

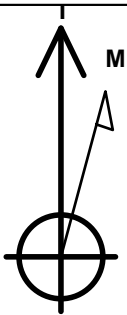
PETROLEUM DEVELOPMENT CORP Weld County CO

Well Name: Anderson 34R-223

Surface Location: Anderson 34R-HZ Pad Sec.34-T7N-R66W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
Ground Elevation: 4880.0
+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.0 0.0 1439709.67 3206003.58 40.538040 -104.758820
RKB - 15' WELL @ 4895.0ft (RKB - 15')

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape Point
BHL 500'FSL, 774'FEL	7155.0	-4561.3	119.5	

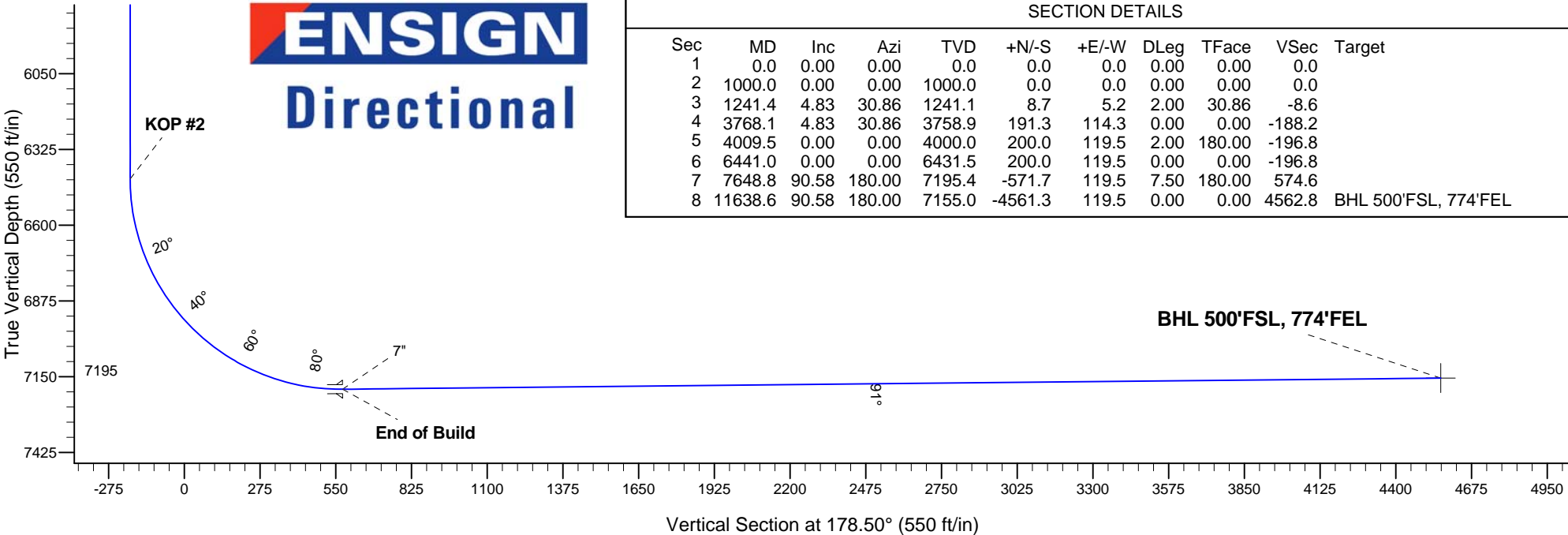
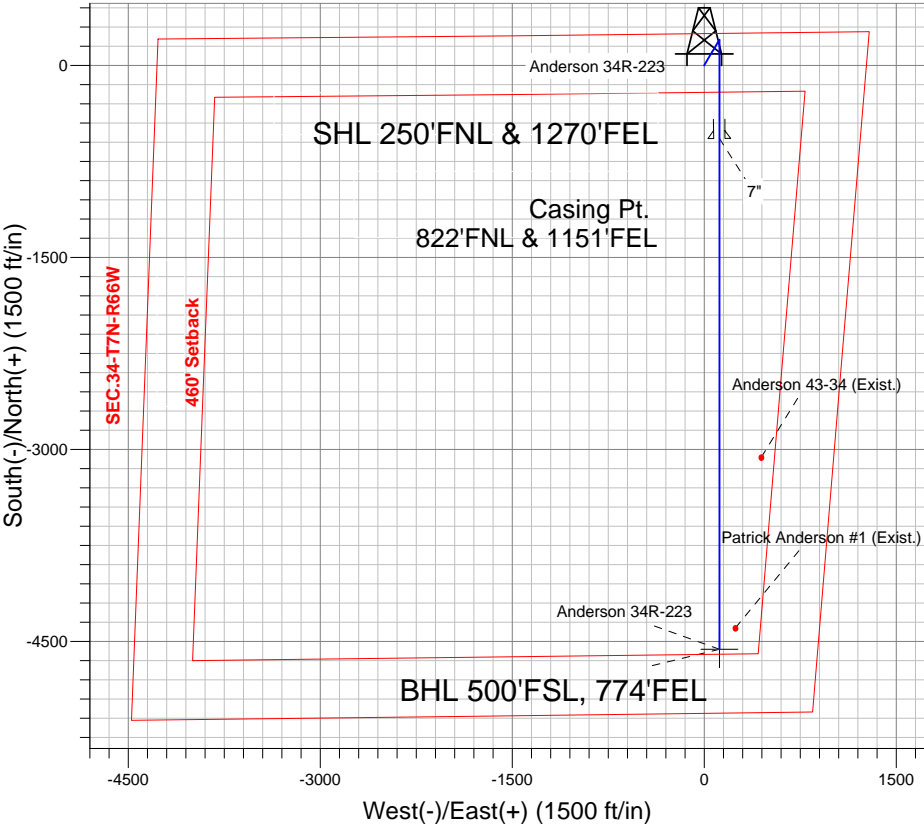


Azimuths to True North
Magnetic North: 8.64°
Magnetic Field
Strength: 53022.3snT
Dip Angle: 67.10°
Date: 3/5/2013
Model: IGRF2010

ANNOTATIONS

TVD	MD	Annotation
1000.0	1000.0	KOP #1
6431.5	6441.0	KOP #2
7195.4	7648.8	End of Build

Anderson 34R-HZ Pad Sec.34-T7N-R66W
Anderson 34R-223
Plan #3 (3-07-13)
9:09, March 07 2013





PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.34-T7N-R66W

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

Anderson 34R-223

Wellbore #1

Plan: Plan #3 (3-07-13)

Standard Planning Report

07 March, 2013

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	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,241.4	4.83	30.86	1,241.1	8.7	5.2	2.00	2.00	0.00	30.86	
3,768.1	4.83	30.86	3,758.9	191.3	114.3	0.00	0.00	0.00	0.00	
4,009.5	0.00	0.00	4,000.0	200.0	119.5	2.00	-2.00	0.00	180.00	
6,441.0	0.00	0.00	6,431.5	200.0	119.5	0.00	0.00	0.00	0.00	
7,648.8	90.58	180.00	7,195.4	-571.7	119.5	7.50	7.50	0.00	180.00	
11,638.6	90.58	180.00	7,155.0	-4,561.3	119.5	0.00	0.00	0.00	0.00	BHL 500'FSL, 774'F

