

PETROLEUM DEVELOPMENT CORP Weld County CO

Well Name: **Loloff Farms 26I-212**

Surface Location: Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 4678.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1376854.66	3271600.86	40.363770	-104.525310	

Original Well Elev WELL @ 4693.0ft (Original Well Elev)

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 236'FSL & 290'FWL, Sec.26	1.0	0.0	0.0	Point
BHL 405'FSL & 2143'FWL, Sec.25	6557.0	179.5	7131.1	Point

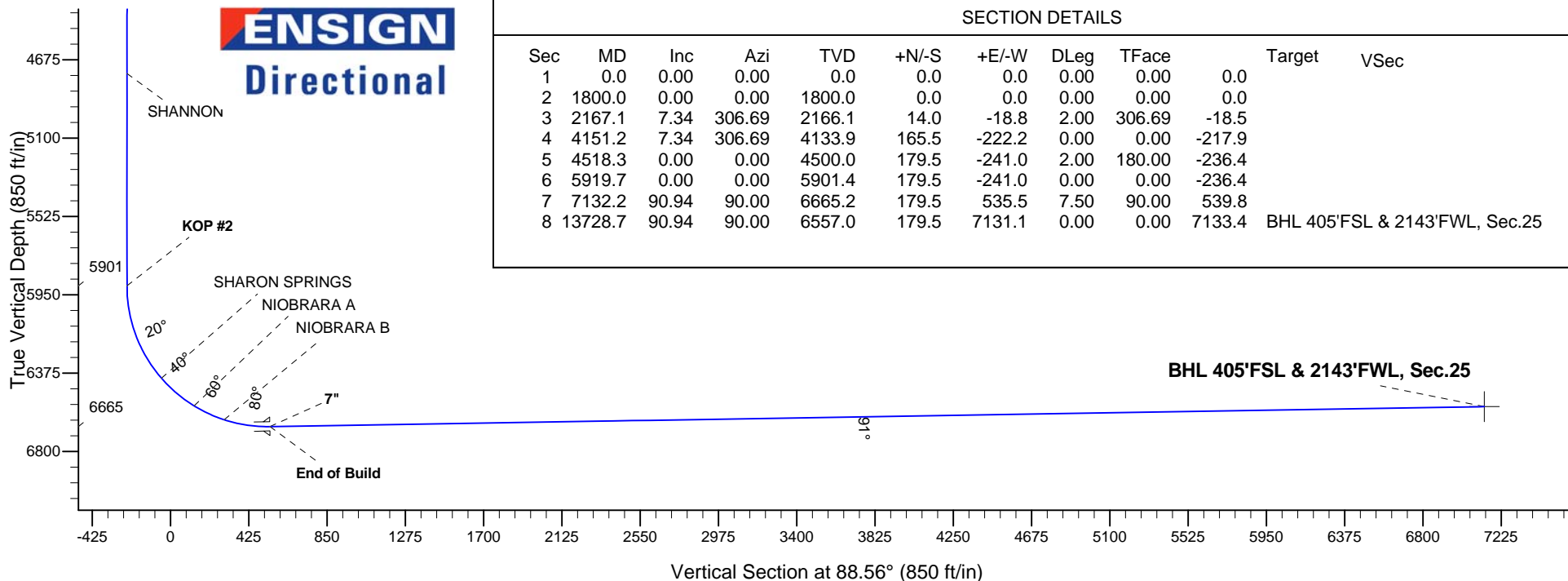
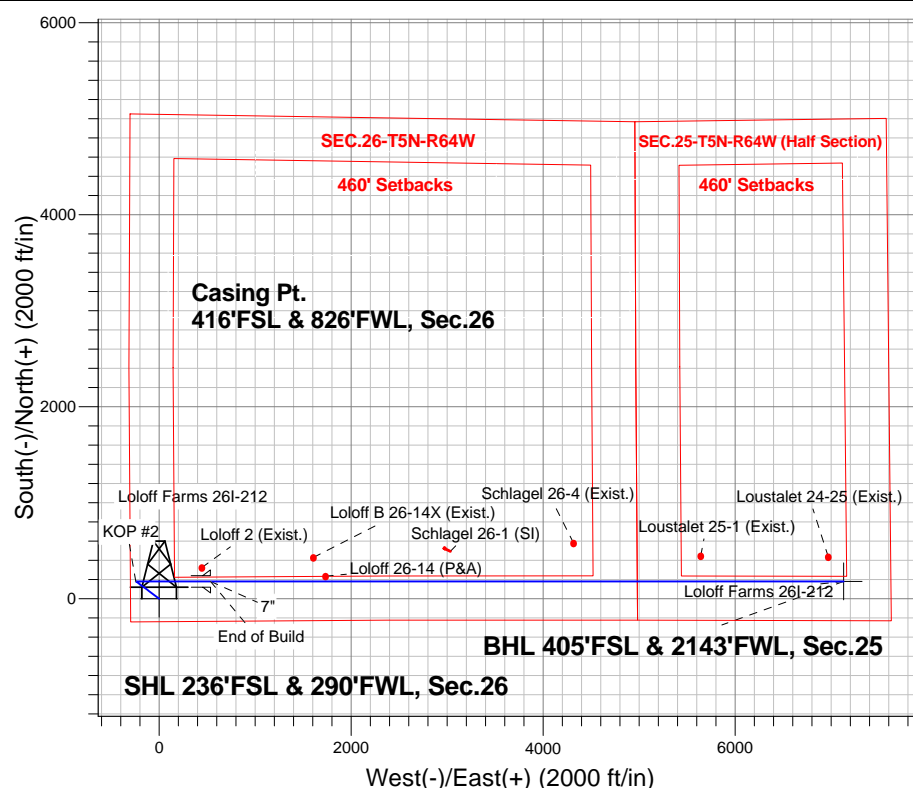


Azimuths to True North
 Magnetic North: 8.31°
 Magnetic Field
 Strength: 52805.3snT
 Dip Angle: 66.95°
 Date: 8/13/2014
 Model: IGRF2010

ANNOTATIONS

TVD	MD	Annotation
1800.0	1800.0	KOP #1
5901.4	5919.7	KOP #2
6665.2	7132.2	End of Build

Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W
 Loloff Farms 26I-212
 Plan #1 (8-13-14)
 14:18, August 15 2014





PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.26-T5N-R64W

Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W

Loloff Farms 26I-212

Wellbore #1

Plan: Plan #1 (8-13-14)

Standard Planning Report

15 August, 2014

Database:	Landmark	Local Co-ordinate Reference:	Well Loloff Farms 26I-212
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4693.0ft (Original Well Elev)
Project:	SEC.26-T5N-R64W	MD Reference:	WELL @ 4693.0ft (Original Well Elev)
Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	North Reference:	True
Well:	Loloff Farms 26I-212	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-13-14)		

Project	SEC.26-T5N-R64W, Weld County, CO		
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						Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W											
Site Position:						Northing:			1,376,850.35 ft			Latitude:			40.363760		
From:			Lat/Long			Easting:			3,271,539.60 ft			Longitude:			-104.525530		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.63 °		

Well	Loloff Farms 26I-212					
Well Position	+N/-S	3.6 ft	Northing:	1,376,854.66 ft	Latitude:	40.363770
	+E/-W	61.3 ft	Easting:	3,271,600.86 ft	Longitude:	-104.525310
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,678.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/13/2014	8.31	66.95	52,805

Design	Plan #1 (8-13-14)			
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	88.56

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	
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,167.1	7.34	306.69	2,166.1	14.0	-18.8	2.00	2.00	0.00	306.69	
4,151.2	7.34	306.69	4,133.9	165.5	-222.2	0.00	0.00	0.00	0.00	
4,518.3	0.00	0.00	4,500.0	179.5	-241.0	2.00	-2.00	0.00	180.00	
5,919.7	0.00	0.00	5,901.4	179.5	-241.0	0.00	0.00	0.00	0.00	
7,132.2	90.94	90.00	6,665.2	179.5	535.5	7.50	7.50	0.00	90.00	
13,728.7	90.94	90.00	6,557.0	179.5	7,131.1	0.00	0.00	0.00	0.00	BHL 405'FSL & 214

Database:	Landmark	Local Co-ordinate Reference:	Well Loloff Farms 26I-212
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4693.0ft (Original Well Elev)
Project:	SEC.26-T5N-R64W	MD Reference:	WELL @ 4693.0ft (Original Well Elev)
Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	North Reference:	True
Well:	Loloff Farms 26I-212	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-13-14)		

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 236'FSL & 290'FWL, Sec.26									
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
300.0	0.00	0.00	300.0	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
500.0	0.00	0.00	500.0	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
700.0	0.00	0.00	700.0	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
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP #1									
1,900.0	2.00	306.69	1,900.0	1.0	-1.4	-1.4	2.00	2.00	0.00
2,000.0	4.00	306.69	1,999.8	4.2	-5.6	-5.5	2.00	2.00	0.00
2,100.0	6.00	306.69	2,099.5	9.4	-12.6	-12.3	2.00	2.00	0.00
2,167.1	7.34	306.69	2,166.1	14.0	-18.8	-18.5	2.00	2.00	0.00
2,200.0	7.34	306.69	2,198.7	16.5	-22.2	-21.8	0.00	0.00	0.00
2,300.0	7.34	306.69	2,297.9	24.2	-32.5	-31.8	0.00	0.00	0.00
2,400.0	7.34	306.69	2,397.1	31.8	-42.7	-41.9	0.00	0.00	0.00
2,500.0	7.34	306.69	2,496.3	39.4	-53.0	-51.9	0.00	0.00	0.00
2,600.0	7.34	306.69	2,595.4	47.1	-63.2	-62.0	0.00	0.00	0.00
2,700.0	7.34	306.69	2,694.6	54.7	-73.4	-72.0	0.00	0.00	0.00
2,800.0	7.34	306.69	2,793.8	62.4	-83.7	-82.1	0.00	0.00	0.00
2,900.0	7.34	306.69	2,893.0	70.0	-93.9	-92.2	0.00	0.00	0.00
3,000.0	7.34	306.69	2,992.2	77.6	-104.2	-102.2	0.00	0.00	0.00
3,100.0	7.34	306.69	3,091.3	85.3	-114.4	-112.3	0.00	0.00	0.00
3,200.0	7.34	306.69	3,190.5	92.9	-124.7	-122.3	0.00	0.00	0.00
3,300.0	7.34	306.69	3,289.7	100.5	-134.9	-132.4	0.00	0.00	0.00
3,400.0	7.34	306.69	3,388.9	108.2	-145.2	-142.4	0.00	0.00	0.00
3,500.0	7.34	306.69	3,488.1	115.8	-155.4	-152.5	0.00	0.00	0.00
3,535.2	7.34	306.69	3,523.0	118.5	-159.0	-156.0	0.00	0.00	0.00
PARKMAN									
3,600.0	7.34	306.69	3,587.2	123.4	-165.7	-162.5	0.00	0.00	0.00
3,700.0	7.34	306.69	3,686.4	131.1	-175.9	-172.6	0.00	0.00	0.00
3,800.0	7.34	306.69	3,785.6	138.7	-186.2	-182.6	0.00	0.00	0.00
3,900.0	7.34	306.69	3,884.8	146.3	-196.4	-192.7	0.00	0.00	0.00
4,000.0	7.34	306.69	3,984.0	154.0	-206.7	-202.7	0.00	0.00	0.00
4,100.0	7.34	306.69	4,083.1	161.6	-216.9	-212.8	0.00	0.00	0.00
4,151.2	7.34	306.69	4,133.9	165.5	-222.2	-217.9	0.00	0.00	0.00
4,183.5	6.70	306.69	4,166.0	167.9	-225.3	-221.0	2.00	-2.00	0.00
SUSSEX									
4,200.0	6.37	306.69	4,182.4	169.0	-226.8	-222.5	2.00	-2.00	0.00

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Project:	SEC.26-T5N-R64W	MD Reference:	WELL @ 4693.0ft (Original Well Elev)
Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	North Reference:	True
Well:	Loloff Farms 26I-212	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-13-14)		

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)
4,300.0	4.37	306.69	4,281.9	174.6	-234.3	-229.9	2.00	-2.00	0.00
4,400.0	2.37	306.69	4,381.8	178.1	-239.0	-234.5	2.00	-2.00	0.00
4,500.0	0.37	306.69	4,481.7	179.5	-241.0	-236.4	2.00	-2.00	0.00
4,518.3	0.00	0.00	4,500.0	179.5	-241.0	-236.4	2.00	-2.00	0.00
4,600.0	0.00	0.00	4,581.7	179.5	-241.0	-236.4	0.00	0.00	0.00
4,700.0	0.00	0.00	4,681.7	179.5	-241.0	-236.4	0.00	0.00	0.00
4,768.3	0.00	0.00	4,750.0	179.5	-241.0	-236.4	0.00	0.00	0.00
SHANNON									
4,800.0	0.00	0.00	4,781.7	179.5	-241.0	-236.4	0.00	0.00	0.00
4,900.0	0.00	0.00	4,881.7	179.5	-241.0	-236.4	0.00	0.00	0.00
5,000.0	0.00	0.00	4,981.7	179.5	-241.0	-236.4	0.00	0.00	0.00
5,100.0	0.00	0.00	5,081.7	179.5	-241.0	-236.4	0.00	0.00	0.00
5,200.0	0.00	0.00	5,181.7	179.5	-241.0	-236.4	0.00	0.00	0.00
5,300.0	0.00	0.00	5,281.7	179.5	-241.0	-236.4	0.00	0.00	0.00
5,400.0	0.00	0.00	5,381.7	179.5	-241.0	-236.4	0.00	0.00	0.00
5,500.0	0.00	0.00	5,481.7	179.5	-241.0	-236.4	0.00	0.00	0.00
5,600.0	0.00	0.00	5,581.7	179.5	-241.0	-236.4	0.00	0.00	0.00
5,700.0	0.00	0.00	5,681.7	179.5	-241.0	-236.4	0.00	0.00	0.00
5,800.0	0.00	0.00	5,781.7	179.5	-241.0	-236.4	0.00	0.00	0.00
5,900.0	0.00	0.00	5,881.7	179.5	-241.0	-236.4	0.00	0.00	0.00
5,919.7	0.00	0.00	5,901.4	179.5	-241.0	-236.4	0.00	0.00	0.00
KOP #2									
6,000.0	6.03	90.00	5,981.6	179.5	-236.8	-232.2	7.50	7.50	0.00
6,100.0	13.53	90.00	6,080.1	179.5	-219.8	-215.2	7.50	7.50	0.00
6,200.0	21.03	90.00	6,175.5	179.5	-190.1	-185.6	7.50	7.50	0.00
6,300.0	28.53	90.00	6,266.2	179.5	-148.3	-143.7	7.50	7.50	0.00
6,400.0	36.03	90.00	6,350.7	179.5	-94.9	-90.3	7.50	7.50	0.00
6,466.9	41.04	90.00	6,403.0	179.5	-53.2	-48.7	7.50	7.50	0.00
SHARON SPRINGS									
6,500.0	43.53	90.00	6,427.5	179.5	-31.0	-26.4	7.50	7.50	0.00
6,600.0	51.03	90.00	6,495.3	179.5	42.4	47.0	7.50	7.50	0.00
6,700.0	58.53	90.00	6,552.9	179.5	124.1	128.6	7.50	7.50	0.00
6,700.1	58.53	90.00	6,553.0	179.5	124.2	128.7	0.00	0.00	0.00
NIOBRARA A									
6,800.0	66.03	90.00	6,599.4	179.5	212.5	217.0	7.51	7.51	0.00
6,879.9	72.02	90.00	6,628.0	179.5	287.1	291.5	7.50	7.50	0.00
NIOBRARA B									
6,900.0	73.53	90.00	6,634.0	179.5	306.3	310.7	7.50	7.50	0.00
7,000.0	81.03	90.00	6,656.0	179.5	403.8	408.2	7.50	7.50	0.00
7,100.0	88.53	90.00	6,665.1	179.5	503.3	507.7	7.50	7.50	0.00
7,132.2	90.94	90.00	6,665.2	179.5	535.5	539.8	7.50	7.50	0.00
End of Build - 7"									
7,200.0	90.94	90.00	6,664.1	179.5	603.3	607.6	0.00	0.00	0.00
7,300.0	90.94	90.00	6,662.5	179.5	703.3	707.6	0.00	0.00	0.00
7,400.0	90.94	90.00	6,660.8	179.5	803.3	807.5	0.00	0.00	0.00
7,500.0	90.94	90.00	6,659.2	179.5	903.2	907.5	0.00	0.00	0.00
7,600.0	90.94	90.00	6,657.5	179.5	1,003.2	1,007.4	0.00	0.00	0.00
7,700.0	90.94	90.00	6,655.9	179.5	1,103.2	1,107.4	0.00	0.00	0.00
7,800.0	90.94	90.00	6,654.3	179.5	1,203.2	1,207.3	0.00	0.00	0.00
7,900.0	90.94	90.00	6,652.6	179.5	1,303.2	1,307.3	0.00	0.00	0.00
8,000.0	90.94	90.00	6,651.0	179.5	1,403.2	1,407.2	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Loloff Farms 26I-212
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Project:	SEC.26-T5N-R64W	MD Reference:	WELL @ 4693.0ft (Original Well Elev)
Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	North Reference:	True
Well:	Loloff Farms 26I-212	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-13-14)		

