

PETROLEUM DEVELOPMENT CORP DJ Basin

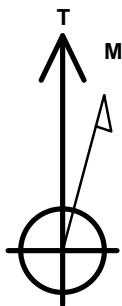
Well Name: **Loloff Farms 261-402**

Surface Location: Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W
North American Datum 1983 , US State Plane 1983, Colorado Northern Zone
Ground Elevation: 4677.0

+N/-S +E/-W Northing Easting Latitude Longitude Slot
0.0 0.0 1376854.95 3271628.73 40.363770 -104.525210
RKB - 23' WELL @ 4700.0ft (RKB - 23')

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 236'FSL, 320'FWL, Sec.26	1.0	0.0	0.0	Point
Spacing Unit Buffer - 460' (261-402)	1.0	-169.3	5120.8	Rectangle
BHL 60'FSL, 500'FEL, SEC.25	6741.0	-169.3	9742.4	Point



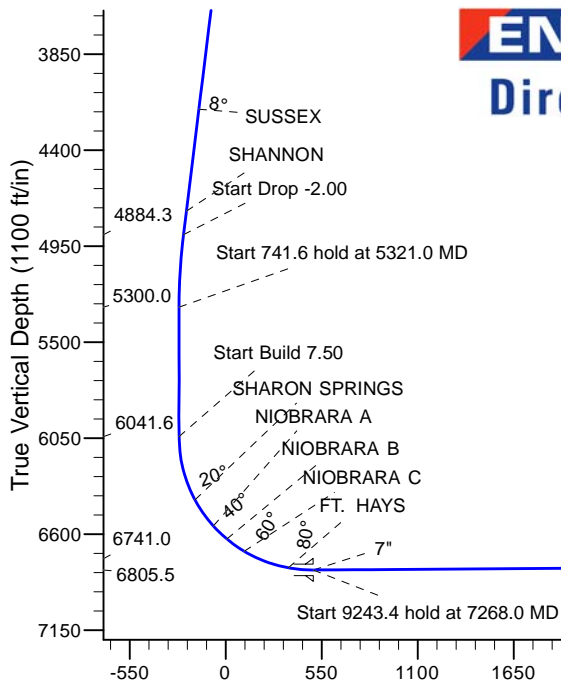
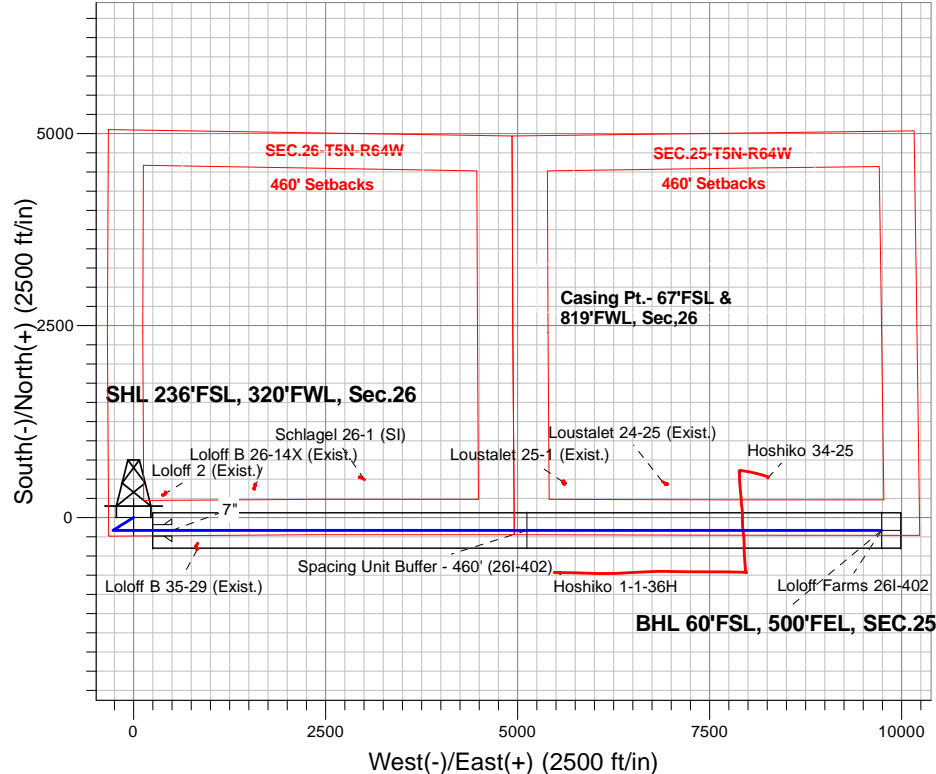
Azimuths to True North
Magnetic North: 8.11°

Magnetic Field
Strength: 52649.7snT
Dip Angle: 66.90°
Date: 2/2/2016
Model: IGRF2010

ANNOTATIONS

TVD	MD	Annotation
2500.0	2500.0	KOP - Start Build 1.00
4884.3	4903.9	Start Drop -2.00
5300.0	5321.0	Start 741.6 hold at 5321.0 MD
6041.6	6062.6	Start Build 7.50
6805.5	7268.0	Start 9243.4 hold at 7268.0 MD
6741.0	16511.3	TD at 16511.3

Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W
Loloff Farms 261-402
Extension Plan #1 (1-29-16)
9:54, February 02 2016



ENSIGN
Directional

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	2500.0	0.00	0.00	2500.0	0.0	0.0	0.00	0.00	0.0	
3	3334.3	8.34	237.91	3331.3	-32.2	-51.4	1.00	237.91	-50.8	
4	4903.9	8.34	237.91	4884.3	-153.2	-244.3	0.00	0.00	-241.6	
5	5321.0	0.00	0.00	5300.0	-169.3	-270.0	2.00	180.00	-267.0	
6	6062.6	0.00	0.00	6041.6	-169.3	-270.0	0.00	0.00	-267.0	
7	7268.0	90.40	90.00	6805.5	-169.3	499.3	7.50	90.00	502.1	
8	16511.3	90.40	90.00	6741.0	-169.3	9742.4	0.00	0.00	9743.9	BHL 60'FSL, 500'FEL, SEC.25

BHL 60'FSL, 500'FEL, SEC.25

TD at 16511.3

Vertical Section at 91.00° (1100 ft/in)



PETROLEUM DEVELOPMENT CORP DJ Basin

SEC.26-T5N-R64W

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

Loloff Farms 26I-402

Wellbore #1

Plan: Extension Plan #1 (1-29-16)

Standard Survey Report

02 February, 2016

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Loloff Farms 26I-402
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4700.0ft (RKB - 23')
Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4700.0ft (RKB - 23')
Well:	Loloff Farms 26I-402	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Extension Plan #1 (1-29-16)	Database:	US_EDM

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 usft	Latitude:	40.363760
From:	Lat/Long	Easting:	3,271,539.61 usft	Longitude:	-104.525530
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.63 °

Well	Loloff Farms 26I-402					
Well Position	+N/-S	0.0 ft	Northing:	1,376,854.95 usft	Latitude:	40.363770
	+E/-W	0.0 ft	Easting:	3,271,628.73 usft	Longitude:	-104.525210
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,677.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/2/2016	8.11	66.90	52,650

Design	Extension Plan #1 (1-29-16)			
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	91.00

Survey Tool Program	Date	2/2/2016		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	16,511.3	Extension Plan #1 (1-29-16) (Wellbore #1)	MWD	MWD - Standard

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
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, 320'FWL, Sec.26 - Spacing Unit Buffer - 460' (26I-402)									
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

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Loloff Farms 26I-402
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4700.0ft (RKB - 23')
Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4700.0ft (RKB - 23')
Well:	Loloff Farms 26I-402	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Extension Plan #1 (1-29-16)	Database:	US_EDM

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
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
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 1.00									
2,600.0	1.00	237.91	2,600.0	-0.5	-0.7	-0.7	1.00	1.00	0.00
2,700.0	2.00	237.91	2,700.0	-1.9	-3.0	-2.9	1.00	1.00	0.00
2,800.0	3.00	237.91	2,799.9	-4.2	-6.7	-6.6	1.00	1.00	0.00
2,900.0	4.00	237.91	2,899.7	-7.4	-11.8	-11.7	1.00	1.00	0.00
3,000.0	5.00	237.91	2,999.4	-11.6	-18.5	-18.3	1.00	1.00	0.00
3,100.0	6.00	237.91	3,098.9	-16.7	-26.6	-26.3	1.00	1.00	0.00
3,200.0	7.00	237.91	3,198.3	-22.7	-36.2	-35.8	1.00	1.00	0.00
3,300.0	8.00	237.91	3,297.4	-29.6	-47.2	-46.7	1.00	1.00	0.00
3,334.3	8.34	237.91	3,331.3	-32.2	-51.4	-50.8	1.00	1.00	0.00
3,400.0	8.34	237.91	3,396.4	-37.3	-59.4	-58.8	0.00	0.00	0.00
3,500.0	8.34	237.91	3,495.3	-45.0	-71.7	-70.9	0.00	0.00	0.00
3,528.0	8.34	237.91	3,523.0	-47.1	-75.2	-74.4	0.00	0.00	0.00
PARKMAN									
3,600.0	8.34	237.91	3,594.2	-52.7	-84.0	-83.1	0.00	0.00	0.00
3,700.0	8.34	237.91	3,693.2	-60.4	-96.3	-95.3	0.00	0.00	0.00
3,800.0	8.34	237.91	3,792.1	-68.1	-108.6	-107.4	0.00	0.00	0.00
3,900.0	8.34	237.91	3,891.1	-75.8	-120.9	-119.6	0.00	0.00	0.00
4,000.0	8.34	237.91	3,990.0	-83.5	-133.2	-131.7	0.00	0.00	0.00
4,100.0	8.34	237.91	4,089.0	-91.2	-145.5	-143.9	0.00	0.00	0.00
4,177.9	8.34	237.91	4,166.0	-97.2	-155.1	-153.4	0.00	0.00	0.00
SUSSEX									
4,200.0	8.34	237.91	4,187.9	-98.9	-157.8	-156.0	0.00	0.00	0.00
4,300.0	8.34	237.91	4,286.8	-106.6	-170.1	-168.2	0.00	0.00	0.00
4,400.0	8.34	237.91	4,385.8	-114.4	-182.4	-180.4	0.00	0.00	0.00
4,500.0	8.34	237.91	4,484.7	-122.1	-194.7	-192.5	0.00	0.00	0.00

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Loloff Farms 26I-402
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4700.0ft (RKB - 23')
Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4700.0ft (RKB - 23')
Well:	Loloff Farms 26I-402	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Extension Plan #1 (1-29-16)	Database:	US_EDM

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,600.0	8.34	237.91	4,583.7	-129.8	-207.0	-204.7	0.00	0.00	0.00
4,700.0	8.34	237.91	4,682.6	-137.5	-219.3	-216.8	0.00	0.00	0.00
4,768.1	8.34	237.91	4,750.0	-142.7	-227.6	-225.1	0.00	0.00	0.00
SHANNON									
4,800.0	8.34	237.91	4,781.5	-145.2	-231.5	-229.0	0.00	0.00	0.00
4,900.0	8.34	237.91	4,880.5	-152.9	-243.8	-241.1	0.00	0.00	0.00
4,903.9	8.34	237.91	4,884.3	-153.2	-244.3	-241.6	0.00	0.00	0.00
Start Drop -2.00									
5,000.0	6.42	237.91	4,979.6	-159.8	-254.8	-252.0	2.00	-2.00	0.00
5,100.0	4.42	237.91	5,079.2	-164.8	-262.8	-259.9	2.00	-2.00	0.00
5,200.0	2.42	237.91	5,179.0	-167.9	-267.8	-264.9	2.00	-2.00	0.00
5,300.0	0.42	237.91	5,279.0	-169.3	-269.9	-267.0	2.00	-2.00	0.00
5,321.0	0.00	237.91	5,300.0	-169.3	-270.0	-267.0	2.00	-2.00	0.00
Start 741.6 hold at 5321.0 MD									
5,400.0	0.00	0.00	5,379.0	-169.3	-270.0	-267.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,479.0	-169.3	-270.0	-267.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,579.0	-169.3	-270.0	-267.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,679.0	-169.3	-270.0	-267.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,779.0	-169.3	-270.0	-267.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,879.0	-169.3	-270.0	-267.0	0.00	0.00	0.00
6,000.0	0.00	0.00	5,979.0	-169.3	-270.0	-267.0	0.00	0.00	0.00
6,062.6	0.00	0.00	6,041.6	-169.3	-270.0	-267.0	0.00	0.00	0.00
Start Build 7.50									
6,100.0	2.80	90.00	6,079.0	-169.3	-269.1	-266.1	7.49	7.49	0.00
6,200.0	10.30	90.00	6,178.2	-169.3	-257.7	-254.7	7.50	7.50	0.00
6,300.0	17.80	90.00	6,275.2	-169.3	-233.4	-230.4	7.50	7.50	0.00
6,400.0	25.30	90.00	6,368.1	-169.3	-196.7	-193.7	7.50	7.50	0.00
6,439.1	28.23	90.00	6,403.0	-169.3	-179.1	-176.1	7.50	7.50	0.00
SHARON SPRINGS									
6,500.0	32.80	90.00	6,455.5	-169.3	-148.2	-145.2	7.50	7.50	0.00
6,600.0	40.30	90.00	6,535.7	-169.3	-88.7	-85.7	7.50	7.50	0.00
6,622.9	42.02	90.00	6,553.0	-169.3	-73.6	-70.6	7.50	7.50	0.00
NIOBRARA A									
6,700.0	47.80	90.00	6,607.6	-169.3	-19.2	-16.2	7.50	7.50	0.00
6,731.1	50.14	90.00	6,628.0	-169.3	4.3	7.2	7.50	7.50	0.00
NIOBRARA B									
6,800.0	55.30	90.00	6,669.7	-169.3	59.1	62.0	7.50	7.50	0.00
6,852.4	59.23	90.00	6,698.0	-169.3	103.1	106.0	7.50	7.50	0.00
NIOBRARA C									
6,900.0	62.80	90.00	6,721.1	-169.3	144.8	147.7	7.50	7.50	0.00
7,000.0	70.30	90.00	6,760.8	-169.3	236.5	239.4	7.50	7.50	0.00
7,100.0	77.80	90.00	6,788.3	-169.3	332.5	335.4	7.50	7.50	0.00
7,124.0	79.60	90.00	6,793.0	-169.3	356.0	358.9	7.50	7.50	0.00
FT. HAYS									
7,200.0	85.30	90.00	6,803.0	-169.3	431.4	434.3	7.50	7.50	0.00

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Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4700.0ft (RKB - 23')
Well:	Loloff Farms 26I-402	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Extension Plan #1 (1-29-16)	Database:	US_EDM

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,268.0	90.40	90.00	6,805.5	-169.3	499.3	502.2	7.50	7.50	0.00
Start 9243.4 hold at 7268.0 MD - 7"									
7,300.0	90.40	90.00	6,805.3	-169.3	531.3	534.2	0.00	0.00	0.00
7,400.0	90.40	90.00	6,804.6	-169.3	631.3	634.2	0.00	0.00	0.00
7,500.0	90.40	90.00	6,803.9	-169.3	731.3	734.1	0.00	0.00	0.00
7,600.0	90.40	90.00	6,803.2	-169.3	831.3	834.1	0.00	0.00	0.00
7,700.0	90.40	90.00	6,802.5	-169.3	931.3	934.1	0.00	0.00	0.00
7,800.0	90.40	90.00	6,801.8	-169.3	1,031.3	1,034.1	0.00	0.00	0.00
7,900.0	90.40	90.00	6,801.1	-169.3	1,131.3	1,134.1	0.00	0.00	0.00
8,000.0	90.40	90.00	6,800.4	-169.3	1,231.3	1,234.0	0.00	0.00	0.00
8,100.0	90.40	90.00	6,799.7	-169.3	1,331.3	1,334.0	0.00	0.00	0.00
8,200.0	90.40	90.00	6,799.0	-169.3	1,431.3	1,434.0	0.00	0.00	0.00
8,300.0	90.40	90.00	6,798.3	-169.3	1,531.3	1,534.0	0.00	0.00	0.00
8,400.0	90.40	90.00	6,797.6	-169.3	1,631.3	1,634.0	0.00	0.00	0.00
8,500.0	90.40	90.00	6,796.9	-169.3	1,731.3	1,734.0	0.00	0.00	0.00
8,600.0	90.40	90.00	6,796.2	-169.3	1,831.3	1,833.9	0.00	0.00	0.00
8,700.0	90.40	90.00	6,795.5	-169.3	1,931.3	1,933.9	0.00	0.00	0.00
8,800.0	90.40	90.00	6,794.8	-169.3	2,031.3	2,033.9	0.00	0.00	0.00
8,900.0	90.40	90.00	6,794.1	-169.3	2,131.3	2,133.9	0.00	0.00	0.00
9,000.0	90.40	90.00	6,793.4	-169.3	2,231.3	2,233.9	0.00	0.00	0.00
9,100.0	90.40	90.00	6,792.7	-169.3	2,331.3	2,333.9	0.00	0.00	0.00
9,200.0	90.40	90.00	6,792.0	-169.3	2,431.3	2,433.8	0.00	0.00	0.00
9,300.0	90.40	90.00	6,791.3	-169.3	2,531.3	2,533.8	0.00	0.00	0.00
9,400.0	90.40	90.00	6,790.6	-169.3	2,631.3	2,633.8	0.00	0.00	0.00
9,500.0	90.40	90.00	6,789.9	-169.3	2,731.3	2,733.8	0.00	0.00	0.00
9,600.0	90.40	90.00	6,789.2	-169.3	2,831.3	2,833.8	0.00	0.00	0.00
9,700.0	90.40	90.00	6,788.6	-169.3	2,931.3	2,933.8	0.00	0.00	0.00
9,800.0	90.40	90.00	6,787.9	-169.3	3,031.3	3,033.7	0.00	0.00	0.00
9,900.0	90.40	90.00	6,787.2	-169.3	3,131.2	3,133.7	0.00	0.00	0.00
10,000.0	90.40	90.00	6,786.5	-169.3	3,231.2	3,233.7	0.00	0.00	0.00
10,100.0	90.40	90.00	6,785.8	-169.3	3,331.2	3,333.7	0.00	0.00	0.00
10,200.0	90.40	90.00	6,785.1	-169.3	3,431.2	3,433.7	0.00	0.00	0.00
10,300.0	90.40	90.00	6,784.4	-169.3	3,531.2	3,533.6	0.00	0.00	0.00
10,400.0	90.40	90.00	6,783.7	-169.3	3,631.2	3,633.6	0.00	0.00	0.00
10,500.0	90.40	90.00	6,783.0	-169.3	3,731.2	3,733.6	0.00	0.00	0.00
10,600.0	90.40	90.00	6,782.3	-169.3	3,831.2	3,833.6	0.00	0.00	0.00
10,700.0	90.40	90.00	6,781.6	-169.3	3,931.2	3,933.6	0.00	0.00	0.00
10,800.0	90.40	90.00	6,780.9	-169.3	4,031.2	4,033.6	0.00	0.00	0.00
10,900.0	90.40	90.00	6,780.2	-169.3	4,131.2	4,133.5	0.00	0.00	0.00
11,000.0	90.40	90.00	6,779.5	-169.3	4,231.2	4,233.5	0.00	0.00	0.00
11,100.0	90.40	90.00	6,778.8	-169.3	4,331.2	4,333.5	0.00	0.00	0.00
11,200.0	90.40	90.00	6,778.1	-169.3	4,431.2	4,433.5	0.00	0.00	0.00
11,300.0	90.40	90.00	6,777.4	-169.3	4,531.2	4,533.5	0.00	0.00	0.00
11,400.0	90.40	90.00	6,776.7	-169.3	4,631.2	4,633.5	0.00	0.00	0.00

