.9	-372.5	401.8	232.9	168.92	2.379	
8,100.0	7,373.8	7,388.8	7,388.8	22.4	147.8	89.94		-429.9	-372.5	465.0	294.8	170.21	2.732	
8,200.0	7,373.7	7,388.7	7,388.7	23.8	147.8	89.93		-429.9	-372.5	539.5	367.9	171.59	3.144	
8,300.0	7,373.6	7,388.6	7,388.6	25.3	147.8	89.91		-429.9	-372.5	621.1	448.1	173.03	3.590	
8,400.0	7,373.5	7,388.5	7,388.5	26.8	147.8	89.89		-429.9	-372.5	707.5	533.0	174.54	4.054	
8,500.0	7,373.4	7,388.4	7,388.4	28.3	147.8	89.87		-429.9	-372.5	797.1	621.0	176.10	4.527	
8,600.0	7,373.3	7,388.3	7,388.3	29.9	147.8	89.85		-429.9	-372.5	888.9	711.2	177.70	5.003	
8,700.0	7,373.2	7,388.2	7,388.2	31.6	147.8	89.84		-429.9	-372.5	982.3	803.0	179.33	5.478	
8,800.0	7,373.1	7,388.1	7,388.1	33.2	147.8	89.82		-429.9	-372.5	1,076.9	895.9	181.00	5.950	
8,900.0	7,373.0	7,388.0	7,388.0	34.9	147.8	89.80		-429.9	-372.5	1,172.4	989.7	182.69	6.418	
9,000.0	7,372.9	7,387.9	7,387.9	36.7	147.8	89.78		-429.9	-372.5	1,268.6	1,084.2	184.41	6.879	
9,100.0	7,372.8	7,387.8	7,387.8	38.4	147.8	89.77		-429.9	-372.5	1,365.3	1,179.2	186.14	7.335	
9,200.0	7,372.7	7,387.7	7,387.7	40.1	147.8	89.75		-429.9	-372.5	1,462.5	1,274.6	187.89	7.784	
9,300.0	7,372.6	7,387.6	7,387.6	41.9	147.8	89.73		-429.9	-372.5	1,560.1	1,370.4	189.66	8.226	
9,400.0	7,372.5	7,387.5	7,387.5	43.7	147.7	89.71		-429.9	-372.5	1,657.9	1,466.4	191.44	8.660	
9,500.0	7,372.4	7,387.4	7,387.4	45.5	147.7	89.70		-429.9	-372.5	1,755.9	1,562.7	193.23	9.087	
9,600.0	7,372.3	7,387.3	7,387.3	47.3	147.7	89.68		-429.9	-372.5	1,854.2	1,659.2	195.03	9.507	
9,700.0	7,372.2	7,387.2	7,387.2	49.1	147.7	89.66		-429.9	-372.5	1,952.7	1,755.8	196.84	9.920	
9,800.0	7,372.1	7,387.1	7,387.1	50.9	147.7	89.64		-429.9	-372.5	2,051.3	1,852.6	198.66	10.325	
9,900.0	7,372.0	7,387.0	7,387.0	52.8	147.7	89.62		-429.9	-372.5	2,150.0	1,949.5	200.49	10.724	
10,000.0	7,371.9	7,386.9	7,386.9	54.6	147.7	89.61		-429.9	-372.5	2,248.8	2,046.5	202.32	11.115	
10,100.0	7,371.8	7,386.8	7,386.8	56.4	147.7	89.59		-429.9	-372.5	2,347.8	2,143.6	204.16	11.500	

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34M-403
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4930.0ft (Original Well Elev)
Reference Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (5-13-13)	Offset TVD Reference:	Offset Datum

Offset Design		Anderson (Existing Wells) Sec.34-T7N-R66W - Anderson 21-34 (Exist) - Wellbore #1 - Wellbore #1										Offset Site Error:	0.0 ft	
Survey Program: 7800-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)			
10,200.0	7,371.7	7,386.7	7,386.7	58.3	147.7	89.57	-429.9	-372.5	2,446.8	2,240.8	206.00	11.878		
10,300.0	7,371.6	7,386.6	7,386.6	60.1	147.7	89.55	-429.9	-372.5	2,545.9	2,338.1	207.85	12.249		
10,400.0	7,371.5	7,386.5	7,386.5	62.0	147.7	89.54	-429.9	-372.5	2,645.1	2,435.4	209.70	12.613		
10,500.0	7,371.4	7,386.4	7,386.4	63.8	147.7	89.52	-429.9	-372.5	2,744.3	2,532.8	211.56	12.972		
10,600.0	7,371.3	7,386.3	7,386.3	65.7	147.7	89.50	-429.9	-372.5	2,843.6	2,630.2	213.42	13.324		
10,700.0	7,371.1	7,386.1	7,386.1	67.6	147.7	89.48	-429.9	-372.5	2,942.9	2,727.7	215.29	13.670		
10,800.0	7,371.0	7,386.0	7,386.0	69.4	147.7	89.47	-429.9	-372.5	3,042.3	2,825.2	217.15	14.010		
10,900.0	7,370.9	7,385.9	7,385.9	71.3	147.7	89.45	-429.9	-372.5	3,141.7	2,922.7	219.02	14.344		
11,000.0	7,370.8	7,385.8	7,385.8	73.2	147.7	89.43	-429.9	-372.5	3,241.2	3,020.3	220.90	14.673		
11,100.0	7,370.7	7,385.7	7,385.7	75.1	147.7	89.41	-429.9	-372.5	3,340.7	3,117.9	222.77	14.996		
11,200.0	7,370.6	7,385.6	7,385.6	76.9	147.7	89.39	-429.9	-372.5	3,440.2	3,215.5	224.65	15.314		
11,300.0	7,370.5	7,385.5	7,385.5	78.8	147.7	89.38	-429.9	-372.5	3,539.7	3,313.2	226.53	15.626		
11,400.0	7,370.4	7,385.4	7,385.4	80.7	147.7	89.36	-429.9	-372.5	3,639.3	3,410.9	228.41	15.933		
11,500.0	7,370.3	7,385.3	7,385.3	82.6	147.7	89.34	-429.9	-372.5	3,738.9	3,508.6	230.29	16.235		
11,600.0	7,370.2	7,385.2	7,385.2	84.5	147.7	89.32	-429.9	-372.5	3,838.5	3,606.3	232.18	16.533		
11,700.0	7,370.1	7,385.1	7,385.1	86.4	147.7	89.31	-429.9	-372.5	3,938.1	3,704.1	234.06	16.825		
11,800.0	7,370.0	7,385.0	7,385.0	88.3	147.7	89.29	-429.9	-372.5	4,037.8	3,801.8	235.95	17.113		
11,816.3	7,370.0	7,385.0	7,385.0	88.6	147.7	89.29	-429.9	-372.5	4,054.0	3,817.8	236.26	17.159		
11,817.1	7,370.0	7,385.0	7,385.0	88.6	147.7	89.29	-429.9	-372.5	4,054.8	3,818.6	236.27	17.162		

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34M-403
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4930.0ft (Original Well Elev)
Reference Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (5-13-13)	Offset TVD Reference:	Offset Datum

Offset Design		Anderson (Existing Wells) Sec.34-T7N-R66W - Anderson 22-34 (Exist.) - Wellbore #1 - Wellbore #1											Offset Site Error:	0.0 ft
Survey Program: 7800-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	Offset		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
0.0	0.0	15.0	15.0	0.0	0.3	-167.00	-1,770.6	-408.6	1,817.1	1,816.8	0.30	6,053.060		
100.0	100.0	115.0	115.0	0.1	2.3	-167.00	-1,770.6	-408.6	1,817.1	1,814.7	2.41	753.188		
200.0	200.0	215.0	215.0	0.3	4.3	-167.00	-1,770.6	-408.6	1,817.1	1,812.5	4.64	391.846		
300.0	300.0	315.0	315.0	0.6	6.3	-167.00	-1,770.6	-408.6	1,817.1	1,810.3	6.86	264.806		
400.0	400.0	415.0	415.0	0.8	8.3	-167.00	-1,770.6	-408.6	1,817.1	1,808.0	9.09	199.973		
500.0	500.0	515.0	515.0	1.0	10.3	-167.00	-1,770.6	-408.6	1,817.1	1,805.8	11.31	160.642		
600.0	600.0	615.0	615.0	1.2	12.3	-167.00	-1,770.6	-408.6	1,817.1	1,803.6	13.54	134.240		
700.0	700.0	715.0	715.0	1.5	14.3	-167.00	-1,770.6	-408.6	1,817.1	1,801.4	15.76	115.291		
800.0	800.0	815.0	815.0	1.7	16.3	-167.00	-1,770.6	-408.6	1,817.1	1,799.1	17.99	101.030		
900.0	900.0	915.0	915.0	1.9	18.3	-167.00	-1,770.6	-408.6	1,817.1	1,796.9	20.21	89.909		
1,000.0	1,000.0	1,015.0	1,015.0	2.1	20.3	-167.00	-1,770.6	-408.6	1,817.1	1,794.7	22.44	80.994		
1,100.0	1,100.0	1,115.0	1,115.0	2.4	22.3	-167.00	-1,770.6	-408.6	1,817.1	1,792.5	24.66	73.687		
1,200.0	1,200.0	1,215.0	1,215.0	2.6	24.3	-167.00	-1,770.6	-408.6	1,817.1	1,790.2	26.88	67.589		
1,300.0	1,300.0	1,315.0	1,315.0	2.8	26.3	-167.00	-1,770.6	-408.6	1,817.1	1,788.0	29.11	62.423		
1,400.0	1,400.0	1,415.0	1,415.0	3.0	28.3	-167.00	-1,770.6	-408.6	1,817.1	1,785.8	31.33	57.991		
1,500.0	1,500.0	1,515.0	1,515.0	3.3	30.3	-167.00	-1,770.6	-408.6	1,817.1	1,783.6	33.56	54.147		
1,600.0	1,600.0	1,615.0	1,615.0	3.5	32.3	-167.00	-1,770.6	-408.6	1,817.1	1,781.3	35.78	50.780		
1,700.0	1,700.0	1,715.0	1,715.0	3.7	34.3	-167.00	-1,770.6	-408.6	1,817.1	1,779.1	38.01	47.808		
1,800.0	1,800.0	1,815.0	1,815.0	3.9	36.3	-167.00	-1,770.6	-408.6	1,817.1	1,776.9	40.23	45.164		
1,900.0	1,900.0	1,915.0	1,915.0	4.2	38.3	-167.00	-1,770.6	-408.6	1,817.1	1,774.7	42.46	42.798		
2,000.0	2,000.0	2,015.0	2,015.0	4.4	40.3	-167.00	-1,770.6	-408.6	1,817.1	1,772.4	44.68	40.667		
2,100.0	2,100.0	2,115.0	2,115.0	4.6	42.3	-159.53	-1,770.6	-408.6	1,818.8	1,771.9	46.88	38.794		
2,200.0	2,199.8	2,214.8	2,214.8	4.8	44.3	-159.55	-1,770.6	-408.6	1,823.7	1,774.6	49.03	37.198		
2,263.5	2,263.2	2,278.2	2,278.2	5.0	45.6	-159.57	-1,770.6	-408.6	1,828.5	1,778.1	50.35	36.312		
2,300.0	2,299.5	2,314.5	2,314.5	5.1	46.3	-159.61	-1,770.6	-408.6	1,831.6	1,780.5	51.16	35.801		
2,400.0	2,399.1	2,414.1	2,414.1	5.3	48.3	-159.71	-1,770.6	-408.6	1,840.2	1,786.9	53.37	34.480		
2,500.0	2,498.6	2,513.6	2,513.6	5.5	50.3	-159.81	-1,770.6	-408.6	1,848.9	1,793.3	55.58	33.263		
2,600.0	2,598.2	2,613.2	2,613.2	5.8	52.3	-159.90	-1,770.6	-408.6	1,857.5	1,799.7	57.80	32.139		
2,700.0	2,697.8	2,712.8	2,712.8	6.0	54.3	-160.00	-1,770.6	-408.6	1,866.1	1,806.1	60.01	31.097		
2,800.0	2,797.4	2,812.4	2,812.4	6.2	56.2	-160.10	-1,770.6	-408.6	1,874.8	1,812.5	62.22	30.129		
2,900.0	2,896.9	2,911.9	2,911.9	6.5	58.2	-160.19	-1,770.6	-408.6	1,883.4	1,819.0	64.44	29.228		
3,000.0	2,996.5	3,011.5	3,011.5	6.7	60.2	-160.29	-1,770.6	-408.6	1,892.1	1,825.4	66.65	28.386		
3,100.0	3,096.1	3,111.1	3,111.1	7.0	62.2	-160.38	-1,770.6	-408.6	1,900.7	1,831.8	68.87	27.598		
3,200.0	3,195.7	3,210.7	3,210.7	7.2	64.2	-160.47	-1,770.6	-408.6	1,909.4	1,838.3	71.09	26.860		
3,300.0	3,295.2	3,310.2	3,310.2	7.5	66.2	-160.56	-1,770.6	-408.6	1,918.0	1,844.7	73.30	26.165		
3,400.0	3,394.8	3,409.8	3,409.8	7.8	68.2	-160.65	-1,770.6	-408.6	1,926.7	1,851.2	75.52	25.512		
3,500.0	3,494.4	3,509.4	3,509.4	8.0	70.2	-160.74	-1,770.6	-408.6	1,935.4	1,857.6	77.74	24.896		
3,600.0	3,594.0	3,609.0	3,609.0	8.3	72.2	-160.83	-1,770.6	-408.6	1,944.1	1,864.1	79.96	24.314		
3,700.0	3,693.6	3,708.6	3,708.6	8.5	74.2	-160.92	-1,770.6	-408.6	1,952.7	1,870.6	82.17	23.763		
3,800.0	3,793.1	3,808.1	3,808.1	8.8	76.2	-161.01	-1,770.6	-408.6	1,961.4	1,877.0	84.39	23.242		
3,900.0	3,892.7	3,907.7	3,907.7	9.1	78.2	-161.10	-1,770.6	-408.6	1,970.1	1,883.5	86.61	22.747		
4,000.0	3,992.3	4,007.3	4,007.3	9.3	80.1	-161.18	-1,770.6	-408.6	1,978.8	1,890.0	88.83	22.276		
4,100.0	4,091.9	4,106.9	4,106.9	9.6	82.1	-161.27	-1,770.6	-408.6	1,987.5	1,896.5	91.05	21.829		
4,200.0	4,191.4	4,206.4	4,206.4	9.9	84.1	-161.35	-1,770.6	-408.6	1,996.2	1,902.9	93.27	21.403		
4,300.0	4,291.0	4,306.0	4,306.0	10.1	86.1	-161.44	-1,770.6	-408.6	2,004.9	1,909.4	95.49	20.997		
4,400.0	4,390.6	4,405.6	4,405.6	10.4	88.1	-161.52	-1,770.6	-408.6	2,013.6	1,915.9	97.71	20.609		
4,500.0	4,490.2	4,505.2	4,505.2	10.7	90.1	-161.60	-1,770.6	-408.6	2,022.4	1,922.4	99.93	20.239		
4,600.0	4,589.7	4,604.7	4,604.7	10.9	92.1	-161.68	-1,770.6	-408.6	2,031.1	1,928.9	102.14	19.884		
4,700.0	4,689.3	4,704.3	4,704.3	11.2	94.1	-161.77	-1,770.6	-408.6	2,039.8	1,935.4	104.36	19.545		
4,800.0	4,788.9	4,803.9	4,803.9	11.5	96.1	-161.85	-1,770.6	-408.6	2,048.5	1,942.0	106.58	19.220		
4,900.0	4,888.5	4,903.5	4,903.5	11.7	98.1	-161.93	-1,770.6	-408.6	2,057.3	1,948.5	108.80	18.908		