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)
8,100.0	90.94	90.00	6,649.3	179.5	1,503.2	1,507.2	0.00	0.00	0.00
8,200.0	90.94	90.00	6,647.7	179.5	1,603.1	1,607.2	0.00	0.00	0.00
8,300.0	90.94	90.00	6,646.1	179.5	1,703.1	1,707.1	0.00	0.00	0.00
8,400.0	90.94	90.00	6,644.4	179.5	1,803.1	1,807.1	0.00	0.00	0.00
8,500.0	90.94	90.00	6,642.8	179.5	1,903.1	1,907.0	0.00	0.00	0.00
8,600.0	90.94	90.00	6,641.1	179.5	2,003.1	2,007.0	0.00	0.00	0.00
8,700.0	90.94	90.00	6,639.5	179.5	2,103.1	2,106.9	0.00	0.00	0.00
8,800.0	90.94	90.00	6,637.9	179.5	2,203.1	2,206.9	0.00	0.00	0.00
8,900.0	90.94	90.00	6,636.2	179.5	2,303.1	2,306.8	0.00	0.00	0.00
9,000.0	90.94	90.00	6,634.6	179.5	2,403.0	2,406.8	0.00	0.00	0.00
9,100.0	90.94	90.00	6,632.9	179.5	2,503.0	2,506.8	0.00	0.00	0.00
9,200.0	90.94	90.00	6,631.3	179.5	2,603.0	2,606.7	0.00	0.00	0.00
9,300.0	90.94	90.00	6,629.7	179.5	2,703.0	2,706.7	0.00	0.00	0.00
9,400.0	90.94	90.00	6,628.0	179.5	2,803.0	2,806.6	0.00	0.00	0.00
9,500.0	90.94	90.00	6,626.4	179.5	2,903.0	2,906.6	0.00	0.00	0.00
9,600.0	90.94	90.00	6,624.7	179.5	3,003.0	3,006.5	0.00	0.00	0.00
9,700.0	90.94	90.00	6,623.1	179.5	3,102.9	3,106.5	0.00	0.00	0.00
9,800.0	90.94	90.00	6,621.5	179.5	3,202.9	3,206.4	0.00	0.00	0.00
9,900.0	90.94	90.00	6,619.8	179.5	3,302.9	3,306.4	0.00	0.00	0.00
10,000.0	90.94	90.00	6,618.2	179.5	3,402.9	3,406.3	0.00	0.00	0.00
10,100.0	90.94	90.00	6,616.5	179.5	3,502.9	3,506.3	0.00	0.00	0.00
10,200.0	90.94	90.00	6,614.9	179.5	3,602.9	3,606.3	0.00	0.00	0.00
10,300.0	90.94	90.00	6,613.2	179.5	3,702.9	3,706.2	0.00	0.00	0.00
10,400.0	90.94	90.00	6,611.6	179.5	3,802.9	3,806.2	0.00	0.00	0.00
10,500.0	90.94	90.00	6,610.0	179.5	3,902.8	3,906.1	0.00	0.00	0.00
10,600.0	90.94	90.00	6,608.3	179.5	4,002.8	4,006.1	0.00	0.00	0.00
10,700.0	90.94	90.00	6,606.7	179.5	4,102.8	4,106.0	0.00	0.00	0.00
10,800.0	90.94	90.00	6,605.0	179.5	4,202.8	4,206.0	0.00	0.00	0.00
10,900.0	90.94	90.00	6,603.4	179.5	4,302.8	4,305.9	0.00	0.00	0.00
11,000.0	90.94	90.00	6,601.8	179.5	4,402.8	4,405.9	0.00	0.00	0.00
11,100.0	90.94	90.00	6,600.1	179.5	4,502.8	4,505.8	0.00	0.00	0.00
11,200.0	90.94	90.00	6,598.5	179.5	4,602.7	4,605.8	0.00	0.00	0.00
11,300.0	90.94	90.00	6,596.8	179.5	4,702.7	4,705.8	0.00	0.00	0.00
11,400.0	90.94	90.00	6,595.2	179.5	4,802.7	4,805.7	0.00	0.00	0.00
11,500.0	90.94	90.00	6,593.6	179.5	4,902.7	4,905.7	0.00	0.00	0.00
11,600.0	90.94	90.00	6,591.9	179.5	5,002.7	5,005.6	0.00	0.00	0.00
11,700.0	90.94	90.00	6,590.3	179.5	5,102.7	5,105.6	0.00	0.00	0.00
11,800.0	90.94	90.00	6,588.6	179.5	5,202.7	5,205.5	0.00	0.00	0.00
11,900.0	90.94	90.00	6,587.0	179.5	5,302.6	5,305.5	0.00	0.00	0.00
12,000.0	90.94	90.00	6,585.4	179.5	5,402.6	5,405.4	0.00	0.00	0.00
12,100.0	90.94	90.00	6,583.7	179.5	5,502.6	5,505.4	0.00	0.00	0.00
12,200.0	90.94	90.00	6,582.1	179.5	5,602.6	5,605.4	0.00	0.00	0.00
12,300.0	90.94	90.00	6,580.4	179.5	5,702.6	5,705.3	0.00	0.00	0.00
12,400.0	90.94	90.00	6,578.8	179.5	5,802.6	5,805.3	0.00	0.00	0.00
12,500.0	90.94	90.00	6,577.2	179.5	5,902.6	5,905.2	0.00	0.00	0.00
12,600.0	90.94	90.00	6,575.5	179.5	6,002.6	6,005.2	0.00	0.00	0.00
12,700.0	90.94	90.00	6,573.9	179.5	6,102.5	6,105.1	0.00	0.00	0.00
12,800.0	90.94	90.00	6,572.2	179.5	6,202.5	6,205.1	0.00	0.00	0.00
12,900.0	90.94	90.00	6,570.6	179.5	6,302.5	6,305.0	0.00	0.00	0.00
13,000.0	90.94	90.00	6,569.0	179.5	6,402.5	6,405.0	0.00	0.00	0.00
13,100.0	90.94	90.00	6,567.3	179.5	6,502.5	6,504.9	0.00	0.00	0.00
13,200.0	90.94	90.00	6,565.7	179.5	6,602.5	6,604.9	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Loloff Farms 26I-212
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4693.0ft (Original Well Elev)
Project:	SEC.26-T5N-R64W	MD Reference:	WELL @ 4693.0ft (Original Well Elev)
Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	North Reference:	True
Well:	Loloff Farms 26I-212	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (8-13-14)		

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)
13,300.0	90.94	90.00	6,564.0	179.5	6,702.5	6,704.9	0.00	0.00	0.00
13,400.0	90.94	90.00	6,562.4	179.5	6,802.4	6,804.8	0.00	0.00	0.00
13,500.0	90.94	90.00	6,560.8	179.5	6,902.4	6,904.8	0.00	0.00	0.00
13,600.0	90.94	90.00	6,559.1	179.5	7,002.4	7,004.7	0.00	0.00	0.00
13,700.0	90.94	90.00	6,557.5	179.5	7,102.4	7,104.7	0.00	0.00	0.00
13,728.7	90.94	90.00	6,557.0	179.5	7,131.1	7,133.4	0.00	0.00	0.00
BHL 405'FSL & 2143'FWL, Sec.25									

Casing Points				
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,132.2	6,665.2	7"	7	7-1/2

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,535.2	3,523.0	PARKMAN		0.00		
4,183.5	4,166.0	SUSSEX		0.00		
4,768.3	4,750.0	SHANNON		0.00		
6,466.9	6,403.0	SHARON SPRINGS		0.00		
6,700.1	6,553.0	NIOBRARA A		0.00		
6,879.9	6,628.0	NIOBRARA B		0.00		
	6,698.0	NOBRARA C		0.00		
	6,793.0	FT. HAYS		0.00		
	6,815.0	CODELL		0.00		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,800.0	1,800.0	0.0	0.0	KOP #1
5,919.7	5,901.4	179.5	-241.0	KOP #2
7,132.2	6,665.2	179.5	535.5	End of Build



PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.26-T5N-R64W

Loloff Farms 5N64W26l Pad Sec.26-T5N-R64W

Loloff Farms 26l-212

Wellbore #1

Plan #1 (8-13-14)

Anticollision Report

15 August, 2014



Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Loloff Farms 26I-212
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4693.0ft (Original Well Elev)
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4693.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Loloff Farms 26I-212	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 (8-13-14)	Offset TVD Reference:	Offset Datum

Reference	Plan #1 (8-13-14)
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method:	MD Interval 100.0ft
Depth Range:	Unlimited
Results Limited by:	Maximum center-center distance of 1,000.0ft
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	ISCWSA
Scan Method:	Closest Approach 3D
Error Surface:	Elliptical Conic

Survey Tool Program		Date	8/15/2014		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	13,728.7	Plan #1 (8-13-14) (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 Pad Sec.26-T5N-R64W						
Loloff 2 (Exist.) - Wellbore #1 - Wellbore #1	7,042.4	6,636.4	144.7	-9.1	0.941	Level 1, CC, ES, SF
Loloff 26-14 (P&A) - Wellbore #1 - Wellbore #1	8,330.2	6,597.6	53.7	-131.1	0.290	Level 1, CC, ES, SF
Loloff B 26-14X (Exist.) - Wellbore #1 - Wellbore #1	8,204.8	6,613.6	250.4	68.7	1.378	Level 3, CC, ES, SF
Loustalet 24-25 (Exist.) - Wellbore #1 - Wellbore #1	13,567.0	6,454.7	255.0	-72.3	0.779	Level 1, CC, ES, SF
Loustalet 25-1 (Exist.) - Wellbore #1 - Wellbore #1	12,240.4	6,479.4	265.6	-25.1	0.914	Level 1, CC, ES, SF
Schlagel 26-1 (SI) - Wellbore #1 - Wellbore #1	9,623.1	6,548.0	316.2	216.4	3.168	CC, ES, SF
Schlagel 26-4 (Exist.) - Wellbore #1 - Wellbore #1	10,916.5	6,500.1	400.1	146.0	1.575	CC, ES, SF
Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W						
Loloff Farms 26H-332 - Wellbore #1 - Plan #1 (8-13-14)	166.3	167.3	61.4	60.9	116.940	CC
Loloff Farms 26H-332 - Wellbore #1 - Plan #1 (8-13-14)	300.0	300.6	61.7	60.6	54.760	ES
Loloff Farms 26H-332 - Wellbore #1 - Plan #1 (8-13-14)	13,728.7	13,835.6	665.7	263.9	1.657	SF
Loloff Farms 26H-432 - Wellbore #1 - Plan #1 (8-13-14)	1,000.0	1,000.0	30.7	26.4	7.178	CC, ES
Loloff Farms 26H-432 - Wellbore #1 - Plan #1 (8-13-14)	13,728.7	13,879.4	380.5	27.9	1.079	Level 2, SF
Loloff Farms 26I-402 - Wellbore #1 - Plan #1 (8-13-14)	1,800.0	1,799.0	27.9	20.0	3.543	CC, ES
Loloff Farms 26I-402 - Wellbore #1 - Plan #1 (8-13-14)	13,728.7	13,864.1	384.1	30.4	1.086	Level 2, SF

Offset Design	Existing Wells Pad Sec.26-T5N-R64W - Loloff 2 (Exist.) - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 ft
Survey Program:	6870-UNKNOWN												Offset Well Error:	0.0 ft
Reference	Vertical Depth (ft)	Measured Depth (ft)	Offset 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)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	53.97	324.2	445.9	551.9					
100.0	100.0	75.0	75.0	0.1	1.5	53.97	324.2	445.9	551.3	549.7	1.61	341.873		
200.0	200.0	175.0	175.0	0.3	3.5	53.97	324.2	445.9	551.3	547.5	3.84	143.667		
300.0	300.0	275.0	275.0	0.6	5.5	53.97	324.2	445.9	551.3	545.2	6.06	90.942		
400.0	400.0	375.0	375.0	0.8	7.5	53.97	324.2	445.9	551.3	543.0	8.29	66.527		
500.0	500.0	475.0	475.0	1.0	9.5	53.97	324.2	445.9	551.3	540.8	10.51	52.446		
600.0	600.0	575.0	575.0	1.2	11.5	53.97	324.2	445.9	551.3	538.6	12.74	43.285		
700.0	700.0	675.0	675.0	1.5	13.5	53.97	324.2	445.9	551.3	536.3	14.96	36.849		
800.0	800.0	775.0	775.0	1.7	15.5	53.97	324.2	445.9	551.3	534.1	17.19	32.078		
900.0	900.0	875.0	875.0	1.9	17.5	53.97	324.2	445.9	551.3	531.9	19.41	28.402		
1,000.0	1,000.0	975.0	975.0	2.1	19.5	53.97	324.2	445.9	551.3	529.7	21.64	25.481		