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Loloff Farms 26I-402
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4700.0ft (RKB - 23')
Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4700.0ft (RKB - 23')
Well:	Loloff Farms 26I-402	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Extension Plan #1 (1-29-16)	Database:	US_EDM

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,500.0	90.40	90.00	6,776.0	-169.3	4,731.2	4,733.4	0.00	0.00	0.00
11,600.0	90.40	90.00	6,775.3	-169.3	4,831.2	4,833.4	0.00	0.00	0.00
11,700.0	90.40	90.00	6,774.6	-169.3	4,931.2	4,933.4	0.00	0.00	0.00
11,800.0	90.40	90.00	6,773.9	-169.3	5,031.2	5,033.4	0.00	0.00	0.00
11,900.0	90.40	90.00	6,773.2	-169.3	5,131.2	5,133.4	0.00	0.00	0.00
12,000.0	90.40	90.00	6,772.5	-169.3	5,231.2	5,233.3	0.00	0.00	0.00
12,100.0	90.40	90.00	6,771.8	-169.3	5,331.2	5,333.3	0.00	0.00	0.00
12,200.0	90.40	90.00	6,771.1	-169.3	5,431.2	5,433.3	0.00	0.00	0.00
12,300.0	90.40	90.00	6,770.4	-169.3	5,531.2	5,533.3	0.00	0.00	0.00
12,400.0	90.40	90.00	6,769.7	-169.3	5,631.2	5,633.3	0.00	0.00	0.00
12,500.0	90.40	90.00	6,769.0	-169.3	5,731.2	5,733.3	0.00	0.00	0.00
12,600.0	90.40	90.00	6,768.3	-169.3	5,831.2	5,833.2	0.00	0.00	0.00
12,700.0	90.40	90.00	6,767.6	-169.3	5,931.2	5,933.2	0.00	0.00	0.00
12,800.0	90.40	90.00	6,766.9	-169.3	6,031.2	6,033.2	0.00	0.00	0.00
12,900.0	90.40	90.00	6,766.2	-169.3	6,131.2	6,133.2	0.00	0.00	0.00
13,000.0	90.40	90.00	6,765.5	-169.3	6,231.2	6,233.2	0.00	0.00	0.00
13,100.0	90.40	90.00	6,764.8	-169.3	6,331.2	6,333.2	0.00	0.00	0.00
13,200.0	90.40	90.00	6,764.1	-169.3	6,431.2	6,433.1	0.00	0.00	0.00
13,300.0	90.40	90.00	6,763.4	-169.3	6,531.2	6,533.1	0.00	0.00	0.00
13,400.0	90.40	90.00	6,762.7	-169.3	6,631.2	6,633.1	0.00	0.00	0.00
13,500.0	90.40	90.00	6,762.0	-169.3	6,731.2	6,733.1	0.00	0.00	0.00
13,600.0	90.40	90.00	6,761.3	-169.3	6,831.2	6,833.1	0.00	0.00	0.00
13,700.0	90.40	90.00	6,760.6	-169.3	6,931.2	6,933.1	0.00	0.00	0.00
13,800.0	90.40	90.00	6,759.9	-169.3	7,031.2	7,033.0	0.00	0.00	0.00
13,875.1	90.40	90.00	6,759.4	-169.3	7,106.2	7,108.1	0.00	0.00	0.00
BHL 75'FSL & 2144'FWL, Sec.25									
13,900.0	90.40	90.00	6,759.2	-169.3	7,131.2	7,133.0	0.00	0.00	0.00
14,000.0	90.40	90.00	6,758.5	-169.3	7,231.1	7,233.0	0.00	0.00	0.00
14,100.0	90.40	90.00	6,757.8	-169.3	7,331.1	7,333.0	0.00	0.00	0.00
14,200.0	90.40	90.00	6,757.1	-169.3	7,431.1	7,433.0	0.00	0.00	0.00
14,300.0	90.40	90.00	6,756.4	-169.3	7,531.1	7,532.9	0.00	0.00	0.00
14,400.0	90.40	90.00	6,755.7	-169.3	7,631.1	7,632.9	0.00	0.00	0.00
14,500.0	90.40	90.00	6,755.0	-169.3	7,731.1	7,732.9	0.00	0.00	0.00
14,600.0	90.40	90.00	6,754.3	-169.3	7,831.1	7,832.9	0.00	0.00	0.00
14,700.0	90.40	90.00	6,753.6	-169.3	7,931.1	7,932.9	0.00	0.00	0.00
14,800.0	90.40	90.00	6,752.9	-169.3	8,031.1	8,032.9	0.00	0.00	0.00
14,900.0	90.40	90.00	6,752.2	-169.3	8,131.1	8,132.8	0.00	0.00	0.00
15,000.0	90.40	90.00	6,751.6	-169.3	8,231.1	8,232.8	0.00	0.00	0.00
15,100.0	90.40	90.00	6,750.9	-169.3	8,331.1	8,332.8	0.00	0.00	0.00
15,200.0	90.40	90.00	6,750.2	-169.3	8,431.1	8,432.8	0.00	0.00	0.00
15,300.0	90.40	90.00	6,749.5	-169.3	8,531.1	8,532.8	0.00	0.00	0.00
15,400.0	90.40	90.00	6,748.8	-169.3	8,631.1	8,632.8	0.00	0.00	0.00
15,500.0	90.40	90.00	6,748.1	-169.3	8,731.1	8,732.7	0.00	0.00	0.00

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Loloff Farms 26I-402
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4700.0ft (RKB - 23')
Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4700.0ft (RKB - 23')
Well:	Loloff Farms 26I-402	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Extension Plan #1 (1-29-16)	Database:	US_EDM

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
15,600.0	90.40	90.00	6,747.4	-169.3	8,831.1	8,832.7	0.00	0.00	0.00	
15,700.0	90.40	90.00	6,746.7	-169.3	8,931.1	8,932.7	0.00	0.00	0.00	
15,800.0	90.40	90.00	6,746.0	-169.3	9,031.1	9,032.7	0.00	0.00	0.00	
15,900.0	90.40	90.00	6,745.3	-169.3	9,131.1	9,132.7	0.00	0.00	0.00	
16,000.0	90.40	90.00	6,744.6	-169.3	9,231.1	9,232.6	0.00	0.00	0.00	
16,100.0	90.40	90.00	6,743.9	-169.3	9,331.1	9,332.6	0.00	0.00	0.00	
16,200.0	90.40	90.00	6,743.2	-169.3	9,431.1	9,432.6	0.00	0.00	0.00	
16,300.0	90.40	90.00	6,742.5	-169.3	9,531.1	9,532.6	0.00	0.00	0.00	
16,400.0	90.40	90.00	6,741.8	-169.3	9,631.1	9,632.6	0.00	0.00	0.00	
16,500.0	90.40	90.00	6,741.1	-169.3	9,731.1	9,732.6	0.00	0.00	0.00	
16,511.3	90.40	90.00	6,741.0	-169.3	9,742.4	9,743.9	0.00	0.00	0.00	
TD at 16511.3 - BHL 60°FSL, 500°FEL, SEC.25										

Design Targets										
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude Longitude		
SHL 236°FSL, 320°FWL, - plan hits target center - Point	0.00	0.00	1.0	0.0	0.0	1,376,854.97	3,271,628.73	40.363770 -104.525210		
Spacing Unit Buffer - 46I - plan misses target center by 5123.6ft at 1.0ft MD (1.0 TVD, 0.0 N, 0.0 E) - Rectangle (sides W9,742.4 H460.0 D0.0)	0.00	0.00	1.0	-169.3	5,120.8	1,376,741.96	3,276,750.91	40.363304 -104.506834		
BHL 60°FSL, 500°FEL, S - plan hits target center - Point	0.00	0.00	6,741.0	-169.3	9,742.4	1,376,792.77	3,281,372.00	40.363300 -104.490250		

Casing Points										
Measured Depth (ft)	Vertical Depth (ft)	Name				Casing Diameter (")	Hole Diameter (")			
7,268.0	6,805.5	7"				7	8-3/4			

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Loloff Farms 26I-402
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4700.0ft (RKB - 23')
Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4700.0ft (RKB - 23')
Well:	Loloff Farms 26I-402	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Extension Plan #1 (1-29-16)	Database:	US_EDM

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,528.0	3,523.0	PARKMAN		0.00	
4,177.9	4,166.0	SUSSEX		0.00	
4,768.1	4,750.0	SHANNON		0.00	
6,439.1	6,403.0	SHARON SPRINGS		0.00	
6,622.9	6,553.0	NIOBRARA A		0.00	
6,731.1	6,628.0	NIOBRARA B		0.00	
6,852.4	6,698.0	NIOBRARA C		0.00	
7,124.0	6,793.0	FT. HAYS		0.00	

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
2500	2500	0	0	KOP - Start Build 1.00
4904	4884	-32	-51	Start Drop -2.00
5321	5300	-153	-244	Start 741.6 hold at 5321.0 MD
6063	6042	-169	-270	Start Build 7.50
7268	6806	-169	-270	Start 9243.4 hold at 7268.0 MD
16,511	6741	-169	499	TD at 16511.3

Checked By: _____	Approved By: _____	Date: _____
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PETROLEUM DEVELOPMENT CORP DJ Basin

SEC.26-T5N-R64W

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

Loloff Farms 26I-402

Wellbore #1

Extension Plan #1 (1-29-16)

Anticollision Report

02 February, 2016



Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Loloff Farms 26I-402
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4700.0ft (RKB - 23')
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4700.0ft (RKB - 23')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Loloff Farms 26I-402	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Extension Plan #1 (1-29-16)	Offset TVD Reference:	Offset Datum

Reference	Extension Plan #1 (1-29-16)		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 800.0 ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date 2/2/2016			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	16,511.3	Extension Plan #1 (1-29-16) (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						
Loustalet 24-25 (Exist.) - Wellbore #1 - Wellbore #1	13,689.1	6,618.8	618.9	410.3	2.966	CC
Loustalet 24-25 (Exist.) - Wellbore #1 - Wellbore #1	13,700.0	6,617.7	619.0	410.1	2.963	ES, SF
Loustalet 25-1 (Exist.) - Wellbore #1 - Wellbore #1	12,363.4	6,665.0	632.8	460.2	3.667	CC, ES
Loustalet 25-1 (Exist.) - Wellbore #1 - Wellbore #1	12,400.0	6,664.6	633.8	460.2	3.651	SF
Schlagel 26-1 (SI) - Wellbore #1 - Wellbore #1	9,771.3	6,709.6	662.9	562.8	6.625	CC
Schlagel 26-1 (SI) - Wellbore #1 - Wellbore #1	9,800.0	6,710.2	663.5	562.6	6.579	ES
Schlagel 26-1 (SI) - Wellbore #1 - Wellbore #1	9,900.0	6,712.2	675.2	571.6	6.517	SF
Existing Wells Pad Sec.26-T5N-R64W (Grid)						
Loloff 2 (Exist.) - Wellbore #1 - Wellbore #1	7,153.9	6,763.3	463.8	431.8	14.477	CC, ES
Loloff 2 (Exist.) - Wellbore #1 - Wellbore #1	7,300.0	6,771.8	486.2	451.2	13.912	SF
Loloff B 26-14X (Exist.) - Wellbore #1 - Wellbore #1	8,344.7	6,758.7	540.2	478.8	8.786	CC, ES
Loloff B 26-14X (Exist.) - Wellbore #1 - Wellbore #1	8,500.0	6,759.1	562.1	496.5	8.563	SF
Loloff B 35-29 (Exist.) - Wellbore #1 - Wellbore #1	7,598.4	6,767.1	240.9	198.3	5.652	CC
Loloff B 35-29 (Exist.) - Wellbore #1 - Wellbore #1	7,600.0	6,767.2	240.9	198.2	5.647	ES, SF
Hoshiko 34-25 Pad Sec.25-T5N-R64W						
Hoshiko 1-1-36H - Wellbore #1 - Wellbore #1	13,723.5	7,416.2	546.9	323.1	2.444	CC
Hoshiko 1-1-36H - Wellbore #1 - Wellbore #1	13,800.0	7,346.1	547.6	323.0	2.438	ES
Hoshiko 1-1-36H - Wellbore #1 - Wellbore #1	14,000.0	7,146.0	549.7	323.3	2.428	SF
Hoshiko 34-25 - Wellbore #1 - Wellbore #1	15,027.7	6,690.3	685.0	435.2	2.742	CC, ES
Hoshiko 34-25 - Wellbore #1 - Wellbore #1	15,100.0	6,689.5	688.9	437.0	2.735	SF
Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W						
Loloff Farms 26H-232 - Wellbore #1 - Extension Plan #1	966.3	967.3	58.5	54.4	14.199	CC
Loloff Farms 26H-232 - Wellbore #1 - Extension Plan #1	1,100.0	1,100.6	58.8	54.1	12.464	ES
Loloff Farms 26H-232 - Wellbore #1 - Extension Plan #1	16,511.3	16,367.0	749.7	210.4	1.390	Level 3, SF
Loloff Farms 26H-332 - Wellbore #1 - Extension Plan #1	166.0	168.0	89.2	88.7	169.710	CC
Loloff Farms 26H-332 - Wellbore #1 - Extension Plan #1	300.0	301.7	89.4	88.3	79.273	ES
Loloff Farms 26H-332 - Wellbore #1 - Extension Plan #1	1,300.0	1,287.8	148.2	142.1	24.151	SF
Loloff Farms 26I-312 - Wellbore #1 - Extension Plan #1 (1,766.3	1,767.3	27.9	20.1	3.611	CC
Loloff Farms 26I-312 - Wellbore #1 - Extension Plan #1 (16,511.3	16,418.5	306.8	-215.0	0.588	Level 1, ES, SF

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Loloff Farms 26I-402
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4700.0ft (RKB - 23')
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4700.0ft (RKB - 23')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Loloff Farms 26I-402	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Extension Plan #1 (1-29-16)	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: 100-NS-GYRO-MS													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		
13,200.0	6,764.1	6,670.9	6,667.8	183.7	11.6	-91.76	451.5	6,914.9	787.2	591.9	195.25	4.032		
13,300.0	6,763.4	6,660.3	6,657.2	186.5	11.6	-90.79	451.0	6,915.9	729.9	531.8	198.10	3.685		
13,400.0	6,762.7	6,649.6	6,646.7	189.3	11.6	-89.81	450.4	6,917.0	682.5	481.6	200.89	3.397		
13,500.0	6,762.0	6,639.0	6,636.1	192.1	11.6	-88.83	449.8	6,918.1	646.9	443.2	203.64	3.177		
13,600.0	6,761.3	6,628.3	6,625.5	194.9	11.5	-87.85	449.3	6,919.1	625.3	418.9	206.32	3.030		
13,689.1	6,760.7	6,618.8	6,616.1	197.4	11.5	-86.98	448.8	6,920.1	618.9	410.3	208.67	2.966 CC		
13,700.0	6,760.6	6,617.7	6,614.9	197.7	11.5	-86.87	448.7	6,920.2	619.0	410.1	208.95	2.963 ES, SF		
13,800.0	6,759.9	6,607.0	6,604.3	200.5	11.5	-85.89	448.2	6,921.2	628.7	417.2	211.52	2.972		
13,900.0	6,759.2	6,596.4	6,593.8	203.3	11.5	-84.91	447.6	6,922.3	653.5	439.5	214.02	3.053		
14,000.0	6,758.5	6,585.7	6,583.2	206.1	11.5	-83.93	447.1	6,923.4	691.8	475.4	216.46	3.196		
14,100.0	6,757.8	6,575.1	6,572.6	208.9	11.4	-82.96	446.5	6,924.4	741.6	522.8	218.83	3.389		

