

PETROLEUM DEVELOPMENT CORP Weld County CO

Well Name: **Honebein 7G-203**

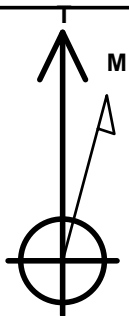
Surface Location: Honebein 4N64W7K Pad Sec.7-T4N-R64W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4846.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1362857.24	3251589.63	40.325930	-104.597630	
RKB - 15' WELL @ 4861.0ft (RKB - 15')						

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 2352'FSL & 1230'FWL, Sec.7	1.0	0.0	0.0	Point
BHL 2141'FNL & 75'FWL, Sec.18	6962.0	-4510.1	-1168.5	Point



Azimuths to True North
Magnetic North: 8.34°

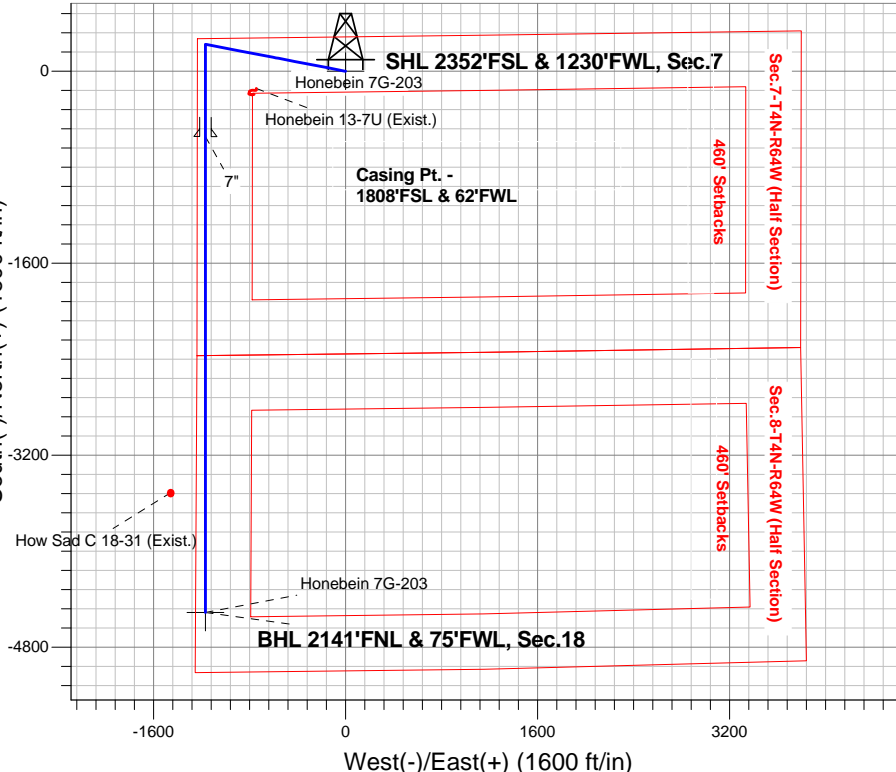
Magnetic Field
Strength: 52774.6srT
Dip Angle: 66.91°
Date: 8/20/2014
Model: IGRF2010

Honebein 4N64W7K Pad Sec.7-T4N-R64W
Honebein 7G-203
Plan #1 (8-14-14)
12:30, August 21 2014

ANNOTATIONS

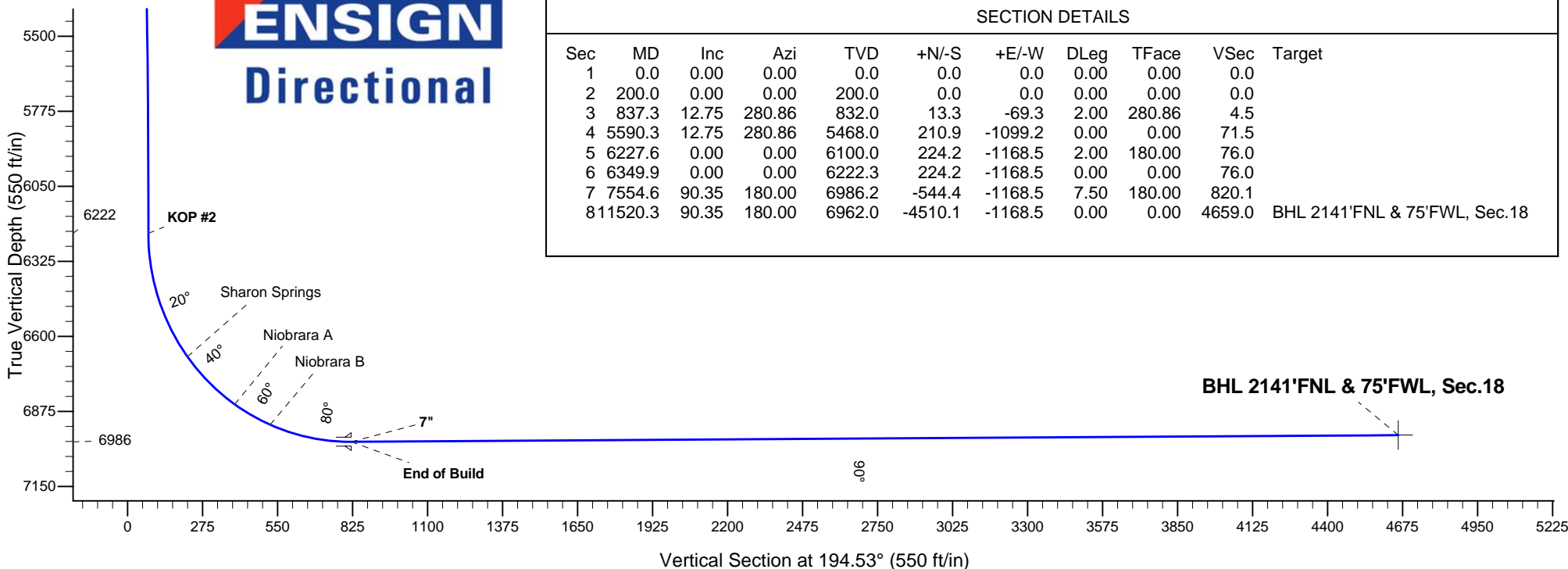
TVD	MD	Annotation
200.0	200.0	KOP #1
6222.3	6349.9	KOP #2
6986.2	7554.6	End of Build

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



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	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	837.3	12.75	280.86	832.0	13.3	-69.3	2.00	280.86	4.5	
4	5590.3	12.75	280.86	5468.0	210.9	-1099.2	0.00	0.00	71.5	
5	6227.6	0.00	0.00	6100.0	224.2	-1168.5	2.00	180.00	76.0	
6	6349.9	0.00	0.00	6222.3	224.2	-1168.5	0.00	0.00	76.0	
7	7554.6	90.35	180.00	6986.2	-544.4	-1168.5	7.50	180.00	820.1	
8	11520.3	90.35	180.00	6962.0	-4510.1	-1168.5	0.00	0.00	4659.0	BHL 2141'FNL & 75'FWL, Sec.18





PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.7-T4N-R64W

Honebein 4N64W7K Pad Sec.7-T4N-R64W

Honebein 7G-203

Wellbore #1

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

Standard Planning Report

21 August, 2014

Database:	Landmark	Local Co-ordinate Reference:	Well Honebein 7G-203
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4861.0ft (RKB - 15')
Project:	SEC.7-T4N-R64W	MD Reference:	WELL @ 4861.0ft (RKB - 15')
Site:	Honebein 4N64W7K Pad Sec.7-T4N-R64W	North Reference:	True
Well:	Honebein 7G-203	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-14-14)		

Project	SEC.7-T4N-R64W, 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						Honebein 4N64W7K Pad Sec.7-T4N-R64W											
Site Position:						Northing:			1,362,857.25 ft			Latitude:			40.325930		
From:			Lat/Long			Easting:			3,251,589.63 ft			Longitude:			-104.597630		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.58 °		

Well	Honebein 7G-203					
Well Position	+N/-S	0.0 ft	Northing:	1,362,857.24 ft	Latitude:	40.325930
	+E/-W	0.0 ft	Easting:	3,251,589.63 ft	Longitude:	-104.597630
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,846.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/20/2014	8.34	66.91	52,775

Design	Plan #1 (8-14-14)			
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	194.53

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	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
837.3	12.75	280.86	832.0	13.3	-69.3	2.00	2.00	0.00	280.86	
5,590.3	12.75	280.86	5,468.0	210.9	-1,099.2	0.00	0.00	0.00	0.00	
6,227.6	0.00	0.00	6,100.0	224.2	-1,168.5	2.00	-2.00	0.00	180.00	
6,349.9	0.00	0.00	6,222.3	224.2	-1,168.5	0.00	0.00	0.00	0.00	
7,554.6	90.35	180.00	6,986.2	-544.4	-1,168.5	7.50	7.50	0.00	180.00	
11,520.3	90.35	180.00	6,962.0	-4,510.1	-1,168.5	0.00	0.00	0.00	0.00	BHL 2141'FNL & 75

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Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4861.0ft (RKB - 15')
Project:	SEC.7-T4N-R64W	MD Reference:	WELL @ 4861.0ft (RKB - 15')
Site:	Honebein 4N64W7K Pad Sec.7-T4N-R64W	North Reference:	True
Well:	Honebein 7G-203	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-14-14)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
1.0	0.00	0.00	1.0	0.0	0.0	0.0	0.00	0.00	0.00
SHL 2352'FSL & 1230'FWL, Sec.7									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP #1									
300.0	2.00	280.86	300.0	0.3	-1.7	0.1	2.00	2.00	0.00
400.0	4.00	280.86	399.8	1.3	-6.9	0.4	2.00	2.00	0.00
500.0	6.00	280.86	499.5	3.0	-15.4	1.0	2.00	2.00	0.00
600.0	8.00	280.86	598.7	5.3	-27.4	1.8	2.00	2.00	0.00
700.0	10.00	280.86	697.5	8.2	-42.7	2.8	2.00	2.00	0.00
800.0	12.00	280.86	795.6	11.8	-61.5	4.0	2.00	2.00	0.00
837.3	12.75	280.86	832.0	13.3	-69.3	4.5	2.00	2.00	0.00
900.0	12.75	280.86	893.2	15.9	-82.9	5.4	0.00	0.00	0.00
1,000.0	12.75	280.86	990.7	20.1	-104.6	6.8	0.00	0.00	0.00
1,100.0	12.75	280.86	1,088.3	24.2	-126.2	8.2	0.00	0.00	0.00
1,200.0	12.75	280.86	1,185.8	28.4	-147.9	9.6	0.00	0.00	0.00
1,300.0	12.75	280.86	1,283.4	32.5	-169.6	11.0	0.00	0.00	0.00
1,400.0	12.75	280.86	1,380.9	36.7	-191.3	12.4	0.00	0.00	0.00
1,500.0	12.75	280.86	1,478.4	40.9	-212.9	13.9	0.00	0.00	0.00
1,600.0	12.75	280.86	1,576.0	45.0	-234.6	15.3	0.00	0.00	0.00
1,700.0	12.75	280.86	1,673.5	49.2	-256.3	16.7	0.00	0.00	0.00
1,800.0	12.75	280.86	1,771.0	53.3	-277.9	18.1	0.00	0.00	0.00
1,900.0	12.75	280.86	1,868.6	57.5	-299.6	19.5	0.00	0.00	0.00
2,000.0	12.75	280.86	1,966.1	61.6	-321.3	20.9	0.00	0.00	0.00
2,100.0	12.75	280.86	2,063.6	65.8	-342.9	22.3	0.00	0.00	0.00
2,200.0	12.75	280.86	2,161.2	70.0	-364.6	23.7	0.00	0.00	0.00
2,300.0	12.75	280.86	2,258.7	74.1	-386.3	25.1	0.00	0.00	0.00
2,400.0	12.75	280.86	2,356.3	78.3	-407.9	26.5	0.00	0.00	0.00
2,500.0	12.75	280.86	2,453.8	82.4	-429.6	28.0	0.00	0.00	0.00
2,600.0	12.75	280.86	2,551.3	86.6	-451.3	29.4	0.00	0.00	0.00
2,700.0	12.75	280.86	2,648.9	90.7	-472.9	30.8	0.00	0.00	0.00
2,800.0	12.75	280.86	2,746.4	94.9	-494.6	32.2	0.00	0.00	0.00
2,900.0	12.75	280.86	2,843.9	99.1	-516.3	33.6	0.00	0.00	0.00
3,000.0	12.75	280.86	2,941.5	103.2	-537.9	35.0	0.00	0.00	0.00
3,100.0	12.75	280.86	3,039.0	107.4	-559.6	36.4	0.00	0.00	0.00
3,200.0	12.75	280.86	3,136.5	111.5	-581.3	37.8	0.00	0.00	0.00
3,300.0	12.75	280.86	3,234.1	115.7	-602.9	39.2	0.00	0.00	0.00
3,400.0	12.75	280.86	3,331.6	119.8	-624.6	40.6	0.00	0.00	0.00
3,500.0	12.75	280.86	3,429.1	124.0	-646.3	42.1	0.00	0.00	0.00
3,600.0	12.75	280.86	3,526.7	128.2	-667.9	43.5	0.00	0.00	0.00
3,700.0	12.75	280.86	3,624.2	132.3	-689.6	44.9	0.00	0.00	0.00
3,800.0	12.75	280.86	3,721.8	136.5	-711.3	46.3	0.00	0.00	0.00
3,802.3	12.75	280.86	3,724.0	136.6	-711.8	46.3	0.00	0.00	0.00
Parkman									
3,900.0	12.75	280.86	3,819.3	140.6	-732.9	47.7	0.00	0.00	0.00
4,000.0	12.75	280.86	3,916.8	144.8	-754.6	49.1	0.00	0.00	0.00
4,100.0	12.75	280.86	4,014.4	148.9	-776.3	50.5	0.00	0.00	0.00
4,200.0	12.75	280.86	4,111.9	153.1	-797.9	51.9	0.00	0.00	0.00
4,300.0	12.75	280.86	4,209.4	157.3	-819.6	53.3	0.00	0.00	0.00
4,400.0	12.75	280.86	4,307.0	161.4	-841.3	54.7	0.00	0.00	0.00
4,500.0	12.75	280.86	4,404.5	165.6	-862.9	56.1	0.00	0.00	0.00
4,546.6	12.75	280.86	4,450.0	167.5	-873.0	56.8	0.00	0.00	0.00