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 Loloff Farms 26I-212
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4693.0ft (Original Well Elev)
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4693.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Loloff Farms 26I-212	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 (8-13-14)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Pad Sec.26-T5N-R64W - Loloff 2 (Exist.) - Wellbore #1 - Wellbore #1												Offset Site Error: 0.0 ft	
Survey Program: 6870-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
1,100.0	1,100.0	1,075.0	1,075.0	2.4	21.5	53.97	324.2	445.9	551.3	527.4	23.86	23.105	
1,200.0	1,200.0	1,175.0	1,175.0	2.6	23.5	53.97	324.2	445.9	551.3	525.2	26.08	21.135	
1,300.0	1,300.0	1,275.0	1,275.0	2.8	25.5	53.97	324.2	445.9	551.3	523.0	28.31	19.474	
1,400.0	1,400.0	1,375.0	1,375.0	3.0	27.5	53.97	324.2	445.9	551.3	520.8	30.53	18.055	
1,500.0	1,500.0	1,475.0	1,475.0	3.3	29.5	53.97	324.2	445.9	551.3	518.5	32.76	16.829	
1,600.0	1,600.0	1,575.0	1,575.0	3.5	31.5	53.97	324.2	445.9	551.3	516.3	34.98	15.759	
1,700.0	1,700.0	1,675.0	1,675.0	3.7	33.5	53.97	324.2	445.9	551.3	514.1	37.21	14.816	
1,800.0	1,800.0	1,775.0	1,775.0	3.9	35.5	53.97	324.2	445.9	551.3	511.9	39.43	13.980	
1,900.0	1,900.0	1,875.0	1,875.0	4.2	37.5	107.45	324.2	445.9	551.8	510.2	41.65	13.249	
2,000.0	1,999.8	1,974.8	1,974.8	4.4	39.5	107.94	324.2	445.9	553.4	509.6	43.86	12.619	
2,100.0	2,099.5	2,074.5	2,074.5	4.6	41.5	108.74	324.2	445.9	556.2	510.1	46.05	12.077	
2,200.0	2,198.7	2,173.7	2,173.7	4.8	43.5	109.84	324.2	445.9	560.2	511.9	48.25	11.609	
2,300.0	2,297.9	2,272.9	2,272.9	5.1	45.5	111.05	324.2	445.9	564.6	514.2	50.47	11.189	
2,400.0	2,397.1	2,372.1	2,372.1	5.3	47.4	112.25	324.2	445.9	569.4	516.7	52.69	10.807	
2,500.0	2,496.3	2,471.3	2,471.3	5.6	49.4	113.42	324.2	445.9	574.4	519.5	54.92	10.460	
2,600.0	2,595.4	2,570.4	2,570.4	5.9	51.4	114.57	324.2	445.9	579.6	522.5	57.15	10.143	
2,700.0	2,694.6	2,669.6	2,669.6	6.1	53.4	115.70	324.2	445.9	585.1	525.7	59.38	9.853	
2,800.0	2,793.8	2,768.8	2,768.8	6.4	55.4	116.81	324.2	445.9	590.8	529.2	61.62	9.588	
2,900.0	2,893.0	2,868.0	2,868.0	6.7	57.4	117.90	324.2	445.9	596.7	532.8	63.85	9.345	
3,000.0	2,992.2	2,967.2	2,967.2	7.0	59.3	118.96	324.2	445.9	602.8	536.7	66.09	9.121	
3,100.0	3,091.3	3,066.3	3,066.3	7.3	61.3	120.01	324.2	445.9	609.1	540.8	68.33	8.915	
3,200.0	3,190.5	3,165.5	3,165.5	7.6	63.3	121.03	324.2	445.9	615.7	545.1	70.57	8.724	
3,300.0	3,289.7	3,264.7	3,264.7	7.9	65.3	122.04	324.2	445.9	622.4	549.6	72.81	8.548	
3,400.0	3,388.9	3,363.9	3,363.9	8.2	67.3	123.02	324.2	445.9	629.3	554.3	75.05	8.386	
3,500.0	3,488.1	3,463.1	3,463.1	8.5	69.3	123.98	324.2	445.9	636.4	559.1	77.28	8.235	
3,600.0	3,587.2	3,562.2	3,562.2	8.8	71.2	124.91	324.2	445.9	643.7	564.2	79.52	8.094	
3,700.0	3,686.4	3,661.4	3,661.4	9.1	73.2	125.83	324.2	445.9	651.1	569.4	81.76	7.964	
3,800.0	3,785.6	3,760.6	3,760.6	9.4	75.2	126.73	324.2	445.9	658.7	574.7	83.99	7.843	
3,900.0	3,884.8	3,859.8	3,859.8	9.7	77.2	127.60	324.2	445.9	666.5	580.3	86.22	7.730	
4,000.0	3,984.0	3,959.0	3,959.0	10.0	79.2	128.46	324.2	445.9	674.4	585.9	88.46	7.624	
4,100.0	4,083.1	4,058.1	4,058.1	10.3	81.2	129.30	324.2	445.9	682.4	591.8	90.69	7.525	
4,200.0	4,182.4	4,157.4	4,157.4	10.6	83.1	130.14	324.2	445.9	690.4	597.4	92.97	7.426	
4,300.0	4,281.9	4,256.9	4,256.9	10.8	85.1	130.82	324.2	445.9	696.5	601.2	95.27	7.310	
4,400.0	4,381.8	4,356.8	4,356.8	11.0	87.1	131.24	324.2	445.9	700.3	602.8	97.53	7.181	
4,500.0	4,481.7	4,456.7	4,456.7	11.2	89.1	131.41	324.2	445.9	701.9	602.2	99.73	7.038	
4,600.0	4,581.7	4,556.7	4,556.7	11.4	91.1	78.10	324.2	445.9	701.9	600.1	101.88	6.890	
4,700.0	4,681.7	4,656.7	4,656.7	11.6	93.1	78.10	324.2	445.9	701.9	597.9	104.08	6.744	
4,800.0	4,781.7	4,756.7	4,756.7	11.8	95.1	78.10	324.2	445.9	701.9	595.7	106.29	6.604	
4,900.0	4,881.7	4,856.7	4,856.7	12.0	97.1	78.10	324.2	445.9	701.9	593.4	108.50	6.470	
5,000.0	4,981.7	4,956.7	4,956.7	12.2	99.1	78.10	324.2	445.9	701.9	591.2	110.70	6.341	
5,100.0	5,081.7	5,056.7	5,056.7	12.4	101.1	78.10	324.2	445.9	701.9	589.0	112.91	6.217	
5,200.0	5,181.7	5,156.7	5,156.7	12.6	103.1	78.10	324.2	445.9	701.9	586.8	115.12	6.097	
5,300.0	5,281.7	5,256.7	5,256.7	12.8	105.1	78.10	324.2	445.9	701.9	584.6	117.33	5.983	
5,400.0	5,381.7	5,356.7	5,356.7	13.0	107.1	78.10	324.2	445.9	701.9	582.4	119.54	5.872	
5,500.0	5,481.7	5,456.7	5,456.7	13.2	109.1	78.10	324.2	445.9	701.9	580.2	121.75	5.765	
5,600.0	5,581.7	5,556.7	5,556.7	13.4	111.1	78.10	324.2	445.9	701.9	578.0	123.96	5.663	
5,700.0	5,681.7	5,656.7	5,656.7	13.6	113.1	78.10	324.2	445.9	701.9	575.8	126.17	5.563	
5,800.0	5,781.7	5,756.7	5,756.7	13.8	115.1	78.10	324.2	445.9	701.9	573.6	128.39	5.467	
5,900.0	5,881.7	5,856.7	5,856.7	14.0	117.1	78.10	324.2	445.9	701.9	571.3	130.60	5.375	
6,000.0	5,981.6	5,956.6	5,956.6	14.1	119.1	-12.03	324.2	445.9	697.8	565.8	132.06	5.284	

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 Loloff Farms 26I-212
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4693.0ft (Original Well Elev)
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4693.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Loloff Farms 26I-212	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 (8-13-14)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Pad Sec.26-T5N-R64W - Loloff 2 (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error: 0.0 ft
Survey Program: 6870-UNKNOWN													Offset Well Error: 0.0 ft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
6,100.0	6,080.1	6,055.1	6,055.1	14.3	121.1	-12.60	324.2	445.9	681.2	549.9	131.35	5.186	
6,200.0	6,175.5	6,150.5	6,150.5	14.3	123.0	-13.70	324.2	445.9	652.3	523.8	128.46	5.077	
6,300.0	6,266.2	6,241.2	6,241.2	14.4	124.8	-15.49	324.2	445.9	611.5	487.9	123.58	4.948	
6,400.0	6,350.7	6,325.7	6,325.7	14.5	126.5	-18.31	324.2	445.9	559.8	442.6	117.23	4.775	
6,500.0	6,427.5	6,402.5	6,402.5	14.7	128.0	-22.71	324.2	445.9	498.3	387.5	110.76	4.499	
6,600.0	6,495.3	6,470.3	6,470.3	15.1	129.4	-29.69	324.2	445.9	428.6	321.3	107.32	3.994	
6,700.0	6,552.9	6,527.9	6,527.9	15.9	130.6	-40.74	324.2	445.9	352.8	240.3	112.51	3.136	
6,800.0	6,599.4	6,574.4	6,574.4	17.1	131.5	-56.77	324.2	445.9	274.6	145.5	129.09	2.127	
6,900.0	6,634.0	6,609.0	6,609.0	18.5	132.2	-74.70	324.2	445.9	201.0	55.0	146.00	1.377 Level 3	
7,000.0	6,656.0	6,631.0	6,631.0	20.3	132.6	-87.40	324.2	445.9	150.7	-2.1	152.76	0.986 Level 1	
7,042.4	6,661.4	6,636.4	6,636.4	21.1	132.7	-90.00	324.2	445.9	144.7	-9.1	153.82	0.941 Level 1, CC, ES, SF	
7,100.0	6,665.1	6,640.1	6,640.1	22.2	132.8	-90.58	324.2	445.9	155.7	0.7	155.00	1.004 Level 2	
7,200.0	6,664.1	6,639.1	6,639.1	24.3	132.8	-88.98	324.2	445.9	213.8	56.7	157.07	1.361 Level 3	
7,300.0	6,662.5	6,637.5	6,637.5	26.6	132.7	-88.33	324.2	445.9	295.3	136.0	159.23	1.854	
7,400.0	6,660.8	6,635.8	6,635.8	28.9	132.7	-87.68	324.2	445.9	385.6	224.1	161.47	2.388	
7,500.0	6,659.2	6,634.2	6,634.2	31.3	132.7	-87.03	324.2	445.9	479.7	316.0	163.76	2.929	
7,600.0	6,657.5	6,632.5	6,632.5	33.8	132.7	-86.38	324.2	445.9	575.8	409.7	166.09	3.467	
7,700.0	6,655.9	6,630.9	6,630.9	36.3	132.6	-85.74	324.2	445.9	673.1	504.6	168.45	3.996	
7,800.0	6,654.3	6,629.3	6,629.3	38.8	132.6	-85.09	324.2	445.9	771.0	600.2	170.82	4.514	
7,900.0	6,652.6	6,627.6	6,627.6	41.4	132.6	-84.45	324.2	445.9	869.4	696.2	173.20	5.020	
8,000.0	6,651.0	6,626.0	6,626.0	44.0	132.5	-83.81	324.2	445.9	968.2	792.6	175.58	5.514	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Loloff Farms 26I-212
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4693.0ft (Original Well Elev)
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4693.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Loloff Farms 26I-212	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 (8-13-14)	Offset TVD Reference:	Offset Datum

Offset Design		Existing Wells Pad Sec.26-T5N-R64W - Loloff 26-14 (P&A) - Wellbore #1 - Wellbore #1											Offset Site Error: 0.0 ft	
Survey Program: 6970-UNKNOWN													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
7,400.0	6,660.8	6,612.8	6,612.8	28.9	132.3	-105.87	233.2	1,733.3	931.6	776.7	154.93	6.013		
7,500.0	6,659.2	6,611.2	6,611.2	31.3	132.2	-104.24	233.2	1,733.3	831.8	673.4	158.42	5.251		
7,600.0	6,657.5	6,609.5	6,609.5	33.8	132.2	-102.58	233.2	1,733.3	732.1	570.2	161.89	4.522		
7,700.0	6,655.9	6,607.9	6,607.9	36.3	132.2	-100.90	233.2	1,733.3	632.4	467.1	165.31	3.825		
7,800.0	6,654.3	6,606.3	6,606.3	38.8	132.1	-99.20	233.2	1,733.3	532.8	364.2	168.68	3.159		
7,900.0	6,652.6	6,604.6	6,604.6	41.4	132.1	-97.49	233.2	1,733.3	433.5	261.5	171.96	2.521		
8,000.0	6,651.0	6,603.0	6,603.0	44.0	132.1	-95.76	233.2	1,733.3	334.5	159.3	175.14	1.910		
8,100.0	6,649.3	6,601.3	6,601.3	46.7	132.0	-94.02	233.2	1,733.3	236.3	58.1	178.20	1.326	Level 3	
8,200.0	6,647.7	6,599.7	6,599.7	49.3	132.0	-92.28	233.2	1,733.3	140.8	-40.3	181.13	0.777	Level 1	
8,300.0	6,646.1	6,598.1	6,598.1	52.0	132.0	-90.53	233.2	1,733.3	61.6	-122.4	183.93	0.335	Level 1	
8,330.2	6,645.6	6,597.6	6,597.6	52.8	132.0	-90.00	233.2	1,733.3	53.7	-131.1	184.74	0.290	Level 1, CC, ES, SF	
8,400.0	6,644.4	6,596.4	6,596.4	54.7	131.9	-88.78	233.2	1,733.3	88.0	-98.5	186.56	0.472	Level 1	
8,500.0	6,642.8	6,594.8	6,594.8	57.4	131.9	-87.03	233.2	1,733.3	178.1	-11.0	189.04	0.942	Level 1	
8,600.0	6,641.1	6,593.1	6,593.1	60.1	131.9	-85.29	233.2	1,733.3	275.1	83.7	191.35	1.437	Level 3	
8,700.0	6,639.5	6,591.5	6,591.5	62.8	131.8	-83.55	233.2	1,733.3	373.6	180.1	193.49	1.931		
8,800.0	6,637.9	6,589.9	6,589.9	65.5	131.8	-81.83	233.2	1,733.3	472.8	277.4	195.44	2.419		
8,900.0	6,636.2	6,588.2	6,588.2	68.3	131.8	-80.12	233.2	1,733.3	572.3	375.0	197.23	2.902		
9,000.0	6,634.6	6,586.6	6,586.6	71.0	131.7	-78.43	233.2	1,733.3	671.9	473.0	198.83	3.379		
9,100.0	6,632.9	6,584.9	6,584.9	73.7	131.7	-76.76	233.2	1,733.3	771.6	571.3	200.25	3.853		
9,200.0	6,631.3	6,583.3	6,583.3	76.5	131.7	-75.11	233.2	1,733.3	871.3	669.8	201.51	4.324		
9,300.0	6,629.7	6,581.7	6,581.7	79.2	131.6	-73.49	233.2	1,733.3	971.2	768.6	202.59	4.794		

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Loloff Farms 26I-212
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4693.0ft (Original Well Elev)
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4693.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Loloff Farms 26I-212	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 (8-13-14)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Pad Sec.26-T5N-R64W - Loloff B 26-14X (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error: 0.0 ft
Survey Program: 6927-UNKNOWN													Offset Well Error: 0.0 ft
Reference	Offset	Semi Major Axis		Distance		Warning							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
7,300.0	6,662.5	6,628.5	6,628.5	26.6	132.6	-93.39	429.9	1,607.9	938.6	779.9	158.79	5.911	
7,400.0	6,660.8	6,626.8	6,626.8	28.9	132.5	-93.02	429.9	1,607.9	842.7	681.6	161.14	5.230	
7,500.0	6,659.2	6,625.2	6,625.2	31.3	132.5	-92.64	429.9	1,607.9	747.8	584.3	163.56	4.572	
7,600.0	6,657.5	6,623.5	6,623.5	33.8	132.5	-92.27	429.9	1,607.9	654.5	488.4	166.05	3.941	
7,700.0	6,655.9	6,621.9	6,621.9	36.3	132.4	-91.89	429.9	1,607.9	563.4	394.8	168.57	3.342	
7,800.0	6,654.3	6,620.3	6,620.3	38.8	132.4	-91.52	429.9	1,607.9	475.9	304.8	171.13	2.781	
7,900.0	6,652.6	6,618.6	6,618.6	41.4	132.4	-91.14	429.9	1,607.9	394.4	220.7	173.72	2.270	
8,000.0	6,651.0	6,617.0	6,617.0	44.0	132.3	-90.77	429.9	1,607.9	323.4	147.1	176.32	1.834	
8,100.0	6,649.3	6,615.3	6,615.3	46.7	132.3	-90.39	429.9	1,607.9	271.4	92.5	178.95	1.517	
8,200.0	6,647.7	6,613.7	6,613.7	49.3	132.3	-90.02	429.9	1,607.9	250.4	68.9	181.58	1.379	Level 3
8,204.8	6,647.6	6,613.6	6,613.6	49.5	132.3	-90.00	429.9	1,607.9	250.4	68.7	181.70	1.378	Level 3, CC, ES, SF
8,300.0	6,646.1	6,612.1	6,612.1	52.0	132.2	-89.64	429.9	1,607.9	267.9	83.7	184.22	1.454	Level 3
8,400.0	6,644.4	6,610.4	6,610.4	54.7	132.2	-89.27	429.9	1,607.9	317.5	130.6	186.87	1.699	
8,500.0	6,642.8	6,608.8	6,608.8	57.4	132.2	-88.89	429.9	1,607.9	387.1	197.6	189.52	2.043	
8,600.0	6,641.1	6,607.1	6,607.1	60.1	132.1	-88.52	429.9	1,607.9	467.8	275.7	192.17	2.434	
8,700.0	6,639.5	6,605.5	6,605.5	62.8	132.1	-88.14	429.9	1,607.9	554.9	360.1	194.82	2.848	
8,800.0	6,637.9	6,603.9	6,603.9	65.5	132.1	-87.77	429.9	1,607.9	645.7	448.2	197.47	3.270	
8,900.0	6,636.2	6,602.2	6,602.2	68.3	132.0	-87.39	429.9	1,607.9	738.9	538.7	200.12	3.692	
9,000.0	6,634.6	6,600.6	6,600.6	71.0	132.0	-87.02	429.9	1,607.9	833.6	630.9	202.76	4.111	
9,100.0	6,632.9	6,598.9	6,598.9	73.7	132.0	-86.64	429.9	1,607.9	929.5	724.1	205.40	4.525	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Loloff Farms 26I-212
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4693.0ft (Original Well Elev)
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4693.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Loloff Farms 26I-212	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 (8-13-14)	Offset TVD Reference:	Offset Datum