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Loloff Farms 26I-402
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4700.0ft (RKB - 23')
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4700.0ft (RKB - 23')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Loloff Farms 26I-402	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Extension Plan #1 (1-29-16)	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:		100-NS-GYRO-MS											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			
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
11,900.0	6,773.2	6,670.4	6,669.9	147.4	12.3	-90.81	463.4	5,594.6	784.3	624.7	159.60	4.914			
12,000.0	6,772.5	6,669.2	6,668.8	150.1	12.3	-90.71	463.4	5,594.6	729.7	567.3	162.39	4.493			
12,100.0	6,771.8	6,668.1	6,667.6	152.9	12.3	-90.60	463.4	5,594.6	685.4	520.2	165.19	4.149			
12,200.0	6,771.1	6,666.9	6,666.5	155.7	12.3	-90.50	463.4	5,594.6	653.5	485.5	167.99	3.890			
12,300.0	6,770.4	6,665.8	6,665.3	158.5	12.3	-90.40	463.5	5,594.6	635.9	465.1	170.78	3.724			
12,363.4	6,770.0	6,665.0	6,664.6	160.3	12.3	-90.33	463.5	5,594.6	632.8	460.2	172.55	3.667 CC, ES			
12,400.0	6,769.7	6,664.6	6,664.2	161.3	12.3	-90.29	463.5	5,594.6	633.8	460.2	173.58	3.651 SF			
12,500.0	6,769.0	6,663.4	6,663.0	164.1	12.3	-90.19	463.5	5,594.6	647.3	471.0	176.38	3.670			
12,600.0	6,768.3	6,662.3	6,661.9	166.9	12.3	-90.08	463.5	5,594.6	675.6	496.4	179.17	3.770			
12,700.0	6,767.6	6,661.1	6,660.7	169.7	12.3	-89.98	463.5	5,594.6	716.7	534.8	181.97	3.939			
12,800.0	6,766.9	6,660.0	6,659.5	172.5	12.3	-89.87	463.5	5,594.6	768.8	584.0	184.76	4.161			

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Loloff Farms 26I-402
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4700.0ft (RKB - 23')
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4700.0ft (RKB - 23')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Loloff Farms 26I-402	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Extension Plan #1 (1-29-16)	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						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
9,400.0	6,790.6	6,702.1	6,700.8	77.8	12.0	-90.15	493.6	3,002.4	759.7	670.0	89.79	8.461		
9,500.0	6,789.9	6,704.1	6,702.9	80.6	12.0	-90.33	493.6	3,002.5	716.2	623.7	92.55	7.739		
9,600.0	6,789.2	6,706.1	6,704.9	83.4	12.0	-90.50	493.6	3,002.5	684.6	589.3	95.31	7.183		
9,700.0	6,788.6	6,708.2	6,706.9	86.1	12.0	-90.68	493.5	3,002.6	666.7	568.6	98.08	6.798		
9,771.3	6,788.1	6,709.6	6,708.4	88.1	12.0	-90.80	493.5	3,002.6	662.9	562.8	100.05	6.625 CC		
9,800.0	6,787.9	6,710.2	6,708.9	88.9	12.0	-90.86	493.5	3,002.7	663.5	562.6	100.84	6.579 ES		
9,900.0	6,787.2	6,712.2	6,711.0	91.7	12.0	-91.03	493.5	3,002.7	675.2	571.6	103.61	6.517 SF		
10,000.0	6,786.5	6,714.3	6,713.0	94.4	12.0	-91.21	493.4	3,002.8	701.2	594.8	106.38	6.591		
10,100.0	6,785.8	6,716.3	6,715.0	97.2	12.0	-91.38	493.4	3,002.8	739.8	630.7	109.15	6.778		
10,200.0	6,785.1	6,718.3	6,717.1	100.0	12.0	-91.56	493.4	3,002.9	789.4	677.4	111.92	7.053		

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Loloff Farms 26I-402
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4700.0ft (RKB - 23')
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4700.0ft (RKB - 23')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Loloff Farms 26I-402	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Extension Plan #1 (1-29-16)	Offset TVD Reference:	Offset Datum

Offset Design		Existing Wells Pad Sec.26-T5N-R64W (Grid) - Loloff 2 (Exist.) - 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							Warning		
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor				
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)					
0.0	0.0	0.0	0.0	0.0	0.0	52.20	324.2	418.0	530.3							
100.0	100.0	63.5	63.5	0.1	0.1	52.21	324.2	418.0	529.0	528.8	0.20	2,687.737				
200.0	200.0	165.0	165.0	0.3	0.3	52.24	323.8	418.0	528.8	528.1	0.64	829.358				
300.0	300.0	265.3	265.3	0.6	0.6	52.27	323.3	417.9	528.3	527.2	1.12	470.552				
386.6	386.6	349.6	349.6	0.8	0.7	52.30	322.9	417.8	528.1	526.6	1.49	355.168				
400.0	400.0	362.5	362.4	0.8	0.8	52.30	322.9	417.8	528.1	526.5	1.54	343.443				
500.0	500.0	462.3	462.3	1.0	0.9	52.31	323.0	418.1	528.3	526.4	1.93	273.553				
600.0	600.0	560.8	560.8	1.2	1.1	52.32	323.1	418.2	528.5	526.2	2.31	228.626				
700.0	700.0	660.7	660.7	1.5	1.2	52.25	323.8	418.3	529.0	526.4	2.65	199.826				
800.0	800.0	761.4	761.3	1.7	1.3	52.21	324.3	418.3	529.3	526.4	2.98	177.377				
900.0	900.0	862.0	862.0	1.9	1.4	52.11	325.3	418.0	529.6	526.3	3.35	158.157				
1,000.0	1,000.0	961.9	961.8	2.1	1.6	52.07	325.7	417.9	529.8	526.0	3.74	141.543				
1,100.0	1,100.0	1,062.9	1,062.9	2.4	1.8	52.05	325.9	417.9	530.0	525.8	4.15	127.559				
1,174.5	1,174.5	1,137.4	1,137.4	2.5	1.9	52.03	326.1	417.8	529.9	525.5	4.46	118.717				
1,200.0	1,200.0	1,162.5	1,162.5	2.6	2.0	52.02	326.1	417.7	530.0	525.4	4.57	115.965				
1,300.0	1,300.0	1,261.8	1,261.8	2.8	2.2	51.99	326.5	417.7	530.2	525.2	5.00	105.969				
1,400.0	1,400.0	1,362.6	1,362.6	3.0	2.4	51.96	326.8	417.7	530.4	524.9	5.45	97.341				
1,500.0	1,500.0	1,463.7	1,463.7	3.3	2.6	51.88	327.4	417.2	530.3	524.4	5.89	90.007				
1,600.0	1,600.0	1,563.9	1,563.8	3.5	2.9	51.73	328.4	416.2	530.2	523.8	6.34	83.659				
1,700.0	1,700.0	1,663.8	1,663.8	3.7	3.1	51.55	329.6	415.1	530.0	523.2	6.79	78.068				
1,796.2	1,796.2	1,759.2	1,759.2	3.9	3.3	51.37	330.8	413.9	529.9	522.7	7.23	73.303				
1,800.0	1,800.0	1,763.0	1,762.9	3.9	3.3	51.36	330.9	413.9	529.9	522.7	7.25	73.125				
1,900.0	1,900.0	1,862.4	1,862.3	4.2	3.6	51.20	332.1	413.0	530.0	522.3	7.71	68.731				
2,000.0	2,000.0	1,962.1	1,962.1	4.4	3.8	51.07	333.1	412.4	530.1	522.0	8.18	64.799				
2,100.0	2,100.0	2,062.3	2,062.2	4.6	4.0	51.01	333.7	412.2	530.3	521.7	8.64	61.399				
2,200.0	2,200.0	2,163.9	2,163.9	4.8	4.2	51.01	333.7	412.2	530.4	521.3	9.03	58.729				
2,300.0	2,300.0	2,264.5	2,264.4	5.1	4.3	51.04	333.3	412.2	530.1	520.7	9.35	56.683				
2,400.0	2,400.0	2,363.5	2,363.4	5.3	4.4	51.10	332.7	412.4	529.9	520.2	9.66	54.871				
2,433.3	2,433.3	2,396.4	2,396.3	5.4	4.4	51.13	332.5	412.6	529.9	520.1	9.76	54.292				
2,500.0	2,500.0	2,462.6	2,462.6	5.5	4.5	51.23	331.8	413.2	529.9	519.9	9.98	53.117				
2,600.0	2,600.0	2,562.8	2,562.7	5.7	4.6	173.58	330.1	414.7	530.9	520.6	10.29	51.605				
2,700.0	2,700.0	2,663.3	2,663.2	5.9	4.7	173.88	328.1	416.3	533.5	522.9	10.59	50.390				
2,800.0	2,799.9	2,764.4	2,764.2	6.1	4.8	174.21	325.9	417.8	537.7	526.8	10.90	49.340				
2,900.0	2,899.7	2,865.8	2,865.6	6.3	5.0	174.53	323.7	419.0	543.4	532.2	11.22	48.441				
3,000.0	2,999.4	2,967.2	2,966.9	6.5	5.1	174.81	321.7	419.6	550.5	539.0	11.54	47.687				
3,100.0	3,098.9	3,067.4	3,067.1	6.7	5.3	175.03	320.1	419.8	559.1	547.3	11.88	47.081				
3,200.0	3,198.3	3,167.8	3,167.6	6.9	5.4	175.25	318.5	419.7	569.4	557.2	12.22	46.617				
3,300.0	3,297.4	3,268.9	3,268.6	7.1	5.6	175.48	316.7	419.5	581.2	568.6	12.56	46.267				
3,334.3	3,331.3	3,303.6	3,303.4	7.2	5.7	175.57	315.9	419.4	585.6	572.9	12.68	46.174				
3,400.0	3,396.4	3,372.3	3,372.0	7.4	5.8	175.75	314.3	419.0	593.9	580.9	12.94	45.901				
3,500.0	3,495.3	3,478.0	3,477.6	7.6	6.0	176.01	311.4	417.7	605.7	592.4	13.34	45.418				
3,600.0	3,594.2	3,581.2	3,580.7	7.9	6.2	176.23	308.1	415.5	616.7	603.0	13.74	44.885				
3,700.0	3,693.2	3,682.2	3,681.7	8.2	6.4	176.43	304.8	413.0	627.2	613.1	14.15	44.342				
3,800.0	3,792.1	3,782.1	3,781.5	8.4	6.6	176.63	301.4	410.4	637.6	623.1	14.56	43.804				
3,900.0	3,891.1	3,881.4	3,880.7	8.7	6.8	176.79	298.2	407.6	648.0	633.1	14.97	43.283				
4,000.0	3,990.0	3,980.3	3,979.5	9.0	7.0	176.85	295.9	404.3	658.5	643.1	15.39	42.788				
4,100.0	4,089.0	4,079.2	4,078.4	9.3	7.2	176.86	294.2	400.7	669.0	653.2	15.81	42.316				
4,200.0	4,187.9	4,179.5	4,178.5	9.6	7.4	176.84	292.8	396.8	679.5	663.3	16.24	41.852				
4,300.0	4,286.8	4,276.7	4,275.7	9.9	7.6	176.79	291.7	392.8	690.1	673.4	16.66	41.423				
4,400.0	4,385.8	4,376.1	4,375.0	10.2	7.8	176.72	290.9	388.9	700.9	683.8	17.09	41.012				
4,500.0	4,484.7	4,473.9	4,472.7	10.5	8.0	176.67	290.0	385.1	711.8	694.2	17.52	40.619				

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

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Loloff Farms 26I-402
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4700.0ft (RKB - 23')
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4700.0ft (RKB - 23')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Loloff Farms 26I-402	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Extension Plan #1 (1-29-16)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Pad Sec.26-T5N-R64W (Grid) - Loloff 2 (Exist.) - 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							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		
4,600.0	4,583.7	4,570.2	4,569.0	10.8	8.2	176.60	289.5	381.6	723.0	705.0	17.95	40.269		
4,700.0	4,682.6	4,662.1	4,660.8	11.1	8.4	176.52	289.6	378.5	734.8	716.4	18.37	39.994		
4,800.0	4,781.5	4,752.5	4,751.2	11.5	8.6	176.47	290.0	376.6	747.8	729.1	18.78	39.817		
4,903.9	4,884.3	4,849.7	4,848.4	11.8	8.8	176.43	290.9	375.5	762.5	743.3	19.20	39.713		
5,000.0	4,979.6	4,944.5	4,943.1	12.1	9.0	176.39	292.1	374.6	774.7	755.1	19.63	39.459		
5,100.0	5,079.2	5,044.4	5,043.1	12.3	9.2	176.33	293.3	373.5	784.0	764.0	20.06	39.084		
5,200.0	5,179.0	5,143.6	5,142.2	12.5	9.3	176.29	294.1	372.9	789.9	769.5	20.46	38.604		
5,300.0	5,279.0	5,239.5	5,238.1	12.7	9.5	176.24	294.9	372.4	792.5	771.7	20.82	38.065		
5,321.0	5,300.0	5,258.6	5,257.2	12.7	9.5	54.14	295.1	372.4	792.7	770.4	22.27	35.594		
5,400.0	5,379.0	5,334.6	5,333.3	12.9	9.6	54.11	295.9	372.8	793.6	771.0	22.52	35.236		
5,500.0	5,479.0	5,438.3	5,436.9	13.1	9.8	54.10	296.5	373.5	794.4	771.6	22.84	34.788		
5,600.0	5,579.0	5,540.9	5,539.5	13.3	9.9	54.12	296.5	374.0	794.8	771.7	23.15	34.333		
5,700.0	5,679.0	5,641.3	5,639.9	13.5	10.0	54.13	296.6	374.4	795.1	771.7	23.47	33.881		
5,800.0	5,779.0	5,740.7	5,739.3	13.7	10.1	54.15	296.6	374.7	795.4	771.6	23.79	33.431		
5,900.0	5,879.0	5,840.8	5,839.4	13.8	10.3	54.14	296.8	375.0	795.8	771.7	24.13	32.982		
6,000.0	5,979.0	5,941.0	5,939.6	14.0	10.4	54.18	296.6	375.4	796.0	771.5	24.47	32.527		
6,062.6	6,041.6	6,001.2	5,999.8	14.2	10.5	54.21	296.4	375.9	796.3	771.6	24.68	32.259		
6,100.0	6,079.0	6,038.9	6,037.5	14.2	10.6	-35.83	296.3	376.2	795.8	772.2	23.52	33.826		
6,150.0	6,128.8	6,089.1	6,087.7	14.3	10.7	-36.12	296.2	376.6	792.7	769.1	23.57	33.629		
6,200.0	6,178.2	6,137.8	6,136.4	14.4	10.7	-36.67	296.2	376.9	787.1	763.5	23.56	33.411		
6,250.0	6,227.1	6,185.5	6,184.1	14.4	10.8	-37.48	296.3	377.3	778.9	755.4	23.49	33.163		
6,300.0	6,275.2	6,232.8	6,231.4	14.4	10.9	-38.57	296.4	377.7	768.4	745.0	23.38	32.867		
6,350.0	6,322.2	6,279.4	6,278.0	14.5	10.9	-39.95	296.4	378.2	755.5	732.2	23.24	32.504		
6,400.0	6,368.1	6,324.8	6,323.4	14.5	11.0	-41.64	296.3	378.9	740.4	717.3	23.11	32.045		
6,450.0	6,412.6	6,368.9	6,367.5	14.5	11.1	-43.67	296.3	379.6	723.3	700.3	22.99	31.457		
6,500.0	6,455.5	6,411.9	6,410.5	14.5	11.1	-46.06	296.2	380.3	704.3	681.3	22.94	30.704		
6,550.0	6,496.6	6,454.0	6,452.6	14.6	11.2	-48.86	296.0	381.0	683.6	660.6	22.98	29.744		
6,600.0	6,535.7	6,494.2	6,492.8	14.6	11.3	-52.06	295.8	381.7	661.6	638.4	23.16	28.562		
6,650.0	6,572.8	6,532.3	6,530.9	14.7	11.3	-55.64	295.6	382.4	638.4	614.9	23.50	27.162		
6,700.0	6,607.6	6,568.3	6,566.8	14.9	11.4	-59.57	295.4	383.1	614.6	590.6	24.02	25.585		
6,750.0	6,639.9	6,601.8	6,600.4	15.2	11.5	-63.77	295.1	383.7	590.5	565.8	24.71	23.902		
6,800.0	6,669.7	6,632.4	6,630.9	15.5	11.5	-68.10	294.8	384.2	566.7	541.2	25.52	22.206		
6,850.0	6,696.8	6,659.9	6,658.5	15.9	11.6	-72.43	294.7	384.6	543.7	517.3	26.42	20.582		
6,900.0	6,721.1	6,684.5	6,683.0	16.4	11.6	-76.58	294.6	384.8	522.3	495.0	27.35	19.097		
6,950.0	6,742.5	6,706.0	6,704.6	17.0	11.6	-80.40	294.6	385.0	503.2	474.9	28.29	17.788		
7,000.0	6,760.8	6,724.9	6,723.4	17.7	11.7	-83.79	294.6	385.1	487.1	457.9	29.21	16.674		
7,050.0	6,776.1	6,740.7	6,739.2	18.5	11.7	-86.58	294.5	385.2	474.7	444.6	30.12	15.761		
7,100.0	6,788.3	6,753.3	6,751.8	19.3	11.7	-88.69	294.5	385.3	466.8	435.8	31.03	15.043		
7,150.0	6,797.3	6,762.7	6,761.2	20.2	11.7	-90.05	294.5	385.4	463.8	431.9	31.96	14.511		
7,153.9	6,797.8	6,763.3	6,761.8	20.3	11.7	-90.12	294.5	385.4	463.8	431.8	32.04	14.477 CC, ES		
7,200.0	6,803.0	6,768.8	6,767.3	21.2	11.7	-90.63	294.5	385.4	466.1	433.1	32.92	14.155		
7,250.0	6,805.4	6,771.6	6,770.2	22.2	11.8	-90.41	294.5	385.4	473.6	439.7	33.92	13.962		
7,268.0	6,805.5	6,771.8	6,770.4	22.5	11.8	-90.13	294.5	385.4	477.5	443.3	34.28	13.929		
7,300.0	6,805.3	6,771.8	6,770.4	23.2	11.8	-90.13	294.5	385.4	486.2	451.2	34.95	13.912 SF		
7,400.0	6,804.6	6,771.8	6,770.4	25.4	11.8	-90.13	294.5	385.4	524.9	487.8	37.11	14.146		
7,500.0	6,803.9	6,771.8	6,770.4	27.7	11.8	-90.13	294.5	385.4	578.5	539.2	39.39	14.689		
7,600.0	6,803.2	6,771.8	6,770.4	30.0	11.8	-90.13	294.5	385.4	643.3	601.6	41.75	15.408		
7,700.0	6,802.5	6,771.8	6,770.4	32.5	11.8	-90.13	294.5	385.4	716.3	672.1	44.19	16.208		
7,800.0	6,801.8	6,771.8	6,770.4	35.0	11.8	-90.13	294.5	385.4	795.1	748.4	46.69	17.031		