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34M-403
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4930.0ft (Original Well Elev)
Reference Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (5-13-13)	Offset TVD Reference:	Offset Datum

Offset Design Anderson (Existing Wells) Sec.34-T7N-R66W - Anderson 22-34 (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 7800-UNKNOWN													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.0	4,988.1	5,003.1	5,003.1	12.0	100.1	-162.00	-162.00	-1,770.6	-408.6	2,066.0	1,955.0	111.02	18.609	
5,100.0	5,087.6	5,102.6	5,102.6	12.3	102.1	-162.08	-162.08	-1,770.6	-408.6	2,074.8	1,961.5	113.24	18.321	
5,200.0	5,187.2	5,202.2	5,202.2	12.6	104.0	-162.16	-162.16	-1,770.6	-408.6	2,083.5	1,968.0	115.46	18.045	
5,249.8	5,236.8	5,251.8	5,251.8	12.7	105.0	-162.20	-162.20	-1,770.6	-408.6	2,087.9	1,971.3	116.57	17.911	
5,300.0	5,286.8	5,301.8	5,301.8	12.8	106.0	-162.26	-162.26	-1,770.6	-408.6	2,091.8	1,974.0	117.81	17.756	
5,400.0	5,386.7	5,401.7	5,401.7	13.0	108.0	-162.34	-162.34	-1,770.6	-408.6	2,097.3	1,977.1	120.17	17.452	
5,500.0	5,486.6	5,501.6	5,501.6	13.2	110.0	-162.37	-162.37	-1,770.6	-408.6	2,099.4	1,977.0	122.40	17.151	
5,513.4	5,500.0	5,515.0	5,515.0	13.2	110.3	-169.86	-169.86	-1,770.6	-408.6	2,099.4	1,976.7	122.69	17.111	
5,600.0	5,586.6	5,601.6	5,601.6	13.4	112.0	-169.86	-169.86	-1,770.6	-408.6	2,099.4	1,974.8	124.59	16.850	
5,700.0	5,686.6	5,701.6	5,701.6	13.6	114.0	-169.86	-169.86	-1,770.6	-408.6	2,099.4	1,972.6	126.81	16.555	
5,800.0	5,786.6	5,801.6	5,801.6	13.8	116.0	-169.86	-169.86	-1,770.6	-408.6	2,099.4	1,970.4	129.03	16.271	
5,900.0	5,886.6	5,901.6	5,901.6	14.0	118.0	-169.86	-169.86	-1,770.6	-408.6	2,099.4	1,968.1	131.25	15.995	
6,000.0	5,986.6	6,001.6	6,001.6	14.2	120.0	-169.86	-169.86	-1,770.6	-408.6	2,099.4	1,965.9	133.47	15.729	
6,100.0	6,086.6	6,101.6	6,101.6	14.4	122.0	-169.86	-169.86	-1,770.6	-408.6	2,099.4	1,963.7	135.69	15.472	
6,200.0	6,186.6	6,201.6	6,201.6	14.6	124.0	-169.86	-169.86	-1,770.6	-408.6	2,099.4	1,961.5	137.91	15.223	
6,300.0	6,286.6	6,301.6	6,301.6	14.8	126.0	-169.86	-169.86	-1,770.6	-408.6	2,099.4	1,959.3	140.13	14.982	
6,400.0	6,386.6	6,401.6	6,401.6	15.0	128.0	-169.86	-169.86	-1,770.6	-408.6	2,099.4	1,957.0	142.35	14.748	
6,500.0	6,486.6	6,501.6	6,501.6	15.2	130.0	-169.86	-169.86	-1,770.6	-408.6	2,099.4	1,954.8	144.57	14.522	
6,600.0	6,586.6	6,601.6	6,601.6	15.4	132.0	-169.86	-169.86	-1,770.6	-408.6	2,099.4	1,952.6	146.79	14.302	
6,613.6	6,600.2	6,615.2	6,615.2	15.4	132.3	-169.86	-169.86	-1,770.6	-408.6	2,099.4	1,952.3	147.09	14.272	
6,650.0	6,636.6	6,651.6	6,651.6	15.5	133.0	10.16	10.16	-1,770.6	-408.6	2,098.5	1,950.8	147.71	14.207	
6,700.0	6,686.4	6,701.4	6,701.4	15.6	134.0	10.23	10.23	-1,770.6	-408.6	2,094.6	1,946.6	148.01	14.152	
6,750.0	6,735.9	6,750.9	6,750.9	15.6	135.0	10.36	10.36	-1,770.6	-408.6	2,087.4	1,939.8	147.69	14.134	
6,800.0	6,784.8	6,799.8	6,799.8	15.6	136.0	10.56	10.56	-1,770.6	-408.6	2,077.1	1,930.4	146.74	14.155	
6,850.0	6,832.9	6,847.9	6,847.9	15.7	137.0	10.82	10.82	-1,770.6	-408.6	2,063.7	1,918.5	145.16	14.217	
6,900.0	6,880.0	6,895.0	6,895.0	15.7	137.9	11.16	11.16	-1,770.6	-408.6	2,047.2	1,904.2	142.96	14.320	
6,950.0	6,925.9	6,940.9	6,940.9	15.7	138.8	11.59	11.59	-1,770.6	-408.6	2,027.7	1,887.5	140.16	14.468	
7,000.0	6,970.4	6,985.4	6,985.4	15.7	139.7	12.10	12.10	-1,770.6	-408.6	2,005.3	1,868.5	136.77	14.662	
7,050.0	7,013.3	7,028.3	7,028.3	15.7	140.6	12.73	12.73	-1,770.6	-408.6	1,980.1	1,847.3	132.85	14.905	
7,100.0	7,054.4	7,069.4	7,069.4	15.7	141.4	13.49	13.49	-1,770.6	-408.6	1,952.2	1,823.8	128.46	15.198	
7,150.0	7,093.6	7,108.6	7,108.6	15.7	142.2	14.40	14.40	-1,770.6	-408.6	1,921.8	1,798.1	123.66	15.540	
7,200.0	7,130.7	7,145.7	7,145.7	15.7	142.9	15.50	15.50	-1,770.6	-408.6	1,888.9	1,770.3	118.61	15.926	
7,250.0	7,165.5	7,180.5	7,180.5	15.8	143.6	16.84	16.84	-1,770.6	-408.6	1,853.7	1,740.3	113.46	16.339	
7,300.0	7,197.9	7,212.9	7,212.9	15.8	144.3	18.46	18.46	-1,770.6	-408.6	1,816.4	1,708.0	108.48	16.745	
7,350.0	7,227.8	7,242.8	7,242.8	15.9	144.9	20.45	20.45	-1,770.6	-408.6	1,777.2	1,673.1	104.05	17.079	
7,400.0	7,254.9	7,269.9	7,269.9	16.1	145.4	22.93	22.93	-1,770.6	-408.6	1,736.2	1,635.4	100.74	17.234	
7,450.0	7,279.3	7,294.3	7,294.3	16.3	145.9	26.02	26.02	-1,770.6	-408.6	1,693.5	1,594.2	99.29	17.056	
7,500.0	7,300.7	7,315.7	7,315.7	16.5	146.3	29.96	29.96	-1,770.6	-408.6	1,649.5	1,548.8	100.66	16.386	
7,550.0	7,319.1	7,334.1	7,334.1	16.8	146.7	35.00	35.00	-1,770.6	-408.6	1,604.2	1,498.4	105.81	15.161	
7,600.0	7,334.5	7,349.5	7,349.5	17.1	147.0	41.51	41.51	-1,770.6	-408.6	1,558.0	1,442.6	115.37	13.504	
7,650.0	7,346.7	7,361.7	7,361.7	17.5	147.2	49.90	49.90	-1,770.6	-408.6	1,510.9	1,381.9	129.07	11.707	
7,700.0	7,355.7	7,370.7	7,370.7	17.9	147.4	60.43	60.43	-1,770.6	-408.6	1,463.3	1,318.4	144.92	10.097	
7,733.6	7,360.0	7,375.0	7,375.0	18.2	147.5	68.65	68.65	-1,770.6	-408.6	1,431.1	1,276.3	154.82	9.243	
7,807.6	7,367.7	7,382.7	7,382.7	19.0	147.7	69.69	69.69	-1,770.6	-408.6	1,360.1	1,203.4	156.67	8.681	
7,900.0	7,373.7	7,388.7	7,388.7	20.0	147.8	85.47	85.47	-1,770.6	-408.6	1,271.7	1,104.4	167.22	7.605	
7,928.8	7,374.0	7,389.0	7,389.0	20.3	147.8	90.19	90.19	-1,770.6	-408.6	1,244.1	1,076.1	168.06	7.403	
8,000.0	7,373.9	7,388.9	7,388.9	21.1	147.8	90.18	90.18	-1,770.6	-408.6	1,176.3	1,007.4	168.92	6.964	
8,100.0	7,373.8	7,388.8	7,388.8	22.4	147.8	90.16	90.16	-1,770.6	-408.6	1,081.9	911.6	170.21	6.356	
8,200.0	7,373.7	7,388.7	7,388.7	23.8	147.8	90.15	90.15	-1,770.6	-408.6	988.5	816.9	171.58	5.761	
8,300.0	7,373.6	7,388.6	7,388.6	25.3	147.8	90.13	90.13	-1,770.6	-408.6	896.5	723.5	173.03	5.181	
8,400.0	7,373.5	7,388.5	7,388.5	26.8	147.8	90.11	90.11	-1,770.6	-408.6	806.5	631.9	174.54	4.621	

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34M-403
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4930.0ft (Original Well Elev)
Reference Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (5-13-13)	Offset TVD Reference:	Offset Datum