Database:	Landmark	Local Co-ordinate Reference:	Well Anderson 34R-223
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4895.0ft (RKB - 15')
Project:	SEC.34-T7N-R66W	MD Reference:	WELL @ 4895.0ft (RKB - 15')
Site:	Anderson 34R-HZ Pad Sec.34-T7N-R66W	North Reference:	True
Well:	Anderson 34R-223	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #3 (3-07-13)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
40.0	0.00	0.00	40.0	0.0	0.0	0.0	0.00	0.00	0.00
80.0	0.00	0.00	80.0	0.0	0.0	0.0	0.00	0.00	0.00
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00
160.0	0.00	0.00	160.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
240.0	0.00	0.00	240.0	0.0	0.0	0.0	0.00	0.00	0.00
280.0	0.00	0.00	280.0	0.0	0.0	0.0	0.00	0.00	0.00
320.0	0.00	0.00	320.0	0.0	0.0	0.0	0.00	0.00	0.00
360.0	0.00	0.00	360.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
440.0	0.00	0.00	440.0	0.0	0.0	0.0	0.00	0.00	0.00
480.0	0.00	0.00	480.0	0.0	0.0	0.0	0.00	0.00	0.00
520.0	0.00	0.00	520.0	0.0	0.0	0.0	0.00	0.00	0.00
560.0	0.00	0.00	560.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
640.0	0.00	0.00	640.0	0.0	0.0	0.0	0.00	0.00	0.00
680.0	0.00	0.00	680.0	0.0	0.0	0.0	0.00	0.00	0.00
720.0	0.00	0.00	720.0	0.0	0.0	0.0	0.00	0.00	0.00
760.0	0.00	0.00	760.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
840.0	0.00	0.00	840.0	0.0	0.0	0.0	0.00	0.00	0.00
880.0	0.00	0.00	880.0	0.0	0.0	0.0	0.00	0.00	0.00
920.0	0.00	0.00	920.0	0.0	0.0	0.0	0.00	0.00	0.00
960.0	0.00	0.00	960.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP #1									
1,040.0	0.80	30.86	1,040.0	0.2	0.1	-0.2	2.00	2.00	0.00
1,080.0	1.60	30.86	1,080.0	1.0	0.6	-0.9	2.00	2.00	0.00
1,120.0	2.40	30.86	1,120.0	2.2	1.3	-2.1	2.00	2.00	0.00
1,160.0	3.20	30.86	1,159.9	3.8	2.3	-3.8	2.00	2.00	0.00
1,200.0	4.00	30.86	1,199.8	6.0	3.6	-5.9	2.00	2.00	0.00
1,240.0	4.80	30.86	1,239.7	8.6	5.2	-8.5	2.00	2.00	0.00
1,241.4	4.83	30.86	1,241.1	8.7	5.2	-8.6	2.00	2.00	0.00
1,280.0	4.83	30.86	1,279.6	11.5	6.9	-11.3	0.00	0.00	0.00
1,320.0	4.83	30.86	1,319.4	14.4	8.6	-14.2	0.00	0.00	0.00
1,360.0	4.83	30.86	1,359.3	17.3	10.3	-17.0	0.00	0.00	0.00
1,400.0	4.83	30.86	1,399.2	20.2	12.1	-19.9	0.00	0.00	0.00
1,440.0	4.83	30.86	1,439.0	23.1	13.8	-22.7	0.00	0.00	0.00
1,480.0	4.83	30.86	1,478.9	26.0	15.5	-25.5	0.00	0.00	0.00
1,520.0	4.83	30.86	1,518.7	28.9	17.2	-28.4	0.00	0.00	0.00
1,560.0	4.83	30.86	1,558.6	31.7	19.0	-31.2	0.00	0.00	0.00
1,600.0	4.83	30.86	1,598.4	34.6	20.7	-34.1	0.00	0.00	0.00
1,640.0	4.83	30.86	1,638.3	37.5	22.4	-36.9	0.00	0.00	0.00
1,680.0	4.83	30.86	1,678.2	40.4	24.1	-39.8	0.00	0.00	0.00
1,720.0	4.83	30.86	1,718.0	43.3	25.9	-42.6	0.00	0.00	0.00
1,760.0	4.83	30.86	1,757.9	46.2	27.6	-45.5	0.00	0.00	0.00
1,800.0	4.83	30.86	1,797.7	49.1	29.3	-48.3	0.00	0.00	0.00
1,840.0	4.83	30.86	1,837.6	52.0	31.1	-51.1	0.00	0.00	0.00
1,880.0	4.83	30.86	1,877.4	54.9	32.8	-54.0	0.00	0.00	0.00
1,920.0	4.83	30.86	1,917.3	57.8	34.5	-56.8	0.00	0.00	0.00
1,960.0	4.83	30.86	1,957.2	60.6	36.2	-59.7	0.00	0.00	0.00
2,000.0	4.83	30.86	1,997.0	63.5	38.0	-62.5	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Anderson 34R-223
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4895.0ft (RKB - 15')
Project:	SEC.34-T7N-R66W	MD Reference:	WELL @ 4895.0ft (RKB - 15')
Site:	Anderson 34R-HZ Pad Sec.34-T7N-R66W	North Reference:	True
Well:	Anderson 34R-223	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #3 (3-07-13)		

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	4.83	30.86	2,036.9	66.4	39.7	-65.4	0.00	0.00	0.00
2,080.0	4.83	30.86	2,076.7	69.3	41.4	-68.2	0.00	0.00	0.00
2,120.0	4.83	30.86	2,116.6	72.2	43.1	-71.0	0.00	0.00	0.00
2,160.0	4.83	30.86	2,156.5	75.1	44.9	-73.9	0.00	0.00	0.00
2,200.0	4.83	30.86	2,196.3	78.0	46.6	-76.7	0.00	0.00	0.00
2,240.0	4.83	30.86	2,236.2	80.9	48.3	-79.6	0.00	0.00	0.00
2,280.0	4.83	30.86	2,276.0	83.8	50.0	-82.4	0.00	0.00	0.00
2,320.0	4.83	30.86	2,315.9	86.7	51.8	-85.3	0.00	0.00	0.00
2,360.0	4.83	30.86	2,355.7	89.5	53.5	-88.1	0.00	0.00	0.00
2,400.0	4.83	30.86	2,395.6	92.4	55.2	-91.0	0.00	0.00	0.00
2,440.0	4.83	30.86	2,435.5	95.3	57.0	-93.8	0.00	0.00	0.00
2,480.0	4.83	30.86	2,475.3	98.2	58.7	-96.6	0.00	0.00	0.00
2,520.0	4.83	30.86	2,515.2	101.1	60.4	-99.5	0.00	0.00	0.00
2,560.0	4.83	30.86	2,555.0	104.0	62.1	-102.3	0.00	0.00	0.00
2,600.0	4.83	30.86	2,594.9	106.9	63.9	-105.2	0.00	0.00	0.00
2,640.0	4.83	30.86	2,634.8	109.8	65.6	-108.0	0.00	0.00	0.00
2,680.0	4.83	30.86	2,674.6	112.7	67.3	-110.9	0.00	0.00	0.00
2,720.0	4.83	30.86	2,714.5	115.5	69.0	-113.7	0.00	0.00	0.00
2,760.0	4.83	30.86	2,754.3	118.4	70.8	-116.5	0.00	0.00	0.00
2,800.0	4.83	30.86	2,794.2	121.3	72.5	-119.4	0.00	0.00	0.00
2,840.0	4.83	30.86	2,834.0	124.2	74.2	-122.2	0.00	0.00	0.00
2,880.0	4.83	30.86	2,873.9	127.1	75.9	-125.1	0.00	0.00	0.00
2,920.0	4.83	30.86	2,913.8	130.0	77.7	-127.9	0.00	0.00	0.00
2,960.0	4.83	30.86	2,953.6	132.9	79.4	-130.8	0.00	0.00	0.00
3,000.0	4.83	30.86	2,993.5	135.8	81.1	-133.6	0.00	0.00	0.00
3,040.0	4.83	30.86	3,033.3	138.7	82.9	-136.5	0.00	0.00	0.00
3,080.0	4.83	30.86	3,073.2	141.6	84.6	-139.3	0.00	0.00	0.00
3,120.0	4.83	30.86	3,113.0	144.4	86.3	-142.1	0.00	0.00	0.00
3,160.0	4.83	30.86	3,152.9	147.3	88.0	-145.0	0.00	0.00	0.00
3,200.0	4.83	30.86	3,192.8	150.2	89.8	-147.8	0.00	0.00	0.00
3,240.0	4.83	30.86	3,232.6	153.1	91.5	-150.7	0.00	0.00	0.00
3,280.0	4.83	30.86	3,272.5	156.0	93.2	-153.5	0.00	0.00	0.00
3,320.0	4.83	30.86	3,312.3	158.9	94.9	-156.4	0.00	0.00	0.00
3,360.0	4.83	30.86	3,352.2	161.8	96.7	-159.2	0.00	0.00	0.00
3,400.0	4.83	30.86	3,392.1	164.7	98.4	-162.0	0.00	0.00	0.00
3,440.0	4.83	30.86	3,431.9	167.6	100.1	-164.9	0.00	0.00	0.00
3,480.0	4.83	30.86	3,471.8	170.5	101.8	-167.7	0.00	0.00	0.00
3,520.0	4.83	30.86	3,511.6	173.3	103.6	-170.6	0.00	0.00	0.00
3,560.0	4.83	30.86	3,551.5	176.2	105.3	-173.4	0.00	0.00	0.00
3,600.0	4.83	30.86	3,591.3	179.1	107.0	-176.3	0.00	0.00	0.00
3,640.0	4.83	30.86	3,631.2	182.0	108.8	-179.1	0.00	0.00	0.00
3,680.0	4.83	30.86	3,671.1	184.9	110.5	-181.9	0.00	0.00	0.00
3,720.0	4.83	30.86	3,710.9	187.8	112.2	-184.8	0.00	0.00	0.00
3,760.0	4.83	30.86	3,750.8	190.7	113.9	-187.6	0.00	0.00	0.00
3,768.1	4.83	30.86	3,758.9	191.3	114.3	-188.2	0.00	0.00	0.00
3,800.0	4.19	30.86	3,790.7	193.4	115.6	-190.3	2.00	-2.00	0.00
3,840.0	3.39	30.86	3,830.6	195.7	116.9	-192.6	2.00	-2.00	0.00
3,880.0	2.59	30.86	3,870.5	197.5	118.0	-194.3	2.00	-2.00	0.00
3,920.0	1.79	30.86	3,910.5	198.8	118.8	-195.6	2.00	-2.00	0.00
3,960.0	0.99	30.86	3,950.5	199.6	119.3	-196.4	2.00	-2.00	0.00
4,000.0	0.19	30.86	3,990.5	200.0	119.5	-196.8	2.00	-2.00	0.00
4,009.5	0.00	0.00	4,000.0	200.0	119.5	-196.8	2.00	-2.00	0.00
4,040.0	0.00	0.00	4,030.5	200.0	119.5	-196.8	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Anderson 34R-223
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4895.0ft (RKB - 15')
Project:	SEC.34-T7N-R66W	MD Reference:	WELL @ 4895.0ft (RKB - 15')
Site:	Anderson 34R-HZ Pad Sec.34-T7N-R66W	North Reference:	True
Well:	Anderson 34R-223	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #3 (3-07-13)		