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

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Loloff Farms 26I-402
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4700.0ft (RKB - 23')
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4700.0ft (RKB - 23')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Loloff Farms 26I-402	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Extension Plan #1 (1-29-16)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Pad Sec.26-T5N-R64W (Grid) - Loloff B 26-14X (Exist.) - 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							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		
7,800.0	6,801.8	6,757.2	6,756.2	35.0	12.4	-89.91	370.9	1,576.0	767.2	719.9	47.29	16.224		
7,900.0	6,801.1	6,757.4	6,756.5	37.5	12.4	-89.94	370.9	1,576.0	699.7	649.9	49.83	14.043		
8,000.0	6,800.4	6,757.7	6,756.8	40.1	12.4	-89.97	370.9	1,576.0	640.9	588.4	52.41	12.229		
8,100.0	6,799.7	6,758.0	6,757.1	42.7	12.4	-90.00	370.9	1,576.0	593.1	538.1	55.01	10.781		
8,200.0	6,799.0	6,758.3	6,757.3	45.3	12.4	-90.03	370.9	1,576.0	559.3	501.6	57.64	9.703		
8,300.0	6,798.3	6,758.6	6,757.6	48.0	12.4	-90.06	370.9	1,576.0	542.1	481.8	60.29	8.991		
8,344.7	6,798.0	6,758.7	6,757.7	49.1	12.4	-90.08	370.9	1,576.0	540.2	478.8	61.49	8.786 CC, ES		
8,400.0	6,797.6	6,758.9	6,757.9	50.6	12.4	-90.09	370.9	1,576.0	543.1	480.1	62.96	8.625		
8,500.0	6,796.9	6,759.1	6,758.2	53.3	12.4	-90.12	370.9	1,576.0	562.1	496.5	65.64	8.563 SF		
8,600.0	6,796.2	6,759.4	6,758.5	56.0	12.4	-90.15	370.9	1,576.0	597.5	529.2	68.34	8.743		
8,700.0	6,795.5	6,759.7	6,758.8	58.7	12.4	-90.18	370.9	1,576.0	646.6	575.5	71.05	9.101		
8,800.0	6,794.8	6,760.0	6,759.0	61.4	12.4	-90.21	370.9	1,576.0	706.5	632.7	73.76	9.578		
8,900.0	6,794.1	6,760.3	6,759.3	64.1	12.4	-90.24	370.9	1,576.0	774.7	698.2	76.48	10.129		

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Loloff Farms 26I-402
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4700.0ft (RKB - 23')
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4700.0ft (RKB - 23')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Loloff Farms 26I-402	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Extension Plan #1 (1-29-16)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Pad Sec.26-T5N-R64W (Grid) - Loloff B 35-29 (Exist.) - 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 (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	
6,850.0	6,696.8	6,653.5	6,651.2	15.9	12.5	32.32	-410.0	828.4	766.2	746.1	20.05	38.203		
6,900.0	6,721.1	6,677.5	6,675.2	16.4	12.5	37.00	-410.1	828.7	725.1	704.1	20.93	34.638		
6,950.0	6,742.5	6,700.0	6,697.7	17.0	12.5	42.76	-410.1	828.9	682.8	660.4	22.45	30.410		
7,000.0	6,760.8	6,717.7	6,715.4	17.7	12.6	49.36	-410.1	829.1	639.8	615.3	24.50	26.113		
7,050.0	6,776.1	6,733.6	6,731.3	18.5	12.6	57.00	-410.2	829.3	596.1	569.2	26.97	22.101		
7,100.0	6,788.3	6,746.3	6,744.0	19.3	12.6	65.23	-410.2	829.5	552.3	522.7	29.51	18.715		
7,150.0	6,797.3	6,755.9	6,753.6	20.2	12.7	73.48	-410.2	829.6	508.6	476.8	31.76	16.011		
7,200.0	6,803.0	6,762.2	6,759.9	21.2	12.7	81.10	-410.2	829.6	465.5	431.9	33.53	13.882		
7,250.0	6,805.4	6,765.2	6,762.9	22.2	12.7	87.56	-410.2	829.7	423.6	388.8	34.82	12.166		
7,268.0	6,805.5	6,765.5	6,763.2	22.5	12.7	89.53	-410.2	829.7	408.9	373.7	35.19	11.620		
7,300.0	6,805.3	6,765.7	6,763.4	23.2	12.7	89.56	-410.2	829.7	383.5	347.7	35.85	10.697		
7,400.0	6,804.6	6,766.2	6,763.9	25.4	12.7	89.68	-410.2	829.7	312.1	274.1	38.01	8.210		
7,500.0	6,803.9	6,766.7	6,764.4	27.7	12.7	89.80	-410.2	829.7	260.2	219.9	40.29	6.459		
7,598.4	6,803.2	6,767.1	6,764.9	30.0	12.7	89.91	-410.2	829.7	240.9	198.3	42.62	5.652 CC		
7,600.0	6,803.2	6,767.2	6,764.9	30.0	12.7	89.91	-410.2	829.7	240.9	198.2	42.66	5.647 ES, SF		
7,700.0	6,802.5	6,767.6	6,765.4	32.5	12.7	90.03	-410.2	829.7	261.5	216.4	45.10	5.797		
7,800.0	6,801.8	6,768.1	6,765.8	35.0	12.7	90.15	-410.2	829.7	314.1	266.5	47.59	6.600		
7,900.0	6,801.1	6,768.6	6,766.3	37.5	12.7	90.26	-410.2	829.7	386.0	335.9	50.13	7.699		
8,000.0	6,800.4	6,769.1	6,766.8	40.1	12.7	90.38	-410.2	829.7	468.3	415.6	52.71	8.885		
8,100.0	6,799.7	6,769.6	6,767.3	42.7	12.7	90.50	-410.2	829.7	556.4	501.1	55.31	10.060		
8,200.0	6,799.0	6,770.1	6,767.8	45.3	12.7	90.61	-410.2	829.7	648.0	590.1	57.94	11.184		
8,300.0	6,798.3	6,770.6	6,768.3	48.0	12.7	90.73	-410.2	829.7	741.8	681.2	60.59	12.243		

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Loloff Farms 26I-402
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4700.0ft (RKB - 23')
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4700.0ft (RKB - 23')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Loloff Farms 26I-402	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Extension Plan #1 (1-29-16)	Offset TVD Reference:	Offset Datum

Offset Design		Hoshiko 34-25 Pad Sec.25-T5N-R64W - Hoshiko 1-1-36H - Wellbore #1 - Wellbore #1											Offset Site Error:		0.0 ft	
Survey Program:		124-												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)					
11,700.0	6,774.6	8,897.0	6,483.5	141.8	69.8	70.81	-716.2	5,475.0	795.3	595.0	200.33	3.970				
11,800.0	6,773.9	8,897.0	6,483.5	144.6	69.8	70.81	-716.2	5,475.0	730.4	527.4	202.98	3.598				
11,900.0	6,773.2	8,897.0	6,483.5	147.4	69.8	70.81	-716.2	5,475.0	674.1	468.5	205.63	3.278				
12,000.0	6,772.5	8,897.0	6,483.5	150.1	69.8	70.81	-716.2	5,475.0	628.8	420.5	208.28	3.019				
12,100.0	6,771.8	8,897.0	6,483.5	152.9	69.8	70.81	-716.2	5,475.0	597.0	386.0	210.93	2.830				
12,200.0	6,771.1	8,897.0	6,483.5	155.7	69.8	70.81	-716.2	5,475.0	580.8	367.2	213.58	2.719				
12,300.0	6,770.4	8,837.6	6,487.1	158.5	68.2	71.22	-717.0	5,534.3	578.5	363.4	215.16	2.689				
12,383.9	6,769.8	8,757.9	6,492.0	160.9	66.1	71.78	-718.6	5,613.8	578.3	362.3	215.96	2.678				
12,400.0	6,769.7	8,741.9	6,493.0	161.3	65.7	71.89	-718.9	5,629.8	578.3	362.2	216.10	2.676				
12,500.0	6,769.0	8,646.6	6,497.7	164.1	63.2	72.47	-721.3	5,724.9	578.9	361.9	216.93	2.668				
12,600.0	6,768.3	8,549.5	6,501.3	166.9	60.7	72.94	-723.6	5,821.9	579.8	362.2	217.60	2.665				
12,700.0	6,767.6	8,450.5	6,503.7	169.7	58.1	73.30	-726.1	5,920.9	581.4	363.3	218.10	2.666				
12,800.0	6,766.9	8,346.3	6,506.6	172.5	55.5	73.72	-728.5	6,025.0	582.6	364.1	218.53	2.666				
12,900.0	6,766.2	8,234.2	6,511.5	175.3	52.6	74.30	-730.3	6,137.0	582.8	363.9	218.92	2.662				
13,000.0	6,765.5	8,117.4	6,515.9	178.1	49.7	74.76	-728.7	6,253.7	580.3	361.2	219.08	2.649				
13,100.0	6,764.8	8,009.4	6,519.5	180.9	47.0	75.06	-724.2	6,361.5	575.2	355.8	219.35	2.622				
13,200.0	6,764.1	7,902.4	6,523.9	183.7	44.4	75.40	-718.1	6,468.3	568.4	348.7	219.72	2.587				
13,300.0	6,763.4	7,804.7	6,527.3	186.5	42.1	75.66	-712.6	6,565.8	561.9	341.7	220.27	2.551				
13,400.0	6,762.7	7,710.5	6,530.7	189.3	39.9	75.95	-708.1	6,659.8	556.2	335.2	220.96	2.517				
13,500.0	6,762.0	7,616.9	6,534.8	192.1	37.9	76.35	-704.9	6,753.3	551.6	329.9	221.78	2.487				
13,600.0	6,761.3	7,529.2	6,537.6	194.9	36.0	76.65	-703.0	6,840.9	548.7	326.0	222.68	2.464				
13,700.0	6,760.6	7,436.0	6,540.3	197.7	34.2	76.97	-702.2	6,934.0	547.0	323.5	223.53	2.447				
13,723.5	6,760.5	7,416.2	6,541.1	198.4	33.8	77.07	-702.3	6,953.8	546.9	323.1	223.80	2.444 CC				
13,800.0	6,759.9	7,346.1	6,544.3	200.5	32.6	77.48	-703.9	7,023.8	547.6	323.0	224.64	2.438 ES				
13,900.0	6,759.2	7,243.0	6,547.6	203.3	31.1	77.95	-706.3	7,126.8	549.1	323.6	225.50	2.435				
14,000.0	6,758.5	7,146.0	6,548.9	206.1	29.8	78.17	-707.3	7,223.8	549.7	323.3	226.42	2.428 SF				
14,100.0	6,757.8	7,061.8	6,542.4	208.9	29.0	77.60	-708.5	7,307.7	552.5	325.4	227.14	2.432				
14,200.0	6,757.1	6,972.7	6,526.0	211.7	28.3	76.02	-709.2	7,395.3	557.5	330.4	227.08	2.455				
14,300.0	6,756.4	6,890.8	6,501.2	214.5	27.8	73.62	-708.9	7,473.3	565.3	339.0	226.32	2.498				
14,400.0	6,755.7	6,815.8	6,471.5	217.3	27.4	70.80	-708.8	7,542.1	578.0	353.0	224.95	2.569				
14,500.0	6,755.0	6,752.2	6,441.2	220.1	27.2	68.02	-708.7	7,598.0	596.4	373.1	223.34	2.670				
14,600.0	6,754.3	6,692.6	6,408.4	222.9	27.0	65.14	-709.3	7,647.7	622.3	401.2	221.17	2.814				
14,700.0	6,753.6	6,630.1	6,370.4	225.7	26.9	61.94	-709.3	7,697.3	654.3	436.4	217.91	3.003				
14,800.0	6,752.9	6,582.0	6,338.6	228.6	26.8	59.40	-709.4	7,733.4	693.6	478.2	215.38	3.220				
14,900.0	6,752.2	6,543.6	6,311.5	231.4	26.7	57.35	-709.9	7,760.6	740.1	526.6	213.50	3.466				
15,000.0	6,751.6	6,500.5	6,279.6	234.2	26.7	55.06	-710.3	7,789.6	792.6	581.9	210.74	3.761				

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Loloff Farms 26I-402
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4700.0ft (RKB - 23')
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4700.0ft (RKB - 23')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Loloff Farms 26I-402	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Extension Plan #1 (1-29-16)	Offset TVD Reference:	Offset Datum

Offset Design														Offset Site Error:	0.0 ft
Survey Program: 599- Hoshiko 34-25 Pad Sec.25-T5N-R64W - Hoshiko 34-25 - Wellbore #1 - Wellbore #1														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)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
14,700.0	6,753.6	6,693.6	6,663.6	225.7	15.0	-90.77	515.7	8,258.8	759.4	518.7	240.64	3.156			
14,800.0	6,752.9	6,692.6	6,662.6	228.6	15.0	-90.69	515.7	8,258.8	721.9	478.4	243.45	2.965			
14,900.0	6,752.2	6,691.6	6,661.6	231.4	15.0	-90.60	515.7	8,258.8	696.8	450.6	246.25	2.830			
15,000.0	6,751.6	6,690.6	6,660.5	234.2	15.0	-90.52	515.7	8,258.8	685.6	436.5	249.06	2.753			
15,027.7	6,751.4	6,690.3	6,660.3	234.9	15.0	-90.49	515.7	8,258.8	685.0	435.2	249.83	2.742 CC, ES			
15,100.0	6,750.9	6,689.5	6,659.5	237.0	15.0	-90.43	515.7	8,258.8	688.9	437.0	251.86	2.735 SF			
15,200.0	6,750.2	6,688.5	6,658.5	239.8	15.0	-90.34	515.7	8,258.8	706.4	451.7	254.67	2.774			
15,300.0	6,749.5	6,687.5	6,657.4	242.6	15.0	-90.26	515.8	8,258.8	737.2	479.7	257.47	2.863			
15,400.0	6,748.8	6,686.4	6,656.4	245.4	15.0	-90.17	515.8	8,258.8	779.7	519.4	260.28	2.996			