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Project:	SEC.7-T4N-R64W	MD Reference:	WELL @ 4861.0ft (RKB - 15')
Site:	Honebein 4N64W7K Pad Sec.7-T4N-R64W	North Reference:	True
Well:	Honebein 7G-203	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-14-14)		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
Sussex									
4,600.0	12.75	280.86	4,502.0	169.7	-884.6	57.6	0.00	0.00	0.00
4,700.0	12.75	280.86	4,599.6	173.9	-906.3	59.0	0.00	0.00	0.00
4,800.0	12.75	280.86	4,697.1	178.0	-927.9	60.4	0.00	0.00	0.00
4,900.0	12.75	280.86	4,794.6	182.2	-949.6	61.8	0.00	0.00	0.00
5,000.0	12.75	280.86	4,892.2	186.4	-971.3	63.2	0.00	0.00	0.00
5,100.0	12.75	280.86	4,989.7	190.5	-992.9	64.6	0.00	0.00	0.00
5,200.0	12.75	280.86	5,087.3	194.7	-1,014.6	66.0	0.00	0.00	0.00
5,300.0	12.75	280.86	5,184.8	198.8	-1,036.3	67.4	0.00	0.00	0.00
5,356.6	12.75	280.86	5,240.0	201.2	-1,048.5	68.2	0.00	0.00	0.00
Shannon									
5,400.0	12.75	280.86	5,282.3	203.0	-1,057.9	68.8	0.00	0.00	0.00
5,500.0	12.75	280.86	5,379.9	207.1	-1,079.6	70.2	0.00	0.00	0.00
5,590.3	12.75	280.86	5,468.0	210.9	-1,099.2	71.5	0.00	0.00	0.00
5,600.0	12.55	280.86	5,477.4	211.3	-1,101.3	71.7	2.00	-2.00	0.00
5,700.0	10.55	280.86	5,575.4	215.1	-1,120.9	72.9	2.00	-2.00	0.00
5,800.0	8.55	280.86	5,674.0	218.2	-1,137.2	74.0	2.00	-2.00	0.00
5,900.0	6.55	280.86	5,773.1	220.7	-1,150.1	74.8	2.00	-2.00	0.00
6,000.0	4.55	280.86	5,872.6	222.5	-1,159.6	75.5	2.00	-2.00	0.00
6,100.0	2.55	280.86	5,972.4	223.7	-1,165.7	75.8	2.00	-2.00	0.00
6,200.0	0.55	280.86	6,072.4	224.2	-1,168.4	76.0	2.00	-2.00	0.00
6,227.6	0.00	0.00	6,100.0	224.2	-1,168.5	76.0	2.00	-2.00	0.00
6,300.0	0.00	0.00	6,172.4	224.2	-1,168.5	76.0	0.00	0.00	0.00
6,349.9	0.00	0.00	6,222.3	224.2	-1,168.5	76.0	0.00	0.00	0.00
KOP #2									
6,400.0	3.76	180.00	6,272.4	222.6	-1,168.5	77.6	7.50	7.50	0.00
6,500.0	11.26	180.00	6,371.4	209.5	-1,168.5	90.3	7.50	7.50	0.00
6,600.0	18.76	180.00	6,468.0	183.6	-1,168.5	115.3	7.50	7.50	0.00
6,700.0	26.26	180.00	6,560.3	145.4	-1,168.5	152.3	7.50	7.50	0.00
6,800.0	33.76	180.00	6,646.8	95.4	-1,168.5	200.7	7.50	7.50	0.00
6,833.2	36.25	180.00	6,674.0	76.4	-1,168.5	219.2	7.50	7.50	0.00
Sharon Springs									
6,900.0	41.26	180.00	6,726.1	34.6	-1,168.5	259.6	7.50	7.50	0.00
7,000.0	48.76	180.00	6,796.7	-36.1	-1,168.5	328.0	7.50	7.50	0.00
7,084.8	55.12	180.00	6,849.0	-102.9	-1,168.5	392.7	7.50	7.50	0.00
Niobrara A									
7,100.0	56.26	180.00	6,857.5	-115.4	-1,168.5	404.8	7.50	7.50	0.00
7,200.0	63.76	180.00	6,907.5	-201.9	-1,168.5	488.6	7.50	7.50	0.00
7,239.4	66.71	180.00	6,924.0	-237.7	-1,168.5	523.2	7.50	7.50	0.00
Niobrara B									
7,300.0	71.26	180.00	6,945.7	-294.3	-1,168.5	577.9	7.50	7.50	0.00
7,400.0	78.76	180.00	6,971.6	-390.8	-1,168.5	671.4	7.50	7.50	0.00
7,500.0	86.26	180.00	6,984.6	-489.9	-1,168.5	767.3	7.50	7.50	0.00
7,554.6	90.35	180.00	6,986.2	-544.4	-1,168.5	820.1	7.50	7.50	0.00
End of Build - 7"									
7,600.0	90.35	180.00	6,985.9	-589.8	-1,168.5	864.1	0.00	0.00	0.00
7,700.0	90.35	180.00	6,985.3	-689.8	-1,168.5	960.9	0.00	0.00	0.00
7,800.0	90.35	180.00	6,984.7	-789.8	-1,168.5	1,057.7	0.00	0.00	0.00
7,900.0	90.35	180.00	6,984.1	-889.8	-1,168.5	1,154.5	0.00	0.00	0.00
8,000.0	90.35	180.00	6,983.5	-989.8	-1,168.5	1,251.3	0.00	0.00	0.00
8,100.0	90.35	180.00	6,982.9	-1,089.8	-1,168.5	1,348.1	0.00	0.00	0.00
8,200.0	90.35	180.00	6,982.3	-1,189.8	-1,168.5	1,444.9	0.00	0.00	0.00

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Site:	Honebein 4N64W7K Pad Sec.7-T4N-R64W	North Reference:	True
Well:	Honebein 7G-203	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-14-14)		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,300.0	90.35	180.00	6,981.7	-1,289.8	-1,168.5	1,541.7	0.00	0.00	0.00
8,400.0	90.35	180.00	6,981.1	-1,389.8	-1,168.5	1,638.5	0.00	0.00	0.00
8,500.0	90.35	180.00	6,980.4	-1,489.8	-1,168.5	1,735.3	0.00	0.00	0.00
8,600.0	90.35	180.00	6,979.8	-1,589.8	-1,168.5	1,832.1	0.00	0.00	0.00
8,700.0	90.35	180.00	6,979.2	-1,689.8	-1,168.5	1,928.9	0.00	0.00	0.00
8,800.0	90.35	180.00	6,978.6	-1,789.8	-1,168.5	2,025.7	0.00	0.00	0.00
8,900.0	90.35	180.00	6,978.0	-1,889.8	-1,168.5	2,122.5	0.00	0.00	0.00
9,000.0	90.35	180.00	6,977.4	-1,989.8	-1,168.5	2,219.3	0.00	0.00	0.00
9,100.0	90.35	180.00	6,976.8	-2,089.8	-1,168.5	2,316.1	0.00	0.00	0.00
9,200.0	90.35	180.00	6,976.2	-2,189.8	-1,168.5	2,412.9	0.00	0.00	0.00
9,300.0	90.35	180.00	6,975.6	-2,289.8	-1,168.5	2,509.7	0.00	0.00	0.00
9,400.0	90.35	180.00	6,975.0	-2,389.8	-1,168.5	2,606.5	0.00	0.00	0.00
9,500.0	90.35	180.00	6,974.3	-2,489.8	-1,168.5	2,703.3	0.00	0.00	0.00
9,600.0	90.35	180.00	6,973.7	-2,589.8	-1,168.5	2,800.1	0.00	0.00	0.00
9,700.0	90.35	180.00	6,973.1	-2,689.8	-1,168.5	2,896.9	0.00	0.00	0.00
9,800.0	90.35	180.00	6,972.5	-2,789.8	-1,168.5	2,993.7	0.00	0.00	0.00
9,900.0	90.35	180.00	6,971.9	-2,889.8	-1,168.5	3,090.5	0.00	0.00	0.00
10,000.0	90.35	180.00	6,971.3	-2,989.8	-1,168.5	3,187.3	0.00	0.00	0.00
10,100.0	90.35	180.00	6,970.7	-3,089.8	-1,168.5	3,284.1	0.00	0.00	0.00
10,200.0	90.35	180.00	6,970.1	-3,189.8	-1,168.5	3,380.9	0.00	0.00	0.00
10,300.0	90.35	180.00	6,969.5	-3,289.8	-1,168.5	3,477.7	0.00	0.00	0.00
10,400.0	90.35	180.00	6,968.8	-3,389.8	-1,168.5	3,574.5	0.00	0.00	0.00
10,500.0	90.35	180.00	6,968.2	-3,489.8	-1,168.5	3,671.3	0.00	0.00	0.00
10,600.0	90.35	180.00	6,967.6	-3,589.8	-1,168.5	3,768.1	0.00	0.00	0.00
10,700.0	90.35	180.00	6,967.0	-3,689.8	-1,168.5	3,864.9	0.00	0.00	0.00
10,800.0	90.35	180.00	6,966.4	-3,789.8	-1,168.5	3,961.7	0.00	0.00	0.00
10,900.0	90.35	180.00	6,965.8	-3,889.8	-1,168.5	4,058.5	0.00	0.00	0.00
11,000.0	90.35	180.00	6,965.2	-3,989.8	-1,168.5	4,155.3	0.00	0.00	0.00
11,100.0	90.35	180.00	6,964.6	-4,089.8	-1,168.5	4,252.1	0.00	0.00	0.00
11,200.0	90.35	180.00	6,964.0	-4,189.8	-1,168.5	4,348.9	0.00	0.00	0.00
11,300.0	90.35	180.00	6,963.3	-4,289.8	-1,168.5	4,445.7	0.00	0.00	0.00
11,400.0	90.35	180.00	6,962.7	-4,389.8	-1,168.5	4,542.5	0.00	0.00	0.00
11,500.0	90.35	180.00	6,962.1	-4,489.8	-1,168.5	4,639.3	0.00	0.00	0.00
11,520.3	90.35	180.00	6,962.0	-4,510.1	-1,168.5	4,659.0	0.00	0.00	0.00

BHL 2141'FNL & 75'FWL, Sec.18

Targets

Target Name	- hit/miss target	- Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
SHL 2352'FSL & 123C	- plan hits target center	- Point	0.00	0.00	1.0	0.0	0.0	1,362,857.25	3,251,589.63	40.325930	-104.597630
BHL 2141'FNL & 75'F	- plan hits target center	- Point	0.00	0.00	6,962.0	-4,510.1	-1,168.5	1,358,335.70	3,250,467.14	40.313550	-104.601820

Database:	Landmark	Local Co-ordinate Reference:	Well Honebein 7G-203
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4861.0ft (RKB - 15')
Project:	SEC.7-T4N-R64W	MD Reference:	WELL @ 4861.0ft (RKB - 15')
Site:	Honebein 4N64W7K Pad Sec.7-T4N-R64W	North Reference:	True
Well:	Honebein 7G-203	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-14-14)		

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,554.6	6,986.2	7"	7	7-1/2

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,802.3	3,724.0	Parkman		0.00	
4,546.6	4,450.0	Sussex		0.00	
5,356.6	5,240.0	Shannon		0.00	
6,833.2	6,674.0	Sharon Springs		0.00	
7,084.8	6,849.0	Niobrara A		0.00	
7,239.4	6,924.0	Niobrara B		0.00	
	6,994.0	Niobrara C		0.00	
	7,094.0	Ft. Hays		0.00	
	7,114.0	Codell		0.00	

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
200.0	200.0	0.0	0.0	KOP #1
6,349.9	6,222.3	224.2	-1,168.5	KOP #2
7,554.6	6,986.2	-544.4	-1,168.5	End of Build



PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.7-T4N-R64W

Honebein 4N64W7K Pad Sec.7-T4N-R64W

Honebein 7G-203

Wellbore #1

Plan #1 (8-14-14)

Anticollision Report

21 August, 2014



Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Honebein 7G-203
Project:	SEC.7-T4N-R64W	TVD Reference:	WELL @ 4861.0ft (RKB - 15')
Reference Site:	Honebein 4N64W7K Pad Sec.7-T4N-R64W	MD Reference:	WELL @ 4861.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Honebein 7G-203	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 (8-14-14)	Offset TVD Reference:	Offset Datum

Reference	Plan #1 (8-14-14)		
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 1,000.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date 8/21/2014			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	11,520.3	Plan #1 (8-14-14) (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Existing Wells Sec. 7-T4N-R64W						
Honebein 13-7U (Exist.) - Wellbore #1 - Wellbore #1	4,009.4	3,907.9	331.3	221.6	3.020	CC, ES
Honebein 13-7U (Exist.) - Wellbore #1 - Wellbore #1	4,500.0	4,390.9	345.7	228.1	2.940	SF
How Sad C 18-31 (Exist.) - Wellbore #1 - Wellbore #1	10,522.1	6,899.1	290.0	81.7	1.392	Level 3, CC, ES, SF
Honebein 4N64W7K Pad Sec.7-T4N-R64W						
Honebein 7G-323 - Wellbore #1 - Plan #1 (8-15-14)	200.0	201.0	30.7	30.0	45.335	CC, ES
Honebein 7G-323 - Wellbore #1 - Plan #1 (8-15-14)	11,520.3	11,562.2	267.0	93.2	1.536	SF
Honebein 7K-223 - Wellbore #1 - Plan #1 (8-15-14)	200.0	204.0	119.9	119.2	175.468	CC, ES
Honebein 7K-223 - Wellbore #1 - Plan #1 (8-15-14)	1,600.0	1,575.1	357.9	350.7	49.689	SF
Honebein 7K-243 - Wellbore #1 - Plan #1 (8-15-15)	200.0	202.0	58.6	57.9	86.261	CC, ES
Honebein 7K-243 - Wellbore #1 - Plan #1 (8-15-15)	11,520.3	11,406.6	839.5	662.1	4.733	SF
Honebein 7K-323 - Wellbore #1 - Plan #1 (8-18-14)	200.0	205.0	150.6	149.9	219.633	CC, ES
Honebein 7K-323 - Wellbore #1 - Plan #1 (8-18-14)	1,200.0	1,174.6	304.9	299.7	57.907	SF
Honebein 7K-403 - Wellbore #1 - Plan #1 (8-15-14)	200.0	203.0	89.2	88.5	131.012	CC, ES
Honebein 7K-403 - Wellbore #1 - Plan #1 (8-15-14)	4,800.0	4,718.9	984.2	960.1	40.957	SF
Honebein 7O-243 - Wellbore #1 - Plan #1 (8-18-14)	200.0	206.0	178.4	177.8	259.455	CC, ES
Honebein 7O-243 - Wellbore #1 - Plan #1 (8-18-14)	1,100.0	1,067.1	318.4	313.6	66.629	SF

Offset Design Existing Wells Sec. 7-T4N-R64W - Honebein 13-7U (Exist.) - Wellbore #1 - Wellbore #1											
Survey Program: 600-UNKNOWN											
Reference											
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)
0.0	0.0	0.0	0.0	0.0	0.0	-104.18	-193.1	-764.0	788.3		
100.0	100.0	77.8	77.8	0.1	1.6	-104.18	-193.0	-764.0	788.0	786.4	1.67
200.0	200.0	177.5	177.5	0.3	3.5	-104.17	-192.9	-764.1	788.1	784.2	3.89
300.0	300.0	277.1	277.1	0.6	5.5	-25.08	-192.7	-764.2	786.6	780.5	6.10
400.0	399.8	376.7	376.7	0.8	7.5	-25.26	-192.4	-764.4	782.0	773.7	8.29
500.0	499.5	476.1	476.1	1.0	9.5	-25.57	-192.1	-764.7	774.2	763.8	10.48
600.0	598.7	575.1	575.1	1.3	11.5	-26.02	-191.6	-765.0	763.5	750.8	12.65
700.0	697.5	671.2	671.2	1.7	14.7	-26.60	-191.1	-765.5	749.8	733.7	16.03
800.0	795.6	767.5	767.4	2.0	18.0	-27.36	-190.8	-766.3	733.4	714.0	19.44
837.3	832.0	803.4	803.4	2.2	19.1	-27.70	-190.8	-766.7	726.6	706.0	20.65