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)	
4,080.0	0.00	0.00	4,070.5	200.0	119.5	-196.8	0.00	0.00	0.00	
4,120.0	0.00	0.00	4,110.5	200.0	119.5	-196.8	0.00	0.00	0.00	
4,160.0	0.00	0.00	4,150.5	200.0	119.5	-196.8	0.00	0.00	0.00	
4,200.0	0.00	0.00	4,190.5	200.0	119.5	-196.8	0.00	0.00	0.00	
4,240.0	0.00	0.00	4,230.5	200.0	119.5	-196.8	0.00	0.00	0.00	
4,280.0	0.00	0.00	4,270.5	200.0	119.5	-196.8	0.00	0.00	0.00	
4,320.0	0.00	0.00	4,310.5	200.0	119.5	-196.8	0.00	0.00	0.00	
4,360.0	0.00	0.00	4,350.5	200.0	119.5	-196.8	0.00	0.00	0.00	
4,400.0	0.00	0.00	4,390.5	200.0	119.5	-196.8	0.00	0.00	0.00	
4,440.0	0.00	0.00	4,430.5	200.0	119.5	-196.8	0.00	0.00	0.00	
4,480.0	0.00	0.00	4,470.5	200.0	119.5	-196.8	0.00	0.00	0.00	
4,520.0	0.00	0.00	4,510.5	200.0	119.5	-196.8	0.00	0.00	0.00	
4,560.0	0.00	0.00	4,550.5	200.0	119.5	-196.8	0.00	0.00	0.00	
4,600.0	0.00	0.00	4,590.5	200.0	119.5	-196.8	0.00	0.00	0.00	
4,640.0	0.00	0.00	4,630.5	200.0	119.5	-196.8	0.00	0.00	0.00	
4,680.0	0.00	0.00	4,670.5	200.0	119.5	-196.8	0.00	0.00	0.00	
4,720.0	0.00	0.00	4,710.5	200.0	119.5	-196.8	0.00	0.00	0.00	
4,760.0	0.00	0.00	4,750.5	200.0	119.5	-196.8	0.00	0.00	0.00	
4,800.0	0.00	0.00	4,790.5	200.0	119.5	-196.8	0.00	0.00	0.00	
4,840.0	0.00	0.00	4,830.5	200.0	119.5	-196.8	0.00	0.00	0.00	
4,880.0	0.00	0.00	4,870.5	200.0	119.5	-196.8	0.00	0.00	0.00	
4,920.0	0.00	0.00	4,910.5	200.0	119.5	-196.8	0.00	0.00	0.00	
4,960.0	0.00	0.00	4,950.5	200.0	119.5	-196.8	0.00	0.00	0.00	
5,000.0	0.00	0.00	4,990.5	200.0	119.5	-196.8	0.00	0.00	0.00	
5,040.0	0.00	0.00	5,030.5	200.0	119.5	-196.8	0.00	0.00	0.00	
5,080.0	0.00	0.00	5,070.5	200.0	119.5	-196.8	0.00	0.00	0.00	
5,120.0	0.00	0.00	5,110.5	200.0	119.5	-196.8	0.00	0.00	0.00	
5,160.0	0.00	0.00	5,150.5	200.0	119.5	-196.8	0.00	0.00	0.00	
5,200.0	0.00	0.00	5,190.5	200.0	119.5	-196.8	0.00	0.00	0.00	
5,240.0	0.00	0.00	5,230.5	200.0	119.5	-196.8	0.00	0.00	0.00	
5,280.0	0.00	0.00	5,270.5	200.0	119.5	-196.8	0.00	0.00	0.00	
5,320.0	0.00	0.00	5,310.5	200.0	119.5	-196.8	0.00	0.00	0.00	
5,360.0	0.00	0.00	5,350.5	200.0	119.5	-196.8	0.00	0.00	0.00	
5,400.0	0.00	0.00	5,390.5	200.0	119.5	-196.8	0.00	0.00	0.00	
5,440.0	0.00	0.00	5,430.5	200.0	119.5	-196.8	0.00	0.00	0.00	
5,480.0	0.00	0.00	5,470.5	200.0	119.5	-196.8	0.00	0.00	0.00	
5,520.0	0.00	0.00	5,510.5	200.0	119.5	-196.8	0.00	0.00	0.00	
5,560.0	0.00	0.00	5,550.5	200.0	119.5	-196.8	0.00	0.00	0.00	
5,600.0	0.00	0.00	5,590.5	200.0	119.5	-196.8	0.00	0.00	0.00	
5,640.0	0.00	0.00	5,630.5	200.0	119.5	-196.8	0.00	0.00	0.00	
5,680.0	0.00	0.00	5,670.5	200.0	119.5	-196.8	0.00	0.00	0.00	
5,720.0	0.00	0.00	5,710.5	200.0	119.5	-196.8	0.00	0.00	0.00	
5,760.0	0.00	0.00	5,750.5	200.0	119.5	-196.8	0.00	0.00	0.00	
5,800.0	0.00	0.00	5,790.5	200.0	119.5	-196.8	0.00	0.00	0.00	
5,840.0	0.00	0.00	5,830.5	200.0	119.5	-196.8	0.00	0.00	0.00	
5,880.0	0.00	0.00	5,870.5	200.0	119.5	-196.8	0.00	0.00	0.00	
5,920.0	0.00	0.00	5,910.5	200.0	119.5	-196.8	0.00	0.00	0.00	
5,960.0	0.00	0.00	5,950.5	200.0	119.5	-196.8	0.00	0.00	0.00	
6,000.0	0.00	0.00	5,990.5	200.0	119.5	-196.8	0.00	0.00	0.00	
6,040.0	0.00	0.00	6,030.5	200.0	119.5	-196.8	0.00	0.00	0.00	
6,080.0	0.00	0.00	6,070.5	200.0	119.5	-196.8	0.00	0.00	0.00	
6,120.0	0.00	0.00	6,110.5	200.0	119.5	-196.8	0.00	0.00	0.00	
6,160.0	0.00	0.00	6,150.5	200.0	119.5	-196.8	0.00	0.00	0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well Anderson 34R-223
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4895.0ft (RKB - 15')
Project:	SEC.34-T7N-R66W	MD Reference:	WELL @ 4895.0ft (RKB - 15')
Site:	Anderson 34R-HZ Pad Sec.34-T7N-R66W	North Reference:	True
Well:	Anderson 34R-223	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #3 (3-07-13)		