Offset Design		Existing Wells Pad Sec.26-T5N-R64W - Loustalet 24-25 (Exist.) - Wellbore #1 - Wellbore #1											Offset Site Error:		0.0 ft	
Survey Program: 6959-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)					
12,600.0	6,575.5	6,470.5	6,470.5	171.1	129.4	-93.56	434.5	6,969.4	999.9	700.1	299.89	3.334				
12,700.0	6,573.9	6,468.9	6,468.9	173.9	129.4	-93.19	434.5	6,969.4	903.6	600.9	302.76	2.985				
12,800.0	6,572.2	6,467.2	6,467.2	176.7	129.3	-92.83	434.5	6,969.4	808.2	502.6	305.63	2.644				
12,900.0	6,570.6	6,465.6	6,465.6	179.5	129.3	-92.46	434.5	6,969.4	714.0	405.5	308.48	2.315				
13,000.0	6,569.0	6,464.0	6,464.0	182.3	129.3	-92.09	434.5	6,969.4	621.6	310.3	311.32	1.997				
13,100.0	6,567.3	6,462.3	6,462.3	185.1	129.2	-91.72	434.5	6,969.4	532.0	217.9	314.16	1.694				
13,200.0	6,565.7	6,460.7	6,460.7	187.9	129.2	-91.35	434.5	6,969.4	446.8	129.9	316.98	1.410	Level 3			
13,300.0	6,564.0	6,459.0	6,459.0	190.7	129.2	-90.98	434.5	6,969.4	369.2	49.4	319.79	1.154	Level 2			
13,400.0	6,562.4	6,457.4	6,457.4	193.5	129.1	-90.62	434.5	6,969.4	304.8	-17.8	322.59	0.945	Level 1			
13,500.0	6,560.8	6,455.8	6,455.8	196.3	129.1	-90.25	434.5	6,969.4	263.6	-61.8	325.38	0.810	Level 1			
13,567.0	6,559.7	6,454.7	6,454.7	198.1	129.1	-90.00	434.5	6,969.4	255.0	-72.3	327.24	0.779	Level 1, CC, ES, SF			
13,600.0	6,559.1	6,454.1	6,454.1	199.1	129.1	-89.88	434.5	6,969.4	257.1	-71.1	328.15	0.783	Level 1			
13,700.0	6,557.5	6,452.5	6,452.5	201.9	129.0	-89.51	434.5	6,969.4	287.5	-43.4	330.91	0.869	Level 1			
13,728.7	6,557.0	6,452.0	6,452.0	202.7	129.0	-89.40	434.5	6,969.4	301.9	-29.8	331.70	0.910	Level 1			

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Loloff Farms 26I-212
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4693.0ft (Original Well Elev)
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4693.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Loloff Farms 26I-212	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 (8-13-14)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Pad Sec.26-T5N-R64W - Loustalet 25-1 (Exist.) - Wellbore #1 - Wellbore #1											Offset Site Error: 0.0 ft		
Survey Program: 6848-UNKNOWN											Offset Well Error: 0.0 ft		
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
11,300.0	6,596.8	6,494.8	6,494.8	134.8	129.9	-93.32	445.1	5,643.0	977.0	712.9	264.19	3.698	
11,400.0	6,595.2	6,493.2	6,493.2	137.6	129.9	-92.97	445.1	5,643.0	881.2	614.2	267.03	3.300	
11,500.0	6,593.6	6,491.6	6,491.6	140.4	129.8	-92.62	445.1	5,643.0	786.5	516.6	269.87	2.914	
11,600.0	6,591.9	6,489.9	6,489.9	143.1	129.8	-92.27	445.1	5,643.0	693.2	420.5	272.70	2.542	
11,700.0	6,590.3	6,488.3	6,488.3	145.9	129.8	-91.91	445.1	5,643.0	602.0	326.5	275.52	2.185	
11,800.0	6,588.6	6,486.6	6,486.6	148.7	129.7	-91.56	445.1	5,643.0	514.2	235.9	278.33	1.847	
11,900.0	6,587.0	6,485.0	6,485.0	151.5	129.7	-91.20	445.1	5,643.0	431.7	150.5	281.14	1.535	
12,000.0	6,585.4	6,483.4	6,483.4	154.3	129.7	-90.85	445.1	5,643.0	358.2	74.2	283.93	1.261 Level 3	
12,100.0	6,583.7	6,481.7	6,481.7	157.1	129.6	-90.50	445.1	5,643.0	300.4	13.7	286.72	1.048 Level 2	
12,200.0	6,582.1	6,480.1	6,480.1	159.9	129.6	-90.14	445.1	5,643.0	268.6	-20.9	289.49	0.928 Level 1	
12,240.4	6,581.4	6,479.4	6,479.4	161.0	129.6	-90.00	445.1	5,643.0	265.6	-25.1	290.61	0.914 Level 1, CC, ES, SF	
12,300.0	6,580.4	6,478.4	6,478.4	162.7	129.6	-89.79	445.1	5,643.0	272.2	-20.1	292.26	0.931 Level 1	
12,400.0	6,578.8	6,476.8	6,476.8	165.5	129.5	-89.44	445.1	5,643.0	309.8	14.8	295.02	1.050 Level 2	
12,500.0	6,577.2	6,475.2	6,475.2	168.3	129.5	-89.08	445.1	5,643.0	371.3	73.6	297.76	1.247 Level 2	
12,600.0	6,575.5	6,473.5	6,473.5	171.1	129.5	-88.73	445.1	5,643.0	447.0	146.5	300.50	1.488 Level 3	
12,700.0	6,573.9	6,471.9	6,471.9	173.9	129.4	-88.37	445.1	5,643.0	530.8	227.5	303.22	1.750	
12,800.0	6,572.2	6,470.2	6,470.2	176.7	129.4	-88.02	445.1	5,643.0	619.4	313.4	305.93	2.024	
12,900.0	6,570.6	6,468.6	6,468.6	179.5	129.4	-87.67	445.1	5,643.0	711.0	402.3	308.63	2.304	
13,000.0	6,569.0	6,467.0	6,467.0	182.3	129.3	-87.31	445.1	5,643.0	804.6	493.3	311.32	2.584	
13,100.0	6,567.3	6,465.3	6,465.3	185.1	129.3	-86.96	445.1	5,643.0	899.6	585.6	313.99	2.865	
13,200.0	6,565.7	6,463.7	6,463.7	187.9	129.3	-86.61	445.1	5,643.0	995.6	678.9	316.65	3.144	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Loloff Farms 26I-212
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4693.0ft (Original Well Elev)
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4693.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Loloff Farms 26I-212	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 (8-13-14)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Pad Sec.26-T5N-R64W - Schlagel 26-1 (SI) - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 ft
Survey Program: 100-NS-GYRO-MS												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)		
8,700.0	6,639.5	6,537.9	6,536.7	62.8	11.7	-88.98	495.9	3,025.8	975.7	901.2	74.46	13.104	
8,800.0	6,637.9	6,539.0	6,537.8	65.5	11.7	-89.18	495.9	3,025.8	881.7	804.5	77.18	11.423	
8,900.0	6,636.2	6,540.1	6,538.9	68.3	11.7	-89.38	495.9	3,025.9	789.2	709.2	79.92	9.874	
9,000.0	6,634.6	6,541.2	6,540.0	71.0	11.7	-89.57	495.9	3,025.9	698.7	616.0	82.66	8.453	
9,100.0	6,632.9	6,542.3	6,541.1	73.7	11.7	-89.77	495.8	3,025.9	611.2	525.8	85.40	7.157	
9,200.0	6,631.3	6,543.4	6,542.2	76.5	11.7	-89.97	495.8	3,026.0	528.2	440.0	88.15	5.992	
9,300.0	6,629.7	6,544.4	6,543.3	79.2	11.7	-90.17	495.8	3,026.0	452.1	361.2	90.90	4.973	
9,400.0	6,628.0	6,545.5	6,544.4	82.0	11.7	-90.36	495.8	3,026.0	387.0	293.3	93.66	4.132	
9,500.0	6,626.4	6,546.6	6,545.5	84.8	11.7	-90.56	495.8	3,026.1	339.3	242.9	96.42	3.520	
9,600.0	6,624.7	6,547.7	6,546.5	87.5	11.7	-90.76	495.8	3,026.1	317.1	217.9	99.18	3.197	
9,623.1	6,624.4	6,548.0	6,546.8	88.2	11.7	-90.80	495.8	3,026.1	316.2	216.4	99.81	3.168 CC, ES, SF	
9,700.0	6,623.1	6,548.8	6,547.6	90.3	11.7	-90.96	495.8	3,026.1	325.5	223.5	101.94	3.193	
9,800.0	6,621.5	6,549.9	6,548.7	93.1	11.7	-91.15	495.7	3,026.1	362.4	257.7	104.70	3.461	
9,900.0	6,619.8	6,551.0	6,549.8	95.8	11.7	-91.35	495.7	3,026.2	420.4	312.9	107.46	3.912	
10,000.0	6,618.2	6,552.1	6,550.9	98.6	11.7	-91.55	495.7	3,026.2	492.0	381.8	110.22	4.464	
10,100.0	6,616.5	6,553.2	6,552.0	101.4	11.7	-91.75	495.7	3,026.2	572.2	459.3	112.99	5.065	
10,200.0	6,614.9	6,554.3	6,553.1	104.1	11.7	-91.95	495.7	3,026.3	657.9	542.1	115.75	5.684	
10,300.0	6,613.2	6,555.4	6,554.2	106.9	11.7	-92.14	495.7	3,026.3	747.1	628.6	118.51	6.304	
10,400.0	6,611.6	6,556.5	6,555.3	109.7	11.7	-92.34	495.6	3,026.3	838.8	717.5	121.27	6.917	
10,500.0	6,610.0	6,557.5	6,556.4	112.5	11.7	-92.54	495.6	3,026.4	932.2	808.1	124.04	7.515	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Loloff Farms 26I-212
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4693.0ft (Original Well Elev)
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4693.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Loloff Farms 26I-212	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 (8-13-14)	Offset TVD Reference:	Offset Datum

Offset Design		Existing Wells Pad Sec.26-T5N-R64W - Schlagel 26-4 (Exist.) - Wellbore #1 - Wellbore #1											Offset Site Error:		0.0 ft	
Survey Program: 6838-UNKNOWN														Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor				
10,000.0	6,618.2	6,515.2	6,515.2	98.6	130.3	-92.15	579.6	4,319.3	999.9	771.2	228.71	4.372	1.575 CC, ES, SF			
10,100.0	6,616.5	6,513.5	6,513.5	101.4	130.3	-91.92	579.6	4,319.3	909.2	677.7	231.48	3.928				
10,200.0	6,614.9	6,511.9	6,511.9	104.1	130.2	-91.68	579.6	4,319.3	820.6	586.3	234.25	3.503				
10,300.0	6,613.2	6,510.2	6,510.2	106.9	130.2	-91.45	579.6	4,319.3	734.9	497.9	237.03	3.100				
10,400.0	6,611.6	6,508.6	6,508.6	109.7	130.2	-91.21	579.6	4,319.3	653.3	413.5	239.80	2.724				
10,500.0	6,610.0	6,507.0	6,507.0	112.5	130.1	-90.98	579.6	4,319.3	577.5	334.9	242.57	2.381				
10,600.0	6,608.3	6,505.3	6,505.3	115.3	130.1	-90.74	579.6	4,319.3	510.1	264.8	245.33	2.079	1.575 CC, ES, SF			
10,700.0	6,606.7	6,503.7	6,503.7	118.0	130.1	-90.51	579.6	4,319.3	454.9	206.8	248.10	1.834				
10,800.0	6,605.0	6,502.0	6,502.0	120.8	130.0	-90.27	579.6	4,319.3	416.7	165.8	250.86	1.661				
10,900.0	6,603.4	6,500.4	6,500.4	123.6	130.0	-90.04	579.6	4,319.3	400.4	146.8	253.62	1.579				
10,916.5	6,603.1	6,500.1	6,500.1	124.1	130.0	-90.00	579.6	4,319.3	400.1	146.0	254.07	1.575 CC, ES, SF				
11,000.0	6,601.8	6,498.8	6,498.8	126.4	130.0	-89.80	579.6	4,319.3	408.7	152.3	256.37	1.594		1.575 CC, ES, SF		
11,100.0	6,600.1	6,497.1	6,497.1	129.2	129.9	-89.57	579.6	4,319.3	440.1	181.0	259.12	1.699				
11,200.0	6,598.5	6,495.5	6,495.5	132.0	129.9	-89.33	579.6	4,319.3	490.3	228.4	261.87	1.872				
11,300.0	6,596.8	6,493.8	6,493.8	134.8	129.9	-89.10	579.6	4,319.3	554.1	289.5	264.62	2.094				
11,400.0	6,595.2	6,492.2	6,492.2	137.6	129.8	-88.86	579.6	4,319.3	627.5	360.1	267.36	2.347				
11,500.0	6,593.6	6,490.6	6,490.6	140.4	129.8	-88.63	579.6	4,319.3	707.4	437.3	270.10	2.619	1.575 CC, ES, SF			
11,600.0	6,591.9	6,488.9	6,488.9	143.1	129.8	-88.39	579.6	4,319.3	791.9	519.1	272.83	2.902				
11,700.0	6,590.3	6,487.3	6,487.3	145.9	129.7	-88.16	579.6	4,319.3	879.6	604.1	275.56	3.192				
11,800.0	6,588.6	6,485.6	6,485.6	148.7	129.7	-87.93	579.6	4,319.3	969.7	691.5	278.28	3.485				

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Loloff Farms 26I-212
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4693.0ft (Original Well Elev)
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4693.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Loloff Farms 26I-212	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 (8-13-14)	Offset TVD Reference:	Offset Datum