Offset Design Anderson (Existing Wells) Sec.34-T7N-R66W - Anderson 22-34 (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 7800-UNKNOWN													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
8,500.0	7,373.4	7,388.4	7,388.4	28.3	147.8	90.10	90.10	-1,770.6	-408.6	719.1	543.0	176.10	4.083	
8,600.0	7,373.3	7,388.3	7,388.3	29.9	147.8	90.08	90.08	-1,770.6	-408.6	635.4	457.7	177.70	3.576	
8,700.0	7,373.2	7,388.2	7,388.2	31.6	147.8	90.07	90.07	-1,770.6	-408.6	557.1	377.8	179.33	3.106	
8,800.0	7,373.1	7,388.1	7,388.1	33.2	147.8	90.05	90.05	-1,770.6	-408.6	486.8	305.8	181.00	2.690	
8,900.0	7,373.0	7,388.0	7,388.0	34.9	147.8	90.03	90.03	-1,770.6	-408.6	428.6	245.9	182.69	2.346	
9,000.0	7,372.9	7,387.9	7,387.9	36.7	147.8	90.02	90.02	-1,770.6	-408.6	387.7	203.3	184.41	2.102	
9,100.0	7,372.8	7,387.8	7,387.8	38.4	147.8	90.00	90.00	-1,770.6	-408.6	370.1	184.0	186.14	1.988	
9,116.7	7,372.8	7,387.8	7,387.8	38.7	147.8	90.00	90.00	-1,770.6	-408.6	369.7	183.3	186.44	1.983 CC, ES, SF	
9,200.0	7,372.7	7,387.7	7,387.7	40.1	147.8	89.99	89.99	-1,770.6	-408.6	379.0	191.1	187.89	2.017	
9,300.0	7,372.6	7,387.6	7,387.6	41.9	147.8	89.97	89.97	-1,770.6	-408.6	412.6	223.0	189.66	2.176	
9,400.0	7,372.5	7,387.5	7,387.5	43.7	147.7	89.95	89.95	-1,770.6	-408.6	465.8	274.3	191.44	2.433	
9,500.0	7,372.4	7,387.4	7,387.4	45.5	147.7	89.94	89.94	-1,770.6	-408.6	532.5	339.3	193.23	2.756	
9,600.0	7,372.3	7,387.3	7,387.3	47.3	147.7	89.92	89.92	-1,770.6	-408.6	608.5	413.4	195.04	3.120	
9,700.0	7,372.2	7,387.2	7,387.2	49.1	147.7	89.91	89.91	-1,770.6	-408.6	690.6	493.7	196.85	3.508	
9,800.0	7,372.1	7,387.1	7,387.1	50.9	147.7	89.89	89.89	-1,770.6	-408.6	776.9	578.2	198.66	3.911	
9,900.0	7,372.0	7,387.0	7,387.0	52.8	147.7	89.88	89.88	-1,770.6	-408.6	866.1	665.7	200.49	4.320	
10,000.0	7,371.9	7,386.9	7,386.9	54.6	147.7	89.86	89.86	-1,770.6	-408.6	957.5	755.2	202.32	4.733	
10,100.0	7,371.8	7,386.8	7,386.8	56.4	147.7	89.84	89.84	-1,770.6	-408.6	1,050.5	846.3	204.16	5.145	
10,200.0	7,371.7	7,386.7	7,386.7	58.3	147.7	89.83	89.83	-1,770.6	-408.6	1,144.6	938.6	206.01	5.556	
10,300.0	7,371.6	7,386.6	7,386.6	60.1	147.7	89.81	89.81	-1,770.6	-408.6	1,239.7	1,031.8	207.86	5.964	
10,400.0	7,371.5	7,386.5	7,386.5	62.0	147.7	89.80	89.80	-1,770.6	-408.6	1,335.5	1,125.8	209.71	6.368	
10,500.0	7,371.4	7,386.4	7,386.4	63.8	147.7	89.78	89.78	-1,770.6	-408.6	1,431.8	1,220.3	211.57	6.768	
10,600.0	7,371.3	7,386.3	7,386.3	65.7	147.7	89.76	89.76	-1,770.6	-408.6	1,528.7	1,315.2	213.43	7.162	
10,700.0	7,371.1	7,386.1	7,386.1	67.6	147.7	89.75	89.75	-1,770.6	-408.6	1,625.9	1,410.6	215.29	7.552	
10,800.0	7,371.0	7,386.0	7,386.0	69.4	147.7	89.73	89.73	-1,770.6	-408.6	1,723.4	1,506.2	217.16	7.936	
10,900.0	7,370.9	7,385.9	7,385.9	71.3	147.7	89.72	89.72	-1,770.6	-408.6	1,821.2	1,602.2	219.03	8.315	
11,000.0	7,370.8	7,385.8	7,385.8	73.2	147.7	89.70	89.70	-1,770.6	-408.6	1,919.2	1,698.3	220.90	8.688	
11,100.0	7,370.7	7,385.7	7,385.7	75.1	147.7	89.68	89.68	-1,770.6	-408.6	2,017.4	1,794.7	222.78	9.056	
11,200.0	7,370.6	7,385.6	7,385.6	76.9	147.7	89.67	89.67	-1,770.6	-408.6	2,115.8	1,891.2	224.66	9.418	
11,300.0	7,370.5	7,385.5	7,385.5	78.8	147.7	89.65	89.65	-1,770.6	-408.6	2,214.4	1,987.8	226.54	9.775	
11,400.0	7,370.4	7,385.4	7,385.4	80.7	147.7	89.64	89.64	-1,770.6	-408.6	2,313.0	2,084.6	228.42	10.126	
11,500.0	7,370.3	7,385.3	7,385.3	82.6	147.7	89.62	89.62	-1,770.6	-408.6	2,411.8	2,181.5	230.30	10.472	
11,600.0	7,370.2	7,385.2	7,385.2	84.5	147.7	89.60	89.60	-1,770.6	-408.6	2,510.6	2,278.5	232.19	10.813	
11,700.0	7,370.1	7,385.1	7,385.1	86.4	147.7	89.59	89.59	-1,770.6	-408.6	2,609.6	2,375.5	234.07	11.149	
11,800.0	7,370.0	7,385.0	7,385.0	88.3	147.7	89.57	89.57	-1,770.6	-408.6	2,708.6	2,472.7	235.96	11.479	
11,816.3	7,370.0	7,385.0	7,385.0	88.6	147.7	89.57	89.57	-1,770.6	-408.6	2,724.8	2,488.5	236.27	11.533	
11,817.1	7,370.0	7,385.0	7,385.0	88.6	147.7	89.57	89.57	-1,770.6	-408.6	2,725.6	2,489.3	236.28	11.535	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34M-403
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4930.0ft (Original Well Elev)
Reference Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (5-13-13)	Offset TVD Reference:	Offset Datum

Offset Design		Anderson (Existing Wells) Sec.34-T7N-R66W - Anderson 23-34 (Exist) - Wellbore #1 - Wellbore #1											Offset Site Error:		0.0 ft	
Survey Program: 7800-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)					
0.0	0.0	15.0	15.0	0.0	0.3	-172.78	-3,158.7	-400.3	3,183.9	3,183.6	0.30	N/A				
100.0	100.0	115.0	115.0	0.1	2.3	-172.78	-3,158.7	-400.3	3,183.9	3,181.5	2.41	1,319.714				
200.0	200.0	215.0	215.0	0.3	4.3	-172.78	-3,158.7	-400.3	3,183.9	3,179.3	4.64	686.582				
300.0	300.0	315.0	315.0	0.6	6.3	-172.78	-3,158.7	-400.3	3,183.9	3,177.1	6.86	463.985				
400.0	400.0	415.0	415.0	0.8	8.3	-172.78	-3,158.7	-400.3	3,183.9	3,174.8	9.09	350.386				
500.0	500.0	515.0	515.0	1.0	10.3	-172.78	-3,158.7	-400.3	3,183.9	3,172.6	11.31	281.473				
600.0	600.0	615.0	615.0	1.2	12.3	-172.78	-3,158.7	-400.3	3,183.9	3,170.4	13.54	235.211				
700.0	700.0	715.0	715.0	1.5	14.3	-172.78	-3,158.7	-400.3	3,183.9	3,168.2	15.76	202.010				
800.0	800.0	815.0	815.0	1.7	16.3	-172.78	-3,158.7	-400.3	3,183.9	3,165.9	17.99	177.023				
900.0	900.0	915.0	915.0	1.9	18.3	-172.78	-3,158.7	-400.3	3,183.9	3,163.7	20.21	157.536				
1,000.0	1,000.0	1,015.0	1,015.0	2.1	20.3	-172.78	-3,158.7	-400.3	3,183.9	3,161.5	22.44	141.914				
1,100.0	1,100.0	1,115.0	1,115.0	2.4	22.3	-172.78	-3,158.7	-400.3	3,183.9	3,159.3	24.66	129.111				
1,200.0	1,200.0	1,215.0	1,215.0	2.6	24.3	-172.78	-3,158.7	-400.3	3,183.9	3,157.0	26.88	118.427				
1,300.0	1,300.0	1,315.0	1,315.0	2.8	26.3	-172.78	-3,158.7	-400.3	3,183.9	3,154.8	29.11	109.376				
1,400.0	1,400.0	1,415.0	1,415.0	3.0	28.3	-172.78	-3,158.7	-400.3	3,183.9	3,152.6	31.33	101.611				
1,500.0	1,500.0	1,515.0	1,515.0	3.3	30.3	-172.78	-3,158.7	-400.3	3,183.9	3,150.4	33.56	94.874				
1,600.0	1,600.0	1,615.0	1,615.0	3.5	32.3	-172.78	-3,158.7	-400.3	3,183.9	3,148.1	35.78	88.976				
1,700.0	1,700.0	1,715.0	1,715.0	3.7	34.3	-172.78	-3,158.7	-400.3	3,183.9	3,145.9	38.01	83.768				
1,800.0	1,800.0	1,815.0	1,815.0	3.9	36.3	-172.78	-3,158.7	-400.3	3,183.9	3,143.7	40.23	79.136				
1,900.0	1,900.0	1,915.0	1,915.0	4.2	38.3	-172.78	-3,158.7	-400.3	3,183.9	3,141.5	42.46	74.989				
2,000.0	2,000.0	2,015.0	2,015.0	4.4	40.3	-172.78	-3,158.7	-400.3	3,183.9	3,139.2	44.68	71.255				
2,100.0	2,100.0	2,115.0	2,115.0	4.6	42.3	-165.29	-3,158.7	-400.3	3,185.6	3,138.7	46.88	67.951				
2,200.0	2,199.8	2,214.8	2,214.8	4.8	44.3	-165.29	-3,158.7	-400.3	3,190.7	3,141.6	49.02	65.090				
2,263.5	2,263.2	2,278.2	2,278.2	5.0	45.6	-165.29	-3,158.7	-400.3	3,195.6	3,145.3	50.34	63.478				
2,300.0	2,299.5	2,314.5	2,314.5	5.1	46.3	-165.30	-3,158.7	-400.3	3,198.9	3,147.7	51.15	62.541				
2,400.0	2,399.1	2,414.1	2,414.1	5.3	48.3	-165.34	-3,158.7	-400.3	3,207.8	3,154.4	53.36	60.118				
2,500.0	2,498.6	2,513.6	2,513.6	5.5	50.3	-165.38	-3,158.7	-400.3	3,216.7	3,161.1	55.57	57.886				
2,600.0	2,598.2	2,613.2	2,613.2	5.8	52.3	-165.43	-3,158.7	-400.3	3,225.5	3,167.8	57.78	55.824				
2,700.0	2,697.8	2,712.8	2,712.8	6.0	54.3	-165.47	-3,158.7	-400.3	3,234.4	3,174.4	59.99	53.914				
2,800.0	2,797.4	2,812.4	2,812.4	6.2	56.2	-165.51	-3,158.7	-400.3	3,243.3	3,181.1	62.21	52.139				
2,900.0	2,896.9	2,911.9	2,911.9	6.5	58.2	-165.55	-3,158.7	-400.3	3,252.2	3,187.8	64.42	50.485				
3,000.0	2,996.5	3,011.5	3,011.5	6.7	60.2	-165.59	-3,158.7	-400.3	3,261.1	3,194.5	66.63	48.941				
3,100.0	3,096.1	3,111.1	3,111.1	7.0	62.2	-165.63	-3,158.7	-400.3	3,270.0	3,201.2	68.85	47.496				
3,200.0	3,195.7	3,210.7	3,210.7	7.2	64.2	-165.67	-3,158.7	-400.3	3,278.9	3,207.9	71.06	46.141				
3,300.0	3,295.2	3,310.2	3,310.2	7.5	66.2	-165.71	-3,158.7	-400.3	3,287.8	3,214.6	73.28	44.868				
3,400.0	3,394.8	3,409.8	3,409.8	7.8	68.2	-165.75	-3,158.7	-400.3	3,296.7	3,221.2	75.49	43.669				
3,500.0	3,494.4	3,509.4	3,509.4	8.0	70.2	-165.79	-3,158.7	-400.3	3,305.6	3,227.9	77.71	42.538				
3,600.0	3,594.0	3,609.0	3,609.0	8.3	72.2	-165.82	-3,158.7	-400.3	3,314.6	3,234.6	79.93	41.470				
3,700.0	3,693.6	3,708.6	3,708.6	8.5	74.2	-165.86	-3,158.7	-400.3	3,323.5	3,241.3	82.14	40.460				
3,800.0	3,793.1	3,808.1	3,808.1	8.8	76.2	-165.90	-3,158.7	-400.3	3,332.4	3,248.0	84.36	39.502				
3,900.0	3,892.7	3,907.7	3,907.7	9.1	78.2	-165.94	-3,158.7	-400.3	3,341.3	3,254.7	86.58	38.594				
4,000.0	3,992.3	4,007.3	4,007.3	9.3	80.1	-165.98	-3,158.7	-400.3	3,350.2	3,261.4	88.79	37.730				
4,100.0	4,091.9	4,106.9	4,106.9	9.6	82.1	-166.02	-3,158.7	-400.3	3,359.1	3,268.1	91.01	36.909				
4,200.0	4,191.4	4,206.4	4,206.4	9.9	84.1	-166.05	-3,158.7	-400.3	3,368.0	3,274.8	93.23	36.127				
4,300.0	4,291.0	4,306.0	4,306.0	10.1	86.1	-166.09	-3,158.7	-400.3	3,376.9	3,281.5	95.45	35.381				
4,400.0	4,390.6	4,405.6	4,405.6	10.4	88.1	-166.13	-3,158.7	-400.3	3,385.9	3,288.2	97.66	34.669				
4,500.0	4,490.2	4,505.2	4,505.2	10.7	90.1	-166.17	-3,158.7	-400.3	3,394.8	3,294.9	99.88	33.988				
4,600.0	4,589.7	4,604.7	4,604.7	10.9	92.1	-166.20	-3,158.7	-400.3	3,403.7	3,301.6	102.10	33.338				
4,700.0	4,689.3	4,704.3	4,704.3	11.2	94.1	-166.24	-3,158.7	-400.3	3,412.6	3,308.3	104.32	32.714				
4,800.0	4,788.9	4,803.9	4,803.9	11.5	96.1	-166.28	-3,158.7	-400.3	3,421.6	3,315.0	106.53	32.117				
4,900.0	4,888.5	4,903.5	4,903.5	11.7	98.1	-166.31	-3,158.7	-400.3	3,430.5	3,321.7	108.75	31.544				