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)
6,200.0	0.00	0.00	6,190.5	200.0	119.5	-196.8	0.00	0.00	0.00
6,240.0	0.00	0.00	6,230.5	200.0	119.5	-196.8	0.00	0.00	0.00
6,280.0	0.00	0.00	6,270.5	200.0	119.5	-196.8	0.00	0.00	0.00
6,320.0	0.00	0.00	6,310.5	200.0	119.5	-196.8	0.00	0.00	0.00
6,360.0	0.00	0.00	6,350.5	200.0	119.5	-196.8	0.00	0.00	0.00
6,400.0	0.00	0.00	6,390.5	200.0	119.5	-196.8	0.00	0.00	0.00
6,440.0	0.00	0.00	6,430.5	200.0	119.5	-196.8	0.00	0.00	0.00
6,441.0	0.00	0.00	6,431.5	200.0	119.5	-196.8	0.00	0.00	0.00
KOP #2									
6,480.0	2.92	180.00	6,470.4	199.0	119.5	-195.8	7.50	7.50	0.00
6,520.0	5.92	180.00	6,510.3	195.9	119.5	-192.7	7.50	7.50	0.00
6,560.0	8.92	180.00	6,550.0	190.8	119.5	-187.6	7.50	7.50	0.00
6,600.0	11.92	180.00	6,589.3	183.5	119.5	-180.3	7.50	7.50	0.00
6,640.0	14.92	180.00	6,628.2	174.2	119.5	-171.0	7.50	7.50	0.00
6,680.0	17.92	180.00	6,666.6	162.9	119.5	-159.7	7.50	7.50	0.00
6,720.0	20.92	180.00	6,704.3	149.6	119.5	-146.4	7.50	7.50	0.00
6,760.0	23.92	180.00	6,741.3	134.4	119.5	-131.2	7.50	7.50	0.00
6,800.0	26.92	180.00	6,777.4	117.2	119.5	-114.0	7.50	7.50	0.00
6,840.0	29.92	180.00	6,812.6	98.2	119.5	-95.0	7.50	7.50	0.00
6,880.0	32.92	180.00	6,846.7	77.3	119.5	-74.1	7.50	7.50	0.00
6,920.0	35.92	180.00	6,879.7	54.7	119.5	-51.5	7.50	7.50	0.00
6,960.0	38.92	180.00	6,911.5	30.4	119.5	-27.3	7.50	7.50	0.00
7,000.0	41.92	180.00	6,941.9	4.5	119.5	-1.3	7.50	7.50	0.00
7,040.0	44.92	180.00	6,971.0	-23.0	119.5	26.2	7.50	7.50	0.00
7,080.0	47.92	180.00	6,998.5	-52.0	119.5	55.1	7.50	7.50	0.00
7,120.0	50.92	180.00	7,024.5	-82.4	119.5	85.5	7.50	7.50	0.00
7,160.0	53.92	180.00	7,048.9	-114.1	119.5	117.2	7.50	7.50	0.00
7,200.0	56.92	180.00	7,071.6	-147.0	119.5	150.1	7.50	7.50	0.00
7,240.0	59.92	180.00	7,092.6	-181.1	119.5	184.2	7.50	7.50	0.00
7,280.0	62.92	180.00	7,111.7	-216.2	119.5	219.3	7.50	7.50	0.00
7,320.0	65.92	180.00	7,129.0	-252.3	119.5	255.3	7.50	7.50	0.00
7,360.0	68.92	180.00	7,144.3	-289.2	119.5	292.3	7.50	7.50	0.00
7,400.0	71.92	180.00	7,157.7	-326.9	119.5	329.9	7.50	7.50	0.00
7,440.0	74.92	180.00	7,169.1	-365.2	119.5	368.2	7.50	7.50	0.00
7,480.0	77.92	180.00	7,178.5	-404.1	119.5	407.1	7.50	7.50	0.00
7,520.0	80.92	180.00	7,185.9	-443.4	119.5	446.4	7.50	7.50	0.00
7,560.0	83.92	180.00	7,191.1	-483.1	119.5	486.0	7.50	7.50	0.00
7,600.0	86.92	180.00	7,194.3	-522.9	119.5	525.9	7.50	7.50	0.00
7,640.0	89.92	180.00	7,195.4	-562.9	119.5	565.9	7.50	7.50	0.00
7,648.8	90.58	180.00	7,195.4	-571.7	119.5	574.7	7.46	7.46	0.00
End of Build - 7"									
7,680.0	90.58	180.00	7,195.1	-602.9	119.5	605.8	0.00	0.00	0.00
7,720.0	90.58	180.00	7,194.7	-642.9	119.5	645.8	0.00	0.00	0.00
7,760.0	90.58	180.00	7,194.3	-682.9	119.5	685.8	0.00	0.00	0.00
7,800.0	90.58	180.00	7,193.9	-722.9	119.5	725.8	0.00	0.00	0.00
7,840.0	90.58	180.00	7,193.5	-762.9	119.5	765.8	0.00	0.00	0.00
7,880.0	90.58	180.00	7,193.0	-802.9	119.5	805.8	0.00	0.00	0.00
7,920.0	90.58	180.00	7,192.6	-842.9	119.5	845.8	0.00	0.00	0.00
7,960.0	90.58	180.00	7,192.2	-882.9	119.5	885.7	0.00	0.00	0.00
8,000.0	90.58	180.00	7,191.8	-922.9	119.5	925.7	0.00	0.00	0.00
8,040.0	90.58	180.00	7,191.4	-962.9	119.5	965.7	0.00	0.00	0.00
8,080.0	90.58	180.00	7,191.0	-1,002.9	119.5	1,005.7	0.00	0.00	0.00
8,120.0	90.58	180.00	7,190.6	-1,042.9	119.5	1,045.7	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Anderson 34R-223
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4895.0ft (RKB - 15')
Project:	SEC.34-T7N-R66W	MD Reference:	WELL @ 4895.0ft (RKB - 15')
Site:	Anderson 34R-HZ Pad Sec.34-T7N-R66W	North Reference:	True
Well:	Anderson 34R-223	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #3 (3-07-13)		