Offset Design		Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W - Loloff Farms 26H-332 - Wellbore #1 - Plan #1 (8-13-1)										Offset Site Error:		0.0 ft
Survey Program:		0-MWD										Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.0	0.0	1.0	1.0	0.0	0.0	-93.40	-3.6	-61.3	61.4	61.4	0.00	N/A		
100.0	100.0	101.0	101.0	0.1	0.1	-93.40	-3.6	-61.3	61.4	61.2	0.23	270.537		
166.3	166.3	167.3	167.3	0.3	0.3	-93.40	-3.6	-61.3	61.4	60.9	0.53	116.940	CC	
200.0	200.0	201.0	201.0	0.3	0.3	-93.40	-3.6	-61.3	61.4	60.7	0.68	90.777		
300.0	300.0	300.6	300.6	0.6	0.6	-91.78	-1.9	-61.7	61.7	60.6	1.13	54.760	ES	
400.0	400.0	400.0	399.8	0.8	0.8	-87.10	3.2	-62.8	62.9	61.3	1.59	39.660		
500.0	500.0	498.9	498.4	1.0	1.0	-79.85	11.6	-64.7	65.7	63.7	2.05	32.078		
600.0	600.0	597.1	595.8	1.2	1.3	-70.96	23.2	-67.2	71.3	68.8	2.51	28.349		
700.0	700.0	694.7	692.2	1.5	1.6	-61.71	37.9	-70.4	80.5	77.5	2.99	26.927		
800.0	800.0	793.3	789.5	1.7	2.0	-53.91	53.9	-74.0	92.3	88.8	3.46	26.685		
900.0	900.0	891.9	886.7	1.9	2.3	-47.94	69.9	-77.5	105.3	101.4	3.94	26.719		
1,000.0	1,000.0	990.5	983.9	2.1	2.7	-43.31	85.9	-81.0	119.3	114.9	4.45	26.841		
1,100.0	1,100.0	1,089.1	1,081.2	2.4	3.0	-39.67	101.9	-84.5	133.9	128.9	4.96	26.987		
1,200.0	1,200.0	1,187.7	1,178.4	2.6	3.4	-36.74	117.9	-88.0	148.9	143.4	5.49	27.134		
1,300.0	1,300.0	1,286.3	1,275.6	2.8	3.8	-34.36	133.9	-91.6	164.2	158.2	6.02	27.272		
1,400.0	1,400.0	1,384.9	1,372.9	3.0	4.1	-32.38	149.9	-95.1	179.7	173.2	6.56	27.400		
1,500.0	1,500.0	1,483.5	1,470.1	3.3	4.5	-30.72	165.9	-98.6	195.5	188.4	7.10	27.518		
1,600.0	1,600.0	1,582.1	1,567.4	3.5	4.9	-29.31	181.9	-102.1	211.3	203.7	7.65	27.625		
1,700.0	1,700.0	1,680.8	1,664.6	3.7	5.3	-28.09	197.9	-105.6	227.3	219.1	8.20	27.723		
1,800.0	1,800.0	1,779.4	1,761.8	3.9	5.6	-27.03	213.9	-109.2	243.3	234.6	8.75	27.812		
1,900.0	1,900.0	1,878.2	1,859.3	4.2	6.0	27.25	230.0	-112.7	257.9	249.3	8.66	29.768		
2,000.0	1,999.8	1,977.3	1,957.0	4.4	6.4	28.48	246.0	-116.2	269.6	260.4	9.12	29.555		
2,100.0	2,099.5	2,076.6	2,055.0	4.6	6.7	29.98	262.2	-119.8	278.3	268.7	9.57	29.076		
2,200.0	2,198.7	2,176.0	2,153.0	4.8	7.1	31.76	278.3	-123.3	284.5	274.4	10.03	28.373		
2,300.0	2,297.9	2,275.4	2,251.0	5.1	7.5	33.60	294.4	-126.9	290.2	279.7	10.49	27.657		
2,400.0	2,397.1	2,374.8	2,349.0	5.3	7.9	35.36	310.6	-130.4	296.3	285.3	10.97	27.005		
2,500.0	2,496.3	2,474.3	2,447.1	5.6	8.3	37.05	326.7	-133.9	302.6	291.2	11.46	26.410		
2,600.0	2,595.4	2,573.7	2,545.1	5.9	8.6	38.67	342.8	-137.5	309.2	297.3	11.96	25.863		
2,700.0	2,694.6	2,673.1	2,643.1	6.1	9.0	40.22	358.9	-141.0	316.0	303.6	12.46	25.359		
2,800.0	2,793.8	2,772.5	2,741.1	6.4	9.4	41.70	375.1	-144.6	323.1	310.1	12.98	24.894		
2,900.0	2,893.0	2,871.9	2,839.2	6.7	9.8	43.13	391.2	-148.1	330.3	316.8	13.50	24.462		
3,000.0	2,992.2	2,971.3	2,937.2	7.0	10.1	44.49	407.3	-151.7	337.8	323.7	14.04	24.061		
3,100.0	3,091.3	3,070.7	3,035.2	7.3	10.5	45.79	423.5	-155.2	345.4	330.8	14.58	23.688		
3,200.0	3,190.5	3,170.1	3,133.2	7.6	10.9	47.03	439.6	-158.8	353.2	338.1	15.13	23.341		
3,300.0	3,289.7	3,269.5	3,231.3	7.9	11.3	48.22	455.7	-162.3	361.2	345.5	15.69	23.016		
3,400.0	3,388.9	3,368.9	3,329.3	8.2	11.6	49.36	471.8	-165.9	369.3	353.0	16.26	22.713		
3,500.0	3,488.1	3,468.3	3,427.3	8.5	12.0	50.45	488.0	-169.4	377.5	360.7	16.83	22.429		
3,600.0	3,587.2	3,567.7	3,525.3	8.8	12.4	51.50	504.1	-173.0	385.9	368.5	17.41	22.163		
3,700.0	3,686.4	3,667.1	3,623.4	9.1	12.8	52.49	520.2	-176.5	394.4	376.4	18.00	21.914		
3,800.0	3,785.6	3,766.5	3,721.4	9.4	13.2	53.45	536.4	-180.1	403.0	384.4	18.59	21.680		
3,900.0	3,884.8	3,865.9	3,819.4	9.7	13.5	54.37	552.5	-183.6	411.7	392.6	19.19	21.460		
4,000.0	3,984.0	3,965.3	3,917.4	10.0	13.9	55.25	568.6	-187.2	420.6	400.8	19.79	21.254		
4,100.0	4,083.1	4,064.8	4,015.5	10.3	14.3	56.09	584.8	-190.7	429.5	409.1	20.39	21.059		
4,200.0	4,182.4	4,164.2	4,113.5	10.6	14.7	56.93	600.9	-194.3	438.7	417.7	20.98	20.911		
4,300.0	4,281.9	4,263.5	4,211.5	10.8	15.0	57.52	617.0	-197.8	449.6	428.2	21.47	20.941		
4,400.0	4,381.8	4,362.7	4,309.3	11.0	15.4	57.75	633.1	-201.3	462.4	440.5	21.92	21.098		
4,500.0	4,481.7	4,461.6	4,406.8	11.2	15.8	57.66	649.1	-204.9	477.1	454.8	22.32	21.376		
4,600.0	4,581.7	4,560.2	4,504.0	11.4	16.2	57.84	665.1	-208.4	493.0	466.8	22.72	21.800		
4,700.0	4,681.7	4,658.8	4,601.2	11.6	16.5	58.32	681.1	-211.9	509.0	482.2	23.13	21.971		
4,800.0	4,781.7	4,757.4	4,698.5	11.8	16.9	58.83	697.1	-215.4	525.0	497.6	23.54	21.937		
4,900.0	4,881.7	4,856.0	4,795.7	12.0	17.3	59.37	713.1	-218.9	541.1	513.1	23.94	21.927		

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 Loloff Farms 26I-212
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4693.0ft (Original Well Elev)
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4693.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Loloff Farms 26I-212	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 (8-13-14)	Offset TVD Reference:	Offset Datum

Offset Design		Loloff Farms 5N64W26l Pad Sec.26-T5N-R64W - Loloff Farms 26H-332 - Wellbore #1 - Plan #1 (8-13-1										Offset Site Error:		0.0 ft
Survey Program:		0-MWD										Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
5,000.0	4,981.7	4,954.6	4,893.0	12.2	17.7	1.93	729.1	-222.5	557.2	528.5	28.64	19.453		
5,100.0	5,081.7	5,053.2	4,990.2	12.4	18.0	1.52	745.1	-226.0	573.3	544.1	29.25	19.603		
5,200.0	5,181.7	5,151.8	5,087.4	12.6	18.4	1.13	761.1	-229.5	589.5	559.6	29.85	19.749		
5,300.0	5,281.7	5,250.4	5,184.7	12.8	18.8	0.77	777.1	-233.0	605.6	575.2	30.45	19.891		
5,400.0	5,381.7	5,349.1	5,281.9	13.0	19.2	0.42	793.1	-236.5	621.8	590.8	31.05	20.028		
5,500.0	5,481.7	5,463.2	5,394.6	13.2	19.5	0.05	810.8	-240.4	637.4	605.7	31.64	20.143		
5,600.0	5,581.7	5,590.4	5,520.9	13.4	19.8	-0.24	825.7	-243.7	649.1	616.9	32.19	20.164		
5,700.0	5,681.7	5,718.7	5,648.8	13.6	20.1	-0.42	835.1	-245.8	656.4	623.7	32.66	20.095		
5,800.0	5,781.7	5,847.6	5,777.7	13.8	20.3	-0.49	838.9	-246.6	659.4	626.3	33.07	19.936		
5,900.0	5,881.7	5,952.7	5,882.7	14.0	20.4	-0.49	839.0	-246.6	659.4	626.0	33.43	19.728		
6,000.0	5,981.6	6,052.8	5,982.9	14.1	20.6	-90.82	839.0	-246.3	659.5	630.9	28.57	23.081		
6,100.0	6,080.1	6,154.3	6,083.8	14.3	20.7	-91.47	839.0	-236.5	659.6	630.8	28.79	22.914		
6,200.0	6,175.5	6,256.8	6,183.5	14.3	20.7	-92.09	839.0	-213.2	659.9	630.9	28.95	22.789		
6,300.0	6,266.2	6,360.3	6,280.1	14.4	20.8	-92.67	839.0	-176.3	660.1	631.0	29.14	22.652		
6,400.0	6,350.7	6,464.7	6,371.7	14.5	20.8	-93.21	839.0	-126.1	660.5	631.0	29.45	22.425		
6,500.0	6,427.5	6,570.1	6,456.2	14.7	20.9	-93.70	839.0	-63.4	660.8	630.8	30.02	22.009		
6,600.0	6,495.3	6,676.3	6,531.9	15.1	21.0	-94.12	839.0	10.9	661.1	630.1	31.01	21.320		
6,700.0	6,552.9	6,783.1	6,596.9	15.9	21.1	-94.47	839.0	95.6	661.4	628.9	32.57	20.308		
6,800.0	6,599.4	6,890.6	6,649.8	17.1	21.4	-94.74	839.0	189.1	661.7	626.9	34.79	19.021		
6,900.0	6,634.0	6,998.4	6,689.1	18.5	22.0	-94.91	839.0	289.4	661.9	624.2	37.67	17.569		
7,000.0	6,656.0	7,106.5	6,713.9	20.3	23.2	-95.00	839.0	394.5	661.9	620.8	41.16	16.083		
7,100.0	6,665.1	7,214.7	6,723.7	22.2	24.9	-95.00	839.0	502.1	661.9	616.8	45.09	14.681		
7,134.4	6,665.7	7,250.9	6,723.7	23.0	25.5	-94.94	839.0	538.4	661.9	615.3	46.54	14.223		
7,200.0	6,664.1	7,316.5	6,723.0	24.3	26.8	-95.01	839.0	603.9	661.9	612.7	49.25	13.441		
7,300.0	6,662.5	7,416.5	6,721.8	26.6	28.8	-95.06	839.0	703.9	662.0	608.4	53.64	12.341		
7,400.0	6,660.8	7,516.5	6,720.7	28.9	31.0	-95.10	839.0	803.9	662.0	603.8	58.24	11.367		
7,500.0	6,659.2	7,616.5	6,719.6	31.3	33.3	-95.14	839.0	903.9	662.1	599.1	63.00	10.509		
7,600.0	6,657.5	7,716.5	6,718.4	33.8	35.6	-95.19	839.0	1,003.9	662.1	594.2	67.89	9.753		
7,700.0	6,655.9	7,816.5	6,717.3	36.3	38.1	-95.23	839.0	1,103.9	662.2	589.3	72.88	9.086		
7,800.0	6,654.3	7,916.5	6,716.1	38.8	40.6	-95.28	839.0	1,203.9	662.2	584.3	77.94	8.496		
7,900.0	6,652.6	8,016.5	6,715.0	41.4	43.1	-95.32	839.0	1,303.9	662.3	579.2	83.08	7.972		
8,000.0	6,651.0	8,116.5	6,713.9	44.0	45.6	-95.36	839.0	1,403.9	662.3	574.1	88.26	7.504		
8,100.0	6,649.3	8,216.5	6,712.7	46.7	48.2	-95.41	839.0	1,503.9	662.4	568.9	93.50	7.084		
8,200.0	6,647.7	8,316.5	6,711.6	49.3	50.8	-95.45	839.0	1,603.9	662.4	563.6	98.77	6.707		
8,300.0	6,646.1	8,416.5	6,710.5	52.0	53.4	-95.49	839.0	1,703.9	662.5	558.4	104.07	6.365		
8,400.0	6,644.4	8,516.5	6,709.3	54.7	56.1	-95.54	839.0	1,803.8	662.5	553.1	109.40	6.056		
8,500.0	6,642.8	8,616.5	6,708.2	57.4	58.8	-95.58	839.0	1,903.8	662.6	547.8	114.76	5.774		
8,600.0	6,641.1	8,716.5	6,707.1	60.1	61.4	-95.62	839.0	2,003.8	662.6	542.5	120.13	5.516		
8,700.0	6,639.5	8,816.5	6,705.9	62.8	64.1	-95.67	839.0	2,103.8	662.7	537.1	125.52	5.279		
8,800.0	6,637.9	8,916.5	6,704.8	65.5	66.8	-95.71	839.0	2,203.8	662.7	531.8	130.93	5.062		
8,900.0	6,636.2	9,016.5	6,703.7	68.3	69.5	-95.75	839.0	2,303.8	662.8	526.4	136.35	4.861		
9,000.0	6,634.6	9,116.5	6,702.5	71.0	72.2	-95.80	839.0	2,403.8	662.8	521.0	141.78	4.675		
9,100.0	6,632.9	9,216.5	6,701.4	73.7	74.9	-95.84	839.0	2,503.8	662.9	515.6	147.22	4.503		
9,200.0	6,631.3	9,316.5	6,700.3	76.5	77.7	-95.89	839.0	2,603.8	662.9	510.2	152.67	4.342		
9,300.0	6,629.7	9,416.5	6,699.1	79.2	80.4	-95.93	839.0	2,703.8	663.0	504.8	158.13	4.193		
9,400.0	6,628.0	9,516.5	6,698.0	82.0	83.1	-95.97	839.0	2,803.8	663.0	499.4	163.59	4.053		
9,500.0	6,626.4	9,616.5	6,696.9	84.8	85.9	-96.02	839.0	2,903.8	663.1	494.0	169.06	3.922		
9,600.0	6,624.7	9,716.5	6,695.7	87.5	88.6	-96.06	839.0	3,003.8	663.1	488.6	174.54	3.799		
9,700.0	6,623.1	9,816.5	6,694.6	90.3	91.4	-96.10	839.0	3,103.7	663.2	483.2	180.02	3.684		
9,800.0	6,621.5	9,916.5	6,693.5	93.1	94.1	-96.15	839.0	3,203.7	663.2	477.7	185.51	3.575		