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 Honebein 7G-203
Project:	SEC.7-T4N-R64W	TVD Reference:	WELL @ 4861.0ft (RKB - 15')
Reference Site:	Honebein 4N64W7K Pad Sec.7-T4N-R64W	MD Reference:	WELL @ 4861.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Honebein 7G-203	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 (8-14-14)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Sec. 7-T4N-R64W - Honebein 13-7U (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 600-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
900.0	893.2	863.7	863.7	2.5	21.0	-28.19	-190.8	-767.3	714.9	692.3	22.66	31.553		
1,000.0	990.7	959.1	959.0	2.9	23.9	-29.00	-190.8	-768.5	696.6	670.8	25.87	26.931		
1,100.0	1,088.3	1,055.7	1,055.7	3.4	26.6	-29.88	-191.2	-769.9	678.8	650.0	28.81	23.559		
1,200.0	1,185.8	1,152.9	1,152.8	3.9	28.7	-30.85	-192.0	-771.2	661.2	629.9	31.30	21.127		
1,300.0	1,283.4	1,250.3	1,250.2	4.3	30.8	-31.91	-193.3	-772.6	644.0	610.3	33.68	19.118		
1,400.0	1,380.9	1,348.2	1,348.1	4.8	33.1	-33.03	-194.5	-773.9	626.9	590.5	36.38	17.232		
1,500.0	1,478.4	1,447.3	1,447.3	5.3	35.8	-34.22	-195.6	-775.2	610.1	570.7	39.40	15.484		
1,600.0	1,576.0	1,546.4	1,546.3	5.8	38.8	-35.47	-196.5	-776.3	593.1	550.4	42.77	13.867		
1,700.0	1,673.5	1,643.7	1,643.6	6.3	42.1	-36.74	-197.2	-777.4	576.5	530.1	46.39	12.427		
1,800.0	1,771.0	1,741.1	1,741.0	6.7	45.3	-38.04	-197.5	-778.8	560.2	510.2	50.03	11.198		
1,900.0	1,868.6	1,838.6	1,838.5	7.2	48.6	-39.38	-197.5	-780.4	544.3	490.6	53.68	10.139		
2,000.0	1,966.1	1,936.3	1,936.1	7.7	51.8	-40.76	-197.2	-782.2	528.7	471.3	57.36	9.217		
2,100.0	2,063.6	2,034.1	2,033.9	8.2	55.3	-42.18	-196.6	-784.2	513.5	452.3	61.23	8.386		
2,200.0	2,161.2	2,132.0	2,131.8	8.7	59.0	-43.68	-196.0	-786.3	498.7	433.2	65.45	7.619		
2,300.0	2,258.7	2,230.0	2,229.7	9.1	62.8	-45.28	-195.4	-788.4	484.2	414.5	69.69	6.948		
2,400.0	2,356.3	2,327.9	2,327.6	9.6	66.6	-46.97	-194.8	-790.5	470.1	396.2	73.95	6.357		
2,500.0	2,453.8	2,425.8	2,425.5	10.1	70.3	-48.76	-194.3	-792.6	456.5	378.3	78.23	5.835		
2,600.0	2,551.3	2,523.8	2,523.5	10.6	74.1	-50.66	-193.8	-794.7	443.4	360.8	82.55	5.371		
2,700.0	2,648.9	2,622.1	2,621.8	11.1	77.9	-52.68	-193.2	-796.8	430.7	343.8	86.90	4.956		
2,800.0	2,746.4	2,720.4	2,720.0	11.6	81.7	-54.80	-192.6	-798.8	418.6	327.3	91.28	4.586		
2,900.0	2,843.9	2,818.6	2,818.3	12.0	85.5	-57.05	-191.9	-800.9	407.0	311.3	95.68	4.254		
3,000.0	2,941.5	2,916.9	2,916.5	12.5	89.2	-59.41	-191.1	-802.9	396.0	295.9	100.11	3.956		
3,100.0	3,039.0	3,015.3	3,014.9	13.0	92.5	-61.90	-190.2	-804.9	385.7	281.6	104.03	3.707		
3,200.0	3,136.5	3,114.6	3,114.2	13.5	92.9	-64.59	-189.3	-806.5	375.8	270.7	105.12	3.575		
3,300.0	3,234.1	3,213.7	3,213.2	14.0	93.3	-67.49	-188.5	-807.5	366.6	260.4	106.21	3.451		
3,400.0	3,331.6	3,312.5	3,312.0	14.5	93.7	-70.62	-187.7	-807.8	358.0	250.7	107.31	3.336		
3,500.0	3,429.1	3,411.0	3,410.5	14.9	94.0	-73.96	-187.0	-807.5	350.3	241.9	108.40	3.231		
3,600.0	3,526.7	3,509.1	3,508.6	15.4	94.3	-77.51	-186.2	-806.6	343.6	234.2	109.39	3.141		
3,700.0	3,624.2	3,606.3	3,605.8	15.9	93.8	-81.17	-185.5	-805.6	338.3	228.8	109.55	3.088		
3,800.0	3,721.8	3,703.7	3,703.2	16.4	93.3	-84.88	-184.6	-804.8	334.5	224.8	109.65	3.050		
3,900.0	3,819.3	3,801.1	3,800.7	16.9	92.8	-88.61	-183.7	-804.3	332.2	222.5	109.71	3.028		
4,000.0	3,916.8	3,898.7	3,898.2	17.4	92.3	-92.34	-182.8	-804.1	331.3	221.6	109.71	3.020		
4,009.4	3,926.0	3,907.9	3,907.5	17.4	92.3	-92.69	-182.7	-804.1	331.3	221.6	109.70	3.020 CC, ES		
4,100.0	4,014.4	3,996.4	3,996.0	17.9	91.8	-96.03	-181.7	-804.1	331.9	222.2	109.64	3.027		
4,200.0	4,111.9	4,095.1	4,094.6	18.3	93.5	-99.72	-180.5	-804.2	333.7	222.0	111.66	2.988		
4,300.0	4,209.4	4,193.7	4,193.2	18.8	95.2	-103.37	-179.0	-804.2	336.6	222.9	113.70	2.961		
4,400.0	4,307.0	4,292.3	4,291.8	19.3	97.0	-106.97	-177.1	-804.1	340.6	224.9	115.67	2.945		
4,500.0	4,404.5	4,390.9	4,390.4	19.8	98.7	-110.50	-174.9	-803.9	345.7	228.1	117.58	2.940 SF		
4,600.0	4,502.0	4,489.4	4,488.9	20.3	100.4	-113.95	-172.5	-803.5	351.8	232.3	119.43	2.945		
4,700.0	4,599.6	4,586.6	4,586.0	20.8	100.4	-117.24	-170.0	-802.9	359.1	239.6	119.51	3.005		
4,800.0	4,697.1	4,681.3	4,680.6	21.2	100.2	-120.44	-167.8	-801.8	368.2	248.8	119.34	3.085		
4,900.0	4,794.6	4,776.7	4,776.0	21.7	100.0	-123.54	-165.9	-800.1	378.9	259.7	119.15	3.180		
5,000.0	4,892.2	4,871.8	4,871.1	22.2	99.8	-126.51	-164.3	-797.9	391.2	272.2	118.92	3.289		
5,100.0	4,989.7	4,966.7	4,965.9	22.7	99.6	-129.35	-162.9	-795.1	405.0	286.4	118.68	3.413		
5,200.0	5,087.3	5,062.8	5,062.0	23.2	98.5	-132.06	-161.8	-792.0	420.3	302.8	117.50	3.577		
5,300.0	5,184.8	5,159.9	5,159.0	23.7	96.8	-134.58	-160.8	-789.0	436.5	320.6	115.83	3.768		
5,400.0	5,282.3	5,257.1	5,256.2	24.2	95.2	-136.89	-159.9	-786.3	453.4	339.2	114.16	3.971		
5,500.0	5,379.9	5,354.4	5,353.5	24.6	93.5	-139.01	-159.1	-783.7	470.8	358.3	112.52	4.184		
5,590.3	5,468.0	5,442.4	5,441.4	25.1	92.0	-140.78	-158.4	-781.6	487.1	376.0	111.05	4.386		
5,600.0	5,477.4	5,451.9	5,450.9	25.1	91.9	-140.98	-158.3	-781.4	488.8	377.9	110.92	4.407		
5,700.0	5,575.4	5,549.3	5,548.3	25.5	90.1	-142.83	-157.7	-779.3	505.6	396.3	109.31	4.626		

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 Honebein 7G-203
Project:	SEC.7-T4N-R64W	TVD Reference:	WELL @ 4861.0ft (RKB - 15')
Reference Site:	Honebein 4N64W7K Pad Sec.7-T4N-R64W	MD Reference:	WELL @ 4861.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Honebein 7G-203	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 (8-14-14)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Sec. 7-T4N-R64W - Honebein 13-7U (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 600-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)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
5,800.0	5,674.0	5,647.0	5,645.9	25.8	88.1	-144.28	-157.3	-777.4	520.1	412.6	107.52	4.837		
5,900.0	5,773.1	5,745.2	5,744.1	26.0	86.1	-145.40	-157.1	-775.4	532.1	426.5	105.68	5.035		
6,000.0	5,872.6	5,843.9	5,842.8	26.2	84.1	-146.23	-157.1	-773.5	541.5	437.8	103.78	5.218		
6,100.0	5,972.4	5,942.9	5,941.8	26.4	82.1	-146.77	-157.4	-771.7	548.2	446.4	101.81	5.385		
6,200.0	6,072.4	6,042.5	6,041.4	26.5	80.0	-147.06	-157.9	-769.9	552.1	452.4	99.65	5.540		
6,227.6	6,100.0	6,070.1	6,069.0	26.5	79.4	133.76	-158.0	-769.4	552.7	453.7	99.00	5.582		
6,300.0	6,172.4	6,142.6	6,141.4	26.6	77.7	133.70	-158.4	-768.1	553.8	456.4	97.43	5.685		
6,349.9	6,222.3	6,192.5	6,191.4	26.6	76.6	133.65	-158.6	-767.2	554.6	458.3	96.34	5.757		
6,400.0	6,272.4	6,242.6	6,241.5	26.7	75.4	-46.53	-158.8	-766.4	554.3	459.5	94.86	5.843		
6,450.0	6,322.1	6,292.4	6,291.3	26.7	74.3	-47.09	-159.1	-765.5	551.7	458.6	93.14	5.924		
6,500.0	6,371.4	6,341.8	6,340.7	26.8	73.1	-48.02	-159.3	-764.6	547.0	455.8	91.23	5.996		
6,550.0	6,420.1	6,390.6	6,389.4	26.8	72.0	-49.34	-159.5	-763.7	540.2	451.0	89.20	6.056		
6,600.0	6,468.0	6,438.5	6,437.4	26.8	70.9	-51.05	-159.7	-762.9	531.5	444.4	87.12	6.100		
6,650.0	6,514.7	6,485.4	6,484.2	26.8	69.8	-53.18	-159.9	-762.0	521.0	435.9	85.10	6.122		
6,700.0	6,560.3	6,530.9	6,529.7	26.8	69.4	-55.71	-160.0	-761.2	509.1	425.3	83.83	6.073		
6,750.0	6,604.4	6,574.8	6,573.6	26.8	69.2	-58.66	-160.2	-760.4	496.1	413.1	83.06	5.973		
6,800.0	6,646.8	6,617.1	6,615.9	26.8	69.0	-61.99	-160.2	-759.5	482.4	399.8	82.60	5.840		
6,850.0	6,687.4	6,657.5	6,656.2	26.8	68.8	-65.67	-160.3	-758.7	468.4	385.9	82.48	5.679		
6,900.0	6,726.1	6,695.8	6,694.6	26.9	68.6	-69.60	-160.3	-757.8	454.7	372.0	82.70	5.498		
6,950.0	6,762.6	6,732.0	6,730.8	26.9	68.5	-73.68	-160.3	-756.9	441.9	358.8	83.17	5.314		
7,000.0	6,796.7	6,765.8	6,764.6	26.9	68.3	-77.76	-160.2	-756.1	430.8	347.0	83.76	5.143		
7,050.0	6,828.4	6,797.2	6,795.9	26.9	68.2	-81.69	-160.2	-755.3	422.1	337.7	84.36	5.003		
7,100.0	6,857.5	6,825.9	6,824.6	27.0	68.0	-85.32	-160.1	-754.6	416.5	331.6	84.86	4.908		
7,144.8	6,881.3	6,849.3	6,848.0	27.0	67.9	-88.19	-160.0	-753.9	414.8	329.6	85.18	4.869		
7,150.0	6,883.9	6,851.9	6,850.6	27.0	67.9	-88.49	-160.0	-753.9	414.8	329.6	85.21	4.868		
7,200.0	6,907.5	6,875.0	6,873.7	27.1	67.8	-91.10	-159.9	-753.2	417.6	332.1	85.44	4.887		
7,250.0	6,928.1	6,895.2	6,893.9	27.2	67.7	-93.05	-159.9	-752.6	425.2	339.6	85.61	4.966		
7,300.0	6,945.7	6,912.3	6,911.0	27.3	67.7	-94.28	-159.8	-752.1	437.7	351.9	85.81	5.101		
7,350.0	6,960.2	6,926.4	6,925.1	27.5	67.6	-94.73	-159.7	-751.7	455.1	369.0	86.09	5.287		
7,400.0	6,971.6	6,937.3	6,936.0	27.6	67.5	-94.35	-159.7	-751.4	477.0	390.6	86.48	5.516		
7,450.0	6,979.7	6,945.0	6,943.7	27.8	67.5	-93.11	-159.6	-751.2	503.0	416.1	86.97	5.784		
7,500.0	6,984.6	6,949.6	6,948.3	28.1	67.5	-91.00	-159.6	-751.0	532.5	445.1	87.43	6.090		
7,554.6	6,986.2	6,950.9	6,949.6	28.4	67.5	-87.67	-159.6	-751.0	568.0	480.3	87.70	6.476		
7,600.0	6,985.9	6,950.4	6,949.1	28.6	67.5	-87.60	-159.6	-751.0	599.7	511.5	88.18	6.800		
7,700.0	6,985.3	6,949.3	6,947.9	29.3	67.5	-87.44	-159.6	-751.1	675.0	585.7	89.32	7.557		
7,800.0	6,984.7	6,948.1	6,946.8	30.1	67.5	-87.29	-159.6	-751.1	756.1	665.5	90.57	8.348		
7,900.0	6,984.1	6,947.0	6,945.7	31.1	67.5	-87.14	-159.6	-751.1	841.2	749.4	91.89	9.155		
8,000.0	6,983.5	6,945.9	6,944.6	32.1	67.5	-86.99	-159.6	-751.2	929.4	836.1	93.29	9.962		