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34M-403
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4930.0ft (Original Well Elev)
Reference Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (5-13-13)	Offset TVD Reference:	Offset Datum

Offset Design		Anderson (Existing Wells) Sec.34-T7N-R66W - Anderson 23-34 (Exist) - Wellbore #1 - Wellbore #1											Offset Site Error:		0.0 ft
Survey Program: 7800-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)				
5,000.0	4,988.1	5,003.1	5,003.1	12.0	100.1	-166.35	-3,158.7	-400.3	3,439.4	3,328.4	110.97	30.994			
5,100.0	5,087.6	5,102.6	5,102.6	12.3	102.1	-166.39	-3,158.7	-400.3	3,448.3	3,335.2	113.19	30.465			
5,200.0	5,187.2	5,202.2	5,202.2	12.6	104.0	-166.42	-3,158.7	-400.3	3,457.3	3,341.9	115.41	29.957			
5,249.8	5,236.8	5,251.8	5,251.8	12.7	105.0	-166.44	-3,158.7	-400.3	3,461.7	3,345.2	116.51	29.711			
5,300.0	5,286.8	5,301.8	5,301.8	12.8	106.0	-166.47	-3,158.7	-400.3	3,465.8	3,348.0	117.76	29.431			
5,400.0	5,386.7	5,401.7	5,401.7	13.0	108.0	-166.52	-3,158.7	-400.3	3,471.3	3,351.2	120.13	28.897			
5,500.0	5,486.6	5,501.6	5,501.6	13.2	110.0	-166.54	-3,158.7	-400.3	3,473.5	3,351.1	122.37	28.386			
5,513.4	5,500.0	5,515.0	5,515.0	13.2	110.3	-174.03	-3,158.7	-400.3	3,473.5	3,350.8	122.65	28.320			
5,600.0	5,586.6	5,601.6	5,601.6	13.4	112.0	-174.03	-3,158.7	-400.3	3,473.5	3,348.9	124.55	27.888			
5,700.0	5,686.6	5,701.6	5,701.6	13.6	114.0	-174.03	-3,158.7	-400.3	3,473.5	3,346.7	126.77	27.399			
5,800.0	5,786.6	5,801.6	5,801.6	13.8	116.0	-174.03	-3,158.7	-400.3	3,473.5	3,344.5	128.99	26.928			
5,900.0	5,886.6	5,901.6	5,901.6	14.0	118.0	-174.03	-3,158.7	-400.3	3,473.5	3,342.3	131.21	26.472			
6,000.0	5,986.6	6,001.6	6,001.6	14.2	120.0	-174.03	-3,158.7	-400.3	3,473.5	3,340.1	133.43	26.032			
6,100.0	6,086.6	6,101.6	6,101.6	14.4	122.0	-174.03	-3,158.7	-400.3	3,473.5	3,337.8	135.66	25.605			
6,200.0	6,186.6	6,201.6	6,201.6	14.6	124.0	-174.03	-3,158.7	-400.3	3,473.5	3,335.6	137.88	25.193			
6,300.0	6,286.6	6,301.6	6,301.6	14.8	126.0	-174.03	-3,158.7	-400.3	3,473.5	3,333.4	140.10	24.794			
6,400.0	6,386.6	6,401.6	6,401.6	15.0	128.0	-174.03	-3,158.7	-400.3	3,473.5	3,331.2	142.32	24.407			
6,500.0	6,486.6	6,501.6	6,501.6	15.2	130.0	-174.03	-3,158.7	-400.3	3,473.5	3,329.0	144.54	24.032			
6,600.0	6,586.6	6,601.6	6,601.6	15.4	132.0	-174.03	-3,158.7	-400.3	3,473.5	3,326.7	146.76	23.668			
6,613.6	6,600.2	6,615.2	6,615.2	15.4	132.3	-174.03	-3,158.7	-400.3	3,473.5	3,326.4	147.06	23.619			
6,650.0	6,636.6	6,651.6	6,651.6	15.5	133.0	5.98	-3,158.7	-400.3	3,472.6	3,325.0	147.67	23.516			
6,700.0	6,686.4	6,701.4	6,701.4	15.6	134.0	6.02	-3,158.7	-400.3	3,468.6	3,320.7	147.96	23.444			
6,750.0	6,735.9	6,750.9	6,750.9	15.6	135.0	6.09	-3,158.7	-400.3	3,461.4	3,313.8	147.60	23.451			
6,800.0	6,784.8	6,799.8	6,799.8	15.6	136.0	6.19	-3,158.7	-400.3	3,451.0	3,304.4	146.61	23.539			
6,850.0	6,832.9	6,847.9	6,847.9	15.7	137.0	6.33	-3,158.7	-400.3	3,437.4	3,292.5	144.96	23.713			
6,900.0	6,880.0	6,895.0	6,895.0	15.7	137.9	6.51	-3,158.7	-400.3	3,420.7	3,278.1	142.66	23.978			
6,950.0	6,925.9	6,940.9	6,940.9	15.7	138.8	6.74	-3,158.7	-400.3	3,401.0	3,261.3	139.72	24.342			
7,000.0	6,970.4	6,985.4	6,985.4	15.7	139.7	7.01	-3,158.7	-400.3	3,378.4	3,242.2	136.15	24.814			
7,050.0	7,013.3	7,028.3	7,028.3	15.7	140.6	7.34	-3,158.7	-400.3	3,352.9	3,220.9	131.97	25.407			
7,100.0	7,054.4	7,069.4	7,069.4	15.7	141.4	7.74	-3,158.7	-400.3	3,324.7	3,197.5	127.21	26.135			
7,150.0	7,093.6	7,108.6	7,108.6	15.7	142.2	8.23	-3,158.7	-400.3	3,293.8	3,171.9	121.92	27.017			
7,200.0	7,130.7	7,145.7	7,145.7	15.7	142.9	8.81	-3,158.7	-400.3	3,260.5	3,144.4	116.14	28.074			
7,250.0	7,165.5	7,180.5	7,180.5	15.8	143.6	9.52	-3,158.7	-400.3	3,224.9	3,114.9	109.97	29.325			
7,300.0	7,197.9	7,212.9	7,212.9	15.8	144.3	10.38	-3,158.7	-400.3	3,187.0	3,083.5	103.52	30.787			
7,350.0	7,227.8	7,242.8	7,242.8	15.9	144.9	11.46	-3,158.7	-400.3	3,147.2	3,050.2	96.97	32.455			
7,400.0	7,254.9	7,269.9	7,269.9	16.1	145.4	12.81	-3,158.7	-400.3	3,105.5	3,014.9	90.60	34.277			
7,450.0	7,279.3	7,294.3	7,294.3	16.3	145.9	14.54	-3,158.7	-400.3	3,062.1	2,977.3	84.87	36.079			
7,500.0	7,300.7	7,315.7	7,315.7	16.5	146.3	16.82	-3,158.7	-400.3	3,017.3	2,936.7	80.55	37.459			
7,550.0	7,319.1	7,334.1	7,334.1	16.8	146.7	19.92	-3,158.7	-400.3	2,971.2	2,892.3	78.90	37.658			
7,600.0	7,334.5	7,349.5	7,349.5	17.1	147.0	24.29	-3,158.7	-400.3	2,924.0	2,842.1	81.85	35.724			
7,650.0	7,346.7	7,361.7	7,361.7	17.5	147.2	30.80	-3,158.7	-400.3	2,875.9	2,783.9	91.94	31.280			
7,700.0	7,355.7	7,370.7	7,370.7	17.9	147.4	41.02	-3,158.7	-400.3	2,827.1	2,715.3	111.79	25.290			
7,733.6	7,360.0	7,375.0	7,375.0	18.2	147.5	51.29	-3,158.7	-400.3	2,794.0	2,663.2	130.86	21.351			
7,807.6	7,367.7	7,382.7	7,382.7	19.0	147.7	52.04	-3,158.7	-400.3	2,721.1	2,588.2	132.85	20.482			
7,900.0	7,373.7	7,388.7	7,388.7	20.0	147.8	80.15	-3,158.7	-400.3	2,629.7	2,464.4	165.34	15.905			
7,928.8	7,374.0	7,389.0	7,389.0	20.3	147.8	90.42	-3,158.7	-400.3	2,601.2	2,433.2	168.06	15.478			
8,000.0	7,373.9	7,388.9	7,388.9	21.1	147.8	90.41	-3,158.7	-400.3	2,530.7	2,361.8	168.91	14.982			
8,100.0	7,373.8	7,388.8	7,388.8	22.4	147.8	90.39	-3,158.7	-400.3	2,431.8	2,261.6	170.21	14.287			
8,200.0	7,373.7	7,388.7	7,388.7	23.8	147.8	90.38	-3,158.7	-400.3	2,332.9	2,161.4	171.58	13.597			
8,300.0	7,373.6	7,388.6	7,388.6	25.3	147.8	90.36	-3,158.7	-400.3	2,234.2	2,061.2	173.03	12.912			
8,400.0	7,373.5	7,388.5	7,388.5	26.8	147.8	90.34	-3,158.7	-400.3	2,135.6	1,961.1	174.54	12.236			

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34M-403
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4930.0ft (Original Well Elev)
Reference Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (5-13-13)	Offset TVD Reference:	Offset Datum