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Loloff Farms 26I-402
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4700.0ft (RKB - 23')
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4700.0ft (RKB - 23')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Loloff Farms 26I-402	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Extension Plan #1 (1-29-16)	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							
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	-90.01	0.0	-58.5	58.5	58.5	0.00	N/A		
100.0	100.0	101.0	101.0	0.1	0.1	-90.01	0.0	-58.5	58.5	58.3	0.23	257.786		
200.0	200.0	201.0	201.0	0.3	0.3	-90.01	0.0	-58.5	58.5	57.8	0.68	86.500		
300.0	300.0	301.0	301.0	0.6	0.6	-90.01	0.0	-58.5	58.5	57.4	1.13	51.969		
400.0	400.0	401.0	401.0	0.8	0.8	-90.01	0.0	-58.5	58.5	56.9	1.58	37.142		
500.0	500.0	501.0	501.0	1.0	1.0	-90.01	0.0	-58.5	58.5	56.5	2.03	28.897		
600.0	600.0	601.0	601.0	1.2	1.2	-90.01	0.0	-58.5	58.5	56.0	2.47	23.648		
700.0	700.0	701.0	701.0	1.5	1.5	-90.01	0.0	-58.5	58.5	55.6	2.92	20.013		
800.0	800.0	801.0	801.0	1.7	1.7	-90.01	0.0	-58.5	58.5	55.1	3.37	17.346		
900.0	900.0	901.0	901.0	1.9	1.9	-90.01	0.0	-58.5	58.5	54.7	3.82	15.307		
966.3	966.3	967.3	967.3	2.1	2.1	-90.01	0.0	-58.5	58.5	54.4	4.12	14.199 CC		
1,000.0	1,000.0	1,001.0	1,001.0	2.1	2.1	-90.01	0.0	-58.5	58.5	54.2	4.27	13.696		
1,100.0	1,100.0	1,100.6	1,100.6	2.4	2.4	-89.20	0.8	-58.8	58.8	54.1	4.72	12.464 ES		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-86.88	3.3	-59.7	59.8	54.7	5.17	11.581		
1,300.0	1,300.0	1,299.7	1,299.5	2.8	2.8	-83.18	7.3	-61.3	61.7	56.1	5.62	10.990		
1,400.0	1,400.0	1,398.9	1,398.6	3.0	3.0	-78.42	13.0	-63.4	64.8	58.7	6.07	10.673		
1,500.0	1,500.0	1,498.0	1,497.3	3.3	3.3	-72.98	20.2	-66.1	69.2	62.7	6.52	10.614		
1,600.0	1,600.0	1,596.7	1,595.6	3.5	3.5	-67.29	29.1	-69.4	75.5	68.5	6.99	10.798		
1,700.0	1,700.0	1,695.1	1,693.4	3.7	3.8	-61.74	39.4	-73.3	83.6	76.1	7.46	11.202		
1,800.0	1,800.0	1,793.0	1,790.5	3.9	4.0	-56.60	51.3	-77.8	93.8	85.8	7.95	11.795		
1,900.0	1,900.0	1,890.6	1,887.0	4.2	4.3	-52.01	64.7	-82.8	106.0	97.5	8.45	12.544		
2,000.0	2,000.0	1,989.4	1,984.7	4.4	4.6	-48.17	78.9	-88.1	119.4	110.5	8.96	13.322		
2,100.0	2,100.0	2,088.2	2,082.3	4.6	4.9	-45.11	93.1	-93.5	133.3	123.8	9.49	14.051		
2,200.0	2,200.0	2,187.0	2,179.9	4.8	5.2	-42.63	107.4	-98.8	147.5	137.5	10.01	14.728		
2,300.0	2,300.0	2,285.8	2,277.5	5.1	5.5	-40.58	121.6	-104.2	161.9	151.3	10.54	15.353		
2,400.0	2,400.0	2,384.7	2,375.2	5.3	5.8	-38.87	135.9	-109.5	176.4	165.4	11.08	15.929		
2,500.0	2,500.0	2,483.5	2,472.8	5.5	6.2	-37.42	150.1	-114.9	191.1	179.5	11.61	16.460		
2,600.0	2,600.0	2,582.2	2,570.4	5.7	6.5	-36.00	164.4	-120.2	205.9	194.3	11.53	17.851		
2,700.0	2,700.0	2,680.9	2,667.9	5.9	6.8	-34.59	178.6	-125.6	220.6	208.7	11.95	18.467		
2,800.0	2,799.9	2,779.5	2,765.3	6.1	7.2	-33.39	192.8	-130.9	235.6	223.2	12.37	19.051		
2,900.0	2,899.7	2,877.9	2,862.6	6.3	7.5	-32.35	207.0	-136.2	250.8	238.0	12.79	19.612		
3,000.0	2,999.4	2,976.2	2,959.7	6.5	7.8	-31.43	221.2	-141.5	266.4	253.2	13.21	20.160		
3,100.0	3,098.9	3,074.3	3,056.6	6.7	8.2	-30.61	235.3	-146.9	282.5	268.9	13.65	20.700		
3,200.0	3,198.3	3,172.1	3,153.2	6.9	8.5	-29.86	249.4	-152.1	299.3	285.2	14.09	21.237		
3,300.0	3,297.4	3,269.6	3,249.6	7.1	8.8	-29.15	263.5	-157.4	316.9	302.3	14.55	21.776		
3,334.3	3,331.3	3,303.0	3,282.6	7.2	9.0	-28.94	268.3	-159.2	323.1	308.4	14.71	21.961		
3,400.0	3,396.4	3,367.0	3,345.8	7.4	9.2	-28.52	277.5	-162.7	335.2	320.2	15.03	22.312		
3,500.0	3,495.3	3,464.3	3,441.9	7.6	9.5	-28.02	291.5	-168.0	354.2	338.7	15.51	22.830		
3,600.0	3,594.2	3,561.6	3,538.1	7.9	9.9	-27.50	305.5	-173.2	373.6	357.6	16.01	23.331		
3,700.0	3,693.2	3,658.9	3,634.3	8.2	10.2	-26.98	319.6	-178.5	393.3	376.8	16.52	23.811		
3,800.0	3,792.1	3,756.2	3,730.4	8.4	10.5	-26.46	333.6	-183.8	413.5	396.4	17.04	24.270		
3,900.0	3,891.1	3,853.6	3,826.6	8.7	10.9	-25.95	347.6	-189.0	433.9	416.3	17.56	24.710		
4,000.0	3,990.0	3,950.9	3,922.7	9.0	11.2	-25.44	361.7	-194.3	454.5	436.4	18.09	25.129		
4,100.0	4,089.0	4,048.2	4,018.9	9.3	11.6	-24.93	375.7	-199.6	475.4	456.8	18.62	25.530		
4,200.0	4,187.9	4,145.5	4,115.0	9.6	11.9	-24.42	389.7	-204.8	496.4	477.3	19.16	25.912		
4,300.0	4,286.8	4,242.8	4,211.2	9.9	12.3	-23.91	403.7	-210.1	517.7	498.0	19.70	26.276		
4,400.0	4,385.8	4,340.1	4,307.3	10.2	12.6	-23.40	417.8	-215.4	539.0	518.8	20.25	26.623		
4,500.0	4,484.7	4,437.4	4,403.5	10.5	13.0	-22.89	431.8	-220.6	560.5	539.7	20.79	26.955		
4,600.0	4,583.7	4,534.8	4,499.7	10.8	13.3	-22.38	445.8	-225.9	582.1	560.8	21.35	27.272		
4,700.0	4,682.6	4,632.1	4,595.8	11.1	13.6	-21.87	459.8	-231.2	603.9	582.0	21.90	27.575		
4,800.0	4,781.5	4,729.4	4,692.0	11.5	14.0	-21.36	473.9	-236.4	625.7	603.2	22.45	27.864		

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

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Loloff Farms 26I-402
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4700.0ft (RKB - 23')
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4700.0ft (RKB - 23')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Loloff Farms 26I-402	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Extension Plan #1 (1-29-16)	Offset TVD Reference:	Offset Datum

Offset Design		Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W - Loloff Farms 26H-232 - Wellbore #1 - Extension Plan											Offset Site Error:		0.0 ft
Survey Program:		0-MWD											Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
4,903.9	4,884.3	4,830.5	4,791.9	11.8	14.4	120.99	488.5	-241.9	648.4	625.4	23.03	28.151			
5,000.0	4,979.6	4,924.3	4,884.5	12.1	14.7	121.81	502.0	-247.0	668.7	645.1	23.59	28.347			
5,100.0	5,079.2	5,022.4	4,981.4	12.3	15.0	122.35	516.1	-252.3	688.1	664.0	24.12	28.522			
5,200.0	5,179.0	5,126.8	5,084.6	12.5	15.4	122.60	531.1	-257.9	705.5	680.9	24.64	28.637			
5,300.0	5,279.0	5,255.9	5,212.7	12.7	15.8	122.58	545.9	-263.4	718.3	693.2	25.12	28.592			
5,321.0	5,300.0	5,283.2	5,239.9	12.7	15.8	0.45	548.3	-264.4	720.2	693.1	27.11	26.566			
5,400.0	5,379.0	5,386.3	5,342.7	12.9	16.0	0.24	555.3	-267.0	725.6	698.1	27.48	26.407			
5,500.0	5,479.0	5,517.3	5,473.7	13.1	16.2	0.12	559.3	-268.5	728.6	700.7	27.90	26.114			
5,600.0	5,579.0	5,623.6	5,580.0	13.3	16.4	0.12	559.4	-268.5	728.7	700.4	28.27	25.779			
5,700.0	5,679.0	5,723.6	5,680.0	13.5	16.6	0.12	559.4	-268.5	728.7	700.1	28.64	25.445			
5,800.0	5,779.0	5,823.6	5,780.0	13.7	16.7	0.12	559.4	-268.5	728.7	699.7	29.01	25.118			
5,900.0	5,879.0	5,923.6	5,880.0	13.8	16.9	0.12	559.4	-268.5	728.7	699.3	29.39	24.797			
5,918.4	5,897.4	5,942.0	5,898.4	13.9	16.9	0.12	559.4	-268.4	728.7	699.2	29.45	24.740			
6,000.0	5,979.0	6,023.0	5,979.1	14.0	17.0	0.55	559.4	-263.0	728.7	699.0	29.74	24.505			
6,062.6	6,041.6	6,083.9	6,039.2	14.2	17.1	1.31	559.4	-253.3	728.9	698.9	29.94	24.342			
6,100.0	6,079.0	6,119.5	6,074.0	14.2	17.1	-88.12	559.4	-245.4	729.1	700.9	28.25	25.808			
6,150.0	6,128.8	6,166.8	6,119.4	14.3	17.1	-87.37	559.4	-232.5	729.5	701.1	28.38	25.701			
6,200.0	6,178.2	6,213.5	6,163.4	14.4	17.2	-86.63	559.4	-216.9	730.0	701.5	28.50	25.617			
6,250.0	6,227.1	6,259.7	6,206.0	14.4	17.2	-85.91	559.4	-198.9	730.6	702.0	28.60	25.551			
6,300.0	6,275.2	6,305.4	6,247.0	14.4	17.2	-85.21	559.4	-178.6	731.3	702.6	28.69	25.494			
6,350.0	6,322.2	6,350.0	6,285.7	14.5	17.2	-84.54	559.4	-156.5	732.1	703.4	28.78	25.442			
6,400.0	6,368.1	6,395.5	6,323.8	14.5	17.2	-83.88	559.4	-131.6	733.0	704.1	28.88	25.379			
6,450.0	6,412.6	6,440.0	6,359.6	14.5	17.2	-83.25	559.4	-105.2	733.9	704.9	29.01	25.298			
6,500.0	6,455.5	6,484.1	6,393.5	14.5	17.3	-82.65	559.4	-76.9	734.9	705.7	29.18	25.186			
6,550.0	6,496.6	6,527.9	6,425.4	14.6	17.3	-82.08	559.4	-47.0	735.9	706.5	29.40	25.032			
6,600.0	6,535.7	6,571.4	6,455.4	14.6	17.3	-81.54	559.4	-15.5	736.9	707.2	29.68	24.826			
6,650.0	6,572.8	6,614.6	6,483.4	14.7	17.3	-81.03	559.4	17.4	737.9	707.8	30.07	24.539			
6,700.0	6,607.6	6,657.6	6,509.3	14.9	17.4	-80.56	559.4	51.7	738.8	708.3	30.53	24.197			
6,750.0	6,639.9	6,700.0	6,533.0	15.2	17.5	-80.13	559.4	86.9	739.8	708.6	31.12	23.773			
6,800.0	6,669.7	6,742.8	6,554.8	15.5	17.6	-79.73	559.4	123.6	740.7	708.8	31.84	23.258			
6,850.0	6,696.8	6,785.1	6,574.4	15.9	17.9	-79.37	559.4	161.1	741.5	708.8	32.70	22.672			
6,900.0	6,721.1	6,827.2	6,591.8	16.4	18.3	-79.05	559.4	199.5	742.3	708.6	33.70	22.023			
6,950.0	6,742.5	6,869.2	6,607.0	17.0	18.8	-78.78	559.4	238.7	743.0	708.1	34.84	21.324			
7,000.0	6,760.8	6,911.1	6,620.0	17.7	19.4	-78.54	559.4	278.5	743.6	707.4	36.12	20.588			
7,050.0	6,776.1	6,950.0	6,630.0	18.5	20.0	-78.35	559.4	316.0	744.1	706.6	37.47	19.856			
7,100.0	6,788.3	6,994.6	6,639.2	19.3	20.8	-78.19	559.4	359.6	744.5	705.4	39.05	19.064			
7,150.0	6,797.3	7,036.2	6,645.5	20.2	21.5	-78.08	559.4	400.8	744.8	704.1	40.69	18.303			
7,200.0	6,803.0	7,077.8	6,649.5	21.2	22.3	-78.01	559.4	442.2	745.0	702.5	42.42	17.561			
7,250.0	6,805.4	7,119.4	6,651.3	22.2	23.2	-77.98	559.4	483.7	745.0	700.8	44.23	16.845			
7,268.0	6,805.5	7,134.3	6,651.4	22.5	23.5	-77.98	559.4	498.6	745.0	700.1	44.89	16.596			
7,268.7	6,805.5	7,134.9	6,651.4	22.6	23.5	-77.98	559.4	499.3	745.0	700.1	44.92	16.585			
7,300.0	6,805.3	7,165.5	6,651.1	23.2	24.1	-77.98	559.4	529.9	745.0	698.9	46.18	16.134			
7,400.0	6,804.6	7,265.5	6,650.2	25.4	26.2	-77.96	559.4	629.9	745.1	694.7	50.41	14.780			
7,500.0	6,803.9	7,365.5	6,649.3	27.7	28.5	-77.94	559.4	729.9	745.1	690.3	54.86	13.581			
7,600.0	6,803.2	7,465.5	6,648.3	30.0	30.8	-77.93	559.4	829.9	745.2	685.7	59.49	12.526			
7,700.0	6,802.5	7,565.5	6,647.4	32.5	33.2	-77.91	559.4	929.9	745.2	681.0	64.26	11.597			
7,800.0	6,801.8	7,665.5	6,646.5	35.0	35.7	-77.89	559.4	1,029.9	745.3	676.1	69.13	10.780			
7,900.0	6,801.1	7,765.5	6,645.6	37.5	38.2	-77.87	559.4	1,129.9	745.3	671.2	74.10	10.059			
8,000.0	6,800.4	7,865.5	6,644.6	40.1	40.8	-77.86	559.4	1,229.8	745.4	666.2	79.13	9.419			
8,100.0	6,799.7	7,965.5	6,643.7	42.7	43.4	-77.84	559.4	1,329.8	745.4	661.2	84.22	8.851			

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

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Loloff Farms 26I-402
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4700.0ft (RKB - 23')
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4700.0ft (RKB - 23')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Loloff Farms 26I-402	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Extension Plan #1 (1-29-16)	Offset TVD Reference:	Offset Datum

