

PETROLEUM DEVELOPMENT CORP Weld County CO

Well Name: Maxey 240-402

Surface Location: Maxey 240-HZ Pad Sec.24-T5N-R65W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

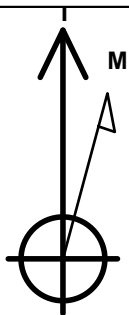
Ground Elevation: 4636.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1383919.36	3247745.25	40.383850	-104.610660	

Original Well Elev WELL @ 4651.0ft (Original Well Elev)

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape Point
BHL 2406'FSL & 2140'FWL, Sec.19	6912.0	36.9	4577.2	Point



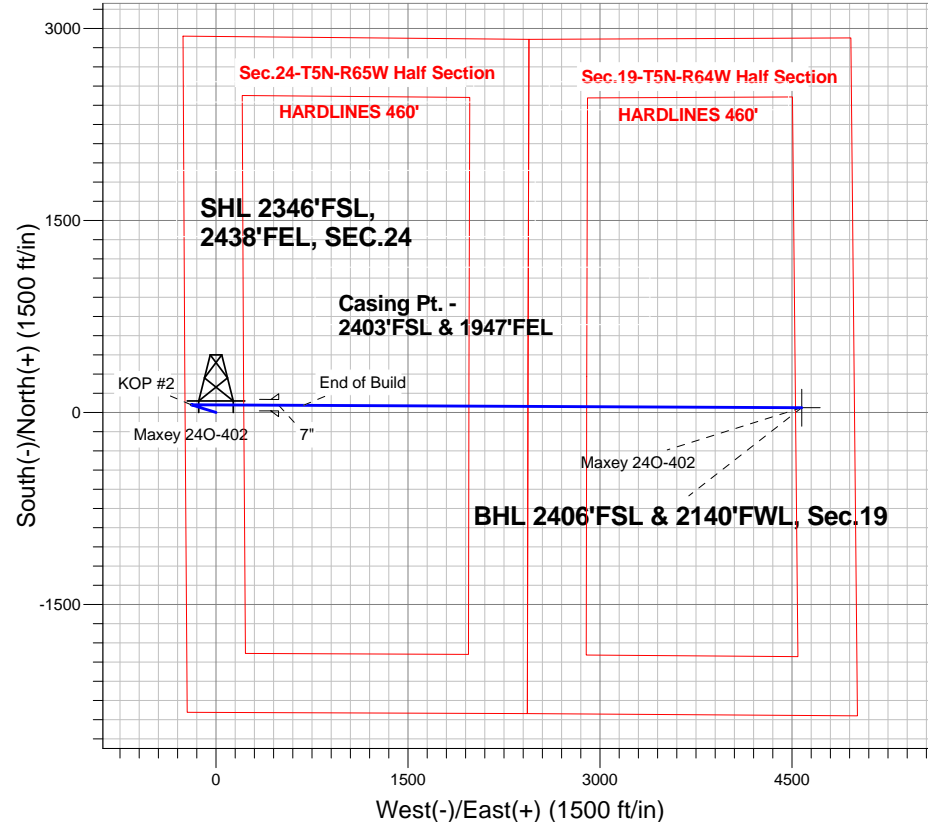
Azimuths to True North
Magnetic North: 8.55°

Magnetic Field
Strength: 52958.8nT
Dip Angle: 67.00°
Date: 3/7/2013
Model: IGRF2010

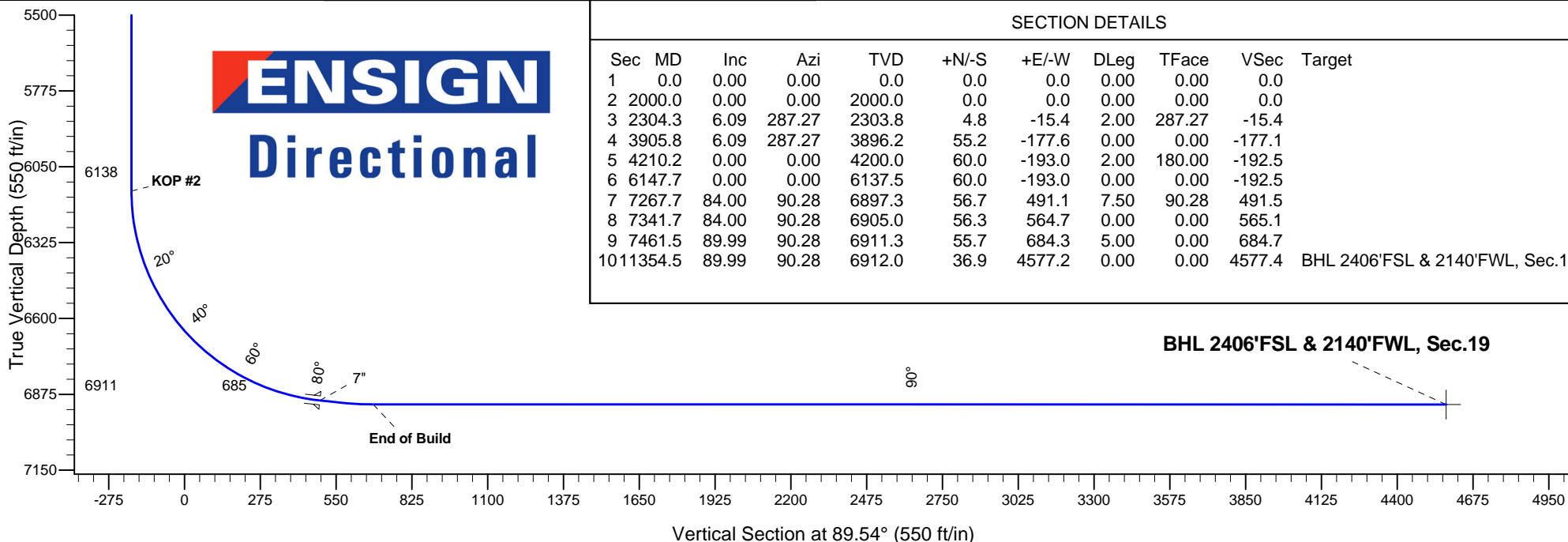
ANNOTATIONS

TVD	MD	Annotation
2000.0	2000.0	KOP #1
6137.5	6147.7	KOP #2
6911.3	7461.5	End of Build

Maxey 240-HZ Pad Sec.24-T5N-R65W
Maxey 240-402
Plan #1 (3-7-13)



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	2000.0	0.00	0.00	2000.0	0.0	0.0	0.00	0.00	0.0	
3	2304.3	6.09	287.27	2303.8	4.8	-15.4	2.00	287.27	-15.4	
4	3905.8	6.09	287.27	3896.2	55.2	-177.6	0.00	0.00	-177.1	
5	4210.2	0.00	0.00	4200.0	60.0	-193.0	2.00	180.00	-192.5	
6	6147.7	0.00	0.00	6137.5	60.0	-193.0	0.00	0.00	-192.5	
7	7267.7	84.00	90.28	6897.3	56.7	491.1	7.50	90.28	491.5	
8	7341.7	84.00	90.28	6905.0	56.3	564.7	0.00	0.00	565.1	
9	7461.5	89.99	90.28	6911.3	55.7	684.3	5.00	0.00	684.7	
10	11354.5	89.99	90.28	6912.0	36.9	4577.2	0.00	0.00	4577.4	BHL 2406'FSL & 2140'FWL, Sec.19



Directional

PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.24-T5N-R65W

Maxey 24O-HZ Pad Sec.24-T5N-R65W

Maxey 24O-402

Wellbore #1

Plan: Plan #1 (3-7-13)

Standard Planning Report

11 March, 2013

Database:	Landmark	Local Co-ordinate Reference:	Well Maxey 24O-402
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4651.0ft (Original Well Elev)
Project:	SEC.24-T5N-R65W	MD Reference:	WELL @ 4651.0ft (Original Well Elev)
Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	North Reference:	True
Well:	Maxey 24O-402	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-7-13)		

Project	SEC.24-T5N-R65W, Weld County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site						Maxey 24O-HZ Pad Sec.24-T5N-R65W											
Site Position:						Northing:			1,383,922.11 ft			Latitude:			40.383860		
From:			Lat/Long			Easting:			3,247,656.08 ft			Longitude:			-104.610980		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.57 °		

Well	Maxey 24O-402					
Well Position	+N-S	-3.7 ft	Northing:	1,383,919.36 ft	Latitude:	40.383850
	+E-W	89.1 ft	Easting:	3,247,745.25 ft	Longitude:	-104.610660
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,636.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/7/2013	8.55	67.00	52,959

Design	Plan #1 (3-7-13)			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	89.54

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,304.3	6.09	287.27	2,303.8	4.8	-15.4	2.00	2.00	0.00	287.27	
3,905.8	6.09	287.27	3,896.2	55.2	-177.6	0.00	0.00	0.00	0.00	
4,210.2	0.00	0.00	4,200.0	60.0	-193.0	2.00	-2.00	0.00	180.00	
6,147.7	0.00	0.00	6,137.5	60.0	-193.0	0.00	0.00	0.00	0.00	
7,267.7	84.00	90.28	6,897.3	56.7	491.1	7.50	7.50	0.00	90.28	
7,341.7	84.00	90.28	6,905.0	56.3	564.7	0.00	0.00	0.00	0.00	
7,461.5	89.99	90.28	6,911.3	55.7	684.3	5.00	5.00	0.00	0.00	
11,354.5	89.99	90.28	6,912.0	36.9	4,577.2	0.00	0.00	0.00	0.00	BHL 2406'FSL & 21