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

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Site Error:	0.0ft	North Reference:	True
Reference Well:	Loloff Farms 26I-212	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 (8-13-14)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:		0.0 ft
Survey Program: 0-MWD												Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
9,900.0	6,619.8	10,016.5	6,692.3	95.8	96.9	-96.19	839.0	3,303.7	663.3	472.3	191.00	3.473		
10,000.0	6,618.2	10,116.5	6,691.2	98.6	99.6	-96.23	839.0	3,403.7	663.3	466.8	196.49	3.376		
10,100.0	6,616.5	10,216.5	6,690.1	101.4	102.4	-96.28	839.0	3,503.7	663.4	461.4	201.99	3.284		
10,200.0	6,614.9	10,316.5	6,688.9	104.1	105.2	-96.32	839.0	3,603.7	663.4	456.0	207.48	3.198		
10,300.0	6,613.2	10,416.5	6,687.8	106.9	107.9	-96.36	839.0	3,703.7	663.5	450.5	212.99	3.115		
10,400.0	6,611.6	10,516.5	6,686.7	109.7	110.7	-96.41	839.0	3,803.7	663.6	445.1	218.49	3.037		
10,500.0	6,610.0	10,616.5	6,685.5	112.5	113.5	-96.45	839.0	3,903.7	663.6	439.6	224.00	2.963		
10,600.0	6,608.3	10,716.4	6,684.4	115.3	116.2	-96.49	839.0	4,003.7	663.7	434.2	229.50	2.892		
10,700.0	6,606.7	10,816.4	6,683.3	118.0	119.0	-96.54	839.0	4,103.7	663.7	428.7	235.01	2.824		
10,800.0	6,605.0	10,916.4	6,682.1	120.8	121.8	-96.58	839.0	4,203.7	663.8	423.3	240.53	2.760		
10,900.0	6,603.4	11,016.4	6,681.0	123.6	124.6	-96.62	839.0	4,303.7	663.8	417.8	246.04	2.698		
11,000.0	6,601.8	11,116.4	6,679.8	126.4	127.4	-96.67	839.0	4,403.6	663.9	412.4	251.55	2.639		
11,100.0	6,600.1	11,216.4	6,678.7	129.2	130.1	-96.71	839.0	4,503.6	664.0	406.9	257.06	2.583		
11,200.0	6,598.5	11,316.4	6,677.6	132.0	132.9	-96.75	839.0	4,603.6	664.0	401.4	262.58	2.529		
11,300.0	6,596.8	11,416.4	6,676.4	134.8	135.7	-96.80	839.0	4,703.6	664.1	396.0	268.10	2.477		
11,400.0	6,595.2	11,516.4	6,675.3	137.6	138.5	-96.84	839.0	4,803.6	664.1	390.5	273.61	2.427		
11,500.0	6,593.6	11,616.4	6,674.2	140.4	141.3	-96.88	839.0	4,903.6	664.2	385.1	279.13	2.380		
11,600.0	6,591.9	11,716.4	6,673.0	143.1	144.1	-96.93	839.0	5,003.6	664.3	379.6	284.64	2.334		
11,700.0	6,590.3	11,816.4	6,671.9	145.9	146.8	-96.97	839.0	5,103.6	664.3	374.2	290.16	2.290		
11,800.0	6,588.6	11,916.4	6,670.8	148.7	149.6	-97.01	839.0	5,203.6	664.4	368.7	295.68	2.247		
11,900.0	6,587.0	12,016.4	6,669.6	151.5	152.4	-97.06	839.0	5,303.6	664.5	363.3	301.20	2.206		
12,000.0	6,585.4	12,116.4	6,668.5	154.3	155.2	-97.10	839.0	5,403.6	664.5	357.8	306.71	2.167		
12,100.0	6,583.7	12,216.4	6,667.4	157.1	158.0	-97.14	839.0	5,503.6	664.6	352.3	312.23	2.128		
12,200.0	6,582.1	12,316.4	6,666.2	159.9	160.8	-97.19	839.0	5,603.6	664.6	346.9	317.75	2.092		
12,300.0	6,580.4	12,416.4	6,665.1	162.7	163.6	-97.23	839.0	5,703.5	664.7	341.4	323.26	2.056		
12,400.0	6,578.8	12,516.4	6,664.0	165.5	166.4	-97.27	839.0	5,803.5	664.8	336.0	328.78	2.022		
12,500.0	6,577.2	12,616.4	6,662.8	168.3	169.2	-97.32	839.0	5,903.5	664.8	330.5	334.30	1.989		
12,600.0	6,575.5	12,716.4	6,661.7	171.1	171.9	-97.36	839.0	6,003.5	664.9	325.1	339.81	1.957		
12,700.0	6,573.9	12,816.4	6,660.6	173.9	174.7	-97.40	839.0	6,103.5	665.0	319.6	345.33	1.926		
12,800.0	6,572.2	12,916.4	6,659.4	176.7	177.5	-97.45	839.0	6,203.5	665.0	314.2	350.84	1.896		
12,900.0	6,570.6	13,016.4	6,658.3	179.5	180.3	-97.49	839.0	6,303.5	665.1	308.7	356.36	1.866		
13,000.0	6,569.0	13,116.4	6,657.2	182.3	183.1	-97.53	839.0	6,403.5	665.2	303.3	361.87	1.838		
13,100.0	6,567.3	13,216.4	6,656.0	185.1	185.9	-97.58	839.0	6,503.5	665.2	297.8	367.39	1.811		
13,200.0	6,565.7	13,316.4	6,654.9	187.9	188.7	-97.62	839.0	6,603.5	665.3	292.4	372.90	1.784		
13,300.0	6,564.0	13,416.4	6,653.8	190.7	191.5	-97.66	839.0	6,703.5	665.4	286.9	378.41	1.758		
13,400.0	6,562.4	13,516.4	6,652.6	193.5	194.3	-97.71	839.0	6,803.5	665.4	281.5	383.92	1.733		
13,500.0	6,560.8	13,616.4	6,651.5	196.3	197.1	-97.75	839.0	6,903.5	665.5	276.1	389.43	1.709		
13,600.0	6,559.1	13,716.4	6,650.4	199.1	199.9	-97.79	839.0	7,003.4	665.6	270.6	394.94	1.685		
13,700.0	6,557.5	13,816.4	6,649.2	201.9	202.7	-97.84	839.0	7,103.4	665.6	265.2	400.45	1.662		
13,707.3	6,557.4	13,823.7	6,649.1	202.1	202.9	-97.84	839.0	7,110.7	665.6	264.8	400.85	1.661		
13,728.7	6,557.0	13,835.6	6,649.0	202.7	203.2	-97.84	839.0	7,122.6	665.7	263.9	401.77	1.657 SF		

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Site Error:	0.0ft	North Reference:	True
Reference Well:	Loloff Farms 26I-212	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 (8-13-14)	Offset TVD Reference:	Offset Datum

Offset Design														Offset Site Error:	0.0 ft
Survey Program: 0-MWD														Offset Well Error:	0.0 ft
Reference															
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		
0.0	0.0	0.0	0.0	0.0	0.0	-90.01	0.0	-30.7	30.7						
100.0	100.0	100.0	100.0	0.1	0.1	-90.01	0.0	-30.7	30.7	30.4	0.22	136.381			
200.0	200.0	200.0	200.0	0.3	0.3	-90.01	0.0	-30.7	30.7	30.0	0.67	45.460			
300.0	300.0	300.0	300.0	0.6	0.6	-90.01	0.0	-30.7	30.7	29.5	1.12	27.276			
400.0	400.0	400.0	400.0	0.8	0.8	-90.01	0.0	-30.7	30.7	29.1	1.57	19.483			
500.0	500.0	500.0	500.0	1.0	1.0	-90.01	0.0	-30.7	30.7	28.6	2.02	15.153			
600.0	600.0	600.0	600.0	1.2	1.2	-90.01	0.0	-30.7	30.7	28.2	2.47	12.398			
700.0	700.0	700.0	700.0	1.5	1.5	-90.01	0.0	-30.7	30.7	27.7	2.92	10.491			
800.0	800.0	800.0	800.0	1.7	1.7	-90.01	0.0	-30.7	30.7	27.3	3.37	9.092			
900.0	900.0	900.0	900.0	1.9	1.9	-90.01	0.0	-30.7	30.7	26.8	3.82	8.022			
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-90.01	0.0	-30.7	30.7	26.4	4.27	7.178 CC, ES			
1,100.0	1,100.0	1,099.5	1,099.5	2.4	2.4	-87.09	1.6	-31.3	31.4	26.6	4.72	6.648			
1,200.0	1,200.0	1,198.9	1,198.7	2.6	2.6	-79.20	6.4	-33.3	34.0	28.8	5.17	6.570			
1,300.0	1,300.0	1,297.7	1,297.2	2.8	2.8	-68.76	14.2	-36.6	39.4	33.8	5.62	7.013			
1,400.0	1,400.0	1,396.0	1,394.8	3.0	3.1	-58.61	25.2	-41.2	48.6	42.5	6.08	7.992			
1,500.0	1,500.0	1,495.1	1,493.0	3.3	3.3	-51.18	37.3	-46.3	59.8	53.3	6.54	9.153			
1,600.0	1,600.0	1,594.3	1,591.3	3.5	3.6	-46.15	49.4	-51.4	71.8	64.8	7.01	10.246			
1,700.0	1,700.0	1,693.4	1,689.5	3.7	3.9	-42.57	61.5	-56.5	84.1	76.6	7.48	11.241			
1,800.0	1,800.0	1,792.5	1,787.8	3.9	4.1	-39.92	73.6	-61.6	96.7	88.7	7.97	12.137			
1,900.0	1,900.0	1,891.8	1,886.2	4.2	4.4	15.63	85.7	-66.6	107.8	99.4	8.33	12.932			
2,000.0	1,999.8	1,991.4	1,984.9	4.4	4.7	17.97	97.9	-71.7	115.7	106.9	8.77	13.185			
2,100.0	2,099.5	2,091.1	2,083.7	4.6	5.0	20.58	110.0	-76.9	120.5	111.3	9.21	13.081			
2,200.0	2,198.7	2,190.9	2,182.6	4.8	5.4	23.60	122.2	-82.0	122.5	112.8	9.65	12.687			
2,300.0	2,297.9	2,290.6	2,281.5	5.1	5.7	26.69	134.4	-87.1	124.1	114.0	10.12	12.262			
2,400.0	2,397.1	2,390.4	2,380.4	5.3	6.0	29.70	146.6	-92.2	126.1	115.5	10.60	11.897			
2,500.0	2,496.3	2,490.2	2,479.3	5.6	6.3	32.60	158.8	-97.3	128.4	117.3	11.09	11.583			
2,600.0	2,595.4	2,589.9	2,578.2	5.9	6.6	35.39	170.9	-102.4	131.1	119.5	11.59	11.311			
2,700.0	2,694.6	2,689.7	2,677.0	6.1	6.9	38.06	183.1	-107.6	134.0	121.9	12.10	11.075			
2,800.0	2,793.8	2,789.5	2,775.9	6.4	7.2	40.62	195.3	-112.7	137.2	124.6	12.63	10.869			
2,900.0	2,893.0	2,889.2	2,874.8	6.7	7.6	43.06	207.5	-117.8	140.7	127.6	13.16	10.690			
3,000.0	2,992.2	2,989.0	2,973.7	7.0	7.9	45.37	219.7	-122.9	144.5	130.7	13.71	10.534			
3,100.0	3,091.3	3,088.8	3,072.6	7.3	8.2	47.56	231.9	-128.0	148.4	134.1	14.27	10.397			
3,200.0	3,190.5	3,188.5	3,171.5	7.6	8.5	49.64	244.0	-133.1	152.6	137.7	14.85	10.277			
3,300.0	3,289.7	3,288.3	3,270.4	7.9	8.8	51.60	256.2	-138.3	156.9	141.5	15.43	10.172			
3,400.0	3,388.9	3,388.0	3,369.2	8.2	9.2	53.46	268.4	-143.4	161.4	145.4	16.02	10.081			
3,500.0	3,488.1	3,487.8	3,468.1	8.5	9.5	55.22	280.6	-148.5	166.1	149.5	16.61	10.000			
3,600.0	3,587.2	3,587.6	3,567.0	8.8	9.8	56.87	292.8	-153.6	171.0	153.7	17.22	9.930			
3,700.0	3,686.4	3,687.3	3,665.9	9.1	10.1	58.44	305.0	-158.7	175.9	158.1	17.83	9.869			
3,800.0	3,785.6	3,787.1	3,764.8	9.4	10.5	59.92	317.1	-163.8	181.0	162.6	18.44	9.815			
3,900.0	3,884.8	3,886.9	3,863.7	9.7	10.8	61.31	329.3	-169.0	186.2	167.2	19.06	9.769			
4,000.0	3,984.0	3,986.6	3,962.6	10.0	11.1	62.63	341.5	-174.1	191.5	171.9	19.69	9.729			
4,100.0	4,083.1	4,086.4	4,061.4	10.3	11.4	63.88	353.7	-179.2	196.9	176.6	20.32	9.694			
4,200.0	4,182.4	4,186.2	4,160.3	10.6	11.8	65.01	365.9	-184.3	202.6	181.7	20.92	9.684			
4,300.0	4,281.9	4,285.9	4,259.2	10.8	12.1	65.39	378.0	-189.4	209.6	188.2	21.42	9.785			
4,400.0	4,381.8	4,385.5	4,357.9	11.0	12.4	64.95	390.2	-194.5	218.0	196.2	21.85	9.978			
4,500.0	4,481.7	4,484.9	4,456.4	11.2	12.7	63.79	402.3	-199.6	228.0	205.8	22.22	10.263			
4,600.0	4,581.7	4,584.0	4,554.7	11.4	13.1	8.78	414.4	-204.7	239.2	216.5	22.70	10.537			
4,700.0	4,681.7	4,683.1	4,652.9	11.6	13.4	7.20	426.5	-209.8	250.6	227.3	23.31	10.754			
4,800.0	4,781.7	4,782.2	4,751.2	11.8	13.7	5.76	438.7	-214.9	262.2	238.3	23.90	10.970			
4,900.0	4,881.7	4,881.4	4,849.4	12.0	14.0	4.44	450.8	-220.0	273.9	249.4	24.49	11.184			
5,000.0	4,981.7	4,980.5	4,947.6	12.2	14.4	3.23	462.9	-225.0	285.8	260.7	25.08	11.394			

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 Loloff Farms 26I-212
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4693.0ft (Original Well Elev)
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4693.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Loloff Farms 26I-212	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 (8-13-14)	Offset TVD Reference:	Offset Datum

Offset Design										Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W - Loloff Farms 26H-432 - Wellbore #1 - Plan #1 (8-13-1)				Offset Site Error:		0.0 ft
Survey Program: 0-MWID														Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor				
5,100.0	5,081.7	5,079.6	5,045.9	12.4	14.7	2.11	475.0	-230.1	297.8	272.1	25.67	11.602				
5,200.0	5,181.7	5,181.3	5,146.7	12.6	15.0	1.06	487.3	-235.3	309.8	283.5	26.25	11.802				
5,300.0	5,281.7	5,291.9	5,256.8	12.8	15.3	0.23	497.9	-239.7	319.3	292.6	26.76	11.932				
5,400.0	5,381.7	5,403.3	5,367.9	13.0	15.5	-0.28	504.6	-242.6	325.4	298.1	27.22	11.953				
5,500.0	5,481.7	5,515.0	5,479.6	13.2	15.7	-0.48	507.4	-243.7	327.8	300.2	27.63	11.867				
5,600.0	5,581.7	5,617.2	5,581.7	13.4	15.8	-0.48	507.4	-243.8	327.9	299.9	28.00	11.711				
5,700.0	5,681.7	5,717.2	5,681.7	13.6	16.0	-0.48	507.4	-243.8	327.9	299.5	28.39	11.551				
5,800.0	5,781.7	5,817.2	5,781.7	13.8	16.2	-0.48	507.4	-243.8	327.9	299.1	28.77	11.396				
5,900.0	5,881.7	5,917.2	5,881.7	14.0	16.4	-0.48	507.4	-243.8	327.9	298.7	29.16	11.244				
5,918.5	5,900.3	5,935.7	5,900.3	14.0	16.4	-90.51	507.4	-243.8	327.9	300.2	27.69	11.841				
6,000.0	5,981.6	6,017.1	5,981.6	14.1	16.5	-91.21	507.4	-243.8	328.0	300.0	27.96	11.730				
6,100.0	6,080.1	6,116.9	6,081.4	14.3	16.7	-93.88	507.4	-242.4	328.7	300.5	28.11	11.691				
6,200.0	6,175.5	6,219.6	6,183.2	14.3	16.8	-96.85	507.4	-229.4	330.3	302.1	28.17	11.724				
6,300.0	6,266.2	6,324.9	6,284.7	14.4	16.9	-99.70	507.4	-202.0	332.8	304.5	28.23	11.789				
6,400.0	6,350.7	6,432.8	6,383.9	14.5	16.9	-102.38	507.4	-159.7	335.9	307.5	28.35	11.849				
6,500.0	6,427.5	6,543.3	6,478.3	14.7	17.0	-104.83	507.4	-102.4	339.4	310.8	28.64	11.852				
6,600.0	6,495.3	6,656.4	6,565.3	15.1	17.0	-106.99	507.4	-30.3	343.1	313.8	29.25	11.731				
6,700.0	6,552.9	6,771.9	6,642.2	15.9	17.1	-108.83	507.4	55.7	346.6	316.3	30.33	11.428				
6,800.0	6,599.4	6,889.5	6,706.2	17.1	17.5	-110.30	507.4	154.3	349.7	317.7	32.05	10.913				
6,900.0	6,634.0	7,008.8	6,755.0	18.5	18.8	-111.38	507.4	263.0	352.2	317.7	34.46	10.219				
7,000.0	6,656.0	7,129.4	6,786.5	20.3	20.7	-112.04	507.4	379.3	353.7	316.2	37.57	9.417				
7,100.0	6,665.1	7,250.6	6,799.3	22.2	23.0	-112.27	507.4	499.7	354.3	313.1	41.25	8.590				
7,200.0	6,664.1	7,355.2	6,799.0	24.3	25.2	-112.36	507.4	604.3	354.5	309.4	45.12	7.857				
7,300.0	6,662.5	7,455.2	6,798.2	26.6	27.4	-112.49	507.4	704.3	354.9	305.7	49.18	7.215				
7,400.0	6,660.8	7,555.2	6,797.5	28.9	29.7	-112.62	507.4	804.3	355.2	301.8	53.43	6.648				
7,500.0	6,659.2	7,655.2	6,796.7	31.3	32.0	-112.75	507.4	904.3	355.6	297.7	57.82	6.150				
7,600.0	6,657.5	7,755.2	6,796.0	33.8	34.5	-112.89	507.4	1,004.3	355.9	293.6	62.32	5.711				
7,700.0	6,655.9	7,855.2	6,795.2	36.3	37.0	-113.02	507.4	1,104.3	356.3	289.3	66.90	5.325				
7,800.0	6,654.3	7,955.2	6,794.5	38.8	39.5	-113.15	507.4	1,204.3	356.6	285.0	71.56	4.983				
7,900.0	6,652.6	8,055.2	6,793.7	41.4	42.1	-113.28	507.4	1,304.2	357.0	280.7	76.26	4.680				
8,000.0	6,651.0	8,155.2	6,793.0	44.0	44.7	-113.41	507.4	1,404.2	357.3	276.3	81.01	4.410				
8,100.0	6,649.3	8,255.2	6,792.2	46.7	47.3	-113.54	507.4	1,504.2	357.7	271.9	85.79	4.169				
8,200.0	6,647.7	8,355.2	6,791.5	49.3	49.9	-113.67	507.4	1,604.2	358.0	267.4	90.60	3.952				
8,300.0	6,646.1	8,455.2	6,790.7	52.0	52.6	-113.80	507.4	1,704.2	358.4	262.9	95.43	3.755				
8,400.0	6,644.4	8,555.2	6,790.0	54.7	55.2	-113.93	507.4	1,804.2	358.7	258.5	100.28	3.577				
8,500.0	6,642.8	8,655.2	6,789.2	57.4	57.9	-114.06	507.4	1,904.2	359.1	254.0	105.13	3.416				
8,600.0	6,641.1	8,755.2	6,788.5	60.1	60.6	-114.19	507.4	2,004.2	359.5	249.5	110.00	3.268				
8,700.0	6,639.5	8,855.2	6,787.7	62.8	63.3	-114.32	507.4	2,104.2	359.8	245.0	114.87	3.132				
8,800.0	6,637.9	8,955.2	6,787.0	65.5	66.0	-114.45	507.4	2,204.2	360.2	240.4	119.75	3.008				
8,900.0	6,636.2	9,055.2	6,786.2	68.3	68.8	-114.58	507.4	2,304.2	360.6	235.9	124.63	2.893				
9,000.0	6,634.6	9,155.1	6,785.5	71.0	71.5	-114.71	507.4	2,404.2	360.9	231.4	129.51	2.787				
9,100.0	6,632.9	9,255.1	6,784.7	73.7	74.2	-114.84	507.4	2,504.2	361.3	226.9	134.39	2.688				
9,200.0	6,631.3	9,355.1	6,784.0	76.5	77.0	-114.97	507.4	2,604.2	361.7	222.4	139.28	2.597				
9,300.0	6,629.7	9,455.1	6,783.2	79.2	79.7	-115.09	507.4	2,704.2	362.1	217.9	144.16	2.512				
9,400.0	6,628.0	9,555.1	6,782.5	82.0	82.5	-115.22	507.4	2,804.1	362.4	213.4	149.03	2.432				
9,500.0	6,626.4	9,655.1	6,781.7	84.8	85.2	-115.35	507.4	2,904.1	362.8	208.9	153.90	2.357				
9,600.0	6,624.7	9,755.1	6,781.0	87.5	88.0	-115.48	507.4	3,004.1	363.2	204.4	158.77	2.288				
9,700.0	6,623.1	9,855.1	6,780.2	90.3	90.7	-115.60	507.4	3,104.1	363.6	199.9	163.64	2.222				
9,800.0	6,621.5	9,955.1	6,779.5	93.1	93.5	-115.73	507.4	3,204.1	364.0	195.5	168.49	2.160				
9,900.0	6,619.8	10,055.1	6,778.7	95.8	96.3	-115.85	507.4	3,304.1	364.4	191.0	173.35	2.102				