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Honebein 7G-203
Project:	SEC.7-T4N-R64W	TVD Reference:	WELL @ 4861.0ft (RKB - 15')
Reference Site:	Honebein 4N64W7K Pad Sec.7-T4N-R64W	MD Reference:	WELL @ 4861.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Honebein 7G-203	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 (8-14-14)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Sec. 7-T4N-R64W - How Sad C 18-31 (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 7237-UNKNOWN													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
9,600.0	6,973.7	6,904.7	6,904.7	56.2	138.1	91.11	-3,511.9	-1,458.5	966.6	775.3	191.27	5.053		
9,700.0	6,973.1	6,904.1	6,904.1	57.9	138.1	90.99	-3,511.9	-1,458.5	871.7	678.6	193.10	4.514		
9,800.0	6,972.5	6,903.5	6,903.5	59.7	138.1	90.87	-3,511.9	-1,458.5	778.1	583.2	194.93	3.992		
9,900.0	6,971.9	6,902.9	6,902.9	61.4	138.1	90.75	-3,511.9	-1,458.5	686.3	489.6	196.76	3.488		
10,000.0	6,971.3	6,902.3	6,902.3	63.2	138.0	90.63	-3,511.9	-1,458.5	597.2	398.6	198.60	3.007		
10,100.0	6,970.7	6,901.7	6,901.7	65.0	138.0	90.51	-3,511.9	-1,458.5	512.1	311.6	200.45	2.555		
10,200.0	6,970.1	6,901.1	6,901.1	66.7	138.0	90.39	-3,511.9	-1,458.5	433.4	231.1	202.29	2.142		
10,300.0	6,969.5	6,900.5	6,900.5	68.5	138.0	90.27	-3,511.9	-1,458.5	365.2	161.1	204.15	1.789		
10,400.0	6,968.8	6,899.8	6,899.8	70.3	138.0	90.15	-3,511.9	-1,458.5	314.6	108.6	206.00	1.527		
10,500.0	6,968.2	6,899.2	6,899.2	72.1	138.0	90.03	-3,511.9	-1,458.5	290.8	83.0	207.86	1.399	Level 3	
10,522.1	6,968.1	6,899.1	6,899.1	72.5	138.0	90.00	-3,511.9	-1,458.5	290.0	81.7	208.27	1.392	Level 3, CC, ES, SF	
10,600.0	6,967.6	6,898.6	6,898.6	73.9	138.0	89.91	-3,511.9	-1,458.5	300.3	90.5	209.71	1.432	Level 3	
10,700.0	6,967.0	6,898.0	6,898.0	75.7	138.0	89.79	-3,511.9	-1,458.5	340.2	128.6	211.57	1.608		
10,800.0	6,966.4	6,897.4	6,897.4	77.6	137.9	89.66	-3,511.9	-1,458.5	401.6	188.2	213.44	1.882		
10,900.0	6,965.8	6,896.8	6,896.8	79.4	137.9	89.54	-3,511.9	-1,458.5	476.3	261.0	215.30	2.212		
11,000.0	6,965.2	6,896.2	6,896.2	81.2	137.9	89.42	-3,511.9	-1,458.5	559.0	341.8	217.16	2.574		
11,100.0	6,964.6	6,895.6	6,895.6	83.0	137.9	89.30	-3,511.9	-1,458.5	646.6	427.5	219.03	2.952		
11,200.0	6,964.0	6,895.0	6,895.0	84.9	137.9	89.18	-3,511.9	-1,458.5	737.3	516.4	220.90	3.338		
11,300.0	6,963.3	6,894.3	6,894.3	86.7	137.9	89.06	-3,511.9	-1,458.5	830.2	607.4	222.77	3.727		
11,400.0	6,962.7	6,893.7	6,893.7	88.6	137.9	88.94	-3,511.9	-1,458.5	924.5	699.9	224.63	4.116		

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Honebein 7G-203
Project:	SEC.7-T4N-R64W	TVD Reference:	WELL @ 4861.0ft (RKB - 15')
Reference Site:	Honebein 4N64W7K Pad Sec.7-T4N-R64W	MD Reference:	WELL @ 4861.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Honebein 7G-203	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 (8-14-14)	Offset TVD Reference:	Offset Datum

Offset Design Honebein 4N64W7K Pad Sec.7-T4N-R64W - Honebein 7G-323 - Wellbore #1 - Plan #1 (8-15-14)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	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	1.0	1.0	0.0	0.0	89.99	0.0	30.7	30.7	30.7	0.00	N/A		
100.0	100.0	101.0	101.0	0.1	0.1	89.99	0.0	30.7	30.7	30.4	0.23	135.106		
200.0	200.0	201.0	201.0	0.3	0.3	89.99	0.0	30.7	30.7	30.0	0.68	45.335 CC, ES		
300.0	300.0	301.0	301.0	0.6	0.6	169.71	0.0	30.7	32.4	31.3	1.12	28.810		
400.0	399.8	400.8	400.8	0.8	0.8	171.12	0.0	30.7	37.5	36.0	1.57	23.846		
500.0	499.5	502.0	502.0	1.0	1.0	172.39	0.4	28.9	44.4	42.4	2.02	22.033		
600.0	598.7	603.5	603.3	1.3	1.2	173.12	1.7	23.7	51.3	48.8	2.45	20.910		
700.0	697.5	705.1	704.6	1.7	1.5	173.51	3.8	14.9	58.1	55.2	2.90	20.033		
800.0	795.6	807.1	805.7	2.0	1.8	173.66	6.8	2.6	64.9	61.6	3.36	19.301		
837.3	832.0	845.1	843.3	2.2	1.9	173.67	8.1	-2.9	67.4	63.9	3.54	19.047		
900.0	893.2	909.3	906.6	2.5	2.1	173.58	10.6	-13.2	71.0	67.1	3.85	18.459		
1,000.0	990.7	1,009.5	1,005.2	2.9	2.4	173.28	14.9	-30.8	75.2	70.8	4.35	17.295		
1,100.0	1,088.3	1,109.4	1,103.4	3.4	2.8	173.01	19.1	-48.3	79.3	74.5	4.86	16.335		
1,200.0	1,185.8	1,209.3	1,201.7	3.9	3.2	172.77	23.3	-65.9	83.5	78.1	5.37	15.539		
1,300.0	1,283.4	1,309.2	1,300.0	4.3	3.6	172.55	27.6	-83.4	87.7	81.8	5.90	14.867		
1,400.0	1,380.9	1,409.1	1,398.2	4.8	4.0	172.35	31.8	-101.0	91.9	85.4	6.42	14.305		
1,500.0	1,478.4	1,509.0	1,496.5	5.3	4.4	172.16	36.1	-118.5	96.0	89.1	6.95	13.815		
1,600.0	1,576.0	1,608.9	1,594.8	5.8	4.8	172.00	40.3	-136.1	100.2	92.7	7.48	13.392		
1,700.0	1,673.5	1,708.9	1,693.0	6.3	5.2	171.84	44.5	-153.6	104.4	96.4	8.02	13.021		
1,800.0	1,771.0	1,808.8	1,791.3	6.7	5.6	171.70	48.8	-171.2	108.5	100.0	8.55	12.694		
1,900.0	1,868.6	1,908.7	1,889.6	7.2	6.0	171.57	53.0	-188.7	112.7	103.6	9.09	12.404		
2,000.0	1,966.1	2,008.6	1,987.8	7.7	6.4	171.45	57.3	-206.3	116.9	107.3	9.63	12.144		
2,100.0	2,063.6	2,108.5	2,086.1	8.2	6.8	171.33	61.5	-223.8	121.1	110.9	10.17	11.911		
2,200.0	2,161.2	2,208.4	2,184.4	8.7	7.2	171.23	65.8	-241.4	125.3	114.5	10.71	11.700		
2,300.0	2,258.7	2,308.3	2,282.6	9.1	7.6	171.13	70.0	-258.9	129.4	118.2	11.25	11.508		
2,400.0	2,356.3	2,408.2	2,380.9	9.6	8.0	171.03	74.2	-276.5	133.6	121.8	11.79	11.334		
2,500.0	2,453.8	2,508.2	2,479.2	10.1	8.4	170.95	78.5	-294.0	137.8	125.5	12.33	11.174		
2,600.0	2,551.3	2,608.1	2,577.4	10.6	8.8	170.86	82.7	-311.6	142.0	129.1	12.87	11.027		
2,700.0	2,648.9	2,708.0	2,675.7	11.1	9.2	170.79	87.0	-329.1	146.1	132.7	13.42	10.892		
2,800.0	2,746.4	2,807.9	2,774.0	11.6	9.7	170.71	91.2	-346.7	150.3	136.4	13.96	10.766		
2,900.0	2,843.9	2,907.8	2,872.2	12.0	10.1	170.64	95.4	-364.2	154.5	140.0	14.51	10.650		
3,000.0	2,941.5	3,007.7	2,970.5	12.5	10.5	170.58	99.7	-381.8	158.7	143.6	15.05	10.542		
3,100.0	3,039.0	3,107.6	3,068.8	13.0	10.9	170.51	103.9	-399.3	162.9	147.3	15.60	10.442		
3,200.0	3,136.5	3,207.5	3,167.0	13.5	11.3	170.46	108.2	-416.9	167.0	150.9	16.14	10.348		
3,300.0	3,234.1	3,307.5	3,265.3	14.0	11.7	170.40	112.4	-434.4	171.2	154.5	16.69	10.259		
3,400.0	3,331.6	3,407.4	3,363.6	14.5	12.1	170.35	116.6	-452.0	175.4	158.2	17.23	10.177		
3,500.0	3,429.1	3,507.3	3,461.8	14.9	12.5	170.29	120.9	-469.5	179.6	161.8	17.78	10.099		
3,600.0	3,526.7	3,607.2	3,560.1	15.4	13.0	170.25	125.1	-487.1	183.8	165.4	18.33	10.026		
3,700.0	3,624.2	3,707.1	3,658.4	15.9	13.4	170.20	129.4	-504.6	187.9	169.1	18.87	9.957		
3,800.0	3,721.8	3,807.0	3,756.6	16.4	13.8	170.15	133.6	-522.2	192.1	172.7	19.42	9.891		
3,900.0	3,819.3	3,906.9	3,854.9	16.9	14.2	170.11	137.9	-539.7	196.3	176.3	19.97	9.829		
4,000.0	3,916.8	4,006.8	3,953.2	17.4	14.6	170.07	142.1	-557.3	200.5	180.0	20.52	9.771		
4,100.0	4,014.4	4,106.8	4,051.4	17.9	15.0	170.03	146.3	-574.8	204.7	183.6	21.07	9.715		
4,200.0	4,111.9	4,206.7	4,149.7	18.3	15.4	169.99	150.6	-592.4	208.8	187.2	21.61	9.662		
4,300.0	4,209.4	4,306.6	4,248.0	18.8	15.8	169.96	154.8	-609.9	213.0	190.9	22.16	9.612		
4,400.0	4,307.0	4,406.5	4,346.2	19.3	16.3	169.92	159.1	-627.5	217.2	194.5	22.71	9.564		
4,500.0	4,404.5	4,506.4	4,444.5	19.8	16.7	169.89	163.3	-645.0	221.4	198.1	23.26	9.518		
4,600.0	4,502.0	4,606.3	4,542.8	20.3	17.1	169.86	167.5	-662.6	225.6	201.7	23.81	9.475		
4,700.0	4,599.6	4,706.2	4,641.1	20.8	17.5	169.83	171.8	-680.1	229.7	205.4	24.36	9.433		
4,800.0	4,697.1	4,806.1	4,739.3	21.2	17.9	169.80	176.0	-697.7	233.9	209.0	24.90	9.393		
4,900.0	4,794.6	4,906.1	4,837.6	21.7	18.3	169.77	180.3	-715.2	238.1	212.6	25.45	9.355		

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 Honebein 7G-203
Project:	SEC.7-T4N-R64W	TVD Reference:	WELL @ 4861.0ft (RKB - 15')
Reference Site:	Honebein 4N64W7K Pad Sec.7-T4N-R64W	MD Reference:	WELL @ 4861.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Honebein 7G-203	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 (8-14-14)	Offset TVD Reference:	Offset Datum

Offset Design Honebein 4N64W7K Pad Sec.7-T4N-R64W - Honebein 7G-323 - Wellbore #1 - Plan #1 (8-15-14)												Offset Site Error: 0.0 ft	
Survey Program: 0-MWD												Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (ft)	Separation Factor	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset		Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)				Between Centres (ft)	Between Ellipses (ft)
5,000.0	4,892.2	5,006.0	4,935.9	22.2	18.7	169.74	184.5	-732.8	242.3	216.3	26.00	9.318	
5,100.0	4,989.7	5,105.9	5,034.1	22.7	19.1	169.71	188.7	-750.3	246.5	219.9	26.55	9.283	
5,200.0	5,087.3	5,205.8	5,132.4	23.2	19.6	169.69	193.0	-767.9	250.6	223.5	27.10	9.249	
5,300.0	5,184.8	5,305.7	5,230.7	23.7	20.0	169.66	197.2	-785.4	254.8	227.2	27.65	9.216	
5,400.0	5,282.3	5,405.6	5,328.9	24.2	20.4	169.64	201.5	-803.0	259.0	230.8	28.20	9.185	
5,500.0	5,379.9	5,505.5	5,427.2	24.6	20.8	169.61	205.7	-820.5	263.2	234.4	28.75	9.155	
5,590.3	5,468.0	5,595.8	5,516.0	25.1	21.2	169.59	209.5	-836.4	267.0	237.7	29.24	9.129	
5,600.0	5,477.4	5,605.4	5,525.5	25.1	21.2	169.59	210.0	-838.1	267.4	238.1	29.30	9.125	
5,700.0	5,575.4	5,705.4	5,623.8	25.5	21.6	169.50	214.2	-855.6	269.5	239.7	29.82	9.037	
5,800.0	5,674.0	5,800.0	5,716.8	25.8	22.0	169.28	218.2	-872.0	268.5	238.2	30.30	8.861	
5,900.0	5,773.1	5,893.7	5,809.4	26.0	22.2	169.05	221.5	-885.9	266.5	235.9	30.68	8.687	
6,000.0	5,872.6	5,985.4	5,900.5	26.2	22.5	168.84	224.1	-896.7	264.3	233.3	31.01	8.524	
6,100.0	5,972.4	6,077.2	5,991.9	26.4	22.6	168.65	226.0	-904.6	261.8	230.5	31.28	8.369	
6,200.0	6,072.4	6,169.0	6,083.6	26.5	22.8	168.46	227.2	-909.6	259.0	227.5	31.49	8.222	
6,227.6	6,100.0	6,194.4	6,108.9	26.5	22.8	89.28	227.5	-910.5	258.1	226.6	31.55	8.182	
6,300.0	6,172.4	6,261.0	6,175.5	26.6	22.9	89.20	227.8	-911.8	256.7	224.9	31.79	8.076	
6,335.6	6,208.0	6,294.5	6,209.0	26.6	23.0	89.20	227.8	-911.9	256.6	224.7	31.90	8.043	
6,349.9	6,222.3	6,308.8	6,223.3	26.6	23.0	89.20	227.8	-911.9	256.6	224.6	31.95	8.031	
6,400.0	6,272.4	6,358.8	6,273.4	26.7	23.0	-91.17	227.8	-911.9	256.6	224.4	32.18	7.975	
6,450.0	6,322.1	6,408.8	6,323.3	26.7	23.1	-92.21	227.6	-911.9	256.8	224.2	32.51	7.898	
6,500.0	6,371.4	6,459.4	6,373.8	26.8	23.2	-93.41	224.8	-911.9	257.0	224.2	32.85	7.824	
6,550.0	6,420.1	6,510.3	6,424.3	26.8	23.2	-94.59	218.6	-911.9	257.4	224.2	33.16	7.761	
6,600.0	6,468.0	6,561.6	6,474.7	26.8	23.2	-95.76	209.0	-911.9	257.9	224.4	33.44	7.712	
6,650.0	6,514.7	6,613.2	6,524.7	26.8	23.3	-96.90	195.9	-911.9	258.5	224.8	33.67	7.675	
6,700.0	6,560.3	6,665.3	6,574.0	26.8	23.3	-98.01	179.4	-911.9	259.1	225.3	33.86	7.653	
6,750.0	6,604.4	6,717.7	6,622.4	26.8	23.3	-99.09	159.3	-911.9	259.9	225.9	33.99	7.644	
6,800.0	6,646.8	6,770.5	6,669.7	26.8	23.3	-100.12	135.8	-911.9	260.7	226.6	34.09	7.647	
6,850.0	6,687.4	6,823.6	6,715.5	26.8	23.3	-101.10	109.0	-911.9	261.5	227.4	34.14	7.660	
6,900.0	6,726.1	6,877.1	6,759.7	26.9	23.3	-102.04	78.7	-911.9	262.4	228.2	34.17	7.679	
6,950.0	6,762.6	6,931.0	6,801.8	26.9	23.3	-102.91	45.3	-911.9	263.3	229.1	34.19	7.701	
7,000.0	6,796.7	6,985.1	6,841.8	26.9	23.4	-103.73	8.7	-911.9	264.1	229.9	34.21	7.721	
7,050.0	6,828.4	7,039.6	6,879.2	26.9	23.4	-104.48	-30.8	-911.9	265.0	230.7	34.28	7.732	
7,100.0	6,857.5	7,094.4	6,914.0	27.0	23.4	-105.17	-73.2	-911.9	265.9	231.5	34.40	7.729	
7,150.0	6,883.9	7,149.4	6,945.7	27.0	23.5	-105.78	-118.1	-911.9	266.6	232.1	34.59	7.709	
7,200.0	6,907.5	7,204.7	6,974.3	27.1	23.6	-106.32	-165.4	-911.9	267.4	232.5	34.89	7.662	
7,250.0	6,928.1	7,260.2	6,999.4	27.2	23.7	-106.79	-214.9	-911.9	268.0	232.7	35.32	7.587	
7,300.0	6,945.7	7,315.9	7,021.0	27.3	23.8	-107.18	-266.2	-911.9	268.6	232.7	35.90	7.481	
7,350.0	6,960.2	7,371.7	7,038.8	27.5	24.0	-107.49	-319.1	-911.9	269.0	232.4	36.63	7.345	
7,400.0	6,971.6	7,427.7	7,052.7	27.6	24.2	-107.72	-373.3	-911.9	269.3	231.8	37.51	7.180	
7,450.0	6,979.7	7,483.7	7,062.6	27.8	24.5	-107.87	-428.5	-911.9	269.6	231.0	38.55	6.992	
7,500.0	6,984.6	7,539.8	7,068.5	28.1	24.8	-107.94	-484.2	-911.9	269.7	229.9	39.74	6.786	
7,554.6	6,986.2	7,600.7	7,070.2	28.4	25.2	-107.92	-545.1	-911.9	269.6	228.5	41.19	6.547	
7,600.0	6,985.9	7,646.2	7,069.8	28.6	25.6	-107.90	-590.5	-911.9	269.6	227.4	42.17	6.393	
7,700.0	6,985.3	7,746.2	7,069.0	29.3	26.4	-107.85	-690.5	-911.9	269.5	225.1	44.46	6.062	
7,800.0	6,984.7	7,846.2	7,068.1	30.1	27.4	-107.81	-790.5	-911.9	269.5	222.5	46.93	5.742	
7,900.0	6,984.1	7,946.2	7,067.3	31.1	28.5	-107.76	-890.5	-911.9	269.4	219.9	49.55	5.437	
8,000.0	6,983.5	8,046.2	7,066.5	32.1	29.7	-107.72	-990.5	-911.9	269.3	217.0	52.30	5.150	
8,100.0	6,982.9	8,146.2	7,065.6	33.2	31.0	-107.67	-1,090.5	-911.9	269.3	214.1	55.16	4.881	
8,200.0	6,982.3	8,246.2	7,064.8	34.5	32.3	-107.62	-1,190.5	-911.9	269.2	211.1	58.12	4.632	
8,300.0	6,981.7	8,346.2	7,063.9	35.8	33.7	-107.58	-1,290.5	-911.9	269.1	208.0	61.15	4.401	
8,400.0	6,981.1	8,446.2	7,063.1	37.1	35.2	-107.53	-1,390.5	-911.9	269.1	204.8	64.26	4.187	