Offset Design		Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W - Loloff Farms 26H-232 - Wellbore #1 - Extension Plan											Offset Site Error:		0.0 ft
Survey Program:		0-MWD											Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor				
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
8,200.0	6,799.0	8,065.5	6,642.8	45.3	46.0	-77.82	559.4	1,429.8	745.5	656.1	89.36	8.342			
8,300.0	6,798.3	8,165.5	6,641.9	48.0	48.6	-77.81	559.4	1,529.8	745.5	651.0	94.54	7.885			
8,400.0	6,797.6	8,265.5	6,640.9	50.6	51.3	-77.79	559.4	1,629.8	745.5	645.8	99.75	7.474			
8,500.0	6,796.9	8,365.5	6,640.0	53.3	53.9	-77.77	559.4	1,729.8	745.6	640.6	105.00	7.101			
8,600.0	6,796.2	8,465.5	6,639.1	56.0	56.6	-77.75	559.4	1,829.8	745.6	635.4	110.26	6.762			
8,700.0	6,795.5	8,565.5	6,638.2	58.7	59.3	-77.74	559.4	1,929.8	745.7	630.1	115.55	6.453			
8,800.0	6,794.8	8,665.5	6,637.2	61.4	62.0	-77.72	559.4	2,029.8	745.7	624.9	120.85	6.171			
8,900.0	6,794.1	8,765.5	6,636.3	64.1	64.7	-77.70	559.4	2,129.8	745.8	619.6	126.18	5.911			
9,000.0	6,793.4	8,865.5	6,635.4	66.9	67.5	-77.69	559.4	2,229.8	745.8	614.3	131.51	5.671			
9,100.0	6,792.7	8,965.5	6,634.5	69.6	70.2	-77.67	559.4	2,329.8	745.9	609.0	136.86	5.450			
9,200.0	6,792.0	9,065.5	6,633.5	72.3	72.9	-77.65	559.4	2,429.8	745.9	603.7	142.21	5.245			
9,300.0	6,791.3	9,165.5	6,632.6	75.1	75.7	-77.64	559.4	2,529.8	746.0	598.4	147.58	5.055			
9,400.0	6,790.6	9,265.5	6,631.7	77.8	78.4	-77.62	559.4	2,629.8	746.0	593.1	152.96	4.877			
9,500.0	6,789.9	9,365.5	6,630.8	80.6	81.1	-77.60	559.4	2,729.8	746.1	587.7	158.34	4.712			
9,600.0	6,789.2	9,465.5	6,629.8	83.4	83.9	-77.58	559.4	2,829.8	746.1	582.4	163.73	4.557			
9,700.0	6,788.6	9,565.5	6,628.9	86.1	86.7	-77.57	559.4	2,929.8	746.2	577.0	169.12	4.412			
9,800.0	6,787.9	9,665.5	6,628.0	88.9	89.4	-77.55	559.4	3,029.8	746.2	571.7	174.52	4.276			
9,900.0	6,787.2	9,765.5	6,627.1	91.7	92.2	-77.53	559.4	3,129.8	746.3	566.3	179.93	4.148			
10,000.0	6,786.5	9,865.5	6,626.1	94.4	94.9	-77.52	559.4	3,229.8	746.3	561.0	185.34	4.027			
10,100.0	6,785.8	9,965.5	6,625.2	97.2	97.7	-77.50	559.4	3,329.8	746.4	555.6	190.75	3.913			
10,200.0	6,785.1	10,065.5	6,624.3	100.0	100.5	-77.48	559.4	3,429.7	746.4	550.2	196.17	3.805			
10,300.0	6,784.4	10,165.5	6,623.4	102.8	103.3	-77.47	559.4	3,529.7	746.5	544.9	201.58	3.703			
10,400.0	6,783.7	10,265.5	6,622.4	105.5	106.0	-77.45	559.4	3,629.7	746.5	539.5	207.01	3.606			
10,500.0	6,783.0	10,365.5	6,621.5	108.3	108.8	-77.43	559.4	3,729.7	746.6	534.1	212.43	3.514			
10,600.0	6,782.3	10,465.5	6,620.6	111.1	111.6	-77.41	559.4	3,829.7	746.6	528.7	217.86	3.427			
10,700.0	6,781.6	10,565.5	6,619.7	113.9	114.4	-77.40	559.4	3,929.7	746.6	523.4	223.29	3.344			
10,800.0	6,780.9	10,665.5	6,618.7	116.7	117.1	-77.38	559.4	4,029.7	746.7	518.0	228.72	3.265			
10,900.0	6,780.2	10,765.5	6,617.8	119.4	119.9	-77.36	559.4	4,129.7	746.7	512.6	234.15	3.189			
11,000.0	6,779.5	10,865.5	6,616.9	122.2	122.7	-77.35	559.4	4,229.7	746.8	507.2	239.59	3.117			
11,100.0	6,778.8	10,965.5	6,616.0	125.0	125.5	-77.33	559.4	4,329.7	746.8	501.8	245.02	3.048			
11,200.0	6,778.1	11,065.5	6,615.0	127.8	128.3	-77.31	559.4	4,429.7	746.9	496.4	250.46	2.982			
11,300.0	6,777.4	11,165.5	6,614.1	130.6	131.1	-77.30	559.4	4,529.7	746.9	491.0	255.90	2.919			
11,400.0	6,776.7	11,265.5	6,613.2	133.4	133.8	-77.28	559.4	4,629.7	747.0	485.7	261.34	2.858			
11,500.0	6,776.0	11,365.5	6,612.3	136.2	136.6	-77.26	559.4	4,729.7	747.0	480.3	266.78	2.800			
11,600.0	6,775.3	11,465.5	6,611.3	139.0	139.4	-77.24	559.4	4,829.7	747.1	474.9	272.22	2.744			
11,700.0	6,774.6	11,565.5	6,610.4	141.8	142.2	-77.23	559.4	4,929.7	747.1	469.5	277.66	2.691			
11,800.0	6,773.9	11,665.5	6,609.5	144.6	145.0	-77.21	559.4	5,029.7	747.2	464.1	283.10	2.639			
11,900.0	6,773.2	11,765.5	6,608.6	147.4	147.8	-77.19	559.4	5,129.7	747.2	458.7	288.55	2.590			
12,000.0	6,772.5	11,865.5	6,607.6	150.1	150.6	-77.18	559.4	5,229.7	747.3	453.3	293.99	2.542			
12,100.0	6,771.8	11,965.5	6,606.7	152.9	153.4	-77.16	559.4	5,329.7	747.3	447.9	299.44	2.496			
12,200.0	6,771.1	12,065.5	6,605.8	155.7	156.2	-77.14	559.4	5,429.7	747.4	442.5	304.88	2.451			
12,300.0	6,770.4	12,165.5	6,604.9	158.5	159.0	-77.13	559.4	5,529.7	747.4	437.1	310.32	2.409			
12,400.0	6,769.7	12,265.5	6,603.9	161.3	161.8	-77.11	559.4	5,629.6	747.5	431.7	315.77	2.367			
12,500.0	6,769.0	12,365.5	6,603.0	164.1	164.6	-77.09	559.4	5,729.6	747.5	426.3	321.21	2.327			
12,600.0	6,768.3	12,465.5	6,602.1	166.9	167.4	-77.07	559.3	5,829.6	747.6	420.9	326.66	2.289			
12,700.0	6,767.6	12,565.5	6,601.2	169.7	170.2	-77.06	559.3	5,929.6	747.6	415.5	332.11	2.251			
12,800.0	6,766.9	12,665.5	6,600.2	172.5	173.0	-77.04	559.3	6,029.6	747.7	410.1	337.55	2.215			
12,900.0	6,766.2	12,765.5	6,599.3	175.3	175.7	-77.02	559.3	6,129.6	747.7	404.7	343.00	2.180			
13,000.0	6,765.5	12,865.5	6,598.4	178.1	178.5	-77.01	559.3	6,229.6	747.8	399.3	348.44	2.146			
13,100.0	6,764.8	12,965.5	6,597.5	180.9	181.3	-76.99	559.3	6,329.6	747.8	393.9	353.89	2.113			
13,200.0	6,764.1	13,065.5	6,596.5	183.7	184.1	-76.97	559.3	6,429.6	747.9	388.6	359.33	2.081			

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

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Loloff Farms 26I-402
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4700.0ft (RKB - 23')
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4700.0ft (RKB - 23')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Loloff Farms 26I-402	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Extension Plan #1 (1-29-16)	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															
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		
13,300.0	6,763.4	13,165.5	6,595.6	186.5	186.9	-76.96	559.3	6,529.6	747.9	383.2	364.78	2.050			
13,400.0	6,762.7	13,265.5	6,594.7	189.3	189.7	-76.94	559.3	6,629.6	748.0	377.8	370.22	2.020			
13,500.0	6,762.0	13,365.5	6,593.8	192.1	192.5	-76.92	559.3	6,729.6	748.0	372.4	375.67	1.991			
13,600.0	6,761.3	13,465.5	6,592.8	194.9	195.3	-76.90	559.3	6,829.6	748.1	367.0	381.11	1.963			
13,700.0	6,760.6	13,565.5	6,591.9	197.7	198.1	-76.89	559.3	6,929.6	748.1	361.6	386.56	1.935			
13,800.0	6,759.9	13,665.5	6,591.0	200.5	200.9	-76.87	559.3	7,029.6	748.2	356.2	392.00	1.909			
13,900.0	6,759.2	13,765.5	6,590.1	203.3	203.7	-76.85	559.3	7,129.6	748.2	350.8	397.45	1.883			
14,000.0	6,758.5	13,865.5	6,589.1	206.1	206.5	-76.84	559.3	7,229.6	748.3	345.4	402.89	1.857			
14,100.0	6,757.8	13,965.5	6,588.2	208.9	209.3	-76.82	559.3	7,329.6	748.3	340.0	408.33	1.833			
14,200.0	6,757.1	14,065.5	6,587.3	211.7	212.1	-76.80	559.3	7,429.6	748.4	334.6	413.78	1.809			
14,300.0	6,756.4	14,165.5	6,586.4	214.5	214.9	-76.79	559.3	7,529.6	748.4	329.2	419.22	1.785			
14,400.0	6,755.7	14,265.5	6,585.4	217.3	217.7	-76.77	559.3	7,629.6	748.5	323.8	424.66	1.763			
14,500.0	6,755.0	14,365.5	6,584.5	220.1	220.5	-76.75	559.3	7,729.6	748.5	318.4	430.10	1.740			
14,600.0	6,754.3	14,465.5	6,583.6	222.9	223.3	-76.74	559.3	7,829.6	748.6	313.1	435.55	1.719			
14,700.0	6,753.6	14,565.5	6,582.7	225.7	226.2	-76.72	559.3	7,929.6	748.6	307.7	440.99	1.698			
14,800.0	6,752.9	14,665.5	6,581.7	228.6	229.0	-76.70	559.3	8,029.6	748.7	302.3	446.43	1.677			
14,900.0	6,752.2	14,765.5	6,580.8	231.4	231.8	-76.68	559.3	8,129.6	748.8	296.9	451.87	1.657			
15,000.0	6,751.6	14,865.5	6,579.9	234.2	234.6	-76.67	559.3	8,229.6	748.8	291.5	457.31	1.637			
15,100.0	6,750.9	14,965.5	6,579.0	237.0	237.4	-76.65	559.3	8,329.6	748.9	286.1	462.75	1.618			
15,200.0	6,750.2	15,065.5	6,578.0	239.8	240.2	-76.63	559.3	8,429.6	748.9	280.7	468.19	1.600			
15,300.0	6,749.5	15,165.5	6,577.1	242.6	243.0	-76.62	559.3	8,529.6	749.0	275.3	473.63	1.581			
15,400.0	6,748.8	15,265.5	6,576.2	245.4	245.8	-76.60	559.3	8,629.6	749.0	269.9	479.07	1.563			
15,500.0	6,748.1	15,365.5	6,575.3	248.2	248.6	-76.58	559.3	8,729.6	749.1	264.6	484.50	1.546			
15,600.0	6,747.4	15,465.5	6,574.3	251.0	251.4	-76.57	559.3	8,829.6	749.1	259.2	489.94	1.529			
15,700.0	6,746.7	15,565.5	6,573.4	253.8	254.2	-76.55	559.3	8,929.6	749.2	253.8	495.38	1.512			
15,800.0	6,746.0	15,665.5	6,572.5	256.6	257.0	-76.53	559.3	9,029.6	749.2	248.4	500.81	1.496 Level 3			
15,900.0	6,745.3	15,765.5	6,571.6	259.4	259.8	-76.52	559.3	9,129.6	749.3	243.0	506.25	1.480 Level 3			
16,000.0	6,744.6	15,865.5	6,570.6	262.2	262.6	-76.50	559.3	9,229.6	749.3	237.6	511.69	1.464 Level 3			
16,100.0	6,743.9	15,965.5	6,569.7	265.0	265.4	-76.48	559.3	9,329.6	749.4	232.3	517.12	1.449 Level 3			
16,200.0	6,743.2	16,065.5	6,568.8	267.8	268.2	-76.47	559.3	9,429.6	749.4	226.9	522.56	1.434 Level 3			
16,300.0	6,742.5	16,165.5	6,567.9	270.6	271.0	-76.45	559.3	9,529.6	749.5	221.5	527.99	1.419 Level 3			
16,400.0	6,741.8	16,265.5	6,566.9	273.4	273.8	-76.43	559.3	9,629.6	749.5	216.1	533.42	1.405 Level 3			
16,500.0	6,741.1	16,365.5	6,566.0	276.2	276.6	-76.41	559.3	9,729.6	749.6	210.7	538.85	1.391 Level 3			
16,511.3	6,741.0	16,367.0	6,566.0	276.5	276.7	-76.41	559.3	9,731.0	749.7	210.4	539.21	1.390 Level 3, SF			

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Loloff Farms 26I-402
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4700.0ft (RKB - 23')
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4700.0ft (RKB - 23')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Loloff Farms 26I-402	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Extension Plan #1 (1-29-16)	Offset TVD Reference:	Offset Datum

Offset Design		Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W - Loloff Farms 26H-332 - Wellbore #1 - Extension Plan											Offset Site Error:		0.0 ft
Survey Program:		0-MWD											Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
0.0	0.0	2.0	2.0	0.0	0.0	-92.34	-3.6	-89.2	89.2	89.2	0.00	N/A			
100.0	100.0	102.0	102.0	0.1	0.1	-92.34	-3.6	-89.2	89.2	89.0	0.23	389.290			
166.0	166.0	168.0	168.0	0.3	0.3	-92.34	-3.6	-89.2	89.2	88.7	0.53	169.710	CC		
200.0	200.0	202.0	202.0	0.3	0.3	-92.34	-3.6	-89.2	89.2	88.6	0.68	131.484			
300.0	300.0	301.7	301.7	0.6	0.6	-91.77	-2.8	-89.4	89.4	88.3	1.13	79.273	ES		
400.0	400.0	401.4	401.3	0.8	0.8	-90.12	-0.2	-89.9	89.9	88.3	1.58	56.963			
500.0	500.0	500.9	500.8	1.0	1.0	-87.43	4.1	-90.9	91.0	88.9	2.03	44.755			
600.0	600.0	600.3	599.9	1.2	1.3	-83.80	10.0	-92.1	92.7	90.2	2.49	37.222			
700.0	700.0	699.4	698.8	1.5	1.5	-79.37	17.6	-93.8	95.5	92.5	2.96	32.283			
800.0	800.0	798.2	797.1	1.7	1.8	-74.34	26.8	-95.8	99.6	96.2	3.44	28.974			
900.0	900.0	896.7	895.0	1.9	2.0	-68.99	37.7	-98.2	105.4	101.4	3.94	26.779			
1,000.0	1,000.0	994.7	992.2	2.1	2.3	-63.57	50.1	-100.9	113.1	108.6	4.45	25.387			
1,100.0	1,100.0	1,092.3	1,088.7	2.4	2.6	-58.32	64.1	-103.9	122.8	117.8	4.99	24.594			
1,200.0	1,200.0	1,189.4	1,184.5	2.6	3.0	-53.41	79.6	-107.3	134.7	129.2	5.55	24.256			
1,300.0	1,300.0	1,287.8	1,281.5	2.8	3.3	-49.05	96.2	-110.9	148.2	142.1	6.14	24.151	SF		
1,400.0	1,400.0	1,386.4	1,378.5	3.0	3.7	-45.43	112.8	-114.4	162.4	155.7	6.72	24.158			
1,500.0	1,500.0	1,484.9	1,475.5	3.3	4.1	-42.39	129.3	-118.0	177.1	169.8	7.31	24.233			
1,600.0	1,600.0	1,583.4	1,572.6	3.5	4.4	-39.82	145.9	-121.6	192.2	184.3	7.89	24.350			
1,700.0	1,700.0	1,681.9	1,669.6	3.7	4.8	-37.63	162.5	-125.2	207.7	199.2	8.48	24.491			
1,800.0	1,800.0	1,780.4	1,766.7	3.9	5.2	-35.74	179.0	-128.8	223.4	214.3	9.06	24.644			
1,900.0	1,900.0	1,878.9	1,863.7	4.2	5.5	-34.10	195.6	-132.4	239.3	229.7	9.65	24.802			
2,000.0	2,000.0	1,977.4	1,960.7	4.4	5.9	-32.67	212.2	-136.0	255.4	245.2	10.23	24.961			
2,100.0	2,100.0	2,075.9	2,057.8	4.6	6.3	-31.40	228.8	-139.6	271.6	260.8	10.81	25.117			
2,200.0	2,200.0	2,174.4	2,154.8	4.8	6.7	-30.28	245.3	-143.2	288.0	276.6	11.40	25.269			
2,300.0	2,300.0	2,272.9	2,251.8	5.1	7.0	-29.28	261.9	-146.8	304.4	292.4	11.98	25.416			
2,400.0	2,400.0	2,371.4	2,348.9	5.3	7.4	-28.38	278.5	-150.4	320.9	308.4	12.56	25.557			
2,500.0	2,500.0	2,469.9	2,445.9	5.5	7.8	-27.57	295.0	-154.0	337.5	324.4	13.14	25.691			
2,600.0	2,600.0	2,568.4	2,542.9	5.7	8.2	-26.82	311.6	-157.6	354.2	342.3	13.70	25.778			
2,700.0	2,700.0	2,666.7	2,639.7	5.9	8.5	-26.13	328.1	-161.2	371.2	358.9	14.23	30.144			
2,800.0	2,799.9	2,764.9	2,736.4	6.1	8.9	-25.48	344.6	-164.8	388.5	375.8	14.73	30.514			
2,900.0	2,899.7	2,862.8	2,832.9	6.3	9.3	-24.87	361.1	-168.4	406.3	393.1	15.15	30.890			
3,000.0	2,999.4	2,960.6	2,929.2	6.5	9.7	-24.29	377.6	-171.9	424.5	410.9	15.57	31.273			
3,100.0	3,098.9	3,058.1	3,025.3	6.7	10.1	-23.74	394.0	-175.5	443.3	429.3	16.00	31.664			
3,200.0	3,198.3	3,155.3	3,121.0	6.9	10.4	-23.24	410.3	-179.1	462.8	448.4	16.43	32.063			
3,300.0	3,297.4	3,252.2	3,216.5	7.1	10.8	-22.77	426.6	-182.6	483.1	468.2	16.88	32.468			
3,334.3	3,331.3	3,285.3	3,249.1	7.2	10.9	-22.34	432.2	-183.8	490.2	475.2	17.33	32.609			
3,400.0	3,396.4	3,348.8	3,311.7	7.4	11.2	-21.90	442.9	-186.1	504.1	488.7	17.77	32.869			
3,500.0	3,495.3	3,445.4	3,406.8	7.6	11.6	-21.49	459.1	-189.7	525.6	509.7	18.20	33.244			
3,600.0	3,594.2	3,542.0	3,502.0	7.9	11.9	-21.10	475.4	-193.2	547.4	531.1	18.62	33.595			
3,700.0	3,693.2	3,638.7	3,597.2	8.2	12.3	-20.72	491.6	-196.7	569.6	552.8	18.99	33.924			
3,800.0	3,792.1	3,735.3	3,692.4	8.4	12.7	-20.36	507.9	-200.2	592.0	574.7	19.29	34.233			
3,900.0	3,891.1	3,831.9	3,787.5	8.7	13.1	-20.02	524.1	-203.8	614.8	597.0	19.60	34.524			
4,000.0	3,990.0	3,928.5	3,882.7	9.0	13.4	-19.70	540.4	-207.3	637.7	619.4	20.00	34.799			
4,100.0	4,089.0	4,025.1	3,977.9	9.3	13.8	-19.40	556.6	-210.8	660.9	642.0	20.39	35.058			
4,200.0	4,187.9	4,121.8	4,073.1	9.6	14.2	-19.12	572.9	-214.4	684.2	664.9	20.78	35.303			
4,300.0	4,286.8	4,218.4	4,168.3	9.9	14.6	-18.85	589.1	-217.9	707.8	687.9	21.17	35.535			
4,400.0	4,385.8	4,315.0	4,263.4	10.2	14.9	-18.59	605.4	-221.4	731.5	711.0	21.56	35.756			
4,500.0	4,484.7	4,411.6	4,358.6	10.5	15.3	-18.34	621.6	-224.9	755.3	734.3	21.95	35.966			
4,600.0	4,583.7	4,508.2	4,453.8	10.8	15.7	-18.10	637.9	-228.5	779.2	757.7	22.34	36.165			