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 Loloff Farms 26I-212
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4693.0ft (Original Well Elev)
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4693.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Loloff Farms 26I-212	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 (8-13-14)	Offset TVD Reference:	Offset Datum

Offset Design										Survey Program: 0-MWD			Offset Site Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance					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	
10,000.0	6,618.2	10,155.1	6,778.0	98.6	99.0	-115.98	507.4	3,404.1	364.7	186.6	178.19	2.047		
10,100.0	6,616.5	10,255.1	6,777.2	101.4	101.8	-116.11	507.4	3,504.1	365.1	182.1	183.03	1.995		
10,200.0	6,614.9	10,355.1	6,776.4	104.1	104.6	-116.23	507.4	3,604.1	365.5	177.7	187.86	1.946		
10,300.0	6,613.2	10,455.1	6,775.7	106.9	107.3	-116.36	507.4	3,704.1	365.9	173.2	192.69	1.899		
10,400.0	6,611.6	10,555.1	6,774.9	109.7	110.1	-116.48	507.4	3,804.1	366.3	168.8	197.51	1.855		
10,500.0	6,610.0	10,655.1	6,774.2	112.5	112.9	-116.60	507.4	3,904.1	366.7	164.4	202.32	1.813		
10,600.0	6,608.3	10,755.1	6,773.4	115.3	115.7	-116.73	507.4	4,004.1	367.1	160.0	207.12	1.772		
10,700.0	6,606.7	10,855.1	6,772.7	118.0	118.4	-116.85	507.4	4,104.1	367.5	155.6	211.91	1.734		
10,800.0	6,605.0	10,955.1	6,771.9	120.8	121.2	-116.98	507.4	4,204.0	367.9	151.2	216.70	1.698		
10,900.0	6,603.4	11,055.1	6,771.2	123.6	124.0	-117.10	507.4	4,304.0	368.3	146.8	221.48	1.663		
11,000.0	6,601.8	11,155.1	6,770.4	126.4	126.8	-117.22	507.4	4,404.0	368.7	142.5	226.24	1.630		
11,100.0	6,600.1	11,255.1	6,769.7	129.2	129.6	-117.35	507.4	4,504.0	369.1	138.1	231.00	1.598		
11,200.0	6,598.5	11,355.1	6,768.9	132.0	132.4	-117.47	507.4	4,604.0	369.5	133.8	235.75	1.568		
11,300.0	6,596.8	11,455.1	6,768.2	134.8	135.2	-117.59	507.4	4,704.0	370.0	129.5	240.50	1.538		
11,400.0	6,595.2	11,555.1	6,767.4	137.6	137.9	-117.71	507.4	4,804.0	370.4	125.1	245.23	1.510		
11,500.0	6,593.6	11,655.0	6,766.7	140.4	140.7	-117.83	507.4	4,904.0	370.8	120.8	249.95	1.483	Level 3	
11,600.0	6,591.9	11,755.0	6,765.9	143.1	143.5	-117.96	507.4	5,004.0	371.2	116.5	254.66	1.458	Level 3	
11,700.0	6,590.3	11,855.0	6,765.2	145.9	146.3	-118.08	507.4	5,104.0	371.6	112.3	259.37	1.433	Level 3	
11,800.0	6,588.6	11,955.0	6,764.4	148.7	149.1	-118.20	507.4	5,204.0	372.0	108.0	264.06	1.409	Level 3	
11,900.0	6,587.0	12,055.0	6,763.7	151.5	151.9	-118.32	507.4	5,304.0	372.5	103.7	268.75	1.386	Level 3	
12,000.0	6,585.4	12,155.0	6,762.9	154.3	154.7	-118.44	507.4	5,404.0	372.9	99.5	273.42	1.364	Level 3	
12,100.0	6,583.7	12,255.0	6,762.2	157.1	157.5	-118.56	507.4	5,504.0	373.3	95.2	278.09	1.342	Level 3	
12,200.0	6,582.1	12,355.0	6,761.4	159.9	160.3	-118.68	507.4	5,604.0	373.7	91.0	282.74	1.322	Level 3	
12,300.0	6,580.4	12,455.0	6,760.7	162.7	163.1	-118.80	507.4	5,703.9	374.2	86.8	287.39	1.302	Level 3	
12,400.0	6,578.8	12,555.0	6,759.9	165.5	165.9	-118.92	507.4	5,803.9	374.6	82.6	292.02	1.283	Level 3	
12,500.0	6,577.2	12,655.0	6,759.2	168.3	168.7	-119.04	507.4	5,903.9	375.0	78.4	296.65	1.264	Level 3	
12,600.0	6,575.5	12,755.0	6,758.4	171.1	171.4	-119.16	507.4	6,003.9	375.5	74.2	301.26	1.246	Level 2	
12,700.0	6,573.9	12,855.0	6,757.7	173.9	174.2	-119.27	507.4	6,103.9	375.9	70.0	305.87	1.229	Level 2	
12,800.0	6,572.2	12,955.0	6,756.9	176.7	177.0	-119.39	507.4	6,203.9	376.3	65.9	310.46	1.212	Level 2	
12,900.0	6,570.6	13,055.0	6,756.2	179.5	179.8	-119.51	507.4	6,303.9	376.8	61.7	315.04	1.196	Level 2	
13,000.0	6,569.0	13,155.0	6,755.4	182.3	182.6	-119.63	507.4	6,403.9	377.2	57.6	319.62	1.180	Level 2	
13,100.0	6,567.3	13,255.0	6,754.7	185.1	185.4	-119.75	507.4	6,503.9	377.6	53.5	324.18	1.165	Level 2	
13,200.0	6,565.7	13,355.0	6,753.9	187.9	188.2	-119.86	507.4	6,603.9	378.1	49.4	328.74	1.150	Level 2	
13,300.0	6,564.0	13,455.0	6,753.2	190.7	191.0	-119.98	507.4	6,703.9	378.5	45.3	333.28	1.136	Level 2	
13,400.0	6,562.4	13,555.0	6,752.4	193.5	193.8	-120.10	507.4	6,803.9	379.0	41.2	337.81	1.122	Level 2	
13,500.0	6,560.8	13,655.0	6,751.7	196.3	196.6	-120.21	507.4	6,903.9	379.4	37.1	342.33	1.108	Level 2	
13,600.0	6,559.1	13,755.0	6,750.9	199.1	199.4	-120.33	507.4	7,003.9	379.9	33.0	346.84	1.095	Level 2	
13,700.0	6,557.5	13,855.0	6,750.2	201.9	202.2	-120.44	507.4	7,103.9	380.3	29.0	351.35	1.082	Level 2	
13,728.7	6,557.0	13,879.4	6,750.0	202.7	202.9	-120.47	507.4	7,128.3	380.5	27.9	352.55	1.079	Level 2, SF	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Loloff Farms 261-212
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4693.0ft (Original Well Elev)
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4693.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Loloff Farms 261-212	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 (8-13-14)	Offset TVD Reference:	Offset Datum

Offset Design										Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W - Loloff Farms 26I-402 - Wellbore #1 - Plan #1 (8-13-14)				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 (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor				
							+N/-S (ft)	+E/-W (ft)								
0.0	0.0	0.0	0.0	0.0	0.0	90.00	0.0	27.9	27.9							
100.0	100.0	99.0	99.0	0.1	0.1	90.00	0.0	27.9	27.9	27.6	0.22	124.605				
200.0	200.0	199.0	199.0	0.3	0.3	90.00	0.0	27.9	27.9	27.2	0.67	41.466				
300.0	300.0	299.0	299.0	0.6	0.6	90.00	0.0	27.9	27.9	26.7	1.12	24.846				
400.0	400.0	399.0	399.0	0.8	0.8	90.00	0.0	27.9	27.9	26.3	1.57	17.737				
500.0	500.0	499.0	499.0	1.0	1.0	90.00	0.0	27.9	27.9	25.8	2.02	13.791				
600.0	600.0	599.0	599.0	1.2	1.2	90.00	0.0	27.9	27.9	25.4	2.47	11.281				
700.0	700.0	699.0	699.0	1.5	1.5	90.00	0.0	27.9	27.9	24.9	2.92	9.544				
800.0	800.0	799.0	799.0	1.7	1.7	90.00	0.0	27.9	27.9	24.5	3.37	8.271				
900.0	900.0	899.0	899.0	1.9	1.9	90.00	0.0	27.9	27.9	24.0	3.82	7.297				
1,000.0	1,000.0	999.0	999.0	2.1	2.1	90.00	0.0	27.9	27.9	23.6	4.27	6.529				
1,100.0	1,100.0	1,099.0	1,099.0	2.4	2.4	90.00	0.0	27.9	27.9	23.1	4.72	5.907				
1,200.0	1,200.0	1,199.0	1,199.0	2.6	2.6	90.00	0.0	27.9	27.9	22.7	5.17	5.393				
1,300.0	1,300.0	1,299.0	1,299.0	2.8	2.8	90.00	0.0	27.9	27.9	22.3	5.62	4.961				
1,400.0	1,400.0	1,399.0	1,399.0	3.0	3.0	90.00	0.0	27.9	27.9	21.8	6.07	4.594				
1,500.0	1,500.0	1,499.0	1,499.0	3.3	3.3	90.00	0.0	27.9	27.9	21.4	6.52	4.277				
1,600.0	1,600.0	1,599.0	1,599.0	3.5	3.5	90.00	0.0	27.9	27.9	20.9	6.97	4.001				
1,700.0	1,700.0	1,699.0	1,699.0	3.7	3.7	90.00	0.0	27.9	27.9	20.5	7.42	3.758				
1,800.0	1,800.0	1,799.0	1,799.0	3.9	3.9	90.00	0.0	27.9	27.9	20.0	7.86	3.543 CC, ES				
1,900.0	1,900.0	1,899.0	1,899.0	4.2	4.2	145.34	0.0	27.9	29.3	21.0	8.31	3.526				
2,000.0	1,999.8	1,998.8	1,998.8	4.4	4.4	150.36	0.0	27.9	33.7	25.0	8.73	3.861				
2,100.0	2,099.5	2,098.5	2,098.5	4.6	4.6	156.25	0.0	27.9	41.5	32.4	9.15	4.537				
2,200.0	2,198.7	2,197.7	2,197.7	4.8	4.8	161.46	0.0	27.9	52.7	43.2	9.57	5.510				
2,300.0	2,297.9	2,296.9	2,296.9	5.1	5.1	165.04	0.0	27.9	65.0	55.0	10.01	6.492				
2,400.0	2,397.1	2,396.1	2,396.1	5.3	5.3	167.48	0.0	27.9	77.4	67.0	10.45	7.407				
2,500.0	2,496.3	2,495.3	2,495.3	5.6	5.5	169.25	0.0	27.9	89.9	79.0	10.89	8.255				
2,600.0	2,595.4	2,596.3	2,596.3	5.9	5.7	171.37	-0.8	26.5	101.7	90.3	11.32	8.979				
2,700.0	2,694.6	2,697.5	2,697.4	6.1	5.9	174.62	-3.3	21.9	111.7	100.0	11.73	9.524				
2,800.0	2,793.8	2,798.7	2,798.1	6.4	6.1	178.85	-7.7	14.3	120.6	108.4	12.15	9.921				
2,900.0	2,893.0	2,898.8	2,897.6	6.7	6.3	-176.21	-13.5	4.0	128.8	116.2	12.59	10.228				
3,000.0	2,992.2	2,997.9	2,995.8	7.0	6.5	-171.67	-19.6	-6.9	137.7	124.6	13.05	10.548				
3,100.0	3,091.3	3,096.9	3,094.1	7.3	6.7	-167.69	-25.8	-17.7	147.3	133.8	13.53	10.889				
3,200.0	3,190.5	3,196.0	3,192.4	7.6	7.0	-164.21	-31.9	-28.6	157.5	143.5	14.02	11.238				
3,300.0	3,289.7	3,295.0	3,290.6	7.9	7.2	-161.16	-38.0	-39.4	168.3	153.8	14.52	11.587				
3,400.0	3,388.9	3,394.0	3,388.9	8.2	7.5	-158.49	-44.1	-50.2	179.5	164.4	15.04	11.932				
3,500.0	3,488.1	3,493.1	3,487.1	8.5	7.7	-156.12	-50.3	-61.1	191.0	175.4	15.57	12.269				
3,600.0	3,587.2	3,592.1	3,585.4	8.8	8.0	-154.03	-56.4	-71.9	202.8	186.7	16.10	12.595				
3,700.0	3,686.4	3,691.2	3,683.6	9.1	8.2	-152.17	-62.5	-82.7	214.9	198.2	16.64	12.908				
3,800.0	3,785.6	3,790.2	3,781.9	9.4	8.5	-150.51	-68.6	-93.6	227.1	209.9	17.19	13.209				
3,900.0	3,884.8	3,889.3	3,880.2	9.7	8.8	-149.02	-74.8	-104.4	239.5	221.8	17.74	13.498				
4,000.0	3,984.0	3,988.3	3,978.4	10.0	9.0	-147.68	-80.9	-115.2	252.1	233.8	18.30	13.773				
4,100.0	4,083.1	4,087.3	4,076.7	10.3	9.3	-146.46	-87.0	-126.1	264.7	245.9	18.86	14.036				
4,200.0	4,182.4	4,186.4	4,175.0	10.6	9.6	-145.37	-93.1	-136.9	277.2	257.8	19.43	14.270				
4,300.0	4,281.9	4,285.7	4,273.4	10.8	9.9	-144.08	-99.3	-147.8	287.3	267.4	19.95	14.404				
4,400.0	4,381.8	4,385.0	4,372.0	11.0	10.2	-142.46	-105.4	-158.6	294.8	274.4	20.45	14.415				
4,500.0	4,481.7	4,484.3	4,470.5	11.2	10.5	-140.47	-111.5	-169.5	299.9	278.9	20.94	14.321				
4,600.0	4,581.7	4,583.5	4,568.9	11.4	10.8	168.47	-117.7	-180.3	303.6	282.9	20.64	14.705				
4,700.0	4,681.7	4,682.7	4,667.3	11.6	11.1	170.68	-123.8	-191.2	307.7	286.7	21.05	14.617				
4,800.0	4,781.7	4,781.9	4,765.7	11.8	11.4	172.83	-129.9	-202.0	312.3	290.8	21.47	14.546				
4,900.0	4,881.7	4,881.1	4,864.2	12.0	11.7	174.91	-136.1	-212.9	317.3	295.4	21.90	14.490				
5,000.0	4,981.7	4,981.5	4,963.8	12.2	12.0	176.94	-142.2	-223.8	322.7	300.4	22.34	14.447				