Database:	Landmark	Local Co-ordinate Reference:	Well Maxey 24O-402
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4651.0ft (Original Well Elev)
Project:	SEC.24-T5N-R65W	MD Reference:	WELL @ 4651.0ft (Original Well Elev)
Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	North Reference:	True
Well:	Maxey 24O-402	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-7-13)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
40.0	0.00	0.00	40.0	0.0	0.0	0.0	0.00	0.00	0.00
80.0	0.00	0.00	80.0	0.0	0.0	0.0	0.00	0.00	0.00
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00
160.0	0.00	0.00	160.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
240.0	0.00	0.00	240.0	0.0	0.0	0.0	0.00	0.00	0.00
280.0	0.00	0.00	280.0	0.0	0.0	0.0	0.00	0.00	0.00
320.0	0.00	0.00	320.0	0.0	0.0	0.0	0.00	0.00	0.00
360.0	0.00	0.00	360.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
440.0	0.00	0.00	440.0	0.0	0.0	0.0	0.00	0.00	0.00
480.0	0.00	0.00	480.0	0.0	0.0	0.0	0.00	0.00	0.00
520.0	0.00	0.00	520.0	0.0	0.0	0.0	0.00	0.00	0.00
560.0	0.00	0.00	560.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
640.0	0.00	0.00	640.0	0.0	0.0	0.0	0.00	0.00	0.00
680.0	0.00	0.00	680.0	0.0	0.0	0.0	0.00	0.00	0.00
720.0	0.00	0.00	720.0	0.0	0.0	0.0	0.00	0.00	0.00
760.0	0.00	0.00	760.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
840.0	0.00	0.00	840.0	0.0	0.0	0.0	0.00	0.00	0.00
880.0	0.00	0.00	880.0	0.0	0.0	0.0	0.00	0.00	0.00
920.0	0.00	0.00	920.0	0.0	0.0	0.0	0.00	0.00	0.00
960.0	0.00	0.00	960.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,040.0	0.00	0.00	1,040.0	0.0	0.0	0.0	0.00	0.00	0.00
1,080.0	0.00	0.00	1,080.0	0.0	0.0	0.0	0.00	0.00	0.00
1,120.0	0.00	0.00	1,120.0	0.0	0.0	0.0	0.00	0.00	0.00
1,160.0	0.00	0.00	1,160.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,240.0	0.00	0.00	1,240.0	0.0	0.0	0.0	0.00	0.00	0.00
1,280.0	0.00	0.00	1,280.0	0.0	0.0	0.0	0.00	0.00	0.00
1,320.0	0.00	0.00	1,320.0	0.0	0.0	0.0	0.00	0.00	0.00
1,360.0	0.00	0.00	1,360.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,440.0	0.00	0.00	1,440.0	0.0	0.0	0.0	0.00	0.00	0.00
1,480.0	0.00	0.00	1,480.0	0.0	0.0	0.0	0.00	0.00	0.00
1,520.0	0.00	0.00	1,520.0	0.0	0.0	0.0	0.00	0.00	0.00
1,560.0	0.00	0.00	1,560.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,640.0	0.00	0.00	1,640.0	0.0	0.0	0.0	0.00	0.00	0.00
1,680.0	0.00	0.00	1,680.0	0.0	0.0	0.0	0.00	0.00	0.00
1,720.0	0.00	0.00	1,720.0	0.0	0.0	0.0	0.00	0.00	0.00
1,760.0	0.00	0.00	1,760.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,840.0	0.00	0.00	1,840.0	0.0	0.0	0.0	0.00	0.00	0.00
1,880.0	0.00	0.00	1,880.0	0.0	0.0	0.0	0.00	0.00	0.00
1,920.0	0.00	0.00	1,920.0	0.0	0.0	0.0	0.00	0.00	0.00
1,960.0	0.00	0.00	1,960.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP #1									
2,040.0	0.80	287.27	2,040.0	0.1	-0.3	-0.3	2.00	2.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Maxey 24O-402
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4651.0ft (Original Well Elev)
Project:	SEC.24-T5N-R65W	MD Reference:	WELL @ 4651.0ft (Original Well Elev)
Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	North Reference:	True
Well:	Maxey 24O-402	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-7-13)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
2,080.0	1.60	287.27	2,080.0	0.3	-1.1	-1.1	2.00	2.00	0.00
2,120.0	2.40	287.27	2,120.0	0.7	-2.4	-2.4	2.00	2.00	0.00
2,160.0	3.20	287.27	2,159.9	1.3	-4.3	-4.3	2.00	2.00	0.00
2,200.0	4.00	287.27	2,199.8	2.1	-6.7	-6.6	2.00	2.00	0.00
2,240.0	4.80	287.27	2,239.7	3.0	-9.6	-9.6	2.00	2.00	0.00
2,280.0	5.60	287.27	2,279.6	4.1	-13.1	-13.0	2.00	2.00	0.00
2,304.3	6.09	287.27	2,303.8	4.8	-15.4	-15.4	2.00	2.00	0.00
2,320.0	6.09	287.27	2,319.3	5.3	-17.0	-17.0	0.00	0.00	0.00
2,360.0	6.09	287.27	2,359.1	6.5	-21.1	-21.0	0.00	0.00	0.00
2,400.0	6.09	287.27	2,398.9	7.8	-25.1	-25.0	0.00	0.00	0.00
2,440.0	6.09	287.27	2,438.7	9.1	-29.2	-29.1	0.00	0.00	0.00
2,480.0	6.09	287.27	2,478.4	10.3	-33.2	-33.1	0.00	0.00	0.00
2,520.0	6.09	287.27	2,518.2	11.6	-37.3	-37.2	0.00	0.00	0.00
2,560.0	6.09	287.27	2,558.0	12.8	-41.3	-41.2	0.00	0.00	0.00
2,600.0	6.09	287.27	2,597.8	14.1	-45.4	-45.2	0.00	0.00	0.00
2,640.0	6.09	287.27	2,637.5	15.4	-49.4	-49.3	0.00	0.00	0.00
2,680.0	6.09	287.27	2,677.3	16.6	-53.5	-53.3	0.00	0.00	0.00
2,720.0	6.09	287.27	2,717.1	17.9	-57.5	-57.4	0.00	0.00	0.00
2,760.0	6.09	287.27	2,756.9	19.1	-61.6	-61.4	0.00	0.00	0.00
2,800.0	6.09	287.27	2,796.6	20.4	-65.6	-65.4	0.00	0.00	0.00
2,840.0	6.09	287.27	2,836.4	21.7	-69.7	-69.5	0.00	0.00	0.00
2,880.0	6.09	287.27	2,876.2	22.9	-73.7	-73.5	0.00	0.00	0.00
2,920.0	6.09	287.27	2,916.0	24.2	-77.8	-77.6	0.00	0.00	0.00
2,960.0	6.09	287.27	2,955.7	25.4	-81.8	-81.6	0.00	0.00	0.00
3,000.0	6.09	287.27	2,995.5	26.7	-85.9	-85.6	0.00	0.00	0.00
3,040.0	6.09	287.27	3,035.3	28.0	-89.9	-89.7	0.00	0.00	0.00
3,080.0	6.09	287.27	3,075.1	29.2	-94.0	-93.7	0.00	0.00	0.00
3,120.0	6.09	287.27	3,114.8	30.5	-98.0	-97.8	0.00	0.00	0.00
3,160.0	6.09	287.27	3,154.6	31.7	-102.1	-101.8	0.00	0.00	0.00
3,200.0	6.09	287.27	3,194.4	33.0	-106.1	-105.8	0.00	0.00	0.00
3,240.0	6.09	287.27	3,234.2	34.2	-110.2	-109.9	0.00	0.00	0.00
3,280.0	6.09	287.27	3,273.9	35.5	-114.2	-113.9	0.00	0.00	0.00
3,320.0	6.09	287.27	3,313.7	36.8	-118.3	-118.0	0.00	0.00	0.00
3,360.0	6.09	287.27	3,353.5	38.0	-122.3	-122.0	0.00	0.00	0.00
3,400.0	6.09	287.27	3,393.3	39.3	-126.4	-126.0	0.00	0.00	0.00
3,440.0	6.09	287.27	3,433.0	40.5	-130.4	-130.1	0.00	0.00	0.00
3,480.0	6.09	287.27	3,472.8	41.8	-134.5	-134.1	0.00	0.00	0.00
3,520.0	6.09	287.27	3,512.6	43.1	-138.5	-138.2	0.00	0.00	0.00
3,560.0	6.09	287.27	3,552.3	44.3	-142.6	-142.2	0.00	0.00	0.00
3,600.0	6.09	287.27	3,592.1	45.6	-146.6	-146.2	0.00	0.00	0.00
3,640.0	6.09	287.27	3,631.9	46.8	-150.7	-150.3	0.00	0.00	0.00
3,680.0	6.09	287.27	3,671.7	48.1	-154.7	-154.3	0.00	0.00	0.00
3,720.0	6.09	287.27	3,711.4	49.4	-158.8	-158.4	0.00	0.00	0.00
3,760.0	6.09	287.27	3,751.2	50.6	-162.8	-162.4	0.00	0.00	0.00
3,800.0	6.09	287.27	3,791.0	51.9	-166.9	-166.4	0.00	0.00	0.00
3,840.0	6.09	287.27	3,830.8	53.1	-170.9	-170.5	0.00	0.00	0.00
3,880.0	6.09	287.27	3,870.5	54.4	-175.0	-174.5	0.00	0.00	0.00
3,905.8	6.09	287.27	3,896.2	55.2	-177.6	-177.1	0.00	0.00	0.00
3,920.0	5.80	287.27	3,910.3	55.6	-179.0	-178.5	2.00	-2.00	0.00
3,960.0	5.00	287.27	3,950.1	56.8	-182.6	-182.1	2.00	-2.00	0.00
4,000.0	4.20	287.27	3,990.0	57.7	-185.6	-185.2	2.00	-2.00	0.00
4,040.0	3.40	287.27	4,029.9	58.5	-188.2	-187.7	2.00	-2.00	0.00
4,080.0	2.60	287.27	4,069.9	59.1	-190.2	-189.7	2.00	-2.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Maxey 24O-402
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4651.0ft (Original Well Elev)