Offset Design Anderson (Existing Wells) Sec.34-T7N-R66W - Anderson 23-34 (Exist) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 7800-UNKNOWN													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
8,500.0	7,373.4	7,388.4	7,388.4	28.3	147.8	90.33	-3,158.7	-400.3	2,037.1	1,861.0	176.09	11.568		
8,600.0	7,373.3	7,388.3	7,388.3	29.9	147.8	90.31	-3,158.7	-400.3	1,938.8	1,761.1	177.69	10.911		
8,700.0	7,373.2	7,388.2	7,388.2	31.6	147.8	90.29	-3,158.7	-400.3	1,840.6	1,661.3	179.33	10.264		
8,800.0	7,373.1	7,388.1	7,388.1	33.2	147.8	90.28	-3,158.7	-400.3	1,742.7	1,561.7	181.00	9.628		
8,900.0	7,373.0	7,388.0	7,388.0	34.9	147.8	90.26	-3,158.7	-400.3	1,645.0	1,462.3	182.69	9.004		
9,000.0	7,372.9	7,387.9	7,387.9	36.7	147.8	90.25	-3,158.7	-400.3	1,547.6	1,363.2	184.41	8.392		
9,100.0	7,372.8	7,387.8	7,387.8	38.4	147.8	90.23	-3,158.7	-400.3	1,450.5	1,264.4	186.14	7.793		
9,200.0	7,372.7	7,387.7	7,387.7	40.1	147.8	90.21	-3,158.7	-400.3	1,353.9	1,166.0	187.89	7.206		
9,300.0	7,372.6	7,387.6	7,387.6	41.9	147.8	90.20	-3,158.7	-400.3	1,257.8	1,068.2	189.66	6.632		
9,400.0	7,372.5	7,387.5	7,387.5	43.7	147.7	90.18	-3,158.7	-400.3	1,162.4	971.0	191.44	6.072		
9,500.0	7,372.4	7,387.4	7,387.4	45.5	147.7	90.16	-3,158.7	-400.3	1,067.8	874.6	193.23	5.526		
9,600.0	7,372.3	7,387.3	7,387.3	47.3	147.7	90.15	-3,158.7	-400.3	974.3	779.3	195.03	4.995		
9,700.0	7,372.2	7,387.2	7,387.2	49.1	147.7	90.13	-3,158.7	-400.3	882.2	685.4	196.85	4.482		
9,800.0	7,372.1	7,387.1	7,387.1	50.9	147.7	90.12	-3,158.7	-400.3	792.0	593.4	198.66	3.987		
9,900.0	7,372.0	7,387.0	7,387.0	52.8	147.7	90.10	-3,158.7	-400.3	704.5	504.0	200.49	3.514		
10,000.0	7,371.9	7,386.9	7,386.9	54.6	147.7	90.08	-3,158.7	-400.3	620.8	418.5	202.32	3.068		
10,100.0	7,371.8	7,386.8	7,386.8	56.4	147.7	90.07	-3,158.7	-400.3	542.6	338.5	204.16	2.658		
10,200.0	7,371.7	7,386.7	7,386.7	58.3	147.7	90.05	-3,158.7	-400.3	472.8	266.8	206.01	2.295		
10,300.0	7,371.6	7,386.6	7,386.6	60.1	147.7	90.03	-3,158.7	-400.3	415.4	207.5	207.86	1.998		
10,400.0	7,371.5	7,386.5	7,386.5	62.0	147.7	90.02	-3,158.7	-400.3	376.3	166.6	209.71	1.794		
10,500.0	7,371.4	7,386.4	7,386.4	63.8	147.7	90.00	-3,158.7	-400.3	361.4	149.9	211.57	1.708		
10,504.8	7,371.4	7,386.4	7,386.4	63.9	147.7	90.00	-3,158.7	-400.3	361.4	149.7	211.66	1.707 CC, ES, SF		
10,600.0	7,371.3	7,386.3	7,386.3	65.7	147.7	89.98	-3,158.7	-400.3	373.7	160.3	213.43	1.751		
10,700.0	7,371.1	7,386.1	7,386.1	67.6	147.7	89.97	-3,158.7	-400.3	410.7	195.5	215.29	1.908		
10,800.0	7,371.0	7,386.0	7,386.0	69.4	147.7	89.95	-3,158.7	-400.3	466.6	249.5	217.16	2.149		
10,900.0	7,370.9	7,385.9	7,385.9	71.3	147.7	89.94	-3,158.7	-400.3	535.5	316.5	219.03	2.445		
11,000.0	7,370.8	7,385.8	7,385.8	73.2	147.7	89.92	-3,158.7	-400.3	613.1	392.2	220.91	2.775		
11,100.0	7,370.7	7,385.7	7,385.7	75.1	147.7	89.90	-3,158.7	-400.3	696.3	473.6	222.78	3.126		
11,200.0	7,370.6	7,385.6	7,385.6	76.9	147.7	89.89	-3,158.7	-400.3	783.5	558.9	224.66	3.488		
11,300.0	7,370.5	7,385.5	7,385.5	78.8	147.7	89.87	-3,158.7	-400.3	873.5	646.9	226.54	3.856		
11,400.0	7,370.4	7,385.4	7,385.4	80.7	147.7	89.85	-3,158.7	-400.3	965.4	737.0	228.42	4.226		
11,500.0	7,370.3	7,385.3	7,385.3	82.6	147.7	89.84	-3,158.7	-400.3	1,058.8	828.5	230.30	4.597		
11,600.0	7,370.2	7,385.2	7,385.2	84.5	147.7	89.82	-3,158.7	-400.3	1,153.3	921.1	232.19	4.967		
11,700.0	7,370.1	7,385.1	7,385.1	86.4	147.7	89.80	-3,158.7	-400.3	1,248.7	1,014.6	234.08	5.334		
11,800.0	7,370.0	7,385.0	7,385.0	88.3	147.7	89.79	-3,158.7	-400.3	1,344.7	1,108.7	235.97	5.699		
11,816.3	7,370.0	7,385.0	7,385.0	88.6	147.7	89.79	-3,158.7	-400.3	1,360.4	1,124.1	236.27	5.758		
11,817.1	7,370.0	7,385.0	7,385.0	88.6	147.7	89.79	-3,158.7	-400.3	1,361.2	1,124.9	236.29	5.761		

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34M-403
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4930.0ft (Original Well Elev)
Reference Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (5-13-13)	Offset TVD Reference:	Offset Datum

Offset Design Anderson 34M-HZ Pad Sec.34-T7N-R66W - Anderson 34M-303 - Wellbore #1 - Plan #1 (5-13-13)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	89.98	0.0	30.6	30.6					
100.0	100.0	100.0	100.0	0.1	0.1	89.98	0.0	30.6	30.6	30.4	0.22	136.030		
200.0	200.0	200.0	200.0	0.3	0.3	89.98	0.0	30.6	30.6	29.9	0.67	45.343		
300.0	300.0	300.0	300.0	0.6	0.6	89.98	0.0	30.6	30.6	29.5	1.12	27.206		
400.0	400.0	400.0	400.0	0.8	0.8	89.98	0.0	30.6	30.6	29.0	1.57	19.433		
500.0	500.0	500.0	500.0	1.0	1.0	89.98	0.0	30.6	30.6	28.6	2.02	15.114		
600.0	600.0	600.0	600.0	1.2	1.2	89.98	0.0	30.6	30.6	28.1	2.47	12.366		
700.0	700.0	700.0	700.0	1.5	1.5	89.98	0.0	30.6	30.6	27.7	2.92	10.464		
800.0	800.0	800.0	800.0	1.7	1.7	89.98	0.0	30.6	30.6	27.2	3.37	9.069		
900.0	900.0	900.0	900.0	1.9	1.9	89.98	0.0	30.6	30.6	26.8	3.82	8.002		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	89.98	0.0	30.6	30.6	26.3	4.27	7.159		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	89.98	0.0	30.6	30.6	25.9	4.72	6.478		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	89.98	0.0	30.6	30.6	25.4	5.17	5.914 CC, ES		
1,300.0	1,300.0	1,299.3	1,299.3	2.8	2.8	87.47	1.4	31.6	31.6	26.0	5.61	5.636		
1,400.0	1,400.0	1,398.4	1,398.3	3.0	3.0	80.94	5.5	34.7	35.1	29.1	6.06	5.803		
1,500.0	1,500.0	1,497.0	1,496.5	3.3	3.3	72.71	12.4	39.7	41.8	35.3	6.50	6.424		
1,600.0	1,600.0	1,596.4	1,595.4	3.5	3.5	65.72	20.7	45.9	50.6	43.7	6.95	7.280		
1,700.0	1,700.0	1,695.9	1,694.3	3.7	3.7	60.84	29.1	52.2	60.0	52.6	7.40	8.105		
1,800.0	1,800.0	1,795.3	1,793.2	3.9	4.0	57.30	37.5	58.4	69.7	61.8	7.85	8.873		
1,900.0	1,900.0	1,894.8	1,892.1	4.2	4.2	54.63	45.8	64.6	79.6	71.3	8.30	9.582		
2,000.0	2,000.0	1,994.2	1,991.0	4.4	4.5	52.56	54.2	70.8	89.6	80.8	8.76	10.231		
2,100.0	2,100.0	2,093.8	2,090.0	4.6	4.8	59.09	62.6	77.0	98.8	89.6	9.20	10.739		
2,200.0	2,199.8	2,193.5	2,189.1	4.8	5.0	59.91	71.0	83.2	106.3	96.6	9.65	11.008		
2,263.5	2,263.2	2,256.9	2,252.2	5.0	5.2	61.21	76.3	87.2	110.1	100.2	9.94	11.075		
2,300.0	2,299.5	2,293.2	2,288.3	5.1	5.3	62.13	79.3	89.4	112.2	102.1	10.11	11.093		
2,400.0	2,399.1	2,393.0	2,387.5	5.3	5.6	64.48	87.7	95.7	118.0	107.4	10.58	11.147		
2,500.0	2,498.6	2,492.7	2,486.7	5.5	5.9	66.62	96.1	101.9	123.9	112.9	11.06	11.206		
2,600.0	2,598.2	2,592.4	2,585.8	5.8	6.1	68.55	104.5	108.1	130.0	118.5	11.54	11.267		
2,700.0	2,697.8	2,692.1	2,685.0	6.0	6.4	70.31	112.9	114.3	136.3	124.3	12.03	11.328		
2,800.0	2,797.4	2,791.8	2,784.2	6.2	6.7	71.92	121.3	120.6	142.7	130.1	12.53	11.390		
2,900.0	2,896.9	2,891.6	2,883.4	6.5	7.0	73.38	129.7	126.8	149.1	136.1	13.02	11.450		
3,000.0	2,996.5	2,991.3	2,982.5	6.7	7.3	74.73	138.1	133.0	155.7	142.2	13.53	11.508		
3,100.0	3,096.1	3,091.0	3,081.7	7.0	7.5	75.96	146.5	139.2	162.3	148.3	14.04	11.564		
3,200.0	3,195.7	3,190.7	3,180.9	7.2	7.8	77.10	154.9	145.5	169.0	154.5	14.55	11.618		
3,300.0	3,295.2	3,290.4	3,280.0	7.5	8.1	78.15	163.2	151.7	175.8	160.7	15.06	11.670		
3,400.0	3,394.8	3,390.2	3,379.2	7.8	8.4	79.12	171.6	157.9	182.6	167.0	15.58	11.720		
3,500.0	3,494.4	3,489.9	3,478.4	8.0	8.7	80.02	180.0	164.1	189.5	173.4	16.10	11.767		
3,600.0	3,594.0	3,589.6	3,577.6	8.3	9.0	80.86	188.4	170.3	196.4	179.8	16.63	11.812		
3,700.0	3,693.6	3,689.3	3,676.7	8.5	9.2	81.65	196.8	176.6	203.4	186.2	17.15	11.856		
3,800.0	3,793.1	3,789.0	3,775.9	8.8	9.5	82.37	205.2	182.8	210.3	192.7	17.68	11.897		
3,900.0	3,892.7	3,888.8	3,875.1	9.1	9.8	83.06	213.6	189.0	217.4	199.2	18.21	11.937		
4,000.0	3,992.3	3,988.5	3,974.2	9.3	10.1	83.70	222.0	195.2	224.4	205.7	18.74	11.974		
4,100.0	4,091.9	4,088.2	4,073.4	9.6	10.4	84.30	230.4	201.5	231.5	212.2	19.27	12.011		
4,200.0	4,191.4	4,187.9	4,172.6	9.9	10.7	84.86	238.7	207.7	238.6	218.8	19.81	12.045		
4,300.0	4,291.0	4,287.6	4,271.8	10.1	11.0	85.40	247.1	213.9	245.7	225.4	20.34	12.078		
4,400.0	4,390.6	4,387.4	4,370.9	10.4	11.3	85.90	255.5	220.1	252.8	232.0	20.88	12.110		
4,500.0	4,490.2	4,487.1	4,470.1	10.7	11.6	86.37	263.9	226.4	260.0	238.6	21.42	12.140		
4,600.0	4,589.7	4,586.8	4,569.3	10.9	11.8	86.82	272.3	232.6	267.2	245.2	21.96	12.169		
4,700.0	4,689.3	4,686.5	4,668.5	11.2	12.1	87.25	280.7	238.8	274.4	251.9	22.50	12.197		
4,800.0	4,788.9	4,791.4	4,772.9	11.5	12.4	87.81	288.8	244.8	281.0	257.9	23.03	12.200		
4,900.0	4,888.5	4,898.8	4,880.0	11.7	12.6	88.89	294.0	248.7	285.0	261.5	23.53	12.112		

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34M-403
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4930.0ft (Original Well Elev)
Reference Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (5-13-13)	Offset TVD Reference:	Offset Datum