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 Honebein 7G-203
Project:	SEC.7-T4N-R64W	TVD Reference:	WELL @ 4861.0ft (RKB - 15')
Reference Site:	Honebein 4N64W7K Pad Sec.7-T4N-R64W	MD Reference:	WELL @ 4861.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Honebein 7G-203	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 (8-14-14)	Offset TVD Reference:	Offset Datum

Offset Design Honebein 4N64W7K Pad Sec.7-T4N-R64W - Honebein 7G-323 - Wellbore #1 - Plan #1 (8-15-14)												Offset Site Error: 0.0 ft	
Survey Program: 0-MWD												Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance				Warning		
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses		Minimum Separation	Separation Factor
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)		(ft)	
8,500.0	6,980.4	8,546.2	7,062.3	38.5	36.7	-107.48	-1,490.5	-911.9	269.0	201.6	67.43	3.989	
8,600.0	6,979.8	8,646.2	7,061.4	40.0	38.2	-107.44	-1,590.5	-911.9	268.9	198.3	70.65	3.807	
8,700.0	6,979.2	8,746.2	7,060.6	41.5	39.8	-107.39	-1,690.5	-911.9	268.9	194.9	73.91	3.637	
8,800.0	6,978.6	8,846.2	7,059.8	43.0	41.4	-107.35	-1,790.5	-911.9	268.8	191.6	77.22	3.481	
8,900.0	6,978.0	8,946.2	7,058.9	44.6	43.1	-107.30	-1,890.5	-911.9	268.7	188.2	80.56	3.336	
9,000.0	6,977.4	9,046.2	7,058.1	46.2	44.7	-107.25	-1,990.5	-911.9	268.7	184.7	83.93	3.201	
9,100.0	6,976.8	9,146.2	7,057.2	47.8	46.4	-107.21	-2,090.5	-911.9	268.6	181.3	87.33	3.075	
9,200.0	6,976.2	9,246.2	7,056.4	49.4	48.1	-107.16	-2,190.5	-911.9	268.5	177.8	90.76	2.959	
9,300.0	6,975.6	9,346.2	7,055.6	51.1	49.8	-107.12	-2,290.5	-911.9	268.5	174.2	94.21	2.850	
9,400.0	6,975.0	9,446.2	7,054.7	52.8	51.6	-107.07	-2,390.5	-911.9	268.4	170.7	97.68	2.748	
9,500.0	6,974.3	9,546.2	7,053.9	54.5	53.3	-107.02	-2,490.5	-911.9	268.3	167.2	101.16	2.652	
9,600.0	6,973.7	9,646.2	7,053.1	56.2	55.1	-106.98	-2,590.5	-911.9	268.3	163.6	104.67	2.563	
9,700.0	6,973.1	9,746.2	7,052.2	57.9	56.8	-106.93	-2,690.5	-911.9	268.2	160.0	108.19	2.479	
9,800.0	6,972.5	9,846.2	7,051.4	59.7	58.6	-106.88	-2,790.5	-911.9	268.1	156.4	111.72	2.400	
9,900.0	6,971.9	9,946.2	7,050.5	61.4	60.4	-106.84	-2,890.5	-911.9	268.1	152.8	115.27	2.326	
10,000.0	6,971.3	10,046.2	7,049.7	63.2	62.2	-106.79	-2,990.4	-911.9	268.0	149.2	118.82	2.255	
10,100.0	6,970.7	10,146.2	7,048.9	65.0	64.0	-106.74	-3,090.4	-911.9	267.9	145.5	122.39	2.189	
10,200.0	6,970.1	10,246.2	7,048.0	66.7	65.8	-106.70	-3,190.4	-911.9	267.9	141.9	125.97	2.126	
10,300.0	6,969.5	10,346.2	7,047.2	68.5	67.6	-106.65	-3,290.4	-911.9	267.8	138.2	129.56	2.067	
10,400.0	6,968.8	10,446.2	7,046.3	70.3	69.4	-106.60	-3,390.4	-911.9	267.7	134.6	133.16	2.011	
10,500.0	6,968.2	10,546.2	7,045.5	72.1	71.2	-106.56	-3,490.4	-911.9	267.7	130.9	136.76	1.957	
10,600.0	6,967.6	10,646.2	7,044.7	73.9	73.1	-106.51	-3,590.4	-911.9	267.6	127.2	140.37	1.906	
10,700.0	6,967.0	10,746.2	7,043.8	75.7	74.9	-106.47	-3,690.4	-911.9	267.5	123.5	143.99	1.858	
10,800.0	6,966.4	10,846.2	7,043.0	77.6	76.7	-106.42	-3,790.4	-911.9	267.5	119.8	147.62	1.812	
10,900.0	6,965.8	10,946.2	7,042.2	79.4	78.6	-106.37	-3,890.4	-911.9	267.4	116.2	151.25	1.768	
11,000.0	6,965.2	11,046.2	7,041.3	81.2	80.4	-106.33	-3,990.4	-911.9	267.3	112.5	154.89	1.726	
11,100.0	6,964.6	11,146.2	7,040.5	83.0	82.3	-106.28	-4,090.4	-911.9	267.3	108.7	158.54	1.686	
11,200.0	6,964.0	11,246.2	7,039.6	84.9	84.1	-106.23	-4,190.4	-911.9	267.2	105.0	162.19	1.648	
11,300.0	6,963.3	11,346.2	7,038.8	86.7	86.0	-106.19	-4,290.4	-911.9	267.2	101.3	165.84	1.611	
11,400.0	6,962.7	11,446.2	7,038.0	88.6	87.8	-106.14	-4,390.4	-911.9	267.1	97.6	169.50	1.576	
11,500.0	6,962.1	11,546.2	7,037.1	90.4	89.7	-106.09	-4,490.4	-911.9	267.0	93.9	173.16	1.542	
11,516.2	6,962.0	11,562.2	7,037.0	90.7	90.0	-106.08	-4,506.4	-911.9	267.0	93.3	173.76	1.537	
11,520.3	6,962.0	11,562.2	7,037.0	90.8	90.0	-106.08	-4,506.4	-911.9	267.0	93.2	173.83	1.536 SF	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Honebein 7G-203
Project:	SEC.7-T4N-R64W	TVD Reference:	WELL @ 4861.0ft (RKB - 15')
Reference Site:	Honebein 4N64W7K Pad Sec.7-T4N-R64W	MD Reference:	WELL @ 4861.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Honebein 7G-203	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 (8-14-14)	Offset TVD Reference:	Offset Datum

Offset Design Honebein 4N64W7K Pad Sec.7-T4N-R64W - Honebein 7K-223 - Wellbore #1 - Plan #1 (8-15-14)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	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	4.0	4.0	0.0	0.0	90.00	0.0	119.9	119.9	119.9	0.00	N/A		
100.0	100.0	104.0	104.0	0.1	0.1	90.00	0.0	119.9	119.9	119.7	0.23	512.908		
200.0	200.0	204.0	204.0	0.3	0.3	90.00	0.0	119.9	119.9	119.2	0.68	175.468 CC, ES		
300.0	300.0	304.0	304.0	0.6	0.6	169.29	0.0	119.9	121.6	120.5	1.13	107.544		
400.0	399.8	403.8	403.8	0.8	0.8	169.71	0.0	119.9	126.8	125.2	1.58	80.170		
500.0	499.5	503.5	503.5	1.0	1.0	170.34	0.0	119.9	135.3	133.3	2.04	66.460		
600.0	598.7	602.7	602.7	1.3	1.2	171.09	0.0	119.9	147.4	144.9	2.49	59.071		
700.0	697.5	701.5	701.5	1.7	1.5	171.90	0.0	119.9	162.8	159.9	2.96	55.096		
800.0	795.6	799.6	799.6	2.0	1.7	172.70	0.0	119.9	181.8	178.3	3.42	53.164		
837.3	832.0	836.0	836.0	2.2	1.8	172.99	0.0	119.9	189.7	186.1	3.59	52.809		
900.0	893.2	897.2	897.2	2.5	1.9	173.46	0.0	119.9	203.4	199.6	3.88	52.396		
1,000.0	990.7	994.7	994.7	2.9	2.1	174.10	0.0	119.9	225.4	221.0	4.35	51.805		
1,100.0	1,088.3	1,092.3	1,092.3	3.4	2.3	174.63	0.0	119.9	247.3	242.5	4.82	51.291		
1,200.0	1,185.8	1,189.8	1,189.8	3.9	2.6	175.07	0.0	119.9	269.3	264.0	5.30	50.843		
1,300.0	1,283.4	1,287.4	1,287.4	4.3	2.8	175.44	0.0	119.9	291.3	285.5	5.77	50.453		
1,400.0	1,380.9	1,384.9	1,384.9	4.8	3.0	175.76	0.0	119.9	313.3	307.1	6.25	50.110		
1,500.0	1,478.4	1,482.4	1,482.4	5.3	3.2	176.04	0.0	119.9	335.3	328.6	6.73	49.807		
1,600.0	1,576.0	1,575.1	1,575.1	5.8	3.4	176.13	0.8	120.5	357.9	350.7	7.20	49.689 SF		
1,700.0	1,673.5	1,666.1	1,666.0	6.3	3.6	175.83	3.8	122.9	382.0	374.3	7.67	49.800		
1,800.0	1,771.0	1,756.1	1,755.8	6.7	3.8	175.22	9.0	126.9	407.7	399.6	8.14	50.084		
1,900.0	1,868.6	1,846.4	1,845.6	7.2	4.0	174.35	16.4	132.8	435.1	426.5	8.62	50.476		
2,000.0	1,966.1	1,942.2	1,940.7	7.7	4.3	173.42	25.1	139.5	463.1	454.0	9.11	50.812		
2,100.0	2,063.6	2,037.9	2,035.8	8.2	4.5	172.61	33.7	146.3	491.3	481.6	9.62	51.091		
2,200.0	2,161.2	2,133.7	2,130.9	8.7	4.7	171.88	42.3	153.0	519.5	509.3	10.12	51.319		
2,300.0	2,258.7	2,229.4	2,226.0	9.1	5.0	171.22	51.0	159.8	547.7	537.1	10.64	51.503		
2,400.0	2,356.3	2,325.1	2,321.2	9.6	5.2	170.63	59.6	166.5	576.1	564.9	11.15	51.658		
2,500.0	2,453.8	2,420.9	2,416.3	10.1	5.5	170.10	68.2	173.3	604.5	592.8	11.67	51.786		
2,600.0	2,551.3	2,516.6	2,511.4	10.6	5.8	169.61	76.9	180.0	632.9	620.7	12.20	51.893		
2,700.0	2,648.9	2,612.4	2,606.5	11.1	6.0	169.17	85.5	186.8	661.3	648.6	12.72	51.982		
2,800.0	2,746.4	2,708.1	2,701.6	11.6	6.3	168.76	94.1	193.5	689.8	676.6	13.25	52.057		
2,900.0	2,843.9	2,803.9	2,796.7	12.0	6.6	168.38	102.8	200.3	718.4	704.6	13.78	52.120		
3,000.0	2,941.5	2,899.6	2,891.8	12.5	6.8	168.03	111.4	207.0	746.9	732.6	14.32	52.173		
3,100.0	3,039.0	2,995.3	2,986.9	13.0	7.1	167.71	120.0	213.8	775.5	760.7	14.85	52.218		
3,200.0	3,136.5	3,091.1	3,082.1	13.5	7.4	167.41	128.7	220.5	804.1	788.7	15.39	52.256		
3,300.0	3,234.1	3,186.8	3,177.2	14.0	7.7	167.13	137.3	227.3	832.7	816.8	15.93	52.288		
3,400.0	3,331.6	3,282.6	3,272.3	14.5	7.9	166.87	145.9	234.0	861.4	844.9	16.47	52.315		
3,500.0	3,429.1	3,378.3	3,367.4	14.9	8.2	166.63	154.5	240.8	890.0	873.0	17.01	52.338		
3,600.0	3,526.7	3,474.0	3,462.5	15.4	8.5	166.40	163.2	247.6	918.7	901.1	17.55	52.357		
3,700.0	3,624.2	3,569.8	3,557.6	15.9	8.8	166.19	171.8	254.3	947.4	929.3	18.09	52.373		
3,800.0	3,721.8	3,665.5	3,652.7	16.4	9.1	165.99	180.4	261.1	976.0	957.4	18.63	52.387		