Project:	SEC.24-T5N-R65W	MD Reference:	WELL @ 4651.0ft (Original Well Elev)
Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	North Reference:	True
Well:	Maxey 24O-402	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-7-13)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,120.0	1.80	287.27	4,109.8	59.6	-191.6	-191.2	2.00	-2.00	0.00
4,160.0	1.00	287.27	4,149.8	59.9	-192.6	-192.1	2.00	-2.00	0.00
4,200.0	0.20	287.27	4,189.8	60.0	-193.0	-192.5	2.00	-2.00	0.00
4,210.2	0.00	0.00	4,200.0	60.0	-193.0	-192.5	2.00	-2.00	0.00
4,240.0	0.00	0.00	4,229.8	60.0	-193.0	-192.5	0.00	0.00	0.00
4,280.0	0.00	0.00	4,269.8	60.0	-193.0	-192.5	0.00	0.00	0.00
4,320.0	0.00	0.00	4,309.8	60.0	-193.0	-192.5	0.00	0.00	0.00
4,360.0	0.00	0.00	4,349.8	60.0	-193.0	-192.5	0.00	0.00	0.00
4,400.0	0.00	0.00	4,389.8	60.0	-193.0	-192.5	0.00	0.00	0.00
4,440.0	0.00	0.00	4,429.8	60.0	-193.0	-192.5	0.00	0.00	0.00
4,480.0	0.00	0.00	4,469.8	60.0	-193.0	-192.5	0.00	0.00	0.00
4,520.0	0.00	0.00	4,509.8	60.0	-193.0	-192.5	0.00	0.00	0.00
4,560.0	0.00	0.00	4,549.8	60.0	-193.0	-192.5	0.00	0.00	0.00
4,600.0	0.00	0.00	4,589.8	60.0	-193.0	-192.5	0.00	0.00	0.00
4,640.0	0.00	0.00	4,629.8	60.0	-193.0	-192.5	0.00	0.00	0.00
4,680.0	0.00	0.00	4,669.8	60.0	-193.0	-192.5	0.00	0.00	0.00
4,720.0	0.00	0.00	4,709.8	60.0	-193.0	-192.5	0.00	0.00	0.00
4,760.0	0.00	0.00	4,749.8	60.0	-193.0	-192.5	0.00	0.00	0.00
4,800.0	0.00	0.00	4,789.8	60.0	-193.0	-192.5	0.00	0.00	0.00
4,840.0	0.00	0.00	4,829.8	60.0	-193.0	-192.5	0.00	0.00	0.00
4,880.0	0.00	0.00	4,869.8	60.0	-193.0	-192.5	0.00	0.00	0.00
4,920.0	0.00	0.00	4,909.8	60.0	-193.0	-192.5	0.00	0.00	0.00
4,960.0	0.00	0.00	4,949.8	60.0	-193.0	-192.5	0.00	0.00	0.00
5,000.0	0.00	0.00	4,989.8	60.0	-193.0	-192.5	0.00	0.00	0.00
5,040.0	0.00	0.00	5,029.8	60.0	-193.0	-192.5	0.00	0.00	0.00
5,080.0	0.00	0.00	5,069.8	60.0	-193.0	-192.5	0.00	0.00	0.00
5,120.0	0.00	0.00	5,109.8	60.0	-193.0	-192.5	0.00	0.00	0.00
5,160.0	0.00	0.00	5,149.8	60.0	-193.0	-192.5	0.00	0.00	0.00
5,200.0	0.00	0.00	5,189.8	60.0	-193.0	-192.5	0.00	0.00	0.00
5,240.0	0.00	0.00	5,229.8	60.0	-193.0	-192.5	0.00	0.00	0.00
5,280.0	0.00	0.00	5,269.8	60.0	-193.0	-192.5	0.00	0.00	0.00
5,320.0	0.00	0.00	5,309.8	60.0	-193.0	-192.5	0.00	0.00	0.00
5,360.0	0.00	0.00	5,349.8	60.0	-193.0	-192.5	0.00	0.00	0.00
5,400.0	0.00	0.00	5,389.8	60.0	-193.0	-192.5	0.00	0.00	0.00
5,440.0	0.00	0.00	5,429.8	60.0	-193.0	-192.5	0.00	0.00	0.00
5,480.0	0.00	0.00	5,469.8	60.0	-193.0	-192.5	0.00	0.00	0.00
5,520.0	0.00	0.00	5,509.8	60.0	-193.0	-192.5	0.00	0.00	0.00
5,560.0	0.00	0.00	5,549.8	60.0	-193.0	-192.5	0.00	0.00	0.00
5,600.0	0.00	0.00	5,589.8	60.0	-193.0	-192.5	0.00	0.00	0.00
5,640.0	0.00	0.00	5,629.8	60.0	-193.0	-192.5	0.00	0.00	0.00
5,680.0	0.00	0.00	5,669.8	60.0	-193.0	-192.5	0.00	0.00	0.00
5,720.0	0.00	0.00	5,709.8	60.0	-193.0	-192.5	0.00	0.00	0.00
5,760.0	0.00	0.00	5,749.8	60.0	-193.0	-192.5	0.00	0.00	0.00
5,800.0	0.00	0.00	5,789.8	60.0	-193.0	-192.5	0.00	0.00	0.00
5,840.0	0.00	0.00	5,829.8	60.0	-193.0	-192.5	0.00	0.00	0.00
5,880.0	0.00	0.00	5,869.8	60.0	-193.0	-192.5	0.00	0.00	0.00
5,920.0	0.00	0.00	5,909.8	60.0	-193.0	-192.5	0.00	0.00	0.00
5,960.0	0.00	0.00	5,949.8	60.0	-193.0	-192.5	0.00	0.00	0.00
6,000.0	0.00	0.00	5,989.8	60.0	-193.0	-192.5	0.00	0.00	0.00
6,040.0	0.00	0.00	6,029.8	60.0	-193.0	-192.5	0.00	0.00	0.00
6,080.0	0.00	0.00	6,069.8	60.0	-193.0	-192.5	0.00	0.00	0.00
6,120.0	0.00	0.00	6,109.8	60.0	-193.0	-192.5	0.00	0.00	0.00
6,147.7	0.00	0.00	6,137.5	60.0	-193.0	-192.5	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Maxey 24O-402
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4651.0ft (Original Well Elev)
Project:	SEC.24-T5N-R65W	MD Reference:	WELL @ 4651.0ft (Original Well Elev)
Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	North Reference:	True
Well:	Maxey 24O-402	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-7-13)		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
KOP #2									
6,160.0	0.92	90.28	6,149.8	60.0	-192.9	-192.4	7.49	7.49	0.00
6,200.0	3.92	90.28	6,189.8	60.0	-191.2	-190.7	7.50	7.50	0.00
6,240.0	6.92	90.28	6,229.6	60.0	-187.4	-186.9	7.50	7.50	0.00
6,280.0	9.92	90.28	6,269.2	59.9	-181.6	-181.1	7.50	7.50	0.00
6,320.0	12.92	90.28	6,308.4	59.9	-173.7	-173.2	7.50	7.50	0.00
6,360.0	15.92	90.28	6,347.1	59.9	-163.7	-163.2	7.50	7.50	0.00
6,400.0	18.92	90.28	6,385.3	59.8	-151.7	-151.2	7.50	7.50	0.00
6,440.0	21.92	90.28	6,422.7	59.7	-137.8	-137.3	7.50	7.50	0.00
6,480.0	24.92	90.28	6,459.4	59.7	-121.9	-121.4	7.50	7.50	0.00
6,520.0	27.92	90.28	6,495.3	59.6	-104.1	-103.6	7.50	7.50	0.00
6,560.0	30.92	90.28	6,530.1	59.5	-84.4	-83.9	7.50	7.50	0.00
6,600.0	33.92	90.28	6,563.9	59.4	-63.0	-62.5	7.50	7.50	0.00
6,640.0	36.92	90.28	6,596.5	59.3	-39.8	-39.3	7.50	7.50	0.00
6,680.0	39.92	90.28	6,627.8	59.1	-15.0	-14.5	7.50	7.50	0.00
6,720.0	42.92	90.28	6,657.8	59.0	11.5	12.0	7.50	7.50	0.00
6,760.0	45.92	90.28	6,686.4	58.9	39.5	40.0	7.50	7.50	0.00
6,800.0	48.92	90.28	6,713.4	58.7	69.0	69.4	7.50	7.50	0.00
6,840.0	51.92	90.28	6,738.9	58.6	99.8	100.2	7.50	7.50	0.00
6,880.0	54.92	90.28	6,762.7	58.4	131.9	132.4	7.50	7.50	0.00
6,920.0	57.92	90.28	6,784.9	58.3	165.2	165.7	7.50	7.50	0.00
6,960.0	60.92	90.28	6,805.2	58.1	199.7	200.1	7.50	7.50	0.00
7,000.0	63.92	90.28	6,823.7	57.9	235.1	235.6	7.50	7.50	0.00
7,040.0	66.92	90.28	6,840.4	57.7	271.5	271.9	7.50	7.50	0.00
7,080.0	69.92	90.28	6,855.1	57.6	308.7	309.1	7.50	7.50	0.00
7,120.0	72.92	90.28	6,867.8	57.4	346.6	347.0	7.50	7.50	0.00
7,160.0	75.92	90.28	6,878.5	57.2	385.1	385.5	7.50	7.50	0.00
7,200.0	78.92	90.28	6,887.3	57.0	424.1	424.6	7.50	7.50	0.00
7,240.0	81.92	90.28	6,893.9	56.8	463.6	464.0	7.50	7.50	0.00
7,267.7	84.00	90.28	6,897.3	56.7	491.1	491.5	7.50	7.50	0.00
7"									
7,280.0	84.00	90.28	6,898.6	56.6	503.3	503.7	0.01	0.01	0.00
7,320.0	84.00	90.28	6,902.8	56.4	543.1	543.5	0.00	0.00	0.00
7,341.7	84.00	90.28	6,905.0	56.3	564.7	565.1	0.00	0.00	0.00
7,360.0	84.91	90.28	6,906.8	56.2	582.9	583.3	5.00	5.00	0.00
7,400.0	86.91	90.28	6,909.7	56.0	622.8	623.2	5.00	5.00	0.00
7,440.0	88.91	90.28	6,911.1	55.8	662.7	663.2	5.00	5.00	0.00
7,461.5	89.99	90.28	6,911.3	55.7	684.2	684.7	5.00	5.00	0.00
End of Build									
7,480.0	89.99	90.28	6,911.3	55.7	702.7	703.2	0.01	0.01	0.00
7,520.0	89.99	90.28	6,911.3	55.5	742.7	743.2	0.00	0.00	0.00
7,560.0	89.99	90.28	6,911.3	55.3	782.7	783.2	0.00	0.00	0.00
7,600.0	89.99	90.28	6,911.3	55.1	822.7	823.1	0.00	0.00	0.00
7,640.0	89.99	90.28	6,911.4	54.9	862.7	863.1	0.00	0.00	0.00
7,680.0	89.99	90.28	6,911.4	54.7	902.7	903.1	0.00	0.00	0.00
7,720.0	89.99	90.28	6,911.4	54.5	942.7	943.1	0.00	0.00	0.00
7,760.0	89.99	90.28	6,911.4	54.3	982.7	983.1	0.00	0.00	0.00
7,800.0	89.99	90.28	6,911.4	54.1	1,022.7	1,023.1	0.00	0.00	0.00