Offset Design Anderson 34M-HZ Pad Sec.34-T7N-R66W - Anderson 34M-303 - Wellbore #1 - Plan #1 (5-13-13)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.0	4,988.1	5,006.0	4,987.2	12.0	12.8	90.50		296.0	250.2	286.6	262.6	24.03	11.927	
5,100.0	5,087.6	5,106.4	5,087.6	12.3	13.0	92.34		296.0	250.2	286.9	262.3	24.53	11.696	
5,200.0	5,187.2	5,206.0	5,187.2	12.6	13.2	94.17		296.0	250.2	287.4	262.3	25.04	11.478	
5,249.8	5,236.8	5,255.6	5,236.8	12.7	13.3	95.07		296.0	250.2	287.7	262.5	25.29	11.378	
5,300.0	5,286.8	5,305.6	5,286.8	12.8	13.4	95.90		296.0	250.2	288.1	262.6	25.53	11.288	
5,400.0	5,386.7	5,405.5	5,386.7	13.0	13.5	97.04		296.0	250.2	288.8	262.8	25.94	11.131	
5,500.0	5,486.6	5,505.4	5,486.6	13.2	13.7	97.48		296.0	250.2	289.1	262.7	26.33	10.980	
5,513.4	5,500.0	5,518.8	5,500.0	13.2	13.8	90.00		296.0	250.2	289.1	262.7	26.38	10.960	
5,600.0	5,586.6	5,605.4	5,586.6	13.4	13.9	90.00		296.0	250.2	289.1	262.4	26.71	10.824	
5,700.0	5,686.6	5,705.4	5,686.6	13.6	14.1	90.00		296.0	250.2	289.1	262.0	27.11	10.663	
5,800.0	5,786.6	5,805.4	5,786.6	13.8	14.3	90.00		296.0	250.2	289.1	261.6	27.52	10.506	
5,900.0	5,886.6	5,905.4	5,886.6	14.0	14.5	90.00		296.0	250.2	289.1	261.2	27.92	10.353	
6,000.0	5,986.6	6,005.4	5,986.6	14.2	14.7	90.00		296.0	250.2	289.1	260.7	28.33	10.203	
6,100.0	6,086.6	6,105.4	6,086.6	14.4	14.9	90.00		296.0	250.2	289.1	260.3	28.74	10.058	
6,200.0	6,186.6	6,205.4	6,186.6	14.6	15.1	90.00		296.0	250.2	289.1	259.9	29.15	9.916	
6,300.0	6,286.6	6,305.4	6,286.6	14.8	15.3	90.00		296.0	250.2	289.1	259.5	29.56	9.778	
6,400.0	6,386.6	6,405.4	6,386.6	15.0	15.5	90.00		296.0	250.2	289.1	259.1	29.98	9.643	
6,500.0	6,486.6	6,505.4	6,486.6	15.2	15.7	90.00		296.0	250.2	289.1	258.7	30.39	9.512	
6,558.4	6,545.0	6,563.9	6,545.0	15.3	15.8	90.00		296.0	250.2	289.1	258.4	30.63	9.437	
6,600.0	6,586.6	6,605.4	6,586.6	15.4	15.9	90.27		294.7	250.2	289.1	258.3	30.79	9.389	
6,613.6	6,600.2	6,618.9	6,600.1	15.4	15.9	90.45		293.7	250.2	289.1	258.2	30.84	9.374	
6,650.0	6,636.6	6,655.0	6,636.0	15.5	15.9	-89.00		290.1	250.2	289.1	258.2	30.95	9.341	
6,700.0	6,686.4	6,704.4	6,684.8	15.6	16.0	-88.24		282.4	250.2	289.2	258.2	31.06	9.311	
6,750.0	6,735.9	6,753.6	6,732.7	15.6	16.0	-87.49		271.6	250.2	289.4	258.2	31.14	9.292	
6,800.0	6,784.8	6,802.5	6,779.7	15.6	16.0	-86.76		257.8	250.2	289.5	258.4	31.18	9.285	
6,850.0	6,832.9	6,851.2	6,825.4	15.7	16.0	-86.04		241.1	250.2	289.8	258.6	31.21	9.286	
6,900.0	6,880.0	6,900.0	6,870.1	15.7	16.0	-85.34		221.5	250.2	290.0	258.8	31.21	9.294	
6,950.0	6,925.9	6,948.0	6,912.7	15.7	16.0	-84.67		199.5	250.2	290.3	259.1	31.19	9.308	
7,000.0	6,970.4	6,996.1	6,954.0	15.7	16.0	-84.02		174.8	250.2	290.7	259.5	31.17	9.324	
7,050.0	7,013.3	7,044.0	6,993.4	15.7	16.0	-83.39		147.7	250.2	291.0	259.9	31.16	9.341	
7,100.0	7,054.4	7,091.7	7,031.0	15.7	16.0	-82.80		118.2	250.2	291.4	260.2	31.15	9.353	
7,150.0	7,093.6	7,139.2	7,066.5	15.7	16.0	-82.23		86.6	250.2	291.8	260.6	31.17	9.360	
7,200.0	7,130.7	7,186.6	7,099.8	15.7	16.0	-81.70		53.0	250.2	292.1	260.9	31.22	9.357	
7,250.0	7,165.5	7,233.9	7,131.0	15.8	16.0	-81.21		17.5	250.2	292.5	261.2	31.32	9.341	
7,300.0	7,197.9	7,281.0	7,159.8	15.8	16.0	-80.75		-19.8	250.2	292.9	261.4	31.46	9.309	
7,350.0	7,227.8	7,328.0	7,186.1	15.9	16.0	-80.33		-58.7	250.2	293.3	261.6	31.68	9.258	
7,400.0	7,254.9	7,374.8	7,210.0	16.1	16.1	-79.95		-99.0	250.2	293.6	261.6	31.95	9.188	
7,450.0	7,279.3	7,421.6	7,231.3	16.3	16.4	-79.61		-140.6	250.2	293.9	261.6	32.31	9.096	
7,500.0	7,300.7	7,468.3	7,250.0	16.5	16.6	-79.31		-183.4	250.2	294.2	261.4	32.75	8.983	
7,550.0	7,319.1	7,514.9	7,266.1	16.8	16.9	-79.05		-227.2	250.2	294.4	261.2	33.27	8.849	
7,600.0	7,334.5	7,561.5	7,279.4	17.1	17.3	-78.84		-271.8	250.2	294.7	260.8	33.89	8.696	
7,650.0	7,346.7	7,608.0	7,289.9	17.5	17.6	-78.67		-317.0	250.2	294.8	260.2	34.58	8.525	
7,700.0	7,355.7	7,654.4	7,297.7	17.9	18.0	-78.55		-362.8	250.2	295.0	259.6	35.36	8.340	
7,733.6	7,360.0	7,685.6	7,301.4	18.2	18.3	-78.49		-393.8	250.2	295.0	259.1	35.94	8.209	
7,807.6	7,367.7	7,754.1	7,305.0	19.0	19.0	-77.81		-462.2	250.2	295.8	258.6	37.23	7.946	
7,900.0	7,373.7	7,845.3	7,304.4	20.0	20.0	-76.52		-553.3	250.2	297.3	258.2	39.07	7.609	
7,928.8	7,374.0	7,874.0	7,304.2	20.3	20.3	-76.42		-582.1	250.2	297.4	257.7	39.71	7.490	
8,000.0	7,373.9	7,945.3	7,303.6	21.1	21.2	-76.33		-653.3	250.2	297.5	256.1	41.38	7.190	
8,100.0	7,373.8	8,045.3	7,302.9	22.4	22.5	-76.21		-753.3	250.2	297.7	253.8	43.89	6.783	
8,200.0	7,373.7	8,145.3	7,302.1	23.8	23.8	-76.09		-853.3	250.2	297.8	251.3	46.56	6.397	
8,300.0	7,373.6	8,245.3	7,301.4	25.3	25.3	-75.97		-953.3	250.2	298.0	248.6	49.37	6.036	

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34M-403
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4930.0ft (Original Well Elev)
Reference Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (5-13-13)	Offset TVD Reference:	Offset Datum

Offset Design Anderson 34M-HZ Pad Sec.34-T7N-R66W - Anderson 34M-303 - Wellbore #1 - Plan #1 (5-13-13)												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
8,400.0	7,373.5	8,345.2	7,300.6	26.8	26.8	-75.85	-1,053.3	250.2	298.1	245.8	52.29	5.702	
8,500.0	7,373.4	8,445.2	7,299.9	28.3	28.4	-75.73	-1,153.3	250.2	298.3	243.0	55.30	5.394	
8,600.0	7,373.3	8,545.2	7,299.1	29.9	30.0	-75.61	-1,253.3	250.2	298.5	240.1	58.40	5.111	
8,700.0	7,373.2	8,645.2	7,298.4	31.6	31.6	-75.48	-1,353.3	250.2	298.6	237.1	61.56	4.851	
8,800.0	7,373.1	8,745.2	7,297.6	33.2	33.3	-75.36	-1,453.3	250.2	298.8	234.0	64.78	4.612	
8,900.0	7,373.0	8,845.2	7,296.9	34.9	34.9	-75.24	-1,553.3	250.2	298.9	230.9	68.05	4.393	
9,000.0	7,372.9	8,945.2	7,296.1	36.7	36.7	-75.12	-1,653.3	250.2	299.1	227.8	71.36	4.192	
9,100.0	7,372.8	9,045.2	7,295.4	38.4	38.4	-75.01	-1,753.3	250.2	299.3	224.6	74.70	4.007	
9,200.0	7,372.7	9,145.2	7,294.6	40.1	40.2	-74.89	-1,853.3	250.2	299.5	221.4	78.07	3.836	
9,300.0	7,372.6	9,245.2	7,293.9	41.9	41.9	-74.77	-1,953.3	250.2	299.6	218.2	81.47	3.678	
9,400.0	7,372.5	9,345.2	7,293.1	43.7	43.7	-74.65	-2,053.3	250.2	299.8	214.9	84.89	3.532	
9,500.0	7,372.4	9,445.2	7,292.4	45.5	45.5	-74.53	-2,153.3	250.2	300.0	211.6	88.32	3.396	
9,600.0	7,372.3	9,545.2	7,291.6	47.3	47.3	-74.41	-2,253.3	250.2	300.1	208.4	91.78	3.270	
9,700.0	7,372.2	9,645.2	7,290.9	49.1	49.1	-74.29	-2,353.3	250.2	300.3	205.1	95.25	3.153	
9,800.0	7,372.1	9,745.2	7,290.1	50.9	50.9	-74.17	-2,453.2	250.2	300.5	201.8	98.73	3.044	
9,900.0	7,372.0	9,845.2	7,289.4	52.8	52.7	-74.05	-2,553.2	250.2	300.7	198.5	102.22	2.942	
10,000.0	7,371.9	9,945.2	7,288.6	54.6	54.6	-73.93	-2,653.2	250.2	300.9	195.1	105.72	2.846	
10,100.0	7,371.8	10,045.2	7,287.9	56.4	56.4	-73.82	-2,753.2	250.2	301.0	191.8	109.22	2.756	
10,200.0	7,371.7	10,145.2	7,287.1	58.3	58.3	-73.70	-2,853.2	250.2	301.2	188.5	112.74	2.672	
10,300.0	7,371.6	10,245.2	7,286.4	60.1	60.1	-73.58	-2,953.2	250.2	301.4	185.1	116.25	2.593	
10,400.0	7,371.5	10,345.2	7,285.6	62.0	62.0	-73.46	-3,053.2	250.2	301.6	181.8	119.78	2.518	
10,500.0	7,371.4	10,445.2	7,284.9	63.8	63.8	-73.34	-3,153.2	250.2	301.8	178.5	123.30	2.447	
10,600.0	7,371.3	10,545.2	7,284.1	65.7	65.7	-73.23	-3,253.2	250.2	302.0	175.1	126.83	2.381	
10,700.0	7,371.1	10,645.2	7,283.4	67.6	67.6	-73.11	-3,353.2	250.2	302.1	171.8	130.37	2.318	
10,800.0	7,371.0	10,745.2	7,282.6	69.4	69.4	-72.99	-3,453.2	250.2	302.3	168.4	133.90	2.258	
10,900.0	7,370.9	10,845.2	7,281.9	71.3	71.3	-72.87	-3,553.2	250.2	302.5	165.1	137.44	2.201	
11,000.0	7,370.8	10,945.2	7,281.1	73.2	73.2	-72.76	-3,653.2	250.2	302.7	161.7	140.97	2.147	
11,100.0	7,370.7	11,045.2	7,280.4	75.1	75.0	-72.64	-3,753.2	250.2	302.9	158.4	144.51	2.096	
11,200.0	7,370.6	11,145.2	7,279.6	76.9	76.9	-72.52	-3,853.2	250.2	303.1	155.1	148.05	2.047	
11,300.0	7,370.5	11,245.2	7,278.9	78.8	78.8	-72.41	-3,953.2	250.2	303.3	151.7	151.59	2.001	
11,400.0	7,370.4	11,345.2	7,278.1	80.7	80.7	-72.29	-4,053.2	250.2	303.5	148.4	155.12	1.957	
11,500.0	7,370.3	11,445.2	7,277.4	82.6	82.6	-72.17	-4,153.2	250.2	303.7	145.0	158.66	1.914	
11,600.0	7,370.2	11,545.2	7,276.6	84.5	84.5	-72.06	-4,253.2	250.2	303.9	141.7	162.19	1.874	
11,700.0	7,370.1	11,645.2	7,275.9	86.4	86.4	-71.94	-4,353.2	250.2	304.1	138.4	165.72	1.835	
11,800.0	7,370.0	11,745.2	7,275.1	88.3	88.2	-71.83	-4,453.1	250.2	304.3	135.0	169.26	1.798	
11,816.3	7,370.0	11,758.6	7,275.0	88.6	88.5	-71.81	-4,466.5	250.2	304.3	134.6	169.78	1.793	
11,817.1	7,370.0	11,758.6	7,275.0	88.6	88.5	-71.81	-4,466.5	250.2	304.4	134.6	169.79	1.793 SF	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34M-403
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4930.0ft (Original Well Elev)
Reference Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (5-13-13)	Offset TVD Reference:	Offset Datum