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Honebein 7G-203
Project:	SEC.7-T4N-R64W	TVD Reference:	WELL @ 4861.0ft (RKB - 15')
Reference Site:	Honebein 4N64W7K Pad Sec.7-T4N-R64W	MD Reference:	WELL @ 4861.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Honebein 7G-203	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 (8-14-14)	Offset TVD Reference:	Offset Datum

Offset Design Honebein 4N64W7K Pad Sec.7-T4N-R64W - Honebein 7K-243 - Wellbore #1 - Plan #1 (8-15-15)													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)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.0	0.0	2.0	2.0	0.0	0.0	90.00	0.0	58.6	58.6	58.6	0.00	N/A		
100.0	100.0	102.0	102.0	0.1	0.1	90.00	0.0	58.6	58.6	58.3	0.23	255.401		
200.0	200.0	202.0	202.0	0.3	0.3	90.00	0.0	58.6	58.6	57.9	0.68	86.261 CC, ES		
300.0	300.0	302.0	302.0	0.6	0.6	169.44	0.0	58.6	60.3	59.1	1.13	53.508		
400.0	399.8	401.8	401.8	0.8	0.8	170.26	0.0	58.6	65.4	63.8	1.58	41.491		
500.0	499.5	501.5	501.5	1.0	1.0	171.38	0.0	58.6	74.0	72.0	2.03	36.428		
600.0	598.7	600.7	600.7	1.3	1.2	172.56	0.0	58.6	86.1	83.6	2.49	34.572		
700.0	697.5	699.5	699.5	1.7	1.5	173.67	0.0	58.6	101.6	98.7	2.95	34.441		
800.0	795.6	797.6	797.6	2.0	1.7	174.63	0.0	58.6	120.6	117.2	3.41	35.336		
837.3	832.0	834.0	834.0	2.2	1.8	174.95	0.0	58.6	128.6	125.0	3.59	35.852		
900.0	893.2	895.2	895.2	2.5	1.9	175.44	0.0	58.6	142.4	138.5	3.88	36.726		
1,000.0	990.7	992.7	992.7	2.9	2.1	176.05	0.0	58.6	164.4	160.0	4.34	37.842		
1,100.0	1,088.3	1,096.0	1,095.9	3.4	2.3	176.34	0.8	57.2	185.0	180.2	4.81	38.423		
1,200.0	1,185.8	1,200.9	1,200.8	3.9	2.6	176.13	3.7	52.5	202.4	197.1	5.28	38.296		
1,300.0	1,283.4	1,307.0	1,306.4	4.3	2.8	175.52	8.5	44.5	216.5	210.7	5.77	37.522		
1,400.0	1,380.9	1,409.6	1,408.3	4.8	3.1	174.67	14.9	34.0	227.7	221.5	6.26	36.380		
1,500.0	1,478.4	1,508.9	1,506.8	5.3	3.3	173.88	21.2	23.5	238.7	232.0	6.76	35.324		
1,600.0	1,576.0	1,608.3	1,605.4	5.8	3.6	173.16	27.6	13.0	249.8	242.5	7.26	34.384		
1,700.0	1,673.5	1,707.6	1,704.0	6.3	3.9	172.50	34.0	2.6	260.8	253.0	7.78	33.544		
1,800.0	1,771.0	1,806.9	1,802.6	6.7	4.2	171.89	40.3	-7.9	271.9	263.6	8.29	32.790		
1,900.0	1,868.6	1,906.3	1,901.2	7.2	4.5	171.34	46.7	-18.4	283.1	274.2	8.82	32.110		
2,000.0	1,966.1	2,005.6	1,999.8	7.7	4.7	170.82	53.0	-28.9	294.2	284.9	9.34	31.493		
2,100.0	2,063.6	2,105.0	2,098.3	8.2	5.0	170.34	59.4	-39.4	305.4	295.5	9.87	30.931		
2,200.0	2,161.2	2,204.3	2,196.9	8.7	5.3	169.90	65.8	-49.9	316.6	306.2	10.41	30.419		
2,300.0	2,258.7	2,303.7	2,295.5	9.1	5.6	169.48	72.1	-60.3	327.8	316.8	10.94	29.949		
2,400.0	2,356.3	2,403.0	2,394.1	9.6	5.9	169.10	78.5	-70.8	339.0	327.5	11.49	29.517		
2,500.0	2,453.8	2,502.3	2,492.7	10.1	6.3	168.73	84.8	-81.3	350.2	338.2	12.03	29.118		
2,600.0	2,551.3	2,601.7	2,591.2	10.6	6.6	168.39	91.2	-91.8	361.5	348.9	12.57	28.750		
2,700.0	2,648.9	2,701.0	2,689.8	11.1	6.9	168.08	97.5	-102.3	372.8	359.6	13.12	28.408		
2,800.0	2,746.4	2,800.4	2,788.4	11.6	7.2	167.78	103.9	-112.7	384.0	370.4	13.67	28.090		
2,900.0	2,843.9	2,899.7	2,887.0	12.0	7.5	167.49	110.3	-123.2	395.3	381.1	14.22	27.794		
3,000.0	2,941.5	2,999.1	2,985.6	12.5	7.8	167.22	116.6	-133.7	406.6	391.8	14.78	27.517		
3,100.0	3,039.0	3,098.4	3,084.2	13.0	8.1	166.97	123.0	-144.2	417.9	402.6	15.33	27.258		
3,200.0	3,136.5	3,197.7	3,182.7	13.5	8.4	166.73	129.3	-154.7	429.2	413.3	15.89	27.015		
3,300.0	3,234.1	3,297.1	3,281.3	14.0	8.7	166.50	135.7	-165.2	440.6	424.1	16.45	26.787		
3,400.0	3,331.6	3,396.4	3,379.9	14.5	9.0	166.29	142.1	-175.6	451.9	434.9	17.01	26.572		
3,500.0	3,429.1	3,495.8	3,478.5	14.9	9.4	166.08	148.4	-186.1	463.2	445.6	17.57	26.370		
3,600.0	3,526.7	3,595.1	3,577.1	15.4	9.7	165.89	154.8	-196.6	474.5	456.4	18.13	26.179		
3,700.0	3,624.2	3,694.5	3,675.7	15.9	10.0	165.70	161.1	-207.1	485.9	467.2	18.69	25.998		
3,800.0	3,721.8	3,793.8	3,774.2	16.4	10.3	165.52	167.5	-217.6	497.2	478.0	19.25	25.827		
3,900.0	3,819.3	3,893.1	3,872.8	16.9	10.6	165.35	173.8	-228.1	508.6	488.8	19.82	25.664		
4,000.0	3,916.8	3,992.5	3,971.4	17.4	10.9	165.19	180.2	-238.5	519.9	499.6	20.38	25.510		
4,100.0	4,014.4	4,091.8	4,070.0	17.9	11.3	165.04	186.6	-249.0	531.3	510.3	20.95	25.363		
4,200.0	4,111.9	4,191.2	4,168.6	18.3	11.6	164.89	192.9	-259.5	542.7	521.1	21.51	25.223		
4,300.0	4,209.4	4,290.5	4,267.2	18.8	11.9	164.74	199.3	-270.0	554.0	531.9	22.08	25.090		
4,400.0	4,307.0	4,389.9	4,365.7	19.3	12.2	164.61	205.6	-280.5	565.4	542.7	22.65	24.963		
4,500.0	4,404.5	4,489.2	4,464.3	19.8	12.5	164.47	212.0	-291.0	576.8	553.5	23.22	24.842		
4,600.0	4,502.0	4,588.5	4,562.9	20.3	12.8	164.35	218.4	-301.4	588.1	564.4	23.79	24.726		
4,700.0	4,599.6	4,685.7	4,659.3	20.8	13.1	164.23	224.6	-311.7	599.5	575.2	24.35	24.626		
4,800.0	4,697.1	4,773.3	4,743.5	21.2	13.3	164.22	229.1	-319.2	612.5	587.7	24.82	24.680		
4,900.0	4,794.6	4,854.4	4,827.3	21.7	13.5	164.35	232.4	-324.6	627.8	602.5	25.25	24.858		

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 Honebein 7G-203
Project:	SEC.7-T4N-R64W	TVD Reference:	WELL @ 4861.0ft (RKB - 15')
Reference Site:	Honebein 4N64W7K Pad Sec.7-T4N-R64W	MD Reference:	WELL @ 4861.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Honebein 7G-203	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 (8-14-14)	Offset TVD Reference:	Offset Datum

Offset Design		Honebein 4N64W7K Pad Sec.7-T4N-R64W - Honebein 7K-243 - Wellbore #1 - Plan #1 (8-15-15)											Offset Site Error:	0.0 ft
Survey Program: 0-MWDD													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	4,892.2	4,937.7	4,910.6	22.2	13.7	164.59	234.4	-327.9	645.4	619.7	25.66	25.149		
5,100.0	4,989.7	5,020.2	4,993.0	22.7	13.8	164.95	235.1	-329.0	665.4	639.3	26.05	25.546		
5,200.0	5,087.3	5,116.4	5,089.3	23.2	13.9	165.42	235.1	-329.0	686.7	660.3	26.44	25.970		
5,300.0	5,184.8	5,214.0	5,186.8	23.7	14.1	165.87	235.1	-329.0	708.2	681.3	26.86	26.367		
5,400.0	5,282.3	5,311.5	5,284.3	24.2	14.3	166.29	235.1	-329.0	729.6	702.3	27.28	26.748		
5,500.0	5,379.9	5,409.0	5,381.9	24.6	14.5	166.69	235.1	-329.0	751.1	723.4	27.70	27.116		
5,590.3	5,468.0	5,497.1	5,470.0	25.1	14.6	167.03	235.1	-329.0	770.5	742.4	28.08	27.436		
5,600.0	5,477.4	5,506.6	5,479.4	25.1	14.6	167.07	235.1	-329.0	772.6	744.4	28.13	27.467		
5,700.0	5,575.4	5,604.5	5,577.4	25.5	14.8	167.48	235.1	-329.0	792.1	763.6	28.54	27.752		
5,800.0	5,674.0	5,703.2	5,676.0	25.8	15.0	167.81	235.1	-329.0	808.3	779.4	28.93	27.939		
5,900.0	5,773.1	5,802.3	5,775.1	26.0	15.2	168.06	235.1	-329.0	821.2	791.9	29.29	28.034		
6,000.0	5,872.6	5,901.8	5,874.6	26.2	15.3	168.23	235.1	-329.0	830.7	801.1	29.62	28.043		
6,100.0	5,972.4	6,001.6	5,974.4	26.4	15.5	168.34	235.1	-329.0	836.7	806.8	29.92	27.968		
6,200.0	6,072.4	6,101.6	6,074.4	26.5	15.7	168.39	235.1	-329.0	839.4	809.2	30.18	27.812		
6,227.6	6,100.0	6,129.2	6,102.0	26.5	15.8	89.26	235.1	-329.0	839.5	809.3	30.25	27.753		
6,300.0	6,172.4	6,201.6	6,174.4	26.6	15.9	89.26	235.1	-329.0	839.5	809.0	30.51	27.513		
6,349.9	6,222.3	6,251.7	6,224.5	26.6	16.0	89.27	234.9	-329.0	839.5	808.8	30.69	27.351		
6,400.0	6,272.4	6,302.5	6,275.2	26.7	16.1	-90.66	232.2	-329.0	839.5	808.7	30.84	27.226		
6,450.0	6,322.1	6,353.1	6,325.4	26.7	16.1	-90.59	226.2	-329.0	839.5	808.6	30.94	27.131		
6,500.0	6,371.4	6,403.6	6,375.1	26.8	16.2	-90.51	216.8	-329.0	839.5	808.5	31.02	27.061		
6,550.0	6,420.1	6,454.0	6,423.9	26.8	16.2	-90.44	204.3	-329.0	839.5	808.4	31.08	27.013		
6,600.0	6,468.0	6,504.4	6,471.7	26.8	16.2	-90.36	188.5	-329.0	839.5	808.4	31.12	26.979		
6,650.0	6,514.7	6,554.7	6,518.4	26.8	16.2	-90.27	169.7	-329.0	839.5	808.3	31.14	26.955		
6,700.0	6,560.3	6,604.9	6,563.6	26.8	16.2	-90.19	147.9	-329.0	839.5	808.3	31.17	26.934		
6,750.0	6,604.4	6,655.0	6,607.2	26.8	16.3	-90.11	123.2	-329.0	839.5	808.3	31.20	26.906		
6,800.0	6,646.8	6,705.1	6,649.0	26.8	16.3	-90.03	95.7	-329.0	839.5	808.2	31.25	26.865		
6,822.2	6,665.1	6,727.3	6,667.0	26.8	16.3	-89.99	82.6	-329.0	839.5	808.2	31.28	26.837		
6,850.0	6,687.4	6,755.0	6,688.9	26.8	16.3	-89.94	65.6	-329.0	839.5	808.1	31.32	26.801		
6,900.0	6,726.1	6,804.9	6,726.7	26.9	16.3	-89.86	33.0	-329.0	839.5	808.0	31.43	26.706		
6,950.0	6,762.6	6,854.7	6,762.2	26.9	16.3	-89.78	-1.9	-329.0	839.5	807.9	31.59	26.573		
7,000.0	6,796.7	6,904.5	6,795.3	26.9	16.3	-89.69	-39.0	-329.0	839.5	807.7	31.80	26.395		
7,050.0	6,828.4	6,954.1	6,825.9	26.9	16.4	-89.61	-78.1	-329.0	839.5	807.4	32.08	26.166		
7,100.0	6,857.5	7,003.7	6,853.8	27.0	16.5	-89.54	-119.1	-329.0	839.5	807.0	32.43	25.884		
7,150.0	6,883.9	7,053.2	6,879.0	27.0	16.6	-89.46	-161.7	-329.0	839.5	806.6	32.86	25.548		
7,200.0	6,907.5	7,102.7	6,901.3	27.1	16.8	-89.38	-205.8	-329.1	839.5	806.1	33.37	25.160		
7,250.0	6,928.1	7,152.0	6,920.8	27.2	17.0	-89.31	-251.2	-329.1	839.5	805.6	33.96	24.722		
7,300.0	6,945.7	7,201.3	6,937.2	27.3	17.3	-89.24	-297.6	-329.1	839.5	804.9	34.63	24.242		
7,350.0	6,960.2	7,250.6	6,950.6	27.5	17.6	-89.18	-345.0	-329.1	839.5	804.1	35.39	23.725		
7,400.0	6,971.6	7,300.0	6,960.9	27.6	18.0	-89.12	-393.3	-329.1	839.5	803.3	36.22	23.179		
7,450.0	6,979.7	7,348.9	6,968.0	27.8	18.5	-89.06	-441.7	-329.1	839.6	802.4	37.12	22.616		
7,500.0	6,984.6	7,398.0	6,972.0	28.1	19.0	-89.01	-490.6	-329.1	839.6	801.5	38.09	22.041		
7,554.6	6,986.2	7,451.8	6,973.0	28.4	19.6	-88.96	-544.4	-329.1	839.6	800.4	39.22	21.406		
7,600.0	6,985.9	7,497.2	6,972.9	28.6	20.1	-88.97	-589.8	-329.1	839.6	799.3	40.24	20.866		
7,700.0	6,985.3	7,597.2	6,972.6	29.3	21.3	-89.00	-689.8	-329.1	839.6	796.9	42.64	19.689		
7,800.0	6,984.7	7,697.2	6,972.4	30.1	22.6	-89.02	-789.8	-329.1	839.6	794.3	45.25	18.556		
7,900.0	6,984.1	7,797.2	6,972.2	31.1	24.0	-89.05	-889.8	-329.1	839.6	791.5	48.01	17.485		
8,000.0	6,983.5	7,897.2	6,972.0	32.1	25.5	-89.08	-989.8	-329.1	839.6	788.6	50.92	16.486		
8,100.0	6,982.9	7,997.2	6,971.7	33.2	27.0	-89.10	-1,089.8	-329.1	839.5	785.6	53.95	15.562		
8,200.0	6,982.3	8,097.2	6,971.5	34.5	28.6	-89.13	-1,189.8	-329.1	839.5	782.5	57.07	14.710		
8,300.0	6,981.7	8,197.2	6,971.3	35.8	30.2	-89.15	-1,289.8	-329.1	839.5	779.3	60.28	13.927		
8,400.0	6,981.1	8,297.2	6,971.1	37.1	31.8	-89.18	-1,389.8	-329.1	839.5	776.0	63.56	13.209		