7,840.0	89.99	90.28	6,911.4	53.9	1,062.7	1,063.1	0.00	0.00	0.00
7,880.0	89.99	90.28	6,911.4	53.7	1,102.7	1,103.1	0.00	0.00	0.00
7,920.0	89.99	90.28	6,911.4	53.5	1,142.7	1,143.1	0.00	0.00	0.00
7,960.0	89.99	90.28	6,911.4	53.3	1,182.7	1,183.1	0.00	0.00	0.00
8,000.0	89.99	90.28	6,911.4	53.1	1,222.7	1,223.1	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Maxey 24O-402
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4651.0ft (Original Well Elev)
Project:	SEC.24-T5N-R65W	MD Reference:	WELL @ 4651.0ft (Original Well Elev)
Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	North Reference:	True
Well:	Maxey 24O-402	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-7-13)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,040.0	89.99	90.28	6,911.4	52.9	1,262.7	1,263.1	0.00	0.00	0.00
8,080.0	89.99	90.28	6,911.4	52.7	1,302.7	1,303.1	0.00	0.00	0.00
8,120.0	89.99	90.28	6,911.4	52.6	1,342.7	1,343.1	0.00	0.00	0.00
8,160.0	89.99	90.28	6,911.4	52.4	1,382.7	1,383.1	0.00	0.00	0.00
8,200.0	89.99	90.28	6,911.4	52.2	1,422.7	1,423.1	0.00	0.00	0.00
8,240.0	89.99	90.28	6,911.5	52.0	1,462.7	1,463.1	0.00	0.00	0.00
8,280.0	89.99	90.28	6,911.5	51.8	1,502.7	1,503.1	0.00	0.00	0.00
8,320.0	89.99	90.28	6,911.5	51.6	1,542.7	1,543.1	0.00	0.00	0.00
8,360.0	89.99	90.28	6,911.5	51.4	1,582.7	1,583.1	0.00	0.00	0.00
8,400.0	89.99	90.28	6,911.5	51.2	1,622.7	1,623.1	0.00	0.00	0.00
8,440.0	89.99	90.28	6,911.5	51.0	1,662.7	1,663.1	0.00	0.00	0.00
8,480.0	89.99	90.28	6,911.5	50.8	1,702.7	1,703.1	0.00	0.00	0.00
8,520.0	89.99	90.28	6,911.5	50.6	1,742.7	1,743.1	0.00	0.00	0.00
8,560.0	89.99	90.28	6,911.5	50.4	1,782.7	1,783.1	0.00	0.00	0.00
8,600.0	89.99	90.28	6,911.5	50.2	1,822.7	1,823.1	0.00	0.00	0.00
8,640.0	89.99	90.28	6,911.5	50.0	1,862.7	1,863.1	0.00	0.00	0.00
8,680.0	89.99	90.28	6,911.5	49.8	1,902.7	1,903.1	0.00	0.00	0.00
8,720.0	89.99	90.28	6,911.5	49.6	1,942.7	1,943.1	0.00	0.00	0.00
8,760.0	89.99	90.28	6,911.5	49.4	1,982.7	1,983.1	0.00	0.00	0.00
8,800.0	89.99	90.28	6,911.6	49.3	2,022.7	2,023.0	0.00	0.00	0.00
8,840.0	89.99	90.28	6,911.6	49.1	2,062.7	2,063.0	0.00	0.00	0.00
8,880.0	89.99	90.28	6,911.6	48.9	2,102.7	2,103.0	0.00	0.00	0.00
8,920.0	89.99	90.28	6,911.6	48.7	2,142.7	2,143.0	0.00	0.00	0.00
8,960.0	89.99	90.28	6,911.6	48.5	2,182.7	2,183.0	0.00	0.00	0.00
9,000.0	89.99	90.28	6,911.6	48.3	2,222.7	2,223.0	0.00	0.00	0.00
9,040.0	89.99	90.28	6,911.6	48.1	2,262.7	2,263.0	0.00	0.00	0.00
9,080.0	89.99	90.28	6,911.6	47.9	2,302.7	2,303.0	0.00	0.00	0.00
9,120.0	89.99	90.28	6,911.6	47.7	2,342.7	2,343.0	0.00	0.00	0.00
9,160.0	89.99	90.28	6,911.6	47.5	2,382.7	2,383.0	0.00	0.00	0.00
9,200.0	89.99	90.28	6,911.6	47.3	2,422.7	2,423.0	0.00	0.00	0.00
9,240.0	89.99	90.28	6,911.6	47.1	2,462.7	2,463.0	0.00	0.00	0.00
9,280.0	89.99	90.28	6,911.6	46.9	2,502.7	2,503.0	0.00	0.00	0.00
9,320.0	89.99	90.28	6,911.6	46.7	2,542.7	2,543.0	0.00	0.00	0.00
9,360.0	89.99	90.28	6,911.7	46.5	2,582.7	2,583.0	0.00	0.00	0.00
9,400.0	89.99	90.28	6,911.7	46.3	2,622.7	2,623.0	0.00	0.00	0.00
9,440.0	89.99	90.28	6,911.7	46.1	2,662.7	2,663.0	0.00	0.00	0.00
9,480.0	89.99	90.28	6,911.7	46.0	2,702.7	2,703.0	0.00	0.00	0.00
9,520.0	89.99	90.28	6,911.7	45.8	2,742.7	2,743.0	0.00	0.00	0.00
9,560.0	89.99	90.28	6,911.7	45.6	2,782.7	2,783.0	0.00	0.00	0.00
9,600.0	89.99	90.28	6,911.7	45.4	2,822.7	2,823.0	0.00	0.00	0.00
9,640.0	89.99	90.28	6,911.7	45.2	2,862.7	2,863.0	0.00	0.00	0.00
9,680.0	89.99	90.28	6,911.7	45.0	2,902.7	2,903.0	0.00	0.00	0.00
9,720.0	89.99	90.28	6,911.7	44.8	2,942.7	2,943.0	0.00	0.00	0.00
9,760.0	89.99	90.28	6,911.7	44.6	2,982.7	2,983.0	0.00	0.00	0.00
9,800.0	89.99	90.28	6,911.7	44.4	3,022.7	3,023.0	0.00	0.00	0.00
9,840.0	89.99	90.28	6,911.7	44.2	3,062.7	3,063.0	0.00	0.00	0.00
9,880.0	89.99	90.28	6,911.7	44.0	3,102.7	3,103.0	0.00	0.00	0.00
9,920.0	89.99	90.28	6,911.7	43.8	3,142.7	3,143.0	0.00	0.00	0.00
9,960.0	89.99	90.28	6,911.8	43.6	3,182.7	3,183.0	0.00	0.00	0.00
10,000.0	89.99	90.28	6,911.8	43.4	3,222.7	3,222.9	0.00	0.00	0.00
10,040.0	89.99	90.28	6,911.8	43.2	3,262.7	3,262.9	0.00	0.00	0.00
10,080.0	89.99	90.28	6,911.8	43.0	3,302.7	3,302.9	0.00	0.00	0.00
10,120.0	89.99	90.28	6,911.8	42.9	3,342.7	3,342.9	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Maxey 24O-402
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4651.0ft (Original Well Elev)
Project:	SEC.24-T5N-R65W	MD Reference:	WELL @ 4651.0ft (Original Well Elev)
Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	North Reference:	True
Well:	Maxey 24O-402	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-7-13)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,160.0	89.99	90.28	6,911.8	42.7	3,382.7	3,382.9	0.00	0.00	0.00
10,200.0	89.99	90.28	6,911.8	42.5	3,422.7	3,422.9	0.00	0.00	0.00
10,240.0	89.99	90.28	6,911.8	42.3	3,462.7	3,462.9	0.00	0.00	0.00
10,280.0	89.99	90.28	6,911.8	42.1	3,502.7	3,502.9	0.00	0.00	0.00
10,320.0	89.99	90.28	6,911.8	41.9	3,542.7	3,542.9	0.00	0.00	0.00
10,360.0	89.99	90.28	6,911.8	41.7	3,582.7	3,582.9	0.00	0.00	0.00
10,400.0	89.99	90.28	6,911.8	41.5	3,622.7	3,622.9	0.00	0.00	0.00
10,440.0	89.99	90.28	6,911.8	41.3	3,662.7	3,662.9	0.00	0.00	0.00
10,480.0	89.99	90.28	6,911.8	41.1	3,702.7	3,702.9	0.00	0.00	0.00
10,520.0	89.99	90.28	6,911.9	40.9	3,742.7	3,742.9	0.00	0.00	0.00
10,560.0	89.99	90.28	6,911.9	40.7	3,782.7	3,782.9	0.00	0.00	0.00
10,600.0	89.99	90.28	6,911.9	40.5	3,822.7	3,822.9	0.00	0.00	0.00
10,640.0	89.99	90.28	6,911.9	40.3	3,862.7	3,862.9	0.00	0.00	0.00
10,680.0	89.99	90.28	6,911.9	40.1	3,902.7	3,902.9	0.00	0.00	0.00
10,720.0	89.99	90.28	6,911.9	39.9	3,942.7	3,942.9	0.00	0.00	0.00
10,760.0	89.99	90.28	6,911.9	39.7	3,982.7	3,982.9	0.00	0.00	0.00
10,800.0	89.99	90.28	6,911.9	39.6	4,022.7	4,022.9	0.00	0.00	0.00
10,840.0	89.99	90.28	6,911.9	39.4	4,062.7	4,062.9	0.00	0.00	0.00
10,880.0	89.99	90.28	6,911.9	39.2	4,102.7	4,102.9	0.00	0.00	0.00
10,920.0	89.99	90.28	6,911.9	39.0	4,142.7	4,142.9	0.00	0.00	0.00
10,960.0	89.99	90.28	6,911.9	38.8	4,182.7	4,182.9	0.00	0.00	0.00
11,000.0	89.99	90.28	6,911.9	38.6	4,222.7	4,222.9	0.00	0.00	0.00
11,040.0	89.99	90.28	6,911.9	38.4	4,262.7	4,262.9	0.00	0.00	0.00
11,080.0	89.99	90.28	6,912.0	38.2	4,302.7	4,302.9	0.00	0.00	0.00
11,120.0	89.99	90.28	6,912.0	38.0	4,342.7	4,342.9	0.00	0.00	0.00
11,160.0	89.99	90.28	6,912.0	37.8	4,382.7	4,382.9	0.00	0.00	0.00
11,200.0	89.99	90.28	6,912.0	37.6	4,422.7	4,422.8	0.00	0.00	0.00
11,240.0	89.99	90.28	6,912.0	37.4	4,462.7	4,462.8	0.00	0.00	0.00
11,280.0	89.99	90.28	6,912.0	37.2	4,502.7	4,502.8	0.00	0.00	0.00
11,320.0	89.99	90.28	6,912.0	37.0	4,542.7	4,542.8	0.00	0.00	0.00
11,354.5	89.99	90.28	6,912.0	36.9	4,577.2	4,577.4	0.00	0.00	0.00