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)
8,160.0	90.58	180.00	7,190.2	-1,082.9	119.5	1,085.7	0.00	0.00	0.00
8,200.0	90.58	180.00	7,189.8	-1,122.9	119.5	1,125.6	0.00	0.00	0.00
8,240.0	90.58	180.00	7,189.4	-1,162.9	119.5	1,165.6	0.00	0.00	0.00
8,280.0	90.58	180.00	7,189.0	-1,202.9	119.5	1,205.6	0.00	0.00	0.00
8,320.0	90.58	180.00	7,188.6	-1,242.9	119.5	1,245.6	0.00	0.00	0.00
8,360.0	90.58	180.00	7,188.2	-1,282.9	119.5	1,285.6	0.00	0.00	0.00
8,400.0	90.58	180.00	7,187.8	-1,322.9	119.5	1,325.6	0.00	0.00	0.00
8,440.0	90.58	180.00	7,187.4	-1,362.9	119.5	1,365.5	0.00	0.00	0.00
8,480.0	90.58	180.00	7,187.0	-1,402.9	119.5	1,405.5	0.00	0.00	0.00
8,520.0	90.58	180.00	7,186.6	-1,442.9	119.5	1,445.5	0.00	0.00	0.00
8,560.0	90.58	180.00	7,186.2	-1,482.9	119.5	1,485.5	0.00	0.00	0.00
8,600.0	90.58	180.00	7,185.8	-1,522.9	119.5	1,525.5	0.00	0.00	0.00
8,640.0	90.58	180.00	7,185.4	-1,562.9	119.5	1,565.5	0.00	0.00	0.00
8,680.0	90.58	180.00	7,184.9	-1,602.9	119.5	1,605.5	0.00	0.00	0.00
8,720.0	90.58	180.00	7,184.5	-1,642.9	119.5	1,645.4	0.00	0.00	0.00
8,760.0	90.58	180.00	7,184.1	-1,682.9	119.5	1,685.4	0.00	0.00	0.00
8,800.0	90.58	180.00	7,183.7	-1,722.9	119.5	1,725.4	0.00	0.00	0.00
8,840.0	90.58	180.00	7,183.3	-1,762.9	119.5	1,765.4	0.00	0.00	0.00
8,880.0	90.58	180.00	7,182.9	-1,802.9	119.5	1,805.4	0.00	0.00	0.00
8,920.0	90.58	180.00	7,182.5	-1,842.9	119.5	1,845.4	0.00	0.00	0.00
8,960.0	90.58	180.00	7,182.1	-1,882.9	119.5	1,885.3	0.00	0.00	0.00
9,000.0	90.58	180.00	7,181.7	-1,922.9	119.5	1,925.3	0.00	0.00	0.00
9,040.0	90.58	180.00	7,181.3	-1,962.9	119.5	1,965.3	0.00	0.00	0.00
9,080.0	90.58	180.00	7,180.9	-2,002.9	119.5	2,005.3	0.00	0.00	0.00
9,120.0	90.58	180.00	7,180.5	-2,042.9	119.5	2,045.3	0.00	0.00	0.00
9,160.0	90.58	180.00	7,180.1	-2,082.8	119.5	2,085.3	0.00	0.00	0.00
9,200.0	90.58	180.00	7,179.7	-2,122.8	119.5	2,125.2	0.00	0.00	0.00
9,240.0	90.58	180.00	7,179.3	-2,162.8	119.5	2,165.2	0.00	0.00	0.00
9,280.0	90.58	180.00	7,178.9	-2,202.8	119.5	2,205.2	0.00	0.00	0.00
9,320.0	90.58	180.00	7,178.5	-2,242.8	119.5	2,245.2	0.00	0.00	0.00
9,360.0	90.58	180.00	7,178.1	-2,282.8	119.5	2,285.2	0.00	0.00	0.00
9,400.0	90.58	180.00	7,177.7	-2,322.8	119.5	2,325.2	0.00	0.00	0.00
9,440.0	90.58	180.00	7,177.3	-2,362.8	119.5	2,365.2	0.00	0.00	0.00
9,480.0	90.58	180.00	7,176.9	-2,402.8	119.5	2,405.1	0.00	0.00	0.00
9,520.0	90.58	180.00	7,176.4	-2,442.8	119.5	2,445.1	0.00	0.00	0.00
9,560.0	90.58	180.00	7,176.0	-2,482.8	119.5	2,485.1	0.00	0.00	0.00
9,600.0	90.58	180.00	7,175.6	-2,522.8	119.5	2,525.1	0.00	0.00	0.00
9,640.0	90.58	180.00	7,175.2	-2,562.8	119.5	2,565.1	0.00	0.00	0.00
9,680.0	90.58	180.00	7,174.8	-2,602.8	119.5	2,605.1	0.00	0.00	0.00
9,720.0	90.58	180.00	7,174.4	-2,642.8	119.5	2,645.0	0.00	0.00	0.00
9,760.0	90.58	180.00	7,174.0	-2,682.8	119.5	2,685.0	0.00	0.00	0.00
9,800.0	90.58	180.00	7,173.6	-2,722.8	119.5	2,725.0	0.00	0.00	0.00
9,840.0	90.58	180.00	7,173.2	-2,762.8	119.5	2,765.0	0.00	0.00	0.00
9,880.0	90.58	180.00	7,172.8	-2,802.8	119.5	2,805.0	0.00	0.00	0.00
9,920.0	90.58	180.00	7,172.4	-2,842.8	119.5	2,845.0	0.00	0.00	0.00
9,960.0	90.58	180.00	7,172.0	-2,882.8	119.5	2,884.9	0.00	0.00	0.00
10,000.0	90.58	180.00	7,171.6	-2,922.8	119.5	2,924.9	0.00	0.00	0.00
10,040.0	90.58	180.00	7,171.2	-2,962.8	119.5	2,964.9	0.00	0.00	0.00
10,080.0	90.58	180.00	7,170.8	-3,002.8	119.5	3,004.9	0.00	0.00	0.00
10,120.0	90.58	180.00	7,170.4	-3,042.8	119.5	3,044.9	0.00	0.00	0.00
10,160.0	90.58	180.00	7,170.0	-3,082.8	119.5	3,084.9	0.00	0.00	0.00
10,200.0	90.58	180.00	7,169.6	-3,122.8	119.5	3,124.9	0.00	0.00	0.00
10,240.0	90.58	180.00	7,169.2	-3,162.8	119.5	3,164.8	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Anderson 34R-223
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4895.0ft (RKB - 15')
Project:	SEC.34-T7N-R66W	MD Reference:	WELL @ 4895.0ft (RKB - 15')
Site:	Anderson 34R-HZ Pad Sec.34-T7N-R66W	North Reference:	True
Well:	Anderson 34R-223	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #3 (3-07-13)		

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)
10,280.0	90.58	180.00	7,168.8	-3,202.8	119.5	3,204.8	0.00	0.00	0.00
10,320.0	90.58	180.00	7,168.3	-3,242.8	119.5	3,244.8	0.00	0.00	0.00
10,360.0	90.58	180.00	7,167.9	-3,282.8	119.5	3,284.8	0.00	0.00	0.00
10,400.0	90.58	180.00	7,167.5	-3,322.8	119.5	3,324.8	0.00	0.00	0.00
10,440.0	90.58	180.00	7,167.1	-3,362.8	119.5	3,364.8	0.00	0.00	0.00
10,480.0	90.58	180.00	7,166.7	-3,402.8	119.5	3,404.7	0.00	0.00	0.00
10,520.0	90.58	180.00	7,166.3	-3,442.8	119.5	3,444.7	0.00	0.00	0.00
10,560.0	90.58	180.00	7,165.9	-3,482.8	119.5	3,484.7	0.00	0.00	0.00
10,600.0	90.58	180.00	7,165.5	-3,522.8	119.5	3,524.7	0.00	0.00	0.00
10,640.0	90.58	180.00	7,165.1	-3,562.8	119.5	3,564.7	0.00	0.00	0.00
10,680.0	90.58	180.00	7,164.7	-3,602.8	119.5	3,604.7	0.00	0.00	0.00
10,720.0	90.58	180.00	7,164.3	-3,642.8	119.5	3,644.6	0.00	0.00	0.00
10,760.0	90.58	180.00	7,163.9	-3,682.8	119.5	3,684.6	0.00	0.00	0.00
10,800.0	90.58	180.00	7,163.5	-3,722.8	119.5	3,724.6	0.00	0.00	0.00
10,840.0	90.58	180.00	7,163.1	-3,762.8	119.5	3,764.6	0.00	0.00	0.00
10,880.0	90.58	180.00	7,162.7	-3,802.8	119.5	3,804.6	0.00	0.00	0.00
10,920.0	90.58	180.00	7,162.3	-3,842.8	119.5	3,844.6	0.00	0.00	0.00
10,960.0	90.58	180.00	7,161.9	-3,882.8	119.5	3,884.6	0.00	0.00	0.00
11,000.0	90.58	180.00	7,161.5	-3,922.8	119.5	3,924.5	0.00	0.00	0.00
11,040.0	90.58	180.00	7,161.1	-3,962.8	119.5	3,964.5	0.00	0.00	0.00
11,080.0	90.58	180.00	7,160.7	-4,002.7	119.5	4,004.5	0.00	0.00	0.00
11,120.0	90.58	180.00	7,160.2	-4,042.7	119.5	4,044.5	0.00	0.00	0.00
11,160.0	90.58	180.00	7,159.8	-4,082.7	119.5	4,084.5	0.00	0.00	0.00
11,200.0	90.58	180.00	7,159.4	-4,122.7	119.5	4,124.5	0.00	0.00	0.00
11,240.0	90.58	180.00	7,159.0	-4,162.7	119.5	4,164.4	0.00	0.00	0.00
11,280.0	90.58	180.00	7,158.6	-4,202.7	119.5	4,204.4	0.00	0.00	0.00
11,320.0	90.58	180.00	7,158.2	-4,242.7	119.5	4,244.4	0.00	0.00	0.00
11,360.0	90.58	180.00	7,157.8	-4,282.7	119.5	4,284.4	0.00	0.00	0.00
11,400.0	90.58	180.00	7,157.4	-4,322.7	119.5	4,324.4	0.00	0.00	0.00
11,440.0	90.58	180.00	7,157.0	-4,362.7	119.5	4,364.4	0.00	0.00	0.00
11,480.0	90.58	180.00	7,156.6	-4,402.7	119.5	4,404.3	0.00	0.00	0.00
11,520.0	90.58	180.00	7,156.2	-4,442.7	119.5	4,444.3	0.00	0.00	0.00
11,560.0	90.58	180.00	7,155.8	-4,482.7	119.5	4,484.3	0.00	0.00	0.00
11,600.0	90.58	180.00	7,155.4	-4,522.7	119.5	4,524.3	0.00	0.00	0.00
11,638.6	90.58	180.00	7,155.0	-4,561.3	119.5	4,562.8	0.00	0.00	0.00
BHL 500'FSL, 774'FEL									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,648.8	7,195.4	7"	7	7-1/2