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 Honebein 7G-203
Project:	SEC.7-T4N-R64W	TVD Reference:	WELL @ 4861.0ft (RKB - 15')
Reference Site:	Honebein 4N64W7K Pad Sec.7-T4N-R64W	MD Reference:	WELL @ 4861.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Honebein 7G-203	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 (8-14-14)	Offset TVD Reference:	Offset Datum

Offset Design Honebein 4N64W7K Pad Sec.7-T4N-R64W - Honebein 7K-243 - Wellbore #1 - Plan #1 (8-15-15)												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)		
8,500.0	6,980.4	8,397.2	6,970.8	38.5	33.5	-89.21	-1,489.8	-329.1	839.5	772.6	66.89	12.550	
8,600.0	6,979.8	8,497.2	6,970.6	40.0	35.2	-89.23	-1,589.8	-329.1	839.5	769.2	70.28	11.945	
8,700.0	6,979.2	8,597.2	6,970.4	41.5	36.9	-89.26	-1,689.8	-329.1	839.5	765.8	73.71	11.389	
8,800.0	6,978.6	8,697.2	6,970.1	43.0	38.6	-89.29	-1,789.8	-329.1	839.5	762.3	77.19	10.876	
8,900.0	6,978.0	8,797.2	6,969.9	44.6	40.4	-89.31	-1,889.8	-329.1	839.5	758.8	80.69	10.404	
9,000.0	6,977.4	8,897.2	6,969.7	46.2	42.1	-89.34	-1,989.8	-329.1	839.5	755.3	84.23	9.967	
9,100.0	6,976.8	8,997.2	6,969.5	47.8	43.9	-89.36	-2,089.8	-329.1	839.5	751.7	87.79	9.563	
9,200.0	6,976.2	9,097.2	6,969.2	49.4	45.7	-89.39	-2,189.8	-329.1	839.5	748.1	91.37	9.188	
9,300.0	6,975.6	9,197.2	6,969.0	51.1	47.5	-89.42	-2,289.8	-329.1	839.5	744.5	94.97	8.839	
9,400.0	6,975.0	9,297.2	6,968.8	52.8	49.3	-89.44	-2,389.8	-329.1	839.5	740.9	98.59	8.514	
9,500.0	6,974.3	9,397.2	6,968.6	54.5	51.1	-89.47	-2,489.8	-329.1	839.5	737.2	102.23	8.211	
9,600.0	6,973.7	9,497.2	6,968.3	56.2	53.0	-89.50	-2,589.8	-329.1	839.5	733.6	105.88	7.928	
9,700.0	6,973.1	9,597.2	6,968.1	57.9	54.8	-89.52	-2,689.8	-329.1	839.5	729.9	109.55	7.663	
9,800.0	6,972.5	9,697.2	6,967.9	59.7	56.6	-89.55	-2,789.8	-329.1	839.5	726.2	113.22	7.414	
9,900.0	6,971.9	9,797.2	6,967.7	61.4	58.5	-89.57	-2,889.8	-329.1	839.4	722.5	116.91	7.180	
10,000.0	6,971.3	9,897.2	6,967.4	63.2	60.3	-89.60	-2,989.8	-329.1	839.4	718.8	120.61	6.960	
10,100.0	6,970.7	9,997.2	6,967.2	65.0	62.2	-89.63	-3,089.8	-329.1	839.4	715.1	124.31	6.753	
10,200.0	6,970.1	10,097.2	6,967.0	66.7	64.0	-89.65	-3,189.8	-329.1	839.4	711.4	128.03	6.557	
10,300.0	6,969.5	10,197.2	6,966.7	68.5	65.9	-89.68	-3,289.8	-329.1	839.4	707.7	131.75	6.371	
10,400.0	6,968.8	10,297.2	6,966.5	70.3	67.7	-89.70	-3,389.8	-329.1	839.4	704.0	135.48	6.196	
10,500.0	6,968.2	10,397.2	6,966.3	72.1	69.6	-89.73	-3,489.8	-329.1	839.4	700.2	139.21	6.030	
10,600.0	6,967.6	10,497.2	6,966.1	73.9	71.5	-89.76	-3,589.8	-329.1	839.4	696.5	142.95	5.872	
10,700.0	6,967.0	10,597.2	6,965.8	75.7	73.3	-89.78	-3,689.8	-329.1	839.4	692.7	146.69	5.722	
10,800.0	6,966.4	10,697.2	6,965.6	77.6	75.2	-89.81	-3,789.8	-329.1	839.4	689.0	150.44	5.580	
10,900.0	6,965.8	10,797.2	6,965.4	79.4	77.1	-89.84	-3,889.8	-329.1	839.4	685.2	154.20	5.444	
11,000.0	6,965.2	10,897.2	6,965.2	81.2	79.0	-89.86	-3,989.8	-329.1	839.4	681.5	157.96	5.314	
11,100.0	6,964.6	10,997.2	6,964.9	83.0	80.9	-89.89	-4,089.8	-329.1	839.4	677.7	161.72	5.191	
11,200.0	6,964.0	11,097.2	6,964.7	84.9	82.7	-89.91	-4,189.8	-329.1	839.4	673.9	165.49	5.072	
11,300.0	6,963.3	11,197.2	6,964.5	86.7	84.6	-89.94	-4,289.8	-329.1	839.4	670.2	169.26	4.959	
11,400.0	6,962.7	11,297.2	6,964.2	88.6	86.5	-89.97	-4,389.8	-329.1	839.4	666.4	173.03	4.851	
11,500.0	6,962.1	11,397.2	6,964.0	90.4	88.4	-89.99	-4,489.8	-329.1	839.4	662.6	176.80	4.748	
11,509.1	6,962.1	11,406.3	6,964.0	90.6	88.6	-90.00	-4,498.9	-329.1	839.4	662.3	177.15	4.738	
11,520.3	6,962.0	11,406.6	6,964.0	90.8	88.6	-90.00	-4,499.2	-329.1	839.5	662.1	177.36	4.733 SF	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Honebein 7G-203
Project:	SEC.7-T4N-R64W	TVD Reference:	WELL @ 4861.0ft (RKB - 15')
Reference Site:	Honebein 4N64W7K Pad Sec.7-T4N-R64W	MD Reference:	WELL @ 4861.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Honebein 7G-203	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 (8-14-14)	Offset TVD Reference:	Offset Datum

Offset Design Honebein 4N64W7K Pad Sec.7-T4N-R64W - Honebein 7K-323 - Wellbore #1 - Plan #1 (8-18-14)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	5.0	5.0	0.0	0.0	90.00	90.00	0.0	150.6	150.6	150.6	0.01	N/A	
100.0	100.0	105.0	105.0	0.1	0.1	90.00	90.00	0.0	150.6	150.6	150.3	0.24	637.982	
200.0	200.0	205.0	205.0	0.3	0.3	90.00	90.00	0.0	150.6	150.6	149.9	0.69	219.633 CC, ES	
300.0	300.0	305.0	305.0	0.6	0.6	169.26	169.26	0.0	150.6	152.3	151.1	1.13	134.403	
400.0	399.8	404.8	404.8	0.8	0.8	169.59	169.59	0.0	150.6	157.4	155.8	1.58	99.431	
500.0	499.5	504.5	504.5	1.0	1.0	170.11	170.11	0.0	150.6	166.0	164.0	2.04	81.432	
600.0	598.7	603.7	603.7	1.3	1.2	170.74	170.74	0.0	150.6	178.0	175.5	2.50	71.295	
700.0	697.5	702.5	702.5	1.7	1.5	171.44	171.44	0.0	150.6	193.5	190.5	2.96	65.410	
800.0	795.6	800.6	800.6	2.0	1.7	172.15	172.15	0.0	150.6	212.4	209.0	3.42	62.071	
837.3	832.0	837.0	837.0	2.2	1.8	172.42	172.42	0.0	150.6	220.3	216.7	3.59	61.282	
900.0	893.2	898.2	898.2	2.5	1.9	172.86	172.86	0.0	150.6	234.0	230.1	3.89	60.227	
1,000.0	990.7	995.7	995.7	2.9	2.1	173.48	173.48	0.0	150.6	255.9	251.6	4.35	58.784	
1,100.0	1,088.3	1,085.9	1,085.9	3.4	2.3	173.83	173.83	0.5	151.7	279.1	274.3	4.81	58.038	
1,200.0	1,185.8	1,174.6	1,174.5	3.9	2.5	173.86	173.86	2.1	155.4	304.9	299.7	5.27	57.907 SF	
1,300.0	1,283.4	1,262.0	1,261.6	4.3	2.7	173.66	173.66	4.8	161.5	333.3	327.6	5.72	58.237	
1,400.0	1,380.9	1,347.8	1,347.0	4.8	2.9	173.28	173.28	8.5	169.9	364.3	358.1	6.18	58.910	
1,500.0	1,478.4	1,438.3	1,436.7	5.3	3.1	172.78	172.78	13.3	180.7	397.3	390.7	6.66	59.679	
1,600.0	1,576.0	1,532.6	1,530.1	5.8	3.4	172.33	172.33	18.3	192.1	430.6	423.4	7.13	60.373	
1,700.0	1,673.5	1,626.8	1,623.5	6.3	3.7	171.94	171.94	23.4	203.6	463.8	456.2	7.61	60.941	
1,800.0	1,771.0	1,721.1	1,717.0	6.7	3.9	171.61	171.61	28.4	215.0	497.1	489.0	8.09	61.412	
1,900.0	1,868.6	1,815.3	1,810.4	7.2	4.2	171.31	171.31	33.5	226.5	530.4	521.8	8.58	61.802	
2,000.0	1,966.1	1,909.6	1,903.8	7.7	4.5	171.05	171.05	38.5	237.9	563.7	554.6	9.07	62.129	
2,100.0	2,063.6	2,003.9	1,997.2	8.2	4.8	170.82	170.82	43.6	249.4	597.0	587.5	9.57	62.410	
2,200.0	2,161.2	2,098.1	2,090.7	8.7	5.1	170.62	170.62	48.6	260.8	630.3	620.3	10.06	62.649	
2,300.0	2,258.7	2,192.4	2,184.1	9.1	5.3	170.43	170.43	53.7	272.3	663.7	653.1	10.56	62.855	
2,400.0	2,356.3	2,286.7	2,277.5	9.6	5.6	170.26	170.26	58.7	283.8	697.0	685.9	11.06	63.034	
2,500.0	2,453.8	2,380.9	2,370.9	10.1	5.9	170.11	170.11	63.8	295.2	730.3	718.8	11.56	63.190	
2,600.0	2,551.3	2,475.2	2,464.4	10.6	6.2	169.97	169.97	68.8	306.7	763.7	751.6	12.06	63.327	
2,700.0	2,648.9	2,569.4	2,557.8	11.1	6.5	169.84	169.84	73.9	318.1	797.0	784.5	12.56	63.447	
2,800.0	2,746.4	2,663.7	2,651.2	11.6	6.8	169.73	169.73	78.9	329.6	830.4	817.3	13.07	63.554	
2,900.0	2,843.9	2,758.0	2,744.7	12.0	7.1	169.62	169.62	84.0	341.0	863.7	850.2	13.57	63.648	
3,000.0	2,941.5	2,852.2	2,838.1	12.5	7.5	169.52	169.52	89.0	352.5	897.1	883.0	14.08	63.733	
3,100.0	3,039.0	2,946.5	2,931.5	13.0	7.8	169.43	169.43	94.1	363.9	930.4	915.9	14.58	63.808	
3,200.0	3,136.5	3,040.8	3,024.9	13.5	8.1	169.34	169.34	99.1	375.4	963.8	948.7	15.09	63.876	
3,300.0	3,234.1	3,135.0	3,118.4	14.0	8.4	169.26	169.26	104.2	386.8	997.2	981.6	15.60	63.937	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Honebein 7G-203
Project:	SEC.7-T4N-R64W	TVD Reference:	WELL @ 4861.0ft (RKB - 15')
Reference Site:	Honebein 4N64W7K Pad Sec.7-T4N-R64W	MD Reference:	WELL @ 4861.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Honebein 7G-203	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 (8-14-14)	Offset TVD Reference:	Offset Datum