Casing Points				
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,267.7	6,897.3	7"	7	7-1/2

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
2,000.0	2,000.0	0.0	0.0	KOP #1
6,147.7	6,137.5	60.0	-193.0	KOP #2
7,461.5	6,911.3	55.7	684.2	End of Build



Directional

PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.24-T5N-R65W

Maxey 24O-HZ Pad Sec.24-T5N-R65W

Maxey 24O-402

Wellbore #1

Plan #1 (3-7-13)

Anticollision Report

11 March, 2013



Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Maxey 24O-402
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (Original Well Elev)
Reference Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4651.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24O-402	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (3-7-13)	Offset TVD Reference:	Offset Datum

Reference	Plan #1 (3-7-13)
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method:	MD Interval 100.0ft
Depth Range:	Unlimited
Results Limited by:	Maximum center-center distance of 1,000.0ft
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	ISCWSA
Scan Method:	Closest Approach 3D
Error Surface:	Elliptical Conic

Survey Tool Program		Date	3/11/2013		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	11,354.5	Plan #1 (3-7-13) (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						
Maxey 24O-HZ Pad Sec.24-T5N-R65W						
Maxey 24O-232 - Wellbore #1 - Plan #1 (3-7-13)	1,500.0	1,500.0	28.1	21.6	4.310	CC, ES
Maxey 24O-232 - Wellbore #1 - Plan #1 (3-7-13)	11,354.5	11,194.2	392.9	161.0	1.695	SF
Maxey 24P-312 - Wellbore #1 - Plan #1 (3-5-13)	966.3	967.3	58.6	54.5	14.222	CC
Maxey 24P-312 - Wellbore #1 - Plan #1 (3-5-13)	1,100.0	1,100.7	58.9	54.2	12.551	ES
Maxey 24P-312 - Wellbore #1 - Plan #1 (3-5-13)	11,354.5	11,300.1	687.1	429.4	2.666	SF
Maxey 24P-402 - Wellbore #1 - Plan #1 (3-5-13)	166.3	167.3	89.2	88.7	169.887	CC
Maxey 24P-402 - Wellbore #1 - Plan #1 (3-5-13)	300.0	300.8	89.3	88.2	80.934	ES
Maxey 24P-402 - Wellbore #1 - Plan #1 (3-5-13)	11,354.5	11,405.5	976.3	715.1	3.738	SF

Offset Design												
Maxey 24O-HZ Pad Sec.24-T5N-R65W - Maxey 24O-232 - Wellbore #1 - Plan #1 (3-7-13)												
Survey Program: 0-MWD												
Reference												
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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor
0.0	0.0	0.0	0.0	0.0	0.0	-82.55	3.6	-27.9	28.1			
100.0	100.0	100.0	100.0	0.1	0.1	-82.55	3.6	-27.9	28.1	27.9	0.22	125.001
200.0	200.0	200.0	200.0	0.3	0.3	-82.55	3.6	-27.9	28.1	27.4	0.67	41.667
300.0	300.0	300.0	300.0	0.6	0.6	-82.55	3.6	-27.9	28.1	27.0	1.12	25.000
400.0	400.0	400.0	400.0	0.8	0.8	-82.55	3.6	-27.9	28.1	26.5	1.57	17.857
500.0	500.0	500.0	500.0	1.0	1.0	-82.55	3.6	-27.9	28.1	26.1	2.02	13.889
600.0	600.0	600.0	600.0	1.2	1.2	-82.55	3.6	-27.9	28.1	25.6	2.47	11.364
700.0	700.0	700.0	700.0	1.5	1.5	-82.55	3.6	-27.9	28.1	25.2	2.92	9.615
800.0	800.0	800.0	800.0	1.7	1.7	-82.55	3.6	-27.9	28.1	24.7	3.37	8.333
900.0	900.0	900.0	900.0	1.9	1.9	-82.55	3.6	-27.9	28.1	24.3	3.82	7.353
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-82.55	3.6	-27.9	28.1	23.8	4.27	6.579
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-82.55	3.6	-27.9	28.1	23.4	4.72	5.952
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-82.55	3.6	-27.9	28.1	22.9	5.17	5.435
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-82.55	3.6	-27.9	28.1	22.5	5.62	5.000
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-82.55	3.6	-27.9	28.1	22.0	6.07	4.630
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-82.55	3.6	-27.9	28.1	21.6	6.52	4.310 CC, ES
1,600.0	1,600.0	1,599.6	1,599.6	3.5	3.5	-85.76	2.1	-28.7	28.8	21.8	6.94	4.146
1,700.0	1,700.0	1,699.0	1,698.8	3.7	3.6	-94.42	-2.4	-31.2	31.3	24.0	7.34	4.263

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Maxey 24O-402
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (Original Well Elev)
Reference Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4651.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24O-402	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (3-7-13)	Offset TVD Reference:	Offset Datum