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

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Loloff Farms 26I-402
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4700.0ft (RKB - 23')
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4700.0ft (RKB - 23')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Loloff Farms 26I-402	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Extension Plan #1 (1-29-16)	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		
0.0	0.0	1.0	1.0	0.0	0.0	-90.03	0.0	-27.9	27.9	27.9	0.00	N/A		
100.0	100.0	101.0	101.0	0.1	0.1	-90.03	0.0	-27.9	27.9	27.6	0.23	122.755		
200.0	200.0	201.0	201.0	0.3	0.3	-90.03	0.0	-27.9	27.9	27.2	0.68	41.190		
300.0	300.0	301.0	301.0	0.6	0.6	-90.03	0.0	-27.9	27.9	26.7	1.13	24.747		
400.0	400.0	401.0	401.0	0.8	0.8	-90.03	0.0	-27.9	27.9	26.3	1.58	17.687		
500.0	500.0	501.0	501.0	1.0	1.0	-90.03	0.0	-27.9	27.9	25.8	2.03	13.761		
600.0	600.0	601.0	601.0	1.2	1.2	-90.03	0.0	-27.9	27.9	25.4	2.47	11.261		
700.0	700.0	701.0	701.0	1.5	1.5	-90.03	0.0	-27.9	27.9	24.9	2.92	9.530		
800.0	800.0	801.0	801.0	1.7	1.7	-90.03	0.0	-27.9	27.9	24.5	3.37	8.260		
900.0	900.0	901.0	901.0	1.9	1.9	-90.03	0.0	-27.9	27.9	24.0	3.82	7.289		
1,000.0	1,000.0	1,001.0	1,001.0	2.1	2.1	-90.03	0.0	-27.9	27.9	23.6	4.27	6.522		
1,100.0	1,100.0	1,101.0	1,101.0	2.4	2.4	-90.03	0.0	-27.9	27.9	23.1	4.72	5.901		
1,200.0	1,200.0	1,201.0	1,201.0	2.6	2.6	-90.03	0.0	-27.9	27.9	22.7	5.17	5.388		
1,300.0	1,300.0	1,301.0	1,301.0	2.8	2.8	-90.03	0.0	-27.9	27.9	22.2	5.62	4.957		
1,400.0	1,400.0	1,401.0	1,401.0	3.0	3.0	-90.03	0.0	-27.9	27.9	21.8	6.07	4.590		
1,500.0	1,500.0	1,501.0	1,501.0	3.3	3.3	-90.03	0.0	-27.9	27.9	21.3	6.52	4.274		
1,600.0	1,600.0	1,601.0	1,601.0	3.5	3.5	-90.03	0.0	-27.9	27.9	20.9	6.97	3.998		
1,700.0	1,700.0	1,701.0	1,701.0	3.7	3.7	-90.03	0.0	-27.9	27.9	20.4	7.42	3.756		
1,766.3	1,766.3	1,767.3	1,767.3	3.9	3.9	-90.03	0.0	-27.9	27.9	20.1	7.72	3.611 CC		
1,800.0	1,800.0	1,801.0	1,801.0	3.9	3.9	-90.03	0.0	-27.9	27.9	20.0	7.87	3.541		
1,900.0	1,900.0	1,900.6	1,900.5	4.2	4.2	-89.25	0.4	-28.7	28.7	20.4	8.31	3.449		
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	-87.18	1.5	-31.0	31.1	22.3	8.74	3.551		
2,100.0	2,100.0	2,099.4	2,099.3	4.6	4.6	-84.36	3.4	-34.9	35.1	25.9	9.18	3.822		
2,200.0	2,200.0	2,198.6	2,198.3	4.8	4.8	-81.36	6.1	-40.3	40.8	31.2	9.62	4.245		
2,300.0	2,300.0	2,297.6	2,296.9	5.1	5.0	-78.58	9.5	-47.2	48.4	38.3	10.07	4.803		
2,400.0	2,400.0	2,396.2	2,395.2	5.3	5.2	-76.17	13.7	-55.7	57.6	47.1	10.52	5.478		
2,500.0	2,500.0	2,494.5	2,492.8	5.5	5.5	-74.16	18.6	-65.6	68.6	57.7	10.98	6.254		
2,600.0	2,600.0	2,593.7	2,591.3	5.7	5.7	49.89	24.0	-76.4	80.1	68.8	11.35	7.061		
2,700.0	2,700.0	2,693.1	2,689.9	5.9	6.0	52.21	29.3	-87.3	90.6	78.9	11.75	7.715		
2,800.0	2,799.9	2,792.6	2,788.6	6.1	6.3	54.84	34.7	-98.2	100.3	88.1	12.15	8.249		
2,900.0	2,899.7	2,892.0	2,887.3	6.3	6.5	57.76	40.1	-109.1	109.1	96.6	12.57	8.684		
3,000.0	2,999.4	2,991.5	2,986.0	6.5	6.8	60.98	45.5	-120.0	117.4	104.4	12.99	9.039		
3,100.0	3,098.9	3,090.9	3,084.7	6.7	7.1	64.46	50.9	-130.9	125.2	111.8	13.42	9.329		
3,200.0	3,198.3	3,190.2	3,183.3	6.9	7.4	68.21	56.3	-141.8	132.9	119.0	13.88	9.573		
3,300.0	3,297.4	3,289.4	3,281.8	7.1	7.6	72.20	61.6	-152.7	140.5	126.1	14.36	9.784		
3,334.3	3,331.3	3,323.4	3,315.5	7.2	7.7	73.62	63.5	-156.4	143.1	128.6	14.52	9.852		
3,400.0	3,396.4	3,388.6	3,380.2	7.4	7.9	76.32	67.0	-163.6	148.4	133.5	14.86	9.985		
3,500.0	3,495.3	3,487.7	3,478.6	7.6	8.2	80.06	72.4	-174.5	157.0	141.6	15.38	10.206		
3,600.0	3,594.2	3,586.8	3,576.9	7.9	8.5	83.40	77.7	-185.3	166.1	150.2	15.91	10.440		
3,700.0	3,693.2	3,686.0	3,675.3	8.2	8.8	86.39	83.1	-196.2	175.8	159.4	16.46	10.683		
3,800.0	3,792.1	3,785.1	3,773.7	8.4	9.1	89.06	88.5	-207.1	186.0	168.9	17.02	10.928		
3,900.0	3,891.1	3,884.2	3,872.1	8.7	9.4	91.45	93.8	-217.9	196.4	178.9	17.58	11.173		
4,000.0	3,990.0	3,983.4	3,970.5	9.0	9.7	93.60	99.2	-228.8	207.2	189.1	18.15	11.416		
4,100.0	4,089.0	4,082.5	4,068.9	9.3	10.0	95.53	104.6	-239.7	218.3	199.5	18.73	11.654		
4,200.0	4,187.9	4,182.8	4,168.4	9.6	10.3	97.31	110.0	-250.6	229.5	210.2	19.31	11.886		
4,300.0	4,286.8	4,288.6	4,273.7	9.9	10.5	99.41	114.5	-259.8	239.1	219.3	19.85	12.046		
4,400.0	4,385.8	4,394.4	4,379.3	10.2	10.7	101.96	117.4	-265.6	246.3	225.9	20.38	12.086		
4,500.0	4,484.7	4,499.9	4,484.8	10.5	10.9	104.99	118.5	-267.8	251.4	230.5	20.90	12.028		
4,600.0	4,583.7	4,599.8	4,584.7	10.8	11.1	108.12	118.5	-267.9	255.6	234.2	21.41	11.938		
4,700.0	4,682.6	4,698.7	4,683.6	11.1	11.3	111.13	118.5	-267.9	260.5	238.6	21.93	11.879		
4,800.0	4,781.5	4,797.6	4,782.5	11.5	11.5	114.02	118.5	-267.9	266.2	243.7	22.44	11.860		

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

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Loloff Farms 26I-402
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4700.0ft (RKB - 23')
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4700.0ft (RKB - 23')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Loloff Farms 26I-402	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Extension Plan #1 (1-29-16)	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															
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		
4,903.9	4,884.3	4,900.4	4,885.3	11.8	11.7	116.89	118.5	-267.9	272.7	249.7	22.96	11.878			
5,000.0	4,979.6	4,995.7	4,980.6	12.1	11.9	119.24	118.5	-267.9	278.5	255.1	23.42	11.893			
5,100.0	5,079.2	5,095.3	5,080.2	12.3	12.1	120.98	118.5	-267.9	283.3	259.4	23.86	11.875			
5,200.0	5,179.0	5,195.1	5,180.0	12.5	12.3	122.06	118.5	-267.9	286.4	262.1	24.28	11.798			
5,300.0	5,279.0	5,295.1	5,280.0	12.7	12.5	122.50	118.5	-267.9	287.8	263.1	24.68	11.660			
5,321.0	5,300.0	5,316.1	5,301.0	12.7	12.5	0.42	118.5	-267.9	287.8	264.3	23.47	12.260			
5,400.0	5,379.0	5,395.1	5,380.0	12.9	12.7	0.42	118.5	-267.9	287.8	264.0	23.80	12.093			
5,500.0	5,479.0	5,495.1	5,480.0	13.1	12.9	0.42	118.5	-267.9	287.8	263.6	24.22	11.884			
5,600.0	5,579.0	5,595.1	5,580.0	13.3	13.1	0.42	118.5	-267.9	287.8	263.2	24.64	11.682			
5,700.0	5,679.0	5,695.1	5,680.0	13.5	13.3	0.42	118.5	-267.9	287.8	262.7	25.06	11.486			
5,800.0	5,779.0	5,795.1	5,780.0	13.7	13.5	0.42	118.5	-267.9	287.8	262.3	25.48	11.296			
5,900.0	5,879.0	5,895.1	5,880.0	13.8	13.7	0.42	118.5	-267.9	287.8	261.9	25.90	11.112			
5,959.9	5,938.9	5,955.0	5,939.9	14.0	13.8	0.42	118.5	-267.9	287.8	261.6	26.15	11.004			
6,000.0	5,979.0	5,995.0	5,979.9	14.0	13.9	0.46	118.5	-267.7	287.8	261.5	26.32	10.934			
6,062.6	6,041.6	6,057.2	6,041.9	14.2	14.0	1.25	118.5	-263.7	287.9	261.3	26.57	10.833			
6,100.0	6,079.0	6,094.0	6,078.4	14.2	14.1	-87.98	118.5	-259.0	288.0	260.1	27.83	10.346			
6,150.0	6,128.8	6,142.9	6,126.5	14.3	14.1	-86.96	118.5	-250.0	288.2	260.2	27.95	10.312			
6,200.0	6,178.2	6,191.5	6,173.6	14.4	14.2	-85.97	118.5	-238.1	288.5	260.5	28.04	10.290			
6,250.0	6,227.1	6,239.8	6,219.6	14.4	14.2	-84.99	118.5	-223.3	288.9	260.8	28.11	10.278			
6,300.0	6,275.2	6,287.8	6,264.2	14.4	14.2	-84.04	118.5	-205.7	289.4	261.2	28.17	10.272			
6,350.0	6,322.2	6,335.6	6,307.5	14.5	14.3	-83.12	118.5	-185.5	289.9	261.7	28.23	10.270			
6,400.0	6,368.1	6,383.0	6,349.1	14.5	14.3	-82.23	118.5	-162.7	290.5	262.2	28.29	10.267			
6,450.0	6,412.6	6,430.3	6,389.1	14.5	14.4	-81.38	118.5	-137.5	291.1	262.7	28.38	10.259			
6,500.0	6,455.5	6,477.3	6,427.3	14.5	14.5	-80.56	118.5	-110.1	291.8	263.3	28.49	10.240			
6,550.0	6,496.6	6,524.1	6,463.5	14.6	14.6	-79.79	118.5	-80.5	292.4	263.8	28.66	10.204			
6,600.0	6,535.7	6,570.6	6,497.7	14.6	14.7	-79.07	118.5	-48.9	293.1	264.2	28.89	10.146			
6,650.0	6,572.8	6,617.0	6,529.8	14.7	15.0	-78.39	118.5	-15.4	293.8	264.6	29.21	10.059			
6,700.0	6,607.6	6,663.2	6,559.7	14.9	15.2	-77.76	118.5	19.8	294.5	264.9	29.63	9.941			
6,750.0	6,639.9	6,709.3	6,587.3	15.2	15.6	-77.18	118.5	56.7	295.2	265.0	30.16	9.786			
6,800.0	6,669.7	6,755.2	6,612.5	15.5	16.0	-76.65	118.5	95.0	295.8	265.0	30.83	9.595			
6,850.0	6,696.8	6,800.0	6,634.9	15.9	16.4	-76.19	118.5	133.8	296.4	264.8	31.62	9.373			
6,900.0	6,721.1	6,846.6	6,655.7	16.4	17.0	-75.76	118.5	175.5	296.9	264.3	32.59	9.111			
6,950.0	6,742.5	6,892.1	6,673.6	17.0	17.6	-75.40	118.5	217.3	297.4	263.7	33.70	8.826			
7,000.0	6,760.8	6,937.6	6,688.9	17.7	18.3	-75.09	118.5	260.1	297.8	262.9	34.95	8.522			
7,050.0	6,776.1	6,983.0	6,701.7	18.5	19.0	-74.84	118.5	303.7	298.2	261.8	36.34	8.206			
7,100.0	6,788.3	7,028.3	6,711.8	19.3	19.8	-74.65	118.5	347.9	298.4	260.6	37.86	7.884			
7,150.0	6,797.3	7,073.6	6,719.2	20.2	20.6	-74.51	118.5	392.5	298.6	259.1	39.49	7.562			
7,200.0	6,803.0	7,118.8	6,724.0	21.2	21.5	-74.43	118.5	437.5	298.7	257.5	41.23	7.247			
7,250.0	6,805.4	7,164.1	6,726.2	22.2	22.4	-74.41	118.5	482.7	298.8	255.7	43.05	6.941			
7,268.0	6,805.5	7,180.3	6,726.3	22.5	22.7	-74.42	118.5	499.0	298.8	255.0	43.72	6.834			
7,270.7	6,805.5	7,182.8	6,726.3	22.6	22.8	-74.42	118.5	501.4	298.8	254.9	43.82	6.818			
7,300.0	6,805.3	7,211.9	6,726.0	23.2	23.4	-74.40	118.5	530.5	298.8	253.8	44.99	6.641			
7,400.0	6,804.6	7,311.9	6,725.0	25.4	25.6	-74.35	118.5	630.5	298.9	249.7	49.16	6.079			
7,500.0	6,803.9	7,411.9	6,724.0	27.7	27.8	-74.30	118.5	730.5	298.9	245.4	53.55	5.582			
7,600.0	6,803.2	7,511.9	6,723.1	30.0	30.2	-74.25	118.5	830.5	299.0	240.9	58.12	5.145			
7,700.0	6,802.5	7,611.9	6,722.1	32.5	32.7	-74.20	118.5	930.5	299.1	236.3	62.82	4.761			
7,800.0	6,801.8	7,711.9	6,721.1	35.0	35.2	-74.15	118.5	1,030.5	299.2	231.5	67.62	4.424			
7,900.0	6,801.1	7,811.9	6,720.1	37.5	37.7	-74.10	118.5	1,130.5	299.2	226.7	72.50	4.127			
8,000.0	6,800.4	7,911.9	6,719.1	40.1	40.3	-74.04	118.5	1,230.5	299.3	221.9	77.46	3.864			
8,100.0	6,799.7	8,011.9	6,718.2	42.7	42.9	-73.99	118.5	1,330.5	299.4	216.9	82.46	3.631			