Offset Design Honebein 4N64W7K Pad Sec.7-T4N-R64W - Honebein 7K-403 - Wellbore #1 - Plan #1 (8-15-14)												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	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	3.0	3.0	0.0	0.0	89.99	0.0	89.2	89.2	89.2	0.00	N/A	
100.0	100.0	103.0	103.0	0.1	0.1	89.99	0.0	89.2	89.2	89.0	0.23	385.405	
200.0	200.0	203.0	203.0	0.3	0.3	89.99	0.0	89.2	89.2	88.5	0.68	131.012 CC, ES	
300.0	300.0	303.0	303.0	0.6	0.6	169.33	0.0	89.2	90.9	89.8	1.13	80.579	
400.0	399.8	402.8	402.8	0.8	0.8	169.89	0.0	89.2	96.1	94.5	1.58	60.857	
500.0	499.5	502.5	502.5	1.0	1.0	170.70	0.0	89.2	104.7	102.6	2.03	51.458	
600.0	598.7	601.7	601.7	1.3	1.2	171.63	0.0	89.2	116.7	114.2	2.49	46.829	
700.0	697.5	700.5	700.5	1.7	1.5	172.58	0.0	89.2	132.2	129.3	2.95	44.772	
800.0	795.6	798.6	798.6	2.0	1.7	173.47	0.0	89.2	151.2	147.7	3.42	44.251	
837.3	832.0	835.0	835.0	2.2	1.8	173.78	0.0	89.2	159.1	155.5	3.59	44.331	
900.0	893.2	896.2	896.2	2.5	1.9	174.28	0.0	89.2	172.9	169.0	3.88	44.561	
1,000.0	990.7	993.7	993.7	2.9	2.1	174.92	0.0	89.2	194.8	190.5	4.35	44.823	
1,100.0	1,088.3	1,091.3	1,091.3	3.4	2.3	175.44	0.0	89.2	216.8	212.0	4.82	45.000	
1,200.0	1,185.8	1,188.8	1,188.8	3.9	2.6	175.86	0.0	89.2	238.8	233.5	5.29	45.122	
1,300.0	1,283.4	1,286.4	1,286.4	4.3	2.8	176.21	0.0	89.2	260.8	255.1	5.77	45.209	
1,400.0	1,380.9	1,383.9	1,383.9	4.8	3.0	176.50	0.0	89.2	282.9	276.6	6.25	45.271	
1,500.0	1,478.4	1,481.4	1,481.4	5.3	3.2	176.76	0.0	89.2	304.9	298.2	6.73	45.315	
1,600.0	1,576.0	1,579.0	1,579.0	5.8	3.4	176.98	0.0	89.2	326.9	319.7	7.21	45.347	
1,700.0	1,673.5	1,676.5	1,676.5	6.3	3.7	177.17	0.0	89.2	349.0	341.3	7.69	45.371	
1,800.0	1,771.0	1,774.0	1,774.0	6.7	3.9	177.34	0.0	89.2	371.0	362.8	8.17	45.388	
1,900.0	1,868.6	1,871.6	1,871.6	7.2	4.1	177.49	0.0	89.2	393.0	384.4	8.66	45.399	
2,000.0	1,966.1	1,969.1	1,969.1	7.7	4.3	177.62	0.0	89.2	415.1	405.9	9.14	45.407	
2,100.0	2,063.6	2,066.8	2,066.8	8.2	4.5	177.63	0.8	89.1	436.9	427.3	9.63	45.361	
2,200.0	2,161.2	2,172.2	2,172.1	8.7	4.8	177.22	5.1	88.4	457.7	447.6	10.12	45.210	
2,300.0	2,258.7	2,273.7	2,273.3	9.1	5.0	176.44	12.8	87.3	477.6	467.0	10.62	44.978	
2,400.0	2,356.3	2,371.5	2,370.7	9.6	5.2	175.63	21.3	86.0	497.3	486.2	11.12	44.742	
2,500.0	2,453.8	2,469.3	2,468.2	10.1	5.4	174.89	29.8	84.7	517.1	505.5	11.62	44.512	
2,600.0	2,551.3	2,567.1	2,565.6	10.6	5.7	174.19	38.2	83.4	537.0	524.8	12.12	44.287	
2,700.0	2,648.9	2,664.9	2,663.0	11.1	5.9	173.55	46.7	82.1	556.9	544.3	12.64	44.069	
2,800.0	2,746.4	2,762.7	2,760.4	11.6	6.1	172.95	55.1	80.8	576.9	563.8	13.15	43.856	
2,900.0	2,843.9	2,860.5	2,857.9	12.0	6.4	172.39	63.6	79.6	597.0	583.3	13.68	43.651	
3,000.0	2,941.5	2,958.3	2,955.3	12.5	6.6	171.87	72.1	78.3	617.1	602.9	14.20	43.454	
3,100.0	3,039.0	3,056.1	3,052.7	13.0	6.9	171.38	80.5	77.0	637.2	622.5	14.73	43.263	
3,200.0	3,136.5	3,154.0	3,150.2	13.5	7.1	170.92	89.0	75.7	657.4	642.2	15.26	43.080	
3,300.0	3,234.1	3,251.8	3,247.6	14.0	7.4	170.48	97.4	74.4	677.7	661.9	15.79	42.904	
3,400.0	3,331.6	3,349.6	3,345.0	14.5	7.6	170.08	105.9	73.1	697.9	681.6	16.33	42.735	
3,500.0	3,429.1	3,447.4	3,442.5	14.9	7.9	169.69	114.4	71.8	718.2	701.4	16.87	42.572	
3,600.0	3,526.7	3,545.2	3,539.9	15.4	8.1	169.33	122.8	70.5	738.6	721.2	17.41	42.416	
3,700.0	3,624.2	3,643.0	3,637.3	15.9	8.4	168.98	131.3	69.3	758.9	741.0	17.96	42.266	
3,800.0	3,721.8	3,740.8	3,734.8	16.4	8.6	168.66	139.7	68.0	779.3	760.8	18.50	42.122	
3,900.0	3,819.3	3,838.6	3,832.2	16.9	8.9	168.35	148.2	66.7	799.7	780.7	19.05	41.984	
4,000.0	3,916.8	3,936.4	3,929.6	17.4	9.1	168.05	156.7	65.4	820.1	800.5	19.60	41.851	
4,100.0	4,014.4	4,034.2	4,027.1	17.9	9.4	167.77	165.1	64.1	840.6	820.4	20.15	41.724	
4,200.0	4,111.9	4,132.0	4,124.5	18.3	9.6	167.51	173.6	62.8	861.1	840.4	20.70	41.601	
4,300.0	4,209.4	4,229.8	4,221.9	18.8	9.9	167.25	182.0	61.5	881.5	860.3	21.25	41.483	
4,400.0	4,307.0	4,327.6	4,319.3	19.3	10.2	167.01	190.5	60.3	902.0	880.2	21.80	41.370	
4,500.0	4,404.5	4,425.4	4,416.8	19.8	10.4	166.78	199.0	59.0	922.6	900.2	22.36	41.261	
4,600.0	4,502.0	4,523.2	4,514.2	20.3	10.7	166.56	207.4	57.7	943.1	920.2	22.91	41.155	
4,700.0	4,599.6	4,621.1	4,611.6	20.8	10.9	166.34	215.9	56.4	963.6	940.1	23.47	41.054	
4,800.0	4,697.1	4,718.9	4,709.1	21.2	11.2	166.14	224.3	55.1	984.2	960.1	24.03	40.957 SF	

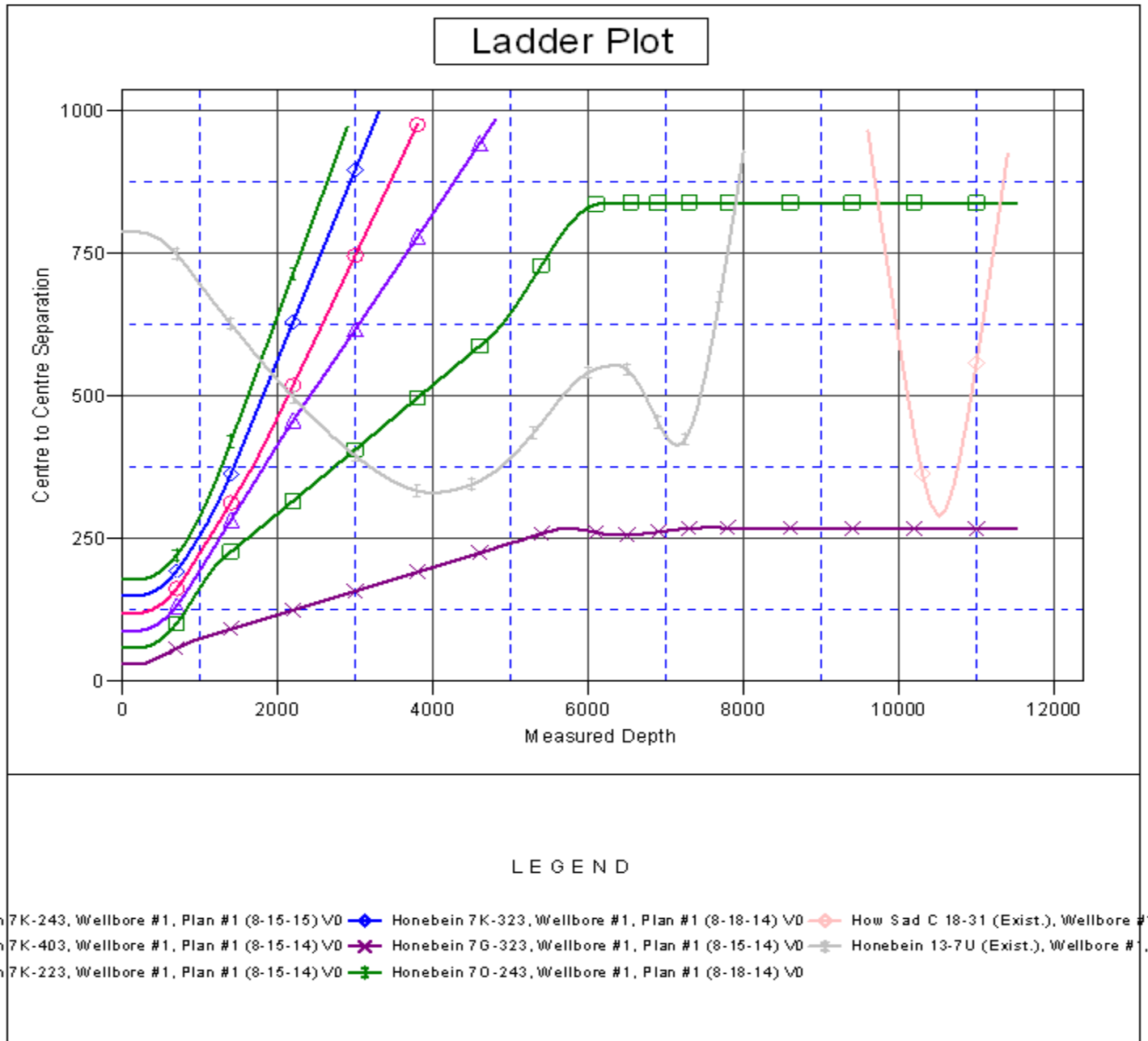
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Honebein 7G-203
Project:	SEC.7-T4N-R64W	TVD Reference:	WELL @ 4861.0ft (RKB - 15')
Reference Site:	Honebein 4N64W7K Pad Sec.7-T4N-R64W	MD Reference:	WELL @ 4861.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Honebein 7G-203	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 (8-14-14)	Offset TVD Reference:	Offset Datum

Offset Design Honebein 4N64W7K Pad Sec.7-T4N-R64W - Honebein 7O-243 - Wellbore #1 - Plan #1 (8-18-14)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	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	6.0	6.0	0.0	0.0	90.00	0.0	178.4	178.4	178.4	0.01	N/A		
100.0	100.0	106.0	106.0	0.1	0.1	90.00	0.0	178.4	178.4	178.2	0.24	748.994		
200.0	200.0	206.0	206.0	0.3	0.4	90.00	0.0	178.4	178.4	177.8	0.69	259.455 CC, ES		
300.0	300.0	306.0	306.0	0.6	0.6	169.24	0.0	178.4	180.2	179.0	1.14	158.701		
400.0	399.8	405.8	405.8	0.8	0.8	169.52	0.0	178.4	185.3	183.7	1.59	116.879		
500.0	499.5	505.5	505.5	1.0	1.0	169.96	0.0	178.4	193.9	191.8	2.04	95.006		
600.0	598.7	604.7	604.7	1.3	1.2	170.51	0.0	178.4	205.9	203.4	2.50	82.385		
700.0	697.5	703.5	703.5	1.7	1.5	171.13	0.0	178.4	221.3	218.4	2.96	74.770		
800.0	795.6	800.0	800.0	2.0	1.7	171.76	0.0	178.4	240.2	236.8	3.42	70.229		
837.3	832.0	835.2	835.2	2.2	1.8	171.98	0.1	178.7	248.4	244.8	3.59	69.186		
900.0	893.2	891.4	891.4	2.5	1.9	172.27	0.5	179.8	263.3	259.5	3.87	68.010		
1,000.0	990.7	980.0	979.8	2.9	2.1	172.49	1.7	183.8	289.5	285.2	4.32	66.950		
1,100.0	1,088.3	1,067.1	1,066.7	3.4	2.3	172.50	3.8	190.3	318.4	313.6	4.78	66.629 SF		
1,200.0	1,185.8	1,152.7	1,151.8	3.9	2.5	172.34	6.7	199.1	350.0	344.7	5.23	66.854		
1,300.0	1,283.4	1,236.6	1,234.9	4.3	2.7	172.06	10.2	210.0	384.2	378.5	5.69	67.465		
1,400.0	1,380.9	1,324.4	1,321.6	4.8	3.0	171.70	14.6	223.6	420.6	414.4	6.17	68.198		
1,500.0	1,478.4	1,417.4	1,413.2	5.3	3.2	171.36	19.4	238.3	457.3	450.7	6.64	68.886		
1,600.0	1,576.0	1,510.4	1,504.9	5.8	3.5	171.07	24.1	253.0	494.1	487.0	7.12	69.426		
1,700.0	1,673.5	1,603.3	1,596.6	6.3	3.9	170.82	28.9	267.7	530.9	523.3	7.60	69.858		
1,800.0	1,771.0	1,696.3	1,688.3	6.7	4.2	170.60	33.6	282.4	567.7	559.6	8.09	70.198		
1,900.0	1,868.6	1,789.3	1,780.0	7.2	4.5	170.41	38.4	297.1	604.4	595.9	8.58	70.469		
2,000.0	1,966.1	1,882.2	1,871.6	7.7	4.8	170.24	43.1	311.8	641.2	632.2	9.07	70.698		
2,100.0	2,063.6	1,975.2	1,963.3	8.2	5.2	170.09	47.9	326.5	678.0	668.5	9.57	70.885		
2,200.0	2,161.2	2,068.2	2,055.0	8.7	5.5	169.95	52.6	341.2	714.8	704.8	10.06	71.040		
2,300.0	2,258.7	2,161.1	2,146.7	9.1	5.8	169.83	57.3	355.9	751.6	741.1	10.56	71.168		
2,400.0	2,356.3	2,254.1	2,238.3	9.6	6.2	169.72	62.1	370.5	788.4	777.4	11.06	71.275		
2,500.0	2,453.8	2,347.1	2,330.0	10.1	6.5	169.62	66.8	385.2	825.2	813.7	11.56	71.365		
2,600.0	2,551.3	2,440.1	2,421.7	10.6	6.9	169.53	71.6	399.9	862.0	850.0	12.07	71.440		
2,700.0	2,648.9	2,533.0	2,513.4	11.1	7.2	169.44	76.3	414.6	898.9	886.3	12.57	71.504		
2,800.0	2,746.4	2,626.0	2,605.1	11.6	7.6	169.37	81.1	429.3	935.7	922.6	13.08	71.558		
2,900.0	2,843.9	2,719.0	2,696.7	12.0	7.9	169.29	85.8	444.0	972.5	958.9	13.58	71.604		

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Honebein 7G-203
Project:	SEC.7-T4N-R64W	TVD Reference:	WELL @ 4861.0ft (RKB - 15')
Reference Site:	Honebein 4N64W7K Pad Sec.7-T4N-R64W	MD Reference:	WELL @ 4861.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Honebein 7G-203	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 (8-14-14)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4861.0ft (RKB - 15')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Honebein 7G-203
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.58°



Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Honebein 7G-203
Project:	SEC.7-T4N-R64W	TVD Reference:	WELL @ 4861.0ft (RKB - 15')
Reference Site:	Honebein 4N64W7K Pad Sec.7-T4N-R64W	MD Reference:	WELL @ 4861.0ft (RKB - 15')
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