Offset Design Maxey 24O-HZ Pad Sec.24-T5N-R65W - Maxey 24O-232 - Wellbore #1 - Plan #1 (3-7-13)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
1,800.0	1,800.0	1,797.9	1,797.3	3.9	3.8	-105.70	-9.9	-35.3	36.8	29.0	7.75	4.743		
1,900.0	1,900.0	1,897.1	1,896.0	4.2	4.0	-115.59	-19.4	-40.5	45.1	36.9	8.17	5.515		
2,000.0	2,000.0	1,996.5	1,994.8	4.4	4.2	-122.32	-28.9	-45.7	54.4	45.7	8.61	6.312		
2,100.0	2,100.0	2,095.9	2,093.6	4.6	4.5	-55.46	-38.5	-51.0	63.2	54.2	8.99	7.029		
2,200.0	2,199.8	2,195.3	2,192.4	4.8	4.7	-62.26	-48.0	-56.2	70.8	61.4	9.39	7.542		
2,300.0	2,299.5	2,294.5	2,291.0	5.0	4.9	-70.00	-57.5	-61.4	78.0	68.2	9.80	7.961		
2,400.0	2,398.9	2,393.6	2,389.5	5.3	5.2	-77.66	-67.0	-66.6	86.1	75.8	10.24	8.408		
2,500.0	2,498.3	2,492.7	2,488.0	5.5	5.4	-83.93	-76.5	-71.8	95.4	84.7	10.68	8.925		
2,600.0	2,597.8	2,591.7	2,586.4	5.7	5.7	-89.05	-86.0	-77.0	105.6	94.5	11.15	9.475		
2,700.0	2,697.2	2,690.8	2,684.9	6.0	6.0	-93.25	-95.5	-82.2	116.5	104.9	11.62	10.031		
2,800.0	2,796.6	2,789.9	2,783.4	6.2	6.2	-96.72	-105.0	-87.5	128.0	115.9	12.10	10.578		
2,900.0	2,896.1	2,888.9	2,881.9	6.5	6.5	-99.61	-114.5	-92.7	139.8	127.2	12.59	11.107		
3,000.0	2,995.5	2,988.0	2,980.3	6.7	6.8	-102.04	-124.0	-97.9	151.9	138.8	13.08	11.614		
3,100.0	3,094.9	3,087.1	3,078.8	7.0	7.1	-104.12	-133.5	-103.1	164.3	150.7	13.58	12.095		
3,200.0	3,194.4	3,186.1	3,177.3	7.3	7.3	-105.90	-143.0	-108.3	176.8	162.7	14.09	12.552		
3,300.0	3,293.8	3,285.2	3,275.8	7.5	7.6	-107.45	-152.5	-113.5	189.5	174.9	14.60	12.982		
3,400.0	3,393.3	3,384.3	3,374.2	7.8	7.9	-108.80	-162.0	-118.7	202.3	187.2	15.11	13.389		
3,500.0	3,492.7	3,483.4	3,472.7	8.1	8.2	-109.99	-171.5	-123.9	215.2	199.6	15.63	13.772		
3,600.0	3,592.1	3,582.4	3,571.2	8.4	8.5	-111.04	-181.0	-129.1	228.2	212.0	16.15	14.133		
3,700.0	3,691.6	3,681.5	3,669.7	8.6	8.8	-111.99	-190.5	-134.4	241.2	224.6	16.67	14.473		
3,800.0	3,791.0	3,780.6	3,768.1	8.9	9.0	-112.83	-200.0	-139.6	254.4	237.2	17.19	14.794		
3,900.0	3,890.4	3,879.6	3,866.6	9.2	9.3	-113.59	-209.5	-144.8	267.5	249.8	17.72	15.096		
4,000.0	3,990.0	3,978.8	3,965.2	9.4	9.6	-114.21	-219.0	-150.0	280.1	261.9	18.22	15.370		
4,100.0	4,089.9	4,078.2	4,064.0	9.6	9.9	-114.15	-228.5	-155.2	291.3	272.6	18.67	15.598		
4,200.0	4,189.8	4,177.6	4,162.8	9.8	10.2	-113.48	-238.0	-160.5	301.0	281.9	19.10	15.763		
4,300.0	4,289.8	4,277.0	4,261.6	10.0	10.5	174.92	-247.6	-165.7	310.1	290.6	19.48	15.917		
4,400.0	4,389.8	4,376.4	4,360.4	10.2	10.8	176.02	-257.1	-170.9	319.2	299.2	19.99	15.970		
4,500.0	4,489.8	4,475.8	4,459.2	10.4	11.1	177.05	-266.6	-176.1	328.5	308.0	20.50	16.024		
4,600.0	4,589.8	4,583.3	4,566.2	10.6	11.4	178.00	-276.0	-181.3	337.0	316.0	21.01	16.042		
4,700.0	4,689.8	4,694.5	4,677.1	10.8	11.6	178.59	-282.0	-184.6	342.4	320.9	21.47	15.950		
4,800.0	4,789.8	4,806.0	4,788.6	11.0	11.8	178.81	-284.3	-185.8	344.4	322.5	21.89	15.732		
4,900.0	4,889.8	4,907.2	4,889.8	11.2	12.0	178.81	-284.4	-185.9	344.4	322.1	22.29	15.450		
5,000.0	4,989.8	5,007.2	4,989.8	11.5	12.2	178.81	-284.4	-185.9	344.4	321.7	22.69	15.182		
5,100.0	5,089.8	5,107.2	5,089.8	11.7	12.4	178.81	-284.4	-185.9	344.4	321.3	23.08	14.922		
5,200.0	5,189.8	5,207.2	5,189.8	11.9	12.5	178.81	-284.4	-185.9	344.4	321.0	23.48	14.670		
5,300.0	5,289.8	5,307.2	5,289.8	12.1	12.7	178.81	-284.4	-185.9	344.4	320.6	23.88	14.426		
5,400.0	5,389.8	5,407.2	5,389.8	12.3	12.9	178.81	-284.4	-185.9	344.4	320.2	24.28	14.188		
5,500.0	5,489.8	5,507.2	5,489.8	12.5	13.1	178.81	-284.4	-185.9	344.4	319.8	24.68	13.957		
5,600.0	5,589.8	5,607.2	5,589.8	12.7	13.2	178.81	-284.4	-185.9	344.4	319.3	25.08	13.733		
5,700.0	5,689.8	5,707.2	5,689.8	12.9	13.4	178.81	-284.4	-185.9	344.4	318.9	25.49	13.515		
5,800.0	5,789.8	5,807.2	5,789.8	13.1	13.6	178.81	-284.4	-185.9	344.4	318.5	25.89	13.303		
5,900.0	5,889.8	5,907.2	5,889.8	13.4	13.8	178.81	-284.4	-185.9	344.4	318.1	26.30	13.097		
5,963.1	5,953.0	5,970.3	5,953.0	13.5	13.9	178.81	-284.4	-185.9	344.4	317.9	26.56	12.969		
6,000.0	5,989.8	6,007.1	5,989.7	13.6	14.0	178.80	-284.4	-185.8	344.4	317.7	26.71	12.897		
6,100.0	6,089.8	6,105.2	6,087.5	13.8	14.1	177.55	-284.4	-178.3	344.7	317.6	27.09	12.725		
6,200.0	6,189.8	6,200.0	6,180.3	14.0	14.2	84.32	-284.5	-159.2	346.1	318.8	27.33	12.665		
6,300.0	6,288.8	6,293.1	6,268.4	14.1	14.3	81.22	-284.7	-129.4	348.6	321.0	27.60	12.629		
6,400.0	6,385.3	6,383.9	6,350.2	14.3	14.4	78.34	-284.9	-90.3	351.8	324.0	27.82	12.645		
6,500.0	6,477.5	6,473.0	6,425.5	14.4	14.5	75.69	-285.1	-42.6	355.7	327.6	28.04	12.684		
6,600.0	6,563.9	6,560.7	6,493.7	14.6	14.6	73.33	-285.4	12.5	359.8	331.5	28.32	12.706		
6,700.0	6,643.0	6,650.0	6,556.1	14.9	14.7	71.20	-285.7	76.2	364.0	335.2	28.80	12.642		

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Maxey 240-402
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (Original Well Elev)
Reference Site:	Maxey 240-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4651.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 240-402	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (3-7-13)	Offset TVD Reference:	Offset Datum