Offset Design Anderson 34M-HZ Pad Sec.34-T7N-R66W - Anderson 34M-343 - Wellbore #1 - Plan #1 (5-13-13)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	-90.02	0.0	-30.6	30.6					
100.0	100.0	100.0	100.0	0.1	0.1	-90.02	0.0	-30.6	30.6	30.4	0.22	136.030		
200.0	200.0	200.0	200.0	0.3	0.3	-90.02	0.0	-30.6	30.6	29.9	0.67	45.343		
300.0	300.0	300.0	300.0	0.6	0.6	-90.02	0.0	-30.6	30.6	29.5	1.12	27.206		
400.0	400.0	400.0	400.0	0.8	0.8	-90.02	0.0	-30.6	30.6	29.0	1.57	19.433		
500.0	500.0	500.0	500.0	1.0	1.0	-90.02	0.0	-30.6	30.6	28.6	2.02	15.114		
600.0	600.0	600.0	600.0	1.2	1.2	-90.02	0.0	-30.6	30.6	28.1	2.47	12.366		
700.0	700.0	700.0	700.0	1.5	1.5	-90.02	0.0	-30.6	30.6	27.7	2.92	10.464		
800.0	800.0	800.0	800.0	1.7	1.7	-90.02	0.0	-30.6	30.6	27.2	3.37	9.069		
900.0	900.0	900.0	900.0	1.9	1.9	-90.02	0.0	-30.6	30.6	26.8	3.82	8.002		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-90.02	0.0	-30.6	30.6	26.3	4.27	7.159 CC, ES		
1,100.0	1,100.0	1,099.2	1,099.1	2.4	2.4	-87.98	1.1	-31.9	31.9	27.2	4.71	6.767		
1,200.0	1,200.0	1,198.1	1,197.9	2.6	2.6	-82.80	4.5	-35.7	36.1	30.9	5.15	6.995		
1,300.0	1,300.0	1,296.6	1,296.0	2.8	2.8	-76.48	10.1	-42.1	43.5	37.9	5.60	7.764		
1,400.0	1,400.0	1,395.9	1,394.8	3.0	3.0	-71.14	17.1	-50.0	53.1	47.0	6.04	8.783		
1,500.0	1,500.0	1,495.3	1,493.7	3.3	3.3	-67.44	24.1	-57.9	63.0	56.6	6.49	9.714		
1,600.0	1,600.0	1,594.7	1,592.5	3.5	3.5	-64.77	31.0	-65.9	73.2	66.2	6.94	10.550		
1,700.0	1,700.0	1,694.2	1,691.4	3.7	3.8	-62.74	38.0	-73.8	83.4	76.1	7.39	11.299		
1,800.0	1,800.0	1,793.6	1,790.3	3.9	4.1	-61.16	45.0	-81.7	93.8	85.9	7.84	11.970		
1,900.0	1,900.0	1,893.0	1,889.1	4.2	4.4	-59.90	52.0	-89.6	104.2	95.9	8.29	12.573		
2,000.0	2,000.0	1,992.5	1,988.0	4.4	4.6	-58.86	58.9	-97.6	114.6	105.9	8.74	13.117		
2,100.0	2,100.0	2,092.0	2,087.0	4.6	4.9	-50.99	65.9	-105.5	124.0	114.8	9.19	13.490		
2,200.0	2,199.8	2,191.7	2,186.2	4.8	5.2	-51.86	72.9	-113.5	131.2	121.5	9.64	13.606		
2,263.5	2,263.2	2,255.1	2,249.2	5.0	5.4	-52.99	77.4	-118.5	134.7	124.8	9.93	13.564		
2,300.0	2,299.5	2,291.5	2,285.3	5.1	5.5	-53.77	79.9	-121.4	136.5	126.4	10.10	13.516		
2,400.0	2,399.1	2,391.2	2,384.5	5.3	5.8	-55.83	86.9	-129.4	141.5	131.0	10.56	13.397		
2,500.0	2,498.6	2,491.0	2,483.7	5.5	6.0	-57.74	93.9	-137.3	146.7	135.7	11.04	13.295		
2,600.0	2,598.2	2,590.7	2,582.9	5.8	6.3	-59.51	100.9	-145.3	152.1	140.6	11.52	13.208		
2,700.0	2,697.8	2,690.5	2,682.1	6.0	6.6	-61.17	107.9	-153.2	157.6	145.6	12.00	13.133		
2,800.0	2,797.4	2,790.2	2,781.3	6.2	6.9	-62.71	114.9	-161.2	163.2	150.7	12.49	13.068		
2,900.0	2,896.9	2,890.0	2,880.4	6.5	7.2	-64.15	121.9	-169.1	169.0	156.0	12.99	13.011		
3,000.0	2,996.5	2,989.7	2,979.6	6.7	7.5	-65.50	128.9	-177.1	174.8	161.3	13.49	12.961		
3,100.0	3,096.1	3,089.5	3,078.8	7.0	7.8	-66.75	135.9	-185.0	180.7	166.7	13.99	12.916		
3,200.0	3,195.7	3,189.2	3,178.0	7.2	8.1	-67.93	142.9	-193.0	186.7	172.2	14.50	12.877		
3,300.0	3,295.2	3,289.0	3,277.2	7.5	8.4	-69.03	149.9	-200.9	192.8	177.8	15.01	12.842		
3,400.0	3,394.8	3,388.7	3,376.4	7.8	8.7	-70.07	156.9	-208.9	199.0	183.4	15.53	12.811		
3,500.0	3,494.4	3,488.5	3,475.6	8.0	8.9	-71.04	163.9	-216.9	205.2	189.1	16.05	12.783		
3,600.0	3,594.0	3,588.2	3,574.7	8.3	9.2	-71.96	170.9	-224.8	211.4	194.8	16.57	12.758		
3,700.0	3,693.6	3,688.0	3,673.9	8.5	9.5	-72.82	177.9	-232.8	217.7	200.6	17.10	12.735		
3,800.0	3,793.1	3,787.7	3,773.1	8.8	9.8	-73.63	184.9	-240.7	224.1	206.5	17.62	12.715		
3,900.0	3,892.7	3,887.5	3,872.3	9.1	10.1	-74.40	191.9	-248.7	230.5	212.3	18.15	12.697		
4,000.0	3,992.3	3,987.2	3,971.5	9.3	10.4	-75.13	198.9	-256.6	236.9	218.2	18.68	12.681		
4,100.0	4,091.9	4,087.0	4,070.7	9.6	10.7	-75.82	205.9	-264.6	243.4	224.2	19.22	12.666		
4,200.0	4,191.4	4,186.7	4,169.8	9.9	11.0	-76.47	212.9	-272.5	249.9	230.2	19.75	12.652		
4,300.0	4,291.0	4,286.5	4,269.0	10.1	11.3	-77.09	219.9	-280.5	256.5	236.2	20.29	12.640		
4,400.0	4,390.6	4,386.2	4,368.2	10.4	11.6	-77.68	226.9	-288.4	263.0	242.2	20.83	12.629		
4,500.0	4,490.2	4,486.0	4,467.4	10.7	11.9	-78.24	233.9	-296.4	269.6	248.3	21.37	12.619		
4,600.0	4,589.7	4,585.7	4,566.6	10.9	12.2	-78.77	240.9	-304.3	276.2	254.3	21.91	12.610		
4,700.0	4,689.3	4,685.5	4,665.8	11.2	12.5	-79.28	247.9	-312.3	282.9	260.4	22.45	12.602		
4,800.0	4,788.9	4,785.2	4,764.9	11.5	12.8	-79.77	254.9	-320.3	289.5	266.6	22.99	12.594		
4,900.0	4,888.5	4,885.0	4,864.1	11.7	13.1	-80.23	261.9	-328.2	296.2	272.7	23.53	12.588		

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34M-403
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4930.0ft (Original Well Elev)
Reference Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (5-13-13)	Offset TVD Reference:	Offset Datum

Offset Design Anderson 34M-HZ Pad Sec.34-T7N-R66W - Anderson 34M-343 - Wellbore #1 - Plan #1 (5-13-13)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.0	4,988.1	4,984.7	4,963.3	12.0	13.4	-80.67		268.9	-336.2	302.9	278.9	24.08	12.581	
5,100.0	5,087.6	5,084.5	5,062.5	12.3	13.7	-81.10		275.9	-344.1	309.7	285.0	24.62	12.576	
5,200.0	5,187.2	5,184.2	5,161.7	12.6	14.0	-81.50		282.9	-352.1	316.4	291.2	25.17	12.571	
5,249.8	5,236.8	5,235.3	5,212.5	12.7	14.1	-81.71		286.4	-356.1	319.7	294.3	25.44	12.568	
5,300.0	5,286.8	5,290.0	5,267.0	12.8	14.2	-81.99		289.7	-359.8	322.6	296.9	25.69	12.555	
5,400.0	5,386.7	5,399.3	5,376.0	13.0	14.5	-82.37		294.2	-364.9	326.5	300.4	26.11	12.505	
5,500.0	5,486.6	5,508.7	5,485.4	13.2	14.6	-82.51		296.0	-366.9	328.0	301.6	26.47	12.391	
5,513.4	5,500.0	5,523.3	5,500.0	13.2	14.7	-90.00		296.0	-367.0	328.1	301.5	26.52	12.371	
5,600.0	5,586.6	5,609.9	5,586.6	13.4	14.8	-90.00		296.0	-367.0	328.1	301.2	26.83	12.226	
5,700.0	5,686.6	5,709.9	5,686.6	13.6	15.0	-90.00		296.0	-367.0	328.1	300.8	27.23	12.047	
5,800.0	5,786.6	5,809.9	5,786.6	13.8	15.2	-90.00		296.0	-367.0	328.1	300.4	27.63	11.872	
5,900.0	5,886.6	5,909.9	5,886.6	14.0	15.4	-90.00		296.0	-367.0	328.1	300.0	28.04	11.701	
6,000.0	5,986.6	6,009.9	5,986.6	14.2	15.5	-90.00		296.0	-367.0	328.1	299.6	28.44	11.535	
6,100.0	6,086.6	6,109.9	6,086.6	14.4	15.7	-90.00		296.0	-367.0	328.1	299.2	28.85	11.372	
6,200.0	6,186.6	6,209.9	6,186.6	14.6	15.9	-90.00		296.0	-367.0	328.1	298.8	29.25	11.214	
6,300.0	6,286.6	6,309.9	6,286.6	14.8	16.1	-90.00		296.0	-367.0	328.1	298.4	29.66	11.060	
6,400.0	6,386.6	6,409.9	6,386.6	15.0	16.3	-90.00		296.0	-367.0	328.1	298.0	30.07	10.909	
6,500.0	6,486.6	6,509.9	6,486.6	15.2	16.5	-90.00		296.0	-367.0	328.1	297.6	30.48	10.762	
6,551.8	6,538.5	6,561.7	6,538.5	15.3	16.6	-90.00		296.0	-367.0	328.1	297.4	30.69	10.688	
6,600.0	6,586.6	6,609.9	6,586.6	15.4	16.7	-90.24		294.7	-367.0	328.1	297.2	30.88	10.623	
6,613.6	6,600.2	6,623.4	6,600.1	15.4	16.7	-90.40		293.7	-367.0	328.1	297.1	30.93	10.606	
6,650.0	6,636.6	6,659.5	6,636.0	15.5	16.7	89.12		290.1	-367.0	328.1	297.0	31.05	10.565	
6,700.0	6,686.4	6,708.9	6,684.8	15.6	16.7	88.46		282.4	-367.0	328.2	297.0	31.18	10.526	
6,750.0	6,735.9	6,758.1	6,732.7	15.6	16.8	87.80		271.6	-367.0	328.3	297.0	31.27	10.500	
6,800.0	6,784.8	6,807.0	6,779.7	15.6	16.8	87.16		257.9	-367.0	328.5	297.1	31.32	10.486	
6,850.0	6,832.9	6,855.7	6,825.5	15.7	16.8	86.53		241.2	-367.0	328.7	297.3	31.35	10.483	
6,900.0	6,880.0	6,904.2	6,869.9	15.7	16.8	85.92		221.7	-367.0	328.9	297.5	31.36	10.487	
6,950.0	6,925.9	6,952.5	6,912.8	15.7	16.8	85.32		199.6	-367.0	329.2	297.8	31.36	10.498	
7,000.0	6,970.4	7,000.0	6,953.5	15.7	16.8	84.76		175.3	-367.0	329.4	298.1	31.34	10.511	
7,050.0	7,013.3	7,048.5	6,993.5	15.7	16.8	84.20		147.8	-367.0	329.8	298.4	31.33	10.525	
7,100.0	7,054.4	7,096.2	7,031.1	15.7	16.7	83.68		118.4	-367.0	330.1	298.7	31.33	10.536	
7,150.0	7,093.6	7,143.8	7,066.6	15.7	16.7	83.18		86.8	-367.0	330.4	299.1	31.35	10.539	
7,200.0	7,130.7	7,191.2	7,100.0	15.7	16.7	82.71		53.1	-367.0	330.7	299.3	31.40	10.532	
7,250.0	7,165.5	7,238.5	7,131.1	15.8	16.7	82.27		17.6	-367.0	331.1	299.6	31.50	10.510	
7,300.0	7,197.9	7,285.6	7,159.9	15.8	16.7	81.87		-19.7	-367.0	331.4	299.7	31.65	10.471	
7,350.0	7,227.8	7,332.6	7,186.3	15.9	16.7	81.50		-58.6	-367.0	331.7	299.9	31.86	10.412	
7,400.0	7,254.9	7,379.5	7,210.2	16.1	16.8	81.16		-98.9	-367.0	332.0	299.9	32.14	10.329	
7,450.0	7,279.3	7,426.3	7,231.6	16.3	16.9	80.86		-140.5	-367.0	332.3	299.8	32.50	10.223	
7,500.0	7,300.7	7,473.0	7,250.3	16.5	17.0	80.60		-183.3	-367.0	332.5	299.6	32.95	10.093	
7,550.0	7,319.1	7,519.6	7,266.3	16.8	17.3	80.37		-227.1	-367.0	332.7	299.3	33.48	9.939	
7,600.0	7,334.5	7,566.1	7,279.6	17.1	17.6	80.18		-271.7	-367.0	332.9	298.8	34.10	9.764	
7,650.0	7,346.7	7,612.7	7,290.2	17.5	17.9	80.03		-317.0	-367.0	333.1	298.3	34.80	9.571	
7,700.0	7,355.7	7,659.1	7,298.0	17.9	18.3	79.93		-362.8	-367.0	333.2	297.6	35.59	9.361	
7,733.6	7,360.0	7,690.3	7,301.7	18.2	18.6	79.87		-393.8	-367.0	333.3	297.1	36.17	9.213	
7,807.6	7,367.7	7,758.8	7,305.3	19.0	19.3	79.27		-462.2	-367.0	334.0	296.5	37.48	8.909	
7,900.0	7,373.7	7,849.7	7,304.3	20.0	20.3	78.06		-553.0	-367.0	335.3	295.9	39.37	8.517	
7,928.8	7,374.0	7,878.4	7,303.9	20.3	20.6	77.94		-581.8	-367.0	335.5	295.4	40.02	8.383	
8,000.0	7,373.9	7,949.7	7,303.0	21.1	21.4	77.80		-653.0	-367.0	335.6	293.9	41.69	8.050	
8,100.0	7,373.8	8,049.7	7,301.8	22.4	22.7	77.61		-753.0	-367.0	335.9	291.7	44.20	7.599	
8,200.0	7,373.7	8,149.6	7,300.5	23.8	24.1	77.42		-852.9	-367.0	336.1	289.3	46.88	7.171	
8,300.0	7,373.6	8,249.6	7,299.2	25.3	25.5	77.23		-952.9	-367.0	336.4	286.7	49.69	6.770	