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

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Loloff Farms 26I-402
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4700.0ft (RKB - 23')
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4700.0ft (RKB - 23')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Loloff Farms 26I-402	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Extension Plan #1 (1-29-16)	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															
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
8,200.0	6,799.0	8,111.9	6,717.2	45.3	45.5	-73.94	118.5	1,430.5	299.5	212.0	87.51	3.422			
8,300.0	6,798.3	8,211.9	6,716.2	48.0	48.2	-73.89	118.5	1,530.5	299.6	206.9	92.60	3.235			
8,400.0	6,797.6	8,311.9	6,715.2	50.6	50.8	-73.84	118.5	1,630.5	299.6	201.9	97.72	3.066			
8,500.0	6,796.9	8,411.9	6,714.3	53.3	53.5	-73.79	118.5	1,730.5	299.7	196.8	102.87	2.913			
8,600.0	6,796.2	8,511.9	6,713.3	56.0	56.2	-73.74	118.5	1,830.5	299.8	191.7	108.04	2.775			
8,700.0	6,795.5	8,611.9	6,712.3	58.7	58.9	-73.69	118.5	1,930.5	299.9	186.6	113.22	2.648			
8,800.0	6,794.8	8,711.9	6,711.3	61.4	61.6	-73.63	118.5	2,030.4	299.9	181.5	118.42	2.533			
8,900.0	6,794.1	8,811.9	6,710.3	64.1	64.3	-73.58	118.5	2,130.4	300.0	176.4	123.64	2.427			
9,000.0	6,793.4	8,911.9	6,709.4	66.9	67.1	-73.53	118.5	2,230.4	300.1	171.2	128.86	2.329			
9,100.0	6,792.7	9,011.9	6,708.4	69.6	69.8	-73.48	118.5	2,330.4	300.2	166.1	134.09	2.239			
9,200.0	6,792.0	9,111.9	6,707.4	72.3	72.5	-73.43	118.5	2,430.4	300.3	160.9	139.34	2.155			
9,300.0	6,791.3	9,211.9	6,706.4	75.1	75.3	-73.38	118.5	2,530.4	300.3	155.8	144.59	2.077			
9,400.0	6,790.6	9,311.9	6,705.5	77.8	78.0	-73.33	118.5	2,630.4	300.4	150.6	149.84	2.005			
9,500.0	6,789.9	9,411.9	6,704.5	80.6	80.8	-73.28	118.5	2,730.4	300.5	145.4	155.10	1.937			
9,600.0	6,789.2	9,511.9	6,703.5	83.4	83.6	-73.23	118.5	2,830.4	300.6	140.2	160.37	1.874			
9,700.0	6,788.6	9,611.9	6,702.5	86.1	86.3	-73.17	118.5	2,930.4	300.7	135.0	165.64	1.815			
9,800.0	6,787.9	9,711.9	6,701.5	88.9	89.1	-73.12	118.5	3,030.4	300.7	129.8	170.91	1.760			
9,900.0	6,787.2	9,811.9	6,700.6	91.7	91.9	-73.07	118.5	3,130.4	300.8	124.6	176.18	1.707			
10,000.0	6,786.5	9,911.9	6,699.6	94.4	94.6	-73.02	118.5	3,230.4	300.9	119.4	181.46	1.658			
10,100.0	6,785.8	10,011.9	6,698.6	97.2	97.4	-72.97	118.5	3,330.4	301.0	114.2	186.74	1.612			
10,200.0	6,785.1	10,111.9	6,697.6	100.0	100.2	-72.92	118.5	3,430.4	301.1	109.1	192.02	1.568			
10,300.0	6,784.4	10,211.9	6,696.7	102.8	102.9	-72.87	118.5	3,530.4	301.2	103.9	197.30	1.526			
10,400.0	6,783.7	10,311.9	6,695.7	105.5	105.7	-72.82	118.5	3,630.4	301.2	98.7	202.58	1.487 Level 3			
10,500.0	6,783.0	10,411.9	6,694.7	108.3	108.5	-72.77	118.5	3,730.4	301.3	93.5	207.86	1.450 Level 3			
10,600.0	6,782.3	10,511.9	6,693.7	111.1	111.3	-72.72	118.5	3,830.4	301.4	88.3	213.14	1.414 Level 3			
10,700.0	6,781.6	10,611.9	6,692.8	113.9	114.1	-72.67	118.5	3,930.3	301.5	83.1	218.42	1.380 Level 3			
10,800.0	6,780.9	10,711.9	6,691.8	116.7	116.9	-72.62	118.5	4,030.3	301.6	77.9	223.70	1.348 Level 3			
10,900.0	6,780.2	10,811.9	6,690.8	119.4	119.6	-72.57	118.5	4,130.3	301.7	72.7	228.98	1.317 Level 3			
11,000.0	6,779.5	10,911.9	6,689.8	122.2	122.4	-72.51	118.5	4,230.3	301.7	67.5	234.26	1.288 Level 3			
11,100.0	6,778.8	11,011.9	6,688.8	125.0	125.2	-72.46	118.5	4,330.3	301.8	62.3	239.53	1.260 Level 3			
11,200.0	6,778.1	11,111.9	6,687.9	127.8	128.0	-72.41	118.5	4,430.3	301.9	57.1	244.81	1.233 Level 2			
11,300.0	6,777.4	11,211.9	6,686.9	130.6	130.8	-72.36	118.5	4,530.3	302.0	51.9	250.09	1.208 Level 2			
11,400.0	6,776.7	11,311.9	6,685.9	133.4	133.6	-72.31	118.5	4,630.3	302.1	46.7	255.36	1.183 Level 2			
11,500.0	6,776.0	11,411.9	6,684.9	136.2	136.4	-72.26	118.5	4,730.3	302.2	41.5	260.63	1.159 Level 2			
11,600.0	6,775.3	11,511.9	6,684.0	139.0	139.2	-72.21	118.5	4,830.3	302.2	36.3	265.91	1.137 Level 2			
11,700.0	6,774.6	11,611.9	6,683.0	141.8	142.0	-72.16	118.5	4,930.3	302.3	31.2	271.18	1.115 Level 2			
11,800.0	6,773.9	11,711.9	6,682.0	144.6	144.7	-72.11	118.5	5,030.3	302.4	26.0	276.44	1.094 Level 2			
11,900.0	6,773.2	11,811.9	6,681.0	147.4	147.5	-72.06	118.5	5,130.3	302.5	20.8	281.71	1.074 Level 2			
12,000.0	6,772.5	11,911.9	6,680.0	150.1	150.3	-72.01	118.5	5,230.3	302.6	15.6	286.98	1.054 Level 2			
12,100.0	6,771.8	12,011.9	6,679.1	152.9	153.1	-71.96	118.5	5,330.3	302.7	10.4	292.24	1.036 Level 2			
12,200.0	6,771.1	12,111.9	6,678.1	155.7	155.9	-71.91	118.5	5,430.3	302.8	5.3	297.50	1.018 Level 2			
12,300.0	6,770.4	12,211.9	6,677.1	158.5	158.7	-71.86	118.5	5,530.3	302.8	0.1	302.76	1.000 Level 2			
12,400.0	6,769.7	12,311.9	6,676.1	161.3	161.5	-71.81	118.5	5,630.3	302.9	-5.1	308.02	0.983 Level 1			
12,500.0	6,769.0	12,411.9	6,675.2	164.1	164.3	-71.76	118.5	5,730.3	303.0	-10.2	313.27	0.967 Level 1			
12,600.0	6,768.3	12,511.9	6,674.2	166.9	167.1	-71.71	118.5	5,830.3	303.1	-15.4	318.52	0.952 Level 1			
12,700.0	6,767.6	12,611.9	6,673.2	169.7	169.9	-71.66	118.5	5,930.2	303.2	-20.6	323.77	0.936 Level 1			
12,800.0	6,766.9	12,711.9	6,672.2	172.5	172.7	-71.61	118.5	6,030.2	303.3	-25.7	329.02	0.922 Level 1			
12,900.0	6,766.2	12,811.9	6,671.3	175.3	175.5	-71.56	118.5	6,130.2	303.4	-30.9	334.27	0.908 Level 1			
13,000.0	6,765.5	12,911.9	6,670.3	178.1	178.3	-71.51	118.5	6,230.2	303.5	-36.0	339.51	0.894 Level 1			
13,100.0	6,764.8	13,011.9	6,669.3	180.9	181.1	-71.46	118.5	6,330.2	303.6	-41.2	344.75	0.880 Level 1			
13,200.0	6,764.1	13,111.9	6,668.3	183.7	183.9	-71.41	118.5	6,430.2	303.6	-46.4	349.99	0.868 Level 1			

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

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Loloff Farms 26I-402
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4700.0ft (RKB - 23')
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4700.0ft (RKB - 23')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Loloff Farms 26I-402	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Extension Plan #1 (1-29-16)	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															
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		
13,300.0	6,763.4	13,211.9	6,667.3	186.5	186.7	-71.36	118.5	6,530.2	303.7	-51.5	355.23	0.855	Level 1		
13,400.0	6,762.7	13,311.9	6,666.4	189.3	189.5	-71.31	118.5	6,630.2	303.8	-56.6	360.46	0.843	Level 1		
13,500.0	6,762.0	13,411.9	6,665.4	192.1	192.3	-71.26	118.5	6,730.2	303.9	-61.8	365.69	0.831	Level 1		
13,600.0	6,761.3	13,511.9	6,664.4	194.9	195.1	-71.21	118.5	6,830.2	304.0	-66.9	370.92	0.820	Level 1		
13,700.0	6,760.6	13,611.9	6,663.4	197.7	197.9	-71.16	118.5	6,930.2	304.1	-72.1	376.15	0.808	Level 1		
13,800.0	6,759.9	13,711.9	6,662.5	200.5	200.7	-71.11	118.5	7,030.2	304.2	-77.2	381.37	0.798	Level 1		
13,900.0	6,759.2	13,811.9	6,661.5	203.3	203.5	-71.06	118.5	7,130.2	304.3	-82.3	386.59	0.787	Level 1		
14,000.0	6,758.5	13,911.9	6,660.5	206.1	206.3	-71.01	118.5	7,230.2	304.4	-87.4	391.81	0.777	Level 1		
14,100.0	6,757.8	14,011.9	6,659.5	208.9	209.1	-70.96	118.5	7,330.2	304.5	-92.6	397.02	0.767	Level 1		
14,200.0	6,757.1	14,111.9	6,658.5	211.7	211.9	-70.91	118.5	7,430.2	304.5	-97.7	402.24	0.757	Level 1		
14,300.0	6,756.4	14,211.9	6,657.6	214.5	214.7	-70.86	118.5	7,530.2	304.6	-102.8	407.45	0.748	Level 1		
14,400.0	6,755.7	14,311.9	6,656.6	217.3	217.5	-70.81	118.5	7,630.2	304.7	-107.9	412.65	0.738	Level 1		
14,500.0	6,755.0	14,411.9	6,655.6	220.1	220.3	-70.76	118.5	7,730.2	304.8	-113.0	417.86	0.729	Level 1		
14,600.0	6,754.3	14,511.9	6,654.6	222.9	223.1	-70.71	118.5	7,830.1	304.9	-118.1	423.06	0.721	Level 1		
14,700.0	6,753.6	14,611.9	6,653.7	225.7	225.9	-70.66	118.5	7,930.1	305.0	-123.3	428.26	0.712	Level 1		
14,800.0	6,752.9	14,711.9	6,652.7	228.6	228.7	-70.61	118.5	8,030.1	305.1	-128.4	433.45	0.704	Level 1		
14,900.0	6,752.2	14,811.9	6,651.7	231.4	231.5	-70.56	118.5	8,130.1	305.2	-133.5	438.65	0.696	Level 1		
15,000.0	6,751.6	14,911.9	6,650.7	234.2	234.3	-70.52	118.5	8,230.1	305.3	-138.6	443.84	0.688	Level 1		
15,100.0	6,750.9	15,011.9	6,649.7	237.0	237.1	-70.47	118.5	8,330.1	305.4	-143.6	449.02	0.680	Level 1		
15,200.0	6,750.2	15,111.9	6,648.8	239.8	240.0	-70.42	118.5	8,430.1	305.5	-148.7	454.21	0.673	Level 1		
15,300.0	6,749.5	15,211.9	6,647.8	242.6	242.8	-70.37	118.5	8,530.1	305.6	-153.8	459.39	0.665	Level 1		
15,400.0	6,748.8	15,311.9	6,646.8	245.4	245.6	-70.32	118.5	8,630.1	305.7	-158.9	464.57	0.658	Level 1		
15,500.0	6,748.1	15,411.9	6,645.8	248.2	248.4	-70.27	118.5	8,730.1	305.8	-164.0	469.74	0.651	Level 1		
15,600.0	6,747.4	15,511.9	6,644.9	251.0	251.2	-70.22	118.5	8,830.1	305.8	-169.1	474.91	0.644	Level 1		
15,700.0	6,746.7	15,611.9	6,643.9	253.8	254.0	-70.17	118.5	8,930.1	305.9	-174.1	480.08	0.637	Level 1		
15,800.0	6,746.0	15,711.9	6,642.9	256.6	256.8	-70.12	118.5	9,030.1	306.0	-179.2	485.25	0.631	Level 1		
15,900.0	6,745.3	15,811.9	6,641.9	259.4	259.6	-70.07	118.5	9,130.1	306.1	-184.3	490.41	0.624	Level 1		
16,000.0	6,744.6	15,911.9	6,641.0	262.2	262.4	-70.02	118.5	9,230.1	306.2	-189.3	495.57	0.618	Level 1		
16,100.0	6,743.9	16,011.9	6,640.0	265.0	265.2	-69.97	118.5	9,330.1	306.3	-194.4	500.73	0.612	Level 1		
16,200.0	6,743.2	16,111.9	6,639.0	267.8	268.0	-69.92	118.5	9,430.1	306.4	-199.5	505.88	0.606	Level 1		
16,300.0	6,742.5	16,211.9	6,638.0	270.6	270.8	-69.88	118.5	9,530.1	306.5	-204.5	511.03	0.600	Level 1		
16,400.0	6,741.8	16,311.9	6,637.0	273.4	273.6	-69.83	118.5	9,630.1	306.6	-209.6	516.18	0.594	Level 1		
16,500.0	6,741.1	16,411.9	6,636.1	276.2	276.4	-69.78	118.5	9,730.0	306.7	-214.6	521.32	0.588	Level 1		
16,511.3	6,741.0	16,418.5	6,636.0	276.5	276.6	-69.77	118.5	9,736.7	306.8	-215.0	521.79	0.588	Level 1, ES, SF		

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Loloff Farms 26I-402
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4700.0ft (RKB - 23')
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4700.0ft (RKB - 23')
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Loloff Farms 26I-402	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Extension Plan #1 (1-29-16)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4700.0ft (RKB - 23')

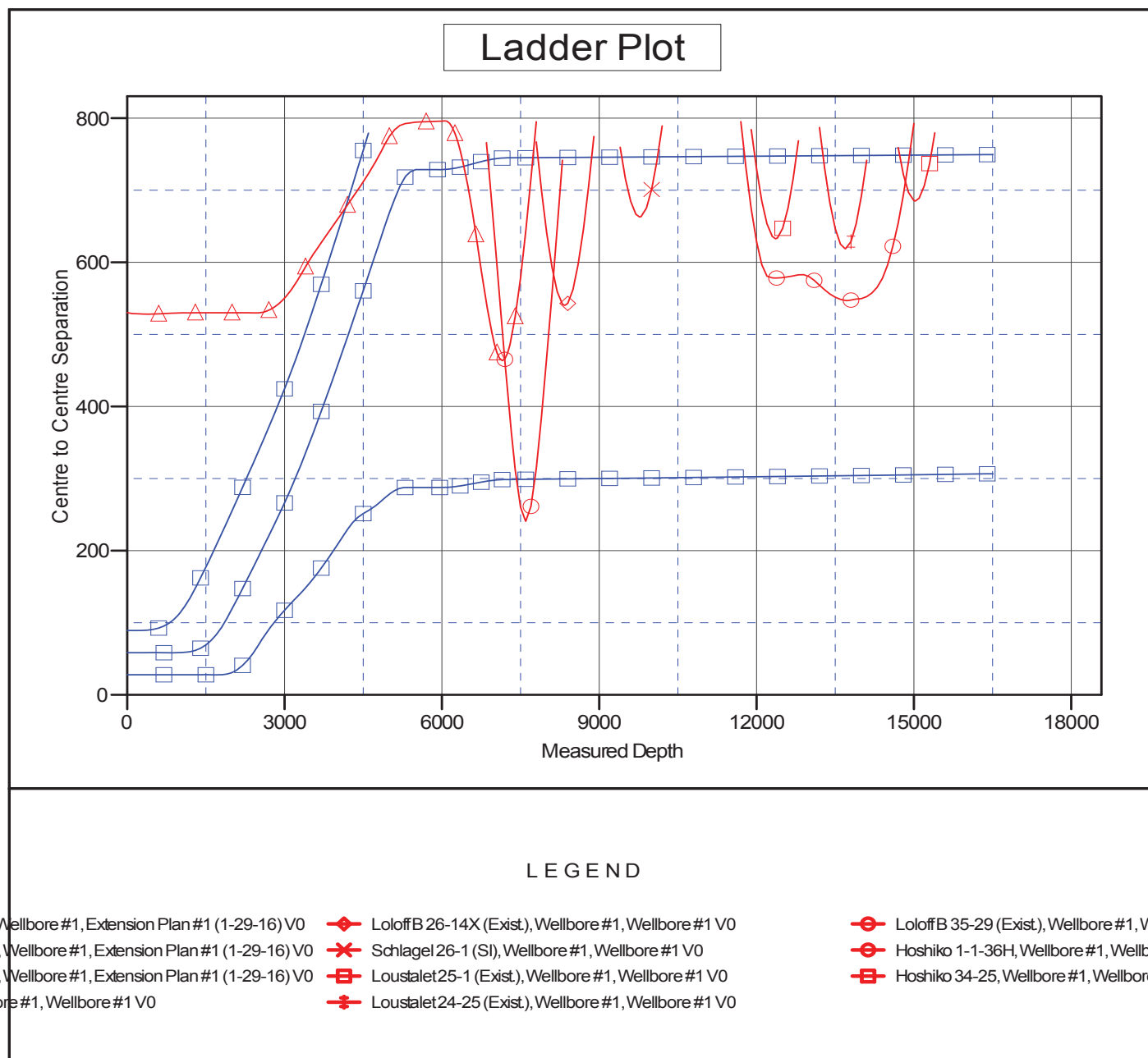
Offset Depths are relative to Offset Datum

Central Meridian is -105.500000

Coordinates are relative to: Loloff Farms 26I-402

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.63°



Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Loloff Farms 26I-402
Project:	SEC.26-T5N-R64W	TVD Reference:	WELL @ 4700.0ft (RKB - 23')
Reference Site:	Loloff Farms 5N64W26I Pad Sec.26-T5N-R64W	MD Reference:	WELL @ 4700.0ft (RKB - 23')
Site Error:	0.0 ft	North Reference:	True
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Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Extension Plan #1 (1-29-16)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4700.0ft (RKB - 23')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: Loloff Farms 26I-402
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.63°