Offset Design												Maxey 240-HZ Pad Sec.24-T5N-R65W - Maxey 240-232 - Wellbore #1 - Plan #1 (3-7-13)		Offset Site Error:		0.0 ft
Survey Program: 0-MWD												Offset Well Error:		0.0 ft		
Reference		Offset		Semi Major Axis				Distance								
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)					
6,800.0	6,713.4	6,732.7	6,607.0	15.4	15.3	69.48	-286.1	141.3	368.0	338.5	29.55	12.454				
6,900.0	6,774.0	6,817.2	6,651.4	16.1	16.1	68.03	-286.4	213.3	371.6	340.9	30.72	12.097				
7,000.0	6,823.7	6,900.0	6,686.9	17.2	17.2	66.91	-286.8	288.0	374.7	342.3	32.37	11.573				
7,100.0	6,861.7	6,984.6	6,714.6	18.6	18.6	66.09	-287.2	367.8	376.9	342.3	34.61	10.891				
7,200.0	6,887.3	7,067.7	6,733.1	20.3	20.1	65.60	-287.7	448.8	378.4	341.0	37.35	10.131				
7,300.0	6,900.7	7,150.0	6,742.7	22.2	21.7	65.35	-288.1	530.5	379.2	338.7	40.51	9.362				
7,400.0	6,909.7	7,239.7	6,744.0	24.3	23.7	64.36	-288.6	620.2	382.4	338.5	43.85	8.720				
7,500.0	6,911.3	7,339.7	6,743.5	26.5	25.9	64.04	-289.1	720.2	383.3	335.6	47.77	8.024				
7,600.0	6,911.3	7,439.7	6,743.0	28.7	28.2	63.98	-289.6	820.2	383.6	331.7	51.93	7.387				
7,700.0	6,911.4	7,539.7	6,742.6	31.1	30.6	63.92	-290.1	920.2	383.8	327.6	56.23	6.826				
7,800.0	6,911.4	7,639.7	6,742.1	33.6	33.1	63.85	-290.7	1,020.2	384.1	323.4	60.65	6.332				
7,900.0	6,911.4	7,739.7	6,741.7	36.1	35.6	63.79	-291.2	1,120.2	384.3	319.2	65.16	5.898				
8,000.0	6,911.4	7,839.7	6,741.2	38.6	38.2	63.73	-291.7	1,220.2	384.5	314.8	69.73	5.515				
8,100.0	6,911.4	7,939.7	6,740.8	41.2	40.8	63.67	-292.2	1,320.2	384.8	310.4	74.36	5.174				
8,200.0	6,911.4	8,039.7	6,740.3	43.8	43.4	63.61	-292.7	1,420.1	385.0	306.0	79.04	4.871				
8,300.0	6,911.5	8,139.7	6,739.9	46.4	46.1	63.55	-293.3	1,520.1	385.3	301.5	83.76	4.600				
8,400.0	6,911.5	8,239.7	6,739.4	49.1	48.7	63.49	-293.8	1,620.1	385.5	297.0	88.50	4.356				
8,500.0	6,911.5	8,339.7	6,739.0	51.7	51.4	63.43	-294.3	1,720.1	385.8	292.5	93.27	4.136				
8,600.0	6,911.5	8,439.7	6,738.5	54.4	54.1	63.37	-294.8	1,820.1	386.0	287.9	98.06	3.936				
8,700.0	6,911.5	8,539.7	6,738.1	57.1	56.8	63.31	-295.4	1,920.1	386.3	283.4	102.87	3.755				
8,800.0	6,911.6	8,639.7	6,737.6	59.8	59.5	63.25	-295.9	2,020.1	386.5	278.8	107.69	3.589				
8,900.0	6,911.6	8,739.7	6,737.2	62.5	62.3	63.19	-296.4	2,120.1	386.7	274.2	112.53	3.437				
9,000.0	6,911.6	8,839.7	6,736.7	65.3	65.0	63.13	-296.9	2,220.1	387.0	269.6	117.37	3.297				
9,100.0	6,911.6	8,939.7	6,736.2	68.0	67.7	63.07	-297.4	2,320.1	387.2	265.0	122.22	3.168				
9,200.0	6,911.6	9,039.7	6,735.8	70.7	70.5	63.01	-298.0	2,420.1	387.5	260.4	127.08	3.049				
9,300.0	6,911.6	9,139.7	6,735.3	73.5	73.2	62.95	-298.5	2,520.1	387.7	255.8	131.94	2.939				
9,400.0	6,911.7	9,239.7	6,734.9	76.2	76.0	62.89	-299.0	2,620.1	388.0	251.2	136.80	2.836				
9,500.0	6,911.7	9,339.7	6,734.4	79.0	78.7	62.83	-299.5	2,720.1	388.2	246.6	141.67	2.740				
9,600.0	6,911.7	9,439.7	6,734.0	81.7	81.5	62.77	-300.1	2,820.1	388.5	241.9	146.54	2.651				
9,700.0	6,911.7	9,539.7	6,733.5	84.5	84.2	62.72	-300.6	2,920.1	388.7	237.3	151.42	2.567				
9,800.0	6,911.7	9,639.7	6,733.1	87.2	87.0	62.66	-301.1	3,020.1	389.0	232.7	156.29	2.489				
9,900.0	6,911.7	9,739.7	6,732.6	90.0	89.8	62.60	-301.6	3,120.1	389.2	228.1	161.16	2.415				
10,000.0	6,911.8	9,839.7	6,732.2	92.8	92.5	62.54	-302.1	3,220.1	389.5	223.4	166.03	2.346				
10,100.0	6,911.8	9,939.7	6,731.7	95.5	95.3	62.48	-302.7	3,320.1	389.7	218.8	170.91	2.280				
10,200.0	6,911.8	10,039.7	6,731.3	98.3	98.1	62.42	-303.2	3,420.1	390.0	214.2	175.78	2.219				
10,300.0	6,911.8	10,139.7	6,730.8	101.1	100.9	62.36	-303.7	3,520.1	390.2	209.6	180.65	2.160				
10,400.0	6,911.8	10,239.7	6,730.3	103.8	103.6	62.30	-304.2	3,620.1	390.5	205.0	185.52	2.105				
10,500.0	6,911.9	10,339.7	6,729.9	106.6	106.4	62.24	-304.8	3,720.1	390.7	200.3	190.38	2.052				
10,600.0	6,911.9	10,439.6	6,729.4	109.4	109.2	62.19	-305.3	3,820.1	391.0	195.7	195.25	2.002				
10,700.0	6,911.9	10,539.6	6,729.0	112.2	112.0	62.13	-305.8	3,920.1	391.2	191.1	200.11	1.955				
10,800.0	6,911.9	10,639.6	6,728.5	115.0	114.8	62.07	-306.3	4,020.1	391.5	186.5	204.97	1.910				
10,900.0	6,911.9	10,739.6	6,728.1	117.7	117.6	62.01	-306.8	4,120.1	391.7	181.9	209.83	1.867				
11,000.0	6,911.9	10,839.6	6,727.6	120.5	120.3	61.95	-307.4	4,220.0	392.0	177.3	214.68	1.826				
11,100.0	6,912.0	10,939.6	6,727.2	123.3	123.1	61.89	-307.9	4,320.0	392.2	172.7	219.53	1.787				
11,200.0	6,912.0	11,039.6	6,726.7	126.1	125.9	61.84	-308.4	4,420.0	392.5	168.1	224.38	1.749				
11,300.0	6,912.0	11,139.6	6,726.3	128.9	128.7	61.78	-308.9	4,520.0	392.8	163.5	229.22	1.713				
11,354.5	6,912.0	11,194.2	6,726.0	130.4	130.2	61.75	-309.2	4,574.6	392.9	161.0	231.86	1.695 SF				

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Maxey 24O-402
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (Original Well Elev)
Reference Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4651.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24O-402	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (3-7-13)	Offset TVD Reference:	Offset Datum