Database:	Landmark	Local Co-ordinate Reference:	Well Anderson 34R-223
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4895.0ft (RKB - 15')
Project:	SEC.34-T7N-R66W	MD Reference:	WELL @ 4895.0ft (RKB - 15')
Site:	Anderson 34R-HZ Pad Sec.34-T7N-R66W	North Reference:	True
Well:	Anderson 34R-223	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #3 (3-07-13)		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,000.0	1,000.0	0.0	0.0	KOP #1
6,441.0	6,431.5	200.0	119.5	KOP #2
7,648.8	7,195.4	-571.7	119.5	End of Build



PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.34-T7N-R66W

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

Anderson 34R-223

Wellbore #1

Plan #3 (3-07-13)

Anticollision Report

07 March, 2013

Anderson 34R-HZ Pad Sec.34-T7N-R66W - Anderson 34R-403 - Wellbore #1 - Plan #3 (3-07-13)													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	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)			
2,200.0	2,196.3	2,196.4	2,196.3	5.1	4.8	-162.58	5.0	-35.1	109.5	99.9	9.66	11.344		
2,300.0	2,296.0	2,295.8	2,295.3	5.3	5.0	-159.64	11.3	-40.8	117.8	107.7	10.12	11.642		
2,400.0	2,395.6	2,395.1	2,394.0	5.6	5.3	-156.12	19.2	-47.9	126.5	115.9	10.59	11.949		
2,500.0	2,495.2	2,494.4	2,492.8	5.8	5.5	-153.04	27.2	-55.1	135.7	124.6	11.07	12.258		
2,600.0	2,594.9	2,593.8	2,591.5	6.1	5.8	-150.36	35.1	-62.3	145.2	133.6	11.56	12.563		
2,700.0	2,694.5	2,693.1	2,690.3	6.4	6.0	-148.02	43.0	-69.4	155.0	142.9	12.05	12.862		
2,800.0	2,794.2	2,792.4	2,789.0	6.6	6.3	-145.95	50.9	-76.6	165.0	152.4	12.54	13.150		
2,900.0	2,893.8	2,891.8	2,887.8	6.9	6.5	-144.12	58.9	-83.8	175.1	162.1	13.04	13.427		
3,000.0	2,993.5	2,991.1	2,986.5	7.2	6.8	-142.50	66.8	-90.9	185.5	172.0	13.55	13.692		
3,100.0	3,093.1	3,090.4	3,085.3	7.4	7.0	-141.04	74.7	-98.1	196.0	181.9	14.05	13.945		
3,200.0	3,192.8	3,189.8	3,184.0	7.7	7.3	-139.74	82.7	-105.3	206.6	192.0	14.56	14.186		
3,300.0	3,292.4	3,289.1	3,282.8	8.0	7.6	-138.56	90.6	-112.4	217.3	202.2	15.07	14.416		
3,400.0	3,392.1	3,388.4	3,381.6	8.2	7.8	-137.49	98.5	-119.6	228.0	212.5	15.58	14.634		
3,500.0	3,491.7	3,487.8	3,480.3	8.5	8.1	-136.52	106.4	-126.8	238.9	222.8	16.10	14.842		
3,600.0	3,591.3	3,587.1	3,579.1	8.8	8.4	-135.63	114.4	-133.9	249.8	233.2	16.61	15.039		
3,700.0	3,691.0	3,686.4	3,677.8	9.0	8.7	-134.82	122.3	-141.1	260.8	243.6	17.12	15.227		
3,800.0	3,790.7	3,785.8	3,776.6	9.3	8.9	-134.10	130.2	-148.2	271.6	254.0	17.64	15.403		
3,900.0	3,890.5	3,885.2	3,875.4	9.5	9.2	-133.12	138.2	-155.4	280.7	262.6	18.10	15.510		
4,000.0	3,990.5	3,984.7	3,974.3	9.7	9.5	-131.66	146.1	-162.6	287.6	269.1	18.55	15.509		
4,100.0	4,090.5	4,084.1	4,073.2	9.8	9.8	-99.03	154.1	-169.8	293.4	274.4	19.00	15.443		
4,200.0	4,190.5	4,183.5	4,172.0	10.0	10.1	-97.31	162.0	-176.9	299.4	280.0	19.47	15.379		
4,300.0	4,290.5	4,282.9	4,270.9	10.2	10.3	-95.66	169.9	-184.1	305.7	285.8	19.94	15.333		
4,400.0	4,390.5	4,382.3	4,369.7	10.4	10.6	-94.08	177.9	-191.3	312.2	291.8	20.40	15.303		
4,500.0	4,490.5	4,481.7	4,468.5	10.6	10.9	-92.56	185.8	-198.4	319.0	298.1	20.87	15.287		
4,600.0	4,590.5	4,587.3	4,573.6	10.8	11.2	-91.17	193.4	-205.3	325.3	304.0	21.32	15.258		
4,700.0	4,690.5	4,695.3	4,681.4	11.0	11.4	-90.32	198.2	-209.6	329.3	307.5	21.73	15.151		
4,800.0	4,790.5	4,803.6	4,789.7	11.2	11.6	-90.00	200.0	-211.3	330.8	308.6	22.13	14.946		
4,900.0	4,890.5	4,904.4	4,890.5	11.5	11.8	-90.00	200.0	-211.3	330.8	308.2	22.53	14.683		
5,000.0	4,990.5	5,004.4	4,990.5	11.7	12.0	-90.00	200.0	-211.3	330.8	307.8	22.95	14.416		
5,100.0	5,090.5	5,104.4	5,090.5	11.9	12.2	-90.00	200.0	-211.3	330.8	307.4	23.36	14.157		
5,200.0	5,190.5	5,204.4	5,190.5	12.1	12.4	-90.00	200.0	-211.3	330.8	307.0	23.79	13.907		
5,300.0	5,290.5	5,304.4	5,290.5	12.3	12.6	-90.00	200.0	-211.3	330.8	306.6	24.21	13.665		
5,400.0	5,390.5	5,404.4	5,390.5	12.5	12.8	-90.00	200.0	-211.3	330.8	306.1	24.63	13.430		
5,500.0	5,490.5	5,504.4	5,490.5	12.7	13.0	-90.00	200.0	-211.3	330.8	305.7	25.05	13.203		
5,600.0	5,590.5	5,604.4	5,590.5	12.9	13.2	-90.00	200.0	-211.3	330.8	305.3	25.48	12.983		
5,700.0	5,690.5	5,704.4	5,690.5	13.1	13.4	-90.00	200.0	-211.3	330.8	304.9	25.90	12.770		
5,800.0	5,790.5	5,804.4	5,790.5	13.3	13.6	-90.00	200.0	-211.3	330.8	304.4	26.33	12.564		
5,900.0	5,890.5	5,904.4	5,890.5	13.6	13.8	-90.00	200.0	-211.3	330.8	304.0	26.75	12.363		
6,000.0	5,990.5	6,004.4	5,990.5	13.8	14.0	-90.00	200.0	-211.3	330.8	303.6	27.18	12.169		
6,100.0	6,090.5	6,104.4	6,090.5	14.0	14.2	-90.00	200.0	-211.3	330.8	303.2	27.61	11.980		
6,200.0	6,190.5	6,204.4	6,190.5	14.2	14.4	-90.00	200.0	-211.3	330.8	302.7	28.04	11.797		
6,300.0	6,290.5	6,304.4	6,290.5	14.4	14.6	-90.00	200.0	-211.3	330.8	302.3	28.47	11.619		
6,400.0	6,390.5	6,404.4	6,390.5	14.6	14.9	-90.00	200.0	-211.3	330.8	301.9	28.90	11.446		
6,447.1	6,437.6	6,451.5	6,437.6	14.7	15.0	90.15	200.0	-211.3	330.8	301.7	29.08	11.373		
6,500.0	6,490.4	6,504.3	6,490.4	14.8	15.1	90.39	200.0	-211.3	330.8	301.5	29.29	11.293		
6,600.0	6,589.3	6,603.7	6,589.7	14.9	15.3	92.77	199.8	-211.3	331.2	301.6	29.60	11.190		
6,700.0	6,685.5	6,705.4	6,690.9	15.0	15.4	95.85	190.6	-211.3	332.6	302.8	29.77	11.171		
6,800.0	6,777.4	6,809.7	6,792.5	15.1	15.5	98.85	167.2	-211.3	334.9	305.0	29.86	11.216		
6,900.0	6,863.3	6,916.8	6,892.5	15.1	15.6	101.68	129.2	-211.3	338.0	308.1	29.89	11.307		
7,000.0	6,941.9	7,026.6	6,988.5	15.2	15.7	104.31	76.0	-211.3	341.6	311.7	29.93	11.414		
7,100.0	7,011.7	7,139.3	7,078.0	15.4	15.7	106.65	7.7	-211.3	345.5	315.5	30.06	11.495		