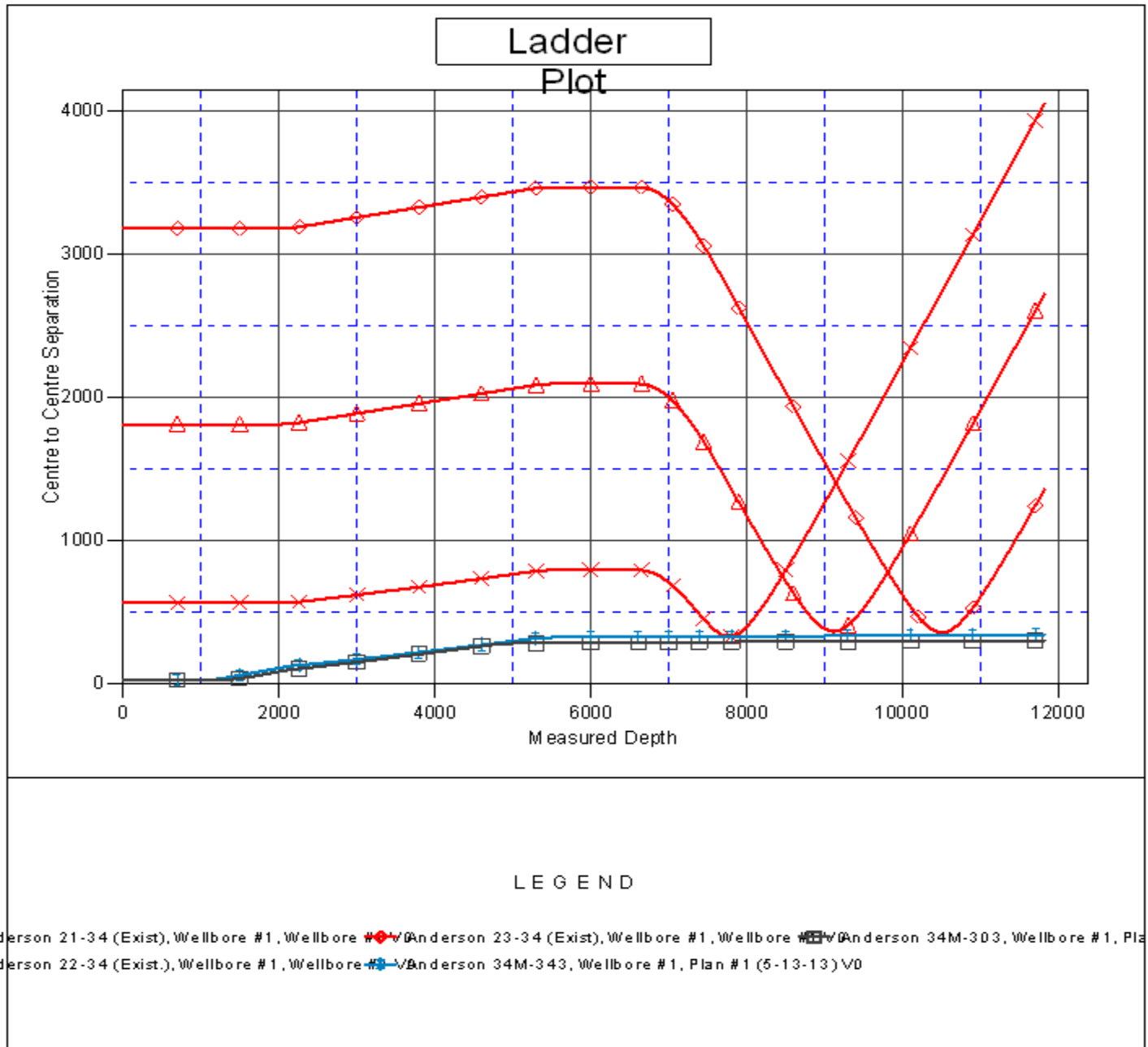
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34M-403
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4930.0ft (Original Well Elev)
Reference Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (5-13-13)	Offset TVD Reference:	Offset Datum

Offset Design		Anderson 34M-HZ Pad Sec.34-T7N-R66W - Anderson 34M-343 - Wellbore #1 - Plan #1 (5-13-13)											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		
8,400.0	7,373.5	8,349.6	7,298.0	26.8	27.0	77.03	-1,052.9	-367.0	336.6	284.0	52.61	6.399		
8,500.0	7,373.4	8,449.6	7,296.7	28.3	28.6	76.84	-1,152.9	-367.0	336.9	281.3	55.63	6.057		
8,600.0	7,373.3	8,549.6	7,295.5	29.9	30.2	76.65	-1,252.9	-367.0	337.2	278.4	58.72	5.742		
8,700.0	7,373.2	8,649.6	7,294.2	31.6	31.8	76.46	-1,352.9	-367.0	337.4	275.6	61.88	5.453		
8,800.0	7,373.1	8,749.6	7,293.0	33.2	33.4	76.27	-1,452.9	-367.0	337.7	272.6	65.10	5.188		
8,900.0	7,373.0	8,849.6	7,291.7	34.9	35.1	76.08	-1,552.8	-367.0	338.0	269.6	68.36	4.944		
9,000.0	7,372.9	8,949.6	7,290.5	36.7	36.8	75.89	-1,652.8	-367.0	338.3	266.6	71.66	4.720		
9,100.0	7,372.8	9,049.6	7,289.2	38.4	38.5	75.70	-1,752.8	-367.0	338.5	263.5	74.99	4.514		
9,200.0	7,372.7	9,149.6	7,287.9	40.1	40.3	75.51	-1,852.8	-367.0	338.8	260.5	78.36	4.324		
9,300.0	7,372.6	9,249.6	7,286.7	41.9	42.0	75.32	-1,952.8	-367.0	339.1	257.4	81.74	4.149		
9,400.0	7,372.5	9,349.6	7,285.4	43.7	43.8	75.14	-2,052.8	-367.0	339.4	254.3	85.15	3.986		
9,500.0	7,372.4	9,449.6	7,284.2	45.5	45.6	74.95	-2,152.8	-367.0	339.7	251.1	88.57	3.836		
9,600.0	7,372.3	9,549.6	7,282.9	47.3	47.4	74.76	-2,252.7	-367.0	340.0	248.0	92.00	3.696		
9,700.0	7,372.2	9,649.5	7,281.7	49.1	49.2	74.57	-2,352.7	-367.0	340.3	244.9	95.45	3.565		
9,800.0	7,372.1	9,749.5	7,280.4	50.9	51.0	74.39	-2,452.7	-367.0	340.6	241.7	98.91	3.444		
9,900.0	7,372.0	9,849.5	7,279.1	52.8	52.8	74.20	-2,552.7	-367.0	340.9	238.6	102.37	3.330		
10,000.0	7,371.9	9,949.5	7,277.9	54.6	54.7	74.01	-2,652.7	-367.0	341.2	235.4	105.84	3.224		
10,100.0	7,371.8	10,049.5	7,276.6	56.4	56.5	73.83	-2,752.7	-367.0	341.6	232.2	109.32	3.124		
10,200.0	7,371.7	10,149.5	7,275.4	58.3	58.3	73.64	-2,852.7	-367.0	341.9	229.1	112.80	3.031		
10,300.0	7,371.6	10,249.5	7,274.1	60.1	60.2	73.46	-2,952.6	-367.0	342.2	225.9	116.29	2.943		
10,400.0	7,371.5	10,349.5	7,272.9	62.0	62.0	73.27	-3,052.6	-367.0	342.5	222.8	119.77	2.860		
10,500.0	7,371.4	10,449.5	7,271.6	63.8	63.9	73.09	-3,152.6	-367.0	342.9	219.6	123.26	2.782		
10,600.0	7,371.3	10,549.5	7,270.3	65.7	65.7	72.90	-3,252.6	-367.0	343.2	216.5	126.75	2.708		
10,700.0	7,371.1	10,649.5	7,269.1	67.6	67.6	72.72	-3,352.6	-367.0	343.6	213.3	130.23	2.638		
10,800.0	7,371.0	10,749.5	7,267.8	69.4	69.5	72.53	-3,452.6	-367.0	343.9	210.2	133.72	2.572		
10,900.0	7,370.9	10,849.5	7,266.6	71.3	71.3	72.35	-3,552.6	-367.0	344.2	207.0	137.20	2.509		
11,000.0	7,370.8	10,949.5	7,265.3	73.2	73.2	72.17	-3,652.5	-367.0	344.6	203.9	140.68	2.449		
11,100.0	7,370.7	11,049.5	7,264.1	75.1	75.1	71.99	-3,752.5	-367.0	345.0	200.8	144.16	2.393		
11,200.0	7,370.6	11,149.4	7,262.8	76.9	77.0	71.80	-3,852.5	-367.0	345.3	197.7	147.64	2.339		
11,300.0	7,370.5	11,249.4	7,261.6	78.8	78.8	71.62	-3,952.5	-367.0	345.7	194.6	151.12	2.287		
11,400.0	7,370.4	11,349.4	7,260.3	80.7	80.7	71.44	-4,052.5	-367.0	346.0	191.5	154.59	2.238		
11,500.0	7,370.3	11,449.4	7,259.0	82.6	82.6	71.26	-4,152.5	-367.0	346.4	188.4	158.05	2.192		
11,600.0	7,370.2	11,549.4	7,257.8	84.5	84.5	71.08	-4,252.4	-367.0	346.8	185.3	161.51	2.147		
11,700.0	7,370.1	11,649.4	7,256.5	86.4	86.4	70.90	-4,352.4	-367.0	347.2	182.2	164.97	2.104		
11,800.0	7,370.0	11,749.4	7,255.3	88.3	88.3	70.72	-4,452.4	-367.0	347.5	179.1	168.42	2.063		
11,816.3	7,370.0	11,765.7	7,255.1	88.6	88.6	70.69	-4,468.7	-367.0	347.6	178.6	168.99	2.057		
11,817.1	7,370.0	11,766.5	7,255.1	88.6	88.6	70.69	-4,469.5	-367.0	347.6	178.6	169.01	2.057 SF		

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34M-403
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4930.0ft (Original Well Elev)
Reference Site:	Anderson 34M-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4930.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34M-403	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (5-13-13)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4930.0ft (Original Well Elev) Coordinates are relative to: Anderson 34M-403
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.47°



Reference Depths are relative to WELL @ 4930.0ft (Original Well Elev)Coordinates are relative to: Anderson 34M-403
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