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 Loloff Farms 261-212
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4693.0ft (Original Well Elev)
Reference Site:	Loloff Farms 5N64W261 Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4693.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Loloff Farms 261-212	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 (8-13-14)	Offset TVD Reference:	Offset Datum

Offset Design										Survey Program: 0-MWD				Offset Site Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							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		
5,100.0	5,081.7	5,086.5	5,068.2	12.4	12.2	178.57	-147.4	-232.9	327.2	304.5	22.77	14.373			
5,200.0	5,181.7	5,192.1	5,173.6	12.6	12.4	179.58	-150.6	-238.6	330.2	307.0	23.19	14.238			
5,300.0	5,281.7	5,298.1	5,279.6	12.8	12.6	179.99	-151.9	-241.0	331.5	307.9	23.61	14.038			
5,400.0	5,381.7	5,399.3	5,380.7	13.0	12.8	-179.99	-152.0	-241.0	331.5	307.5	24.02	13.801			
5,500.0	5,481.7	5,499.3	5,480.7	13.2	13.0	-179.99	-152.0	-241.0	331.5	307.1	24.44	13.566			
5,600.0	5,581.7	5,599.3	5,580.7	13.4	13.2	-179.99	-152.0	-241.0	331.5	306.7	24.86	13.338			
5,700.0	5,681.7	5,699.3	5,680.7	13.6	13.4	-179.99	-152.0	-241.0	331.5	306.3	25.27	13.118			
5,800.0	5,781.7	5,799.3	5,780.7	13.8	13.6	-179.99	-152.0	-241.0	331.5	305.8	25.69	12.904			
5,900.0	5,881.7	5,899.3	5,880.7	14.0	13.8	-179.99	-152.0	-241.0	331.5	305.4	26.11	12.696			
5,938.4	5,920.1	5,937.6	5,919.1	14.0	13.9	90.14	-152.0	-241.0	331.5	304.2	27.34	12.126			
6,000.0	5,981.6	5,999.1	5,980.6	14.1	14.0	90.73	-152.0	-241.0	331.6	304.0	27.57	12.026			
6,100.0	6,080.1	6,098.8	6,080.2	14.3	14.2	93.39	-152.0	-239.7	332.1	304.3	27.87	11.918			
6,200.0	6,175.5	6,201.1	6,181.6	14.3	14.3	96.36	-152.0	-227.0	333.6	305.6	28.05	11.894			
6,300.0	6,266.2	6,305.9	6,282.9	14.4	14.4	99.22	-152.0	-199.9	336.0	307.8	28.16	11.930			
6,400.0	6,350.7	6,413.4	6,381.8	14.5	14.4	101.92	-152.0	-158.1	339.0	310.7	28.28	11.988			
6,500.0	6,427.5	6,523.6	6,476.1	14.7	14.5	104.40	-152.0	-101.3	342.5	314.0	28.53	12.006			
6,600.0	6,495.3	6,636.4	6,563.1	15.1	14.7	106.61	-152.0	-29.7	346.2	317.1	29.08	11.905			
6,700.0	6,552.9	6,751.7	6,640.2	15.9	15.2	108.50	-152.0	55.9	349.8	319.7	30.13	11.610			
6,800.0	6,599.4	6,869.1	6,704.6	17.1	16.2	110.02	-152.0	154.0	353.0	321.1	31.87	11.077			
6,900.0	6,634.0	6,988.4	6,753.8	18.5	17.7	111.16	-152.0	262.5	355.6	321.2	34.36	10.348			
7,000.0	6,656.0	7,109.0	6,785.8	20.3	19.6	111.89	-152.0	378.6	357.3	319.7	37.60	9.502			
7,100.0	6,665.1	7,230.3	6,799.2	22.2	21.9	112.19	-152.0	499.1	358.0	316.6	41.46	8.635			
7,200.0	6,664.1	7,335.6	6,799.0	24.3	24.1	112.29	-152.0	604.3	358.3	312.9	45.41	7.890			
7,300.0	6,662.5	7,435.6	6,798.3	26.6	26.4	112.42	-152.0	704.3	358.6	309.2	49.48	7.248			
7,400.0	6,660.8	7,535.6	6,797.5	28.9	28.7	112.55	-152.0	804.3	359.0	305.2	53.74	6.680			
7,500.0	6,659.2	7,635.6	6,796.8	31.3	31.1	112.68	-152.0	904.3	359.3	301.2	58.14	6.180			
7,600.0	6,657.5	7,735.6	6,796.0	33.8	33.5	112.81	-152.0	1,004.3	359.7	297.0	62.66	5.740			
7,700.0	6,655.9	7,835.6	6,795.3	36.3	36.0	112.94	-152.0	1,104.3	360.0	292.8	67.25	5.353			
7,800.0	6,654.3	7,935.5	6,794.5	38.8	38.6	113.08	-152.0	1,204.3	360.4	288.4	71.92	5.011			
7,900.0	6,652.6	8,035.5	6,793.8	41.4	41.2	113.21	-152.0	1,304.3	360.7	284.1	76.64	4.707			
8,000.0	6,651.0	8,135.5	6,793.0	44.0	43.8	113.33	-152.0	1,404.2	361.1	279.7	81.40	4.435			
8,100.0	6,649.3	8,235.5	6,792.3	46.7	46.4	113.46	-152.0	1,504.2	361.4	275.2	86.20	4.193			
8,200.0	6,647.7	8,335.5	6,791.5	49.3	49.1	113.59	-152.0	1,604.2	361.8	270.8	91.02	3.975			
8,300.0	6,646.1	8,435.5	6,790.8	52.0	51.8	113.72	-152.0	1,704.2	362.1	266.3	95.87	3.777			
8,400.0	6,644.4	8,535.5	6,790.0	54.7	54.5	113.85	-152.0	1,804.2	362.5	261.8	100.73	3.599			
8,500.0	6,642.8	8,635.5	6,789.3	57.4	57.2	113.98	-152.0	1,904.2	362.9	257.3	105.60	3.436			
8,600.0	6,641.1	8,735.5	6,788.5	60.1	59.9	114.11	-152.0	2,004.2	363.2	252.7	110.48	3.288			
8,700.0	6,639.5	8,835.5	6,787.7	62.8	62.6	114.24	-152.0	2,104.2	363.6	248.2	115.37	3.151			
8,800.0	6,637.9	8,935.5	6,787.0	65.5	65.3	114.36	-152.0	2,204.2	363.9	243.7	120.26	3.026			
8,900.0	6,636.2	9,035.5	6,786.2	68.3	68.0	114.49	-152.0	2,304.2	364.3	239.1	125.16	2.911			
9,000.0	6,634.6	9,135.5	6,785.5	71.0	70.8	114.62	-152.0	2,404.2	364.7	234.6	130.06	2.804			
9,100.0	6,632.9	9,235.5	6,784.7	73.7	73.5	114.75	-152.0	2,504.2	365.1	230.1	134.96	2.705			
9,200.0	6,631.3	9,335.5	6,784.0	76.5	76.3	114.87	-152.0	2,604.2	365.4	225.6	139.86	2.613			
9,300.0	6,629.7	9,435.5	6,783.2	79.2	79.0	115.00	-152.0	2,704.2	365.8	221.0	144.76	2.527			
9,400.0	6,628.0	9,535.5	6,782.5	82.0	81.8	115.13	-152.0	2,804.2	366.2	216.5	149.65	2.447			
9,500.0	6,626.4	9,635.5	6,781.7	84.8	84.5	115.25	-152.0	2,904.1	366.6	212.0	154.54	2.372			
9,600.0	6,624.7	9,735.5	6,781.0	87.5	87.3	115.38	-152.0	3,004.1	366.9	207.5	159.43	2.302			
9,700.0	6,623.1	9,835.5	6,780.2	90.3	90.1	115.50	-152.0	3,104.1	367.3	203.0	164.31	2.235			
9,800.0	6,621.5	9,935.5	6,779.5	93.1	92.8	115.63	-152.0	3,204.1	367.7	198.5	169.19	2.173			
9,900.0	6,619.8	10,035.5	6,778.7	95.8	95.6	115.75	-152.0	3,304.1	368.1	194.0	174.06	2.115			

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 Loloff Farms 26I-212
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4693.0ft (Original Well Elev)
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4693.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Loloff Farms 26I-212	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 (8-13-14)	Offset TVD Reference:	Offset Datum

Offset Design		Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W - Loloff Farms 26I-402 - Wellbore #1 - Plan #1 (8-13-14)										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 (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		
10,000.0	6,618.2	10,135.5	6,778.0	98.6	98.4	115.88	-152.0	3,404.1	368.5	189.5	178.93	2.059		
10,100.0	6,616.5	10,235.5	6,777.2	101.4	101.1	116.00	-152.0	3,504.1	368.9	185.1	183.79	2.007		
10,200.0	6,614.9	10,335.5	6,776.5	104.1	103.9	116.13	-152.0	3,604.1	369.3	180.6	188.64	1.957		
10,300.0	6,613.2	10,435.4	6,775.7	106.9	106.7	116.25	-152.0	3,704.1	369.7	176.2	193.49	1.910		
10,400.0	6,611.6	10,535.4	6,775.0	109.7	109.5	116.37	-152.0	3,804.1	370.0	171.7	198.33	1.866		
10,500.0	6,610.0	10,635.4	6,774.2	112.5	112.3	116.50	-152.0	3,904.1	370.4	167.3	203.16	1.823		
10,600.0	6,608.3	10,735.4	6,773.5	115.3	115.0	116.62	-152.0	4,004.1	370.8	162.9	207.98	1.783		
10,700.0	6,606.7	10,835.4	6,772.7	118.0	117.8	116.74	-152.0	4,104.1	371.2	158.4	212.79	1.745		
10,800.0	6,605.0	10,935.4	6,772.0	120.8	120.6	116.87	-152.0	4,204.1	371.6	154.0	217.60	1.708		
10,900.0	6,603.4	11,035.4	6,771.2	123.6	123.4	116.99	-152.0	4,304.1	372.0	149.6	222.40	1.673		
11,000.0	6,601.8	11,135.4	6,770.5	126.4	126.2	117.11	-152.0	4,404.0	372.4	145.3	227.19	1.639		
11,100.0	6,600.1	11,235.4	6,769.7	129.2	129.0	117.23	-152.0	4,504.0	372.9	140.9	231.97	1.607		
11,200.0	6,598.5	11,335.4	6,769.0	132.0	131.8	117.35	-152.0	4,604.0	373.3	136.5	236.74	1.577		
11,300.0	6,596.8	11,435.4	6,768.2	134.8	134.5	117.47	-152.0	4,704.0	373.7	132.2	241.51	1.547		
11,400.0	6,595.2	11,535.4	6,767.5	137.6	137.3	117.59	-152.0	4,804.0	374.1	127.8	246.26	1.519		
11,500.0	6,593.6	11,635.4	6,766.7	140.4	140.1	117.72	-152.0	4,904.0	374.5	123.5	251.01	1.492	Level 3	
11,600.0	6,591.9	11,735.4	6,766.0	143.1	142.9	117.84	-152.0	5,004.0	374.9	119.2	255.75	1.466	Level 3	
11,700.0	6,590.3	11,835.4	6,765.2	145.9	145.7	117.96	-152.0	5,104.0	375.3	114.9	260.47	1.441	Level 3	
11,800.0	6,588.6	11,935.4	6,764.5	148.7	148.5	118.08	-152.0	5,204.0	375.7	110.6	265.19	1.417	Level 3	
11,900.0	6,587.0	12,035.4	6,763.7	151.5	151.3	118.20	-152.0	5,304.0	376.2	106.3	269.90	1.394	Level 3	
12,000.0	6,585.4	12,135.4	6,763.0	154.3	154.1	118.31	-152.0	5,404.0	376.6	102.0	274.60	1.371	Level 3	
12,100.0	6,583.7	12,235.4	6,762.2	157.1	156.9	118.43	-152.0	5,504.0	377.0	97.7	279.29	1.350	Level 3	
12,200.0	6,582.1	12,335.4	6,761.5	159.9	159.7	118.55	-152.0	5,604.0	377.4	93.5	283.97	1.329	Level 3	
12,300.0	6,580.4	12,435.4	6,760.7	162.7	162.5	118.67	-152.0	5,704.0	377.9	89.2	288.64	1.309	Level 3	
12,400.0	6,578.8	12,535.4	6,760.0	165.5	165.3	118.79	-152.0	5,803.9	378.3	85.0	293.30	1.290	Level 3	
12,500.0	6,577.2	12,635.4	6,759.2	168.3	168.1	118.91	-152.0	5,903.9	378.7	80.8	297.95	1.271	Level 3	
12,600.0	6,575.5	12,735.4	6,758.5	171.1	170.9	119.03	-152.0	6,003.9	379.2	76.6	302.59	1.253	Level 3	
12,700.0	6,573.9	12,835.4	6,757.7	173.9	173.7	119.14	-152.0	6,103.9	379.6	72.4	307.22	1.236	Level 2	
12,800.0	6,572.2	12,935.3	6,757.0	176.7	176.5	119.26	-152.0	6,203.9	380.0	68.2	311.84	1.219	Level 2	
12,900.0	6,570.6	13,035.3	6,756.2	179.5	179.3	119.38	-152.0	6,303.9	380.5	64.0	316.45	1.202	Level 2	
13,000.0	6,569.0	13,135.3	6,755.5	182.3	182.1	119.49	-152.0	6,403.9	380.9	59.8	321.05	1.186	Level 2	
13,100.0	6,567.3	13,235.3	6,754.7	185.1	184.9	119.61	-152.0	6,503.9	381.3	55.7	325.64	1.171	Level 2	
13,200.0	6,565.7	13,335.3	6,754.0	187.9	187.7	119.73	-152.0	6,603.9	381.8	51.6	330.22	1.156	Level 2	
13,300.0	6,564.0	13,435.3	6,753.2	190.7	190.5	119.84	-152.0	6,703.9	382.2	47.4	334.78	1.142	Level 2	
13,400.0	6,562.4	13,535.3	6,752.5	193.5	193.3	119.96	-152.0	6,803.9	382.7	43.3	339.34	1.128	Level 2	
13,500.0	6,560.8	13,635.3	6,751.7	196.3	196.1	120.07	-152.0	6,903.9	383.1	39.2	343.89	1.114	Level 2	
13,600.0	6,559.1	13,735.3	6,751.0	199.1	198.9	120.19	-152.0	7,003.9	383.5	35.1	348.43	1.101	Level 2	
13,700.0	6,557.5	13,835.3	6,750.2	201.9	201.3	120.30	-152.0	7,103.9	384.0	31.3	352.65	1.089	Level 2	
13,728.7	6,557.0	13,864.1	6,750.0	202.7	201.8	120.34	-152.0	7,132.6	384.1	30.4	353.70	1.086	Level 2, SF	

Reference Depths are relative to WELL @ 4693.0ft (Original Well Elev)	Coordinates are relative to: Loloff Farms 261-212
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.500000 °	Grid Convergence at Surface is: 0.63°



Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Loloff Farms 26I-212
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4693.0ft (Original Well Elev)
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4693.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Loloff Farms 26I-212	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 (8-13-14)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4693.0ft (Original Well Elev) Coordinates are relative to: Loloff Farms 26I-212
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.63°