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34R-223
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4895.0ft (RKB - 15')
Reference Site:	Anderson 34R-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4895.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34R-223	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 #3 (3-07-13)	Offset TVD Reference:	Offset Datum

Offset Design Anderson 34R-HZ Pad Sec.34-T7N-R66W - Anderson 34R-403 - Wellbore #1 - Plan #3 (3-07-13)													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
7,200.0	7,071.6	7,254.5	7,158.1	15.7	15.8	108.68		-74.9	-211.3	349.4	319.0	30.38	11.500	
7,300.0	7,120.6	7,372.1	7,226.2	16.3	16.2	110.35		-170.7	-211.3	353.0	322.0	31.02	11.380	
7,400.0	7,157.7	7,491.7	7,279.5	17.0	16.9	111.61		-277.7	-211.3	355.9	323.9	32.04	11.108	
7,500.0	7,182.4	7,612.9	7,315.8	17.9	17.9	112.46		-393.1	-211.3	358.0	324.5	33.52	10.680	
7,600.0	7,194.3	7,729.5	7,333.5	18.9	19.0	112.91		-508.3	-211.3	359.2	323.8	35.39	10.150	
7,700.0	7,194.9	7,836.5	7,343.3	20.0	20.2	114.15		-614.8	-211.3	362.6	325.4	37.29	9.725	
7,800.0	7,193.9	7,944.6	7,345.0	21.3	21.6	114.56		-722.9	-211.3	363.7	324.1	39.59	9.187	
7,900.0	7,192.8	8,044.6	7,345.0	22.7	22.9	114.70		-822.9	-211.3	364.1	322.1	42.02	8.665	
8,000.0	7,191.8	8,144.6	7,345.0	24.1	24.3	114.85		-922.9	-211.3	364.5	319.9	44.59	8.174	
8,100.0	7,190.8	8,244.6	7,345.0	25.6	25.8	114.99		-1,022.9	-211.3	365.0	317.7	47.29	7.718	
8,200.0	7,189.8	8,344.6	7,345.0	27.1	27.3	115.13		-1,122.9	-211.3	365.4	315.3	50.07	7.297	
8,300.0	7,188.8	8,444.6	7,345.0	28.7	28.9	115.28		-1,222.9	-211.3	365.8	312.9	52.94	6.910	
8,400.0	7,187.8	8,544.6	7,345.0	30.4	30.5	115.42		-1,322.9	-211.3	366.2	310.4	55.87	6.555	
8,500.0	7,186.8	8,644.6	7,345.0	32.0	32.2	115.56		-1,422.9	-211.3	366.7	307.8	58.86	6.230	
8,600.0	7,185.8	8,744.6	7,345.0	33.7	33.8	115.70		-1,522.9	-211.3	367.1	305.2	61.89	5.932	
8,700.0	7,184.7	8,844.6	7,345.0	35.4	35.6	115.85		-1,622.9	-211.3	367.6	302.6	64.96	5.658	
8,800.0	7,183.7	8,944.6	7,345.0	37.2	37.3	115.99		-1,722.9	-211.3	368.0	299.9	68.06	5.407	
8,900.0	7,182.7	9,044.6	7,345.0	38.9	39.0	116.13		-1,822.9	-211.3	368.5	297.3	71.19	5.176	
9,000.0	7,181.7	9,144.6	7,345.0	40.7	40.8	116.27		-1,922.9	-211.3	368.9	294.6	74.34	4.962	
9,100.0	7,180.7	9,244.6	7,345.0	42.5	42.6	116.41		-2,022.9	-211.3	369.4	291.8	77.51	4.765	
9,200.0	7,179.7	9,344.6	7,345.0	44.3	44.4	116.55		-2,122.8	-211.3	369.8	289.1	80.70	4.583	
9,300.0	7,178.7	9,444.5	7,345.0	46.1	46.1	116.69		-2,222.8	-211.3	370.3	286.4	83.90	4.413	
9,400.0	7,177.7	9,544.5	7,345.0	47.9	48.0	116.83		-2,322.8	-211.3	370.7	283.6	87.10	4.256	
9,500.0	7,176.6	9,644.5	7,345.0	49.7	49.8	116.97		-2,422.8	-211.3	371.2	280.9	90.32	4.110	
9,600.0	7,175.6	9,744.5	7,345.0	51.5	51.6	117.11		-2,522.8	-211.3	371.6	278.1	93.54	3.973	
9,700.0	7,174.6	9,844.5	7,345.0	53.4	53.4	117.25		-2,622.8	-211.3	372.1	275.3	96.77	3.845	
9,800.0	7,173.6	9,944.5	7,345.0	55.2	55.3	117.39		-2,722.8	-211.3	372.6	272.6	100.01	3.725	
9,900.0	7,172.6	10,044.5	7,345.0	57.1	57.1	117.53		-2,822.8	-211.3	373.0	269.8	103.24	3.613	
10,000.0	7,171.6	10,144.5	7,345.0	58.9	59.0	117.66		-2,922.8	-211.3	373.5	267.0	106.48	3.508	
10,100.0	7,170.6	10,244.5	7,345.0	60.8	60.8	117.80		-3,022.8	-211.3	374.0	264.3	109.72	3.408	
10,200.0	7,169.6	10,344.5	7,345.0	62.6	62.7	117.94		-3,122.8	-211.3	374.4	261.5	112.96	3.315	
10,300.0	7,168.5	10,444.5	7,345.0	64.5	64.5	118.07		-3,222.8	-211.3	374.9	258.7	116.20	3.227	
10,400.0	7,167.5	10,544.5	7,345.0	66.4	66.4	118.21		-3,322.8	-211.3	375.4	256.0	119.44	3.143	
10,500.0	7,166.5	10,644.5	7,345.0	68.2	68.3	118.35		-3,422.8	-211.3	375.9	253.2	122.67	3.064	
10,600.0	7,165.5	10,744.5	7,345.0	70.1	70.1	118.48		-3,522.8	-211.3	376.4	250.5	125.91	2.989	
10,700.0	7,164.5	10,844.5	7,345.0	72.0	72.0	118.62		-3,622.8	-211.3	376.8	247.7	129.14	2.918	
10,800.0	7,163.5	10,944.5	7,345.0	73.9	73.9	118.75		-3,722.8	-211.3	377.3	245.0	132.37	2.851	
10,900.0	7,162.5	11,044.5	7,345.0	75.8	75.8	118.89		-3,822.8	-211.3	377.8	242.2	135.60	2.786	
11,000.0	7,161.5	11,144.5	7,345.0	77.6	77.6	119.02		-3,922.8	-211.3	378.3	239.5	138.82	2.725	
11,100.0	7,160.5	11,244.5	7,345.0	79.5	79.5	119.15		-4,022.7	-211.3	378.8	236.8	142.04	2.667	
11,200.0	7,159.4	11,344.4	7,345.0	81.4	81.4	119.29		-4,122.7	-211.3	379.3	234.1	145.25	2.611	
11,300.0	7,158.4	11,444.4	7,345.0	83.3	83.3	119.42		-4,222.7	-211.3	379.8	231.3	148.46	2.558	
11,400.0	7,157.4	11,544.4	7,345.0	85.2	85.2	119.55		-4,322.7	-211.3	380.3	228.6	151.67	2.507	
11,500.0	7,156.4	11,644.4	7,345.0	87.1	87.1	119.69		-4,422.7	-211.3	380.8	225.9	154.87	2.459	
11,600.0	7,155.4	11,744.4	7,345.0	89.0	89.0	119.82		-4,522.7	-211.3	381.3	223.2	158.07	2.412	
11,638.6	7,155.0	11,783.0	7,345.0	89.7	89.7	119.87		-4,561.3	-211.3	381.5	222.2	159.30	2.395 SF	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34R-223
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4895.0ft (RKB - 15')
Reference Site:	Anderson 34R-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4895.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34R-223	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 #3 (3-07-13)	Offset TVD Reference:	Offset Datum

Offset Design Anderson 34R-HZ Pad Sec.34-T7N-R66W - Anderson 43-34 (Exist.) - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 ft
Survey Program: 8000-UNKNOWN												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
9,200.0	7,179.7	7,199.7	7,199.7	44.3	144.0	-91.66	-3,060.3	447.6	993.2	805.0	188.14	5.279	
9,300.0	7,178.7	7,198.7	7,198.7	46.1	144.0	-91.48	-3,060.3	447.6	899.4	709.5	189.94	4.735	
9,400.0	7,177.7	7,197.7	7,197.7	47.9	144.0	-91.30	-3,060.3	447.6	807.1	615.4	191.75	4.209	
9,500.0	7,176.6	7,196.6	7,196.6	49.7	143.9	-91.13	-3,060.3	447.6	716.9	523.3	193.57	3.704	
9,600.0	7,175.6	7,195.6	7,195.6	51.5	143.9	-90.95	-3,060.3	447.6	629.7	434.3	195.39	3.223	
9,700.0	7,174.6	7,194.6	7,194.6	53.4	143.9	-90.77	-3,060.3	447.6	546.8	349.6	197.22	2.773	
9,800.0	7,173.6	7,193.6	7,193.6	55.2	143.9	-90.60	-3,060.3	447.6	470.6	271.6	199.05	2.364	
9,900.0	7,172.6	7,192.6	7,192.6	57.1	143.9	-90.42	-3,060.3	447.6	405.0	204.1	200.89	2.016	
10,000.0	7,171.6	7,191.6	7,191.6	58.9	143.8	-90.24	-3,060.3	447.6	355.7	153.0	202.72	1.755	
10,100.0	7,170.6	7,190.6	7,190.6	60.8	143.8	-90.07	-3,060.3	447.6	330.2	125.6	204.56	1.614	
10,137.5	7,170.2	7,190.2	7,190.2	61.5	143.8	-90.00	-3,060.3	447.6	328.0	122.8	205.26	1.598 CC, ES, SF	
10,200.0	7,169.6	7,189.6	7,189.6	62.6	143.8	-89.89	-3,060.3	447.6	333.9	127.5	206.41	1.618	
10,300.0	7,168.5	7,188.5	7,188.5	64.5	143.8	-89.71	-3,060.3	447.6	366.1	157.8	208.25	1.758	
10,400.0	7,167.5	7,187.5	7,187.5	66.4	143.8	-89.54	-3,060.3	447.6	420.1	210.0	210.10	2.000	
10,500.0	7,166.5	7,186.5	7,186.5	68.2	143.7	-89.36	-3,060.3	447.6	488.9	276.9	211.94	2.307	
10,600.0	7,165.5	7,185.5	7,185.5	70.1	143.7	-89.18	-3,060.3	447.6	567.0	353.2	213.79	2.652	
10,700.0	7,164.5	7,184.5	7,184.5	72.0	143.7	-89.01	-3,060.3	447.6	651.1	435.5	215.64	3.020	
10,800.0	7,163.5	7,183.5	7,183.5	73.9	143.7	-88.83	-3,060.3	447.6	739.2	521.7	217.49	3.399	
10,900.0	7,162.5	7,182.5	7,182.5	75.8	143.6	-88.65	-3,060.3	447.6	830.0	610.7	219.34	3.784	
11,000.0	7,161.5	7,181.5	7,181.5	77.6	143.6	-88.48	-3,060.3	447.6	922.7	701.5	221.18	4.172	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34R-223
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4895.0ft (RKB - 15')
Reference Site:	Anderson 34R-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4895.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34R-223	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 #3 (3-07-13)	Offset TVD Reference:	Offset Datum

Offset Design Anderson 34R-HZ Pad Sec.34-T7N-R66W - Patrick Anderson #1 (Exist.) - Wellbore #1 - Wellbore #1										Offset Site Error:		0.0 ft	
Survey Program: 8000-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)		
10,500.0	7,166.5	7,182.5	7,182.5	68.2	143.7	-94.49	-4,393.7	244.6	978.9	767.7	211.22	4.635	
10,600.0	7,165.5	7,181.5	7,181.5	70.1	143.6	-94.03	-4,393.7	244.6	879.9	666.7	213.19	4.127	
10,700.0	7,164.5	7,180.5	7,180.5	72.0	143.6	-93.57	-4,393.7	244.6	781.0	565.9	215.16	3.630	
10,800.0	7,163.5	7,179.5	7,179.5	73.9	143.6	-93.11	-4,393.7	244.6	682.5	465.4	217.12	3.144	
10,900.0	7,162.5	7,178.5	7,178.5	75.8	143.6	-92.65	-4,393.7	244.6	584.5	365.4	219.06	2.668	
11,000.0	7,161.5	7,177.5	7,177.5	77.6	143.5	-92.18	-4,393.7	244.6	487.3	266.3	221.00	2.205	
11,100.0	7,160.5	7,176.5	7,176.5	79.5	143.5	-91.72	-4,393.7	244.6	391.5	168.6	222.92	1.756	
11,200.0	7,159.4	7,175.4	7,175.4	81.4	143.5	-91.26	-4,393.7	244.6	298.4	73.6	224.84	1.327 Level 3	
11,300.0	7,158.4	7,174.4	7,174.4	83.3	143.5	-90.79	-4,393.7	244.6	211.8	-14.9	226.74	0.934 Level 1	
11,400.0	7,157.4	7,173.4	7,173.4	85.2	143.5	-90.33	-4,393.7	244.6	143.8	-84.8	228.63	0.629 Level 1	
11,470.9	7,156.7	7,172.7	7,172.7	86.5	143.5	-90.00	-4,393.7	244.6	125.1	-104.9	229.97	0.544 Level 1, CC, ES, SF	
11,500.0	7,156.4	7,172.4	7,172.4	87.1	143.4	-89.87	-4,393.7	244.6	128.4	-102.1	230.51	0.557 Level 1	
11,600.0	7,155.4	7,171.4	7,171.4	89.0	143.4	-89.40	-4,393.7	244.6	179.7	-52.7	232.38	0.773 Level 1	
11,638.6	7,155.0	7,171.0	7,171.0	89.7	143.4	-89.22	-4,393.7	244.6	209.1	-24.0	233.09	0.897 Level 1	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34R-223
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4895.0ft (RKB - 15')
Reference Site:	Anderson 34R-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4895.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34R-223	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 #3 (3-07-13)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4895.0ft (RKB - 15')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Anderson 34R-223
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.48°



Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Anderson 34R-223
Project:	SEC.34-T7N-R66W	TVD Reference:	WELL @ 4895.0ft (RKB - 15')
Reference Site:	Anderson 34R-HZ Pad Sec.34-T7N-R66W	MD Reference:	WELL @ 4895.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Anderson 34R-223	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 #3 (3-07-13)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4895.0ft (RKB - 15')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Anderson 34R-223
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Grid Convergence at Surface is: 0.48°