Offset Design Maxey 24O-HZ Pad Sec.24-T5N-R65W - Maxey 24P-312 - Wellbore #1 - Plan #1 (3-5-13)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	1.0	1.0	0.0	0.0	-86.44	-86.44	3.6	-58.5	58.6	58.6	0.00	N/A	
100.0	100.0	101.0	101.0	0.1	0.1	-86.44	-86.44	3.6	-58.5	58.6	58.4	0.23	258.209	
200.0	200.0	201.0	201.0	0.3	0.3	-86.44	-86.44	3.6	-58.5	58.6	57.9	0.68	86.641	
300.0	300.0	301.0	301.0	0.6	0.6	-86.44	-86.44	3.6	-58.5	58.6	57.5	1.13	52.054	
400.0	400.0	401.0	401.0	0.8	0.8	-86.44	-86.44	3.6	-58.5	58.6	57.0	1.58	37.203	
500.0	500.0	501.0	501.0	1.0	1.0	-86.44	-86.44	3.6	-58.5	58.6	56.6	2.03	28.945	
600.0	600.0	601.0	601.0	1.2	1.2	-86.44	-86.44	3.6	-58.5	58.6	56.1	2.47	23.687	
700.0	700.0	701.0	701.0	1.5	1.5	-86.44	-86.44	3.6	-58.5	58.6	55.7	2.92	20.045	
800.0	800.0	801.0	801.0	1.7	1.7	-86.44	-86.44	3.6	-58.5	58.6	55.2	3.37	17.374	
900.0	900.0	901.0	901.0	1.9	1.9	-86.44	-86.44	3.6	-58.5	58.6	54.8	3.82	15.332	
966.3	966.3	967.3	967.3	2.1	2.1	-86.44	-86.44	3.6	-58.5	58.6	54.5	4.12	14.222 CC	
1,000.0	1,000.0	1,001.0	1,001.0	2.1	2.1	-86.44	-86.44	3.6	-58.5	58.6	54.3	4.27	13.720	
1,100.0	1,100.0	1,100.7	1,100.6	2.4	2.3	-88.14	-88.14	1.9	-58.9	58.9	54.2	4.69	12.551 ES	
1,200.0	1,200.0	1,200.0	1,199.8	2.6	2.5	-93.03	-93.03	-3.2	-60.0	60.1	55.0	5.10	11.788	
1,300.0	1,300.0	1,299.0	1,298.5	2.8	2.7	-100.63	-100.63	-11.6	-61.8	62.9	57.4	5.51	11.421	
1,400.0	1,400.0	1,397.2	1,395.9	3.0	2.9	-109.87	-109.87	-23.2	-64.3	68.5	62.6	5.94	11.543	
1,500.0	1,500.0	1,496.2	1,494.0	3.3	3.1	-118.64	-118.64	-36.7	-67.2	76.9	70.5	6.39	12.024	
1,600.0	1,600.0	1,595.2	1,592.0	3.5	3.4	-125.60	-125.60	-50.2	-70.1	86.7	79.8	6.87	12.609	
1,700.0	1,700.0	1,694.3	1,690.1	3.7	3.7	-131.09	-131.09	-63.6	-73.0	97.4	90.1	7.37	13.221	
1,800.0	1,800.0	1,793.3	1,788.2	3.9	4.0	-135.46	-135.46	-77.1	-75.9	108.9	101.1	7.88	13.821	
1,900.0	1,900.0	1,892.3	1,886.2	4.2	4.3	-138.98	-138.98	-90.6	-78.8	120.9	112.5	8.40	14.390	
2,000.0	2,000.0	1,991.3	1,984.3	4.4	4.6	-141.87	-141.87	-104.0	-81.7	133.3	124.4	8.93	14.922	
2,100.0	2,100.0	2,090.3	2,082.3	4.6	4.9	-71.95	-71.95	-117.5	-84.6	145.4	136.4	9.04	16.097	
2,200.0	2,199.8	2,189.2	2,180.2	4.8	5.2	-75.51	-75.51	-130.9	-87.5	157.0	147.5	9.45	16.606	
2,300.0	2,299.5	2,287.7	2,277.8	5.0	5.5	-79.69	-79.69	-144.3	-90.4	168.5	158.6	9.88	17.062	
2,400.0	2,398.9	2,386.0	2,375.1	5.3	5.8	-84.09	-84.09	-157.7	-93.2	180.7	170.4	10.31	17.532	
2,500.0	2,498.3	2,484.4	2,472.5	5.5	6.1	-87.94	-87.94	-171.1	-96.1	193.8	183.1	10.75	18.028	
2,600.0	2,597.8	2,582.7	2,569.9	5.7	6.5	-91.29	-91.29	-184.5	-99.0	207.7	196.5	11.21	18.532	
2,700.0	2,697.2	2,681.0	2,667.3	6.0	6.8	-94.22	-94.22	-197.8	-101.9	222.2	210.5	11.68	19.030	
2,800.0	2,796.6	2,779.4	2,764.7	6.2	7.1	-96.79	-96.79	-211.2	-104.7	237.2	225.1	12.15	19.515	
2,900.0	2,896.1	2,877.7	2,862.0	6.5	7.4	-99.05	-99.05	-224.6	-107.6	252.6	240.0	12.64	19.983	
3,000.0	2,995.5	2,976.1	2,959.4	6.7	7.8	-101.05	-101.05	-238.0	-110.5	268.4	255.2	13.14	20.430	
3,100.0	3,094.9	3,074.4	3,056.8	7.0	8.1	-102.83	-102.83	-251.3	-113.4	284.4	270.8	13.64	20.856	
3,200.0	3,194.4	3,172.7	3,154.2	7.3	8.4	-104.42	-104.42	-264.7	-116.3	300.7	286.6	14.14	21.261	
3,300.0	3,293.8	3,271.1	3,251.6	7.5	8.8	-105.85	-105.85	-278.1	-119.1	317.2	302.6	14.66	21.644	
3,400.0	3,393.3	3,369.4	3,349.0	7.8	9.1	-107.13	-107.13	-291.5	-122.0	333.9	318.7	15.17	22.007	
3,500.0	3,492.7	3,467.7	3,446.3	8.1	9.4	-108.29	-108.29	-304.8	-124.9	350.7	335.0	15.69	22.350	
3,600.0	3,592.1	3,566.1	3,543.7	8.4	9.8	-109.35	-109.35	-318.2	-127.8	367.6	351.4	16.21	22.674	
3,700.0	3,691.6	3,664.4	3,641.1	8.6	10.1	-110.31	-110.31	-331.6	-130.7	384.7	367.9	16.74	22.982	
3,800.0	3,791.0	3,762.8	3,738.5	8.9	10.5	-111.20	-111.20	-345.0	-133.5	401.8	384.6	17.27	23.272	
3,900.0	3,890.4	3,861.1	3,835.9	9.2	10.8	-112.01	-112.01	-358.3	-136.4	419.1	401.3	17.80	23.548	
4,000.0	3,990.0	3,959.6	3,933.4	9.4	11.1	-112.86	-112.86	-371.7	-139.3	435.8	417.5	18.31	23.802	
4,100.0	4,089.9	4,058.4	4,031.2	9.6	11.5	-113.25	-113.25	-385.2	-142.2	451.2	432.4	18.77	24.040	
4,200.0	4,189.8	4,157.4	4,129.3	9.8	11.8	-113.21	-113.21	-398.6	-145.1	465.2	446.0	19.20	24.225	
4,300.0	4,289.8	4,256.4	4,227.3	10.0	12.2	174.55	174.55	-412.1	-148.0	478.5	457.2	21.31	22.459	
4,400.0	4,389.8	4,355.4	4,325.4	10.2	12.5	175.04	175.04	-425.6	-150.9	491.8	469.9	21.86	22.494	
4,500.0	4,489.8	4,454.4	4,423.4	10.4	12.8	175.51	175.51	-439.1	-153.8	505.1	482.7	22.42	22.527	
4,600.0	4,589.8	4,553.5	4,521.5	10.6	13.2	175.95	175.95	-452.5	-156.7	518.5	495.5	22.98	22.559	
4,700.0	4,689.8	4,652.5	4,619.6	10.8	13.5	176.36	176.36	-466.0	-159.6	531.8	508.3	23.54	22.590	
4,800.0	4,789.8	4,751.5	4,717.6	11.0	13.9	176.76	176.76	-479.5	-162.5	545.3	521.2	24.11	22.620	
4,900.0	4,889.8	4,850.6	4,815.7	11.2	14.2	177.14	177.14	-492.9	-165.4	558.7	534.0	24.67	22.649	

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Maxey 24O-402
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (Original Well Elev)
Reference Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4651.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24O-402	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (3-7-13)	Offset TVD Reference:	Offset Datum

Offset Design Maxey 24O-HZ Pad Sec.24-T5N-R65W - Maxey 24P-312 - Wellbore #1 - Plan #1 (3-5-13)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.0	4,989.8	4,949.6	4,913.8	11.5	14.6	177.50	177.50	-506.4	-168.3	572.1	546.9	25.23	22.676	
5,100.0	5,089.8	5,048.6	5,011.8	11.7	14.9	177.84	177.84	-519.9	-171.2	585.6	559.8	25.79	22.703	
5,200.0	5,189.8	5,147.6	5,109.9	11.9	15.2	178.17	178.17	-533.3	-174.1	599.1	572.8	26.36	22.730	
5,300.0	5,289.8	5,246.7	5,208.0	12.1	15.6	178.49	178.49	-546.8	-177.0	612.6	585.7	26.92	22.755	
5,400.0	5,389.8	5,345.7	5,306.0	12.3	15.9	178.79	178.79	-560.3	-179.9	626.2	598.7	27.49	22.779	
5,500.0	5,489.8	5,444.7	5,404.1	12.5	16.3	179.07	179.07	-573.7	-182.8	639.7	611.7	28.05	22.803	
5,600.0	5,589.8	5,544.0	5,502.4	12.7	16.6	179.35	179.35	-587.2	-185.7	653.3	624.7	28.62	22.826	
5,700.0	5,689.8	5,672.0	5,629.6	12.9	16.9	179.64	179.64	-601.8	-188.8	664.7	635.5	29.16	22.791	
5,800.0	5,789.8	5,801.2	5,758.4	13.1	17.2	179.81	179.81	-610.9	-190.8	671.7	642.1	29.64	22.662	
5,900.0	5,889.8	5,931.0	5,888.1	13.4	17.4	179.87	179.87	-614.3	-191.5	674.3	644.3	30.07	22.428	
6,000.0	5,989.8	6,033.7	5,990.8	13.6	17.5	179.87	179.87	-614.3	-191.5	674.4	643.9	30.44	22.156	
6,051.0	6,040.8	6,084.7	6,041.8	13.7	17.6	179.87	179.87	-614.3	-191.5	674.4	643.7	30.62	22.026	
6,100.0	6,089.8	6,133.5	6,090.6	13.8	17.7	179.81	179.81	-614.4	-190.8	674.4	643.6	30.79	21.901	
6,200.0	6,189.8	6,231.7	6,188.2	14.0	17.8	88.77	88.77	-614.4	-180.1	674.5	646.5	27.98	24.110	
6,300.0	6,288.8	6,328.6	6,282.3	14.1	17.9	87.90	87.90	-614.5	-157.4	674.8	646.6	28.26	23.876	
6,400.0	6,385.3	6,424.4	6,371.8	14.3	18.0	87.07	87.07	-614.7	-123.5	675.3	646.8	28.51	23.684	
6,500.0	6,477.5	6,519.0	6,455.4	14.4	18.1	86.30	86.30	-615.0	-79.2	675.8	647.1	28.78	23.482	
6,600.0	6,563.9	6,612.7	6,532.1	14.6	18.2	85.59	85.59	-615.3	-25.5	676.5	647.3	29.17	23.189	
6,700.0	6,643.0	6,705.6	6,601.1	14.9	18.3	84.95	84.95	-615.6	36.5	677.1	647.3	29.81	22.716	
6,800.0	6,713.4	6,797.7	6,661.7	15.4	18.5	84.40	84.40	-616.0	105.9	677.8	647.0	30.83	21.982	
6,900.0	6,774.0	6,889.3	6,713.1	16.1	18.8	83.93	83.93	-616.4	181.6	678.4	646.0	32.38	20.951	
7,000.0	6,823.7	6,980.3	6,754.9	17.2	19.4	83.56	83.56	-616.9	262.4	678.9	644.4	34.51	19.672	
7,100.0	6,861.7	7,071.0	6,786.7	18.6	20.3	83.29	83.29	-617.3	347.2	679.4	642.1	37.24	18.244	
7,200.0	6,887.3	7,161.5	6,808.2	20.3	21.6	83.13	83.13	-617.8	435.0	679.6	639.1	40.50	16.782	
7,300.0	6,900.7	7,250.0	6,819.0	22.2	23.1	83.03	83.03	-618.3	522.9	679.9	635.7	44.13	15.408	
7,400.0	6,909.7	7,345.7	6,820.4	24.3	25.0	82.40	82.40	-618.8	618.5	680.9	632.7	48.17	14.137	
7,500.0	6,911.3	7,445.7	6,819.9	26.5	27.2	82.20	82.20	-619.4	718.5	681.3	628.7	52.55	12.963	
7,600.0	6,911.3	7,545.7	6,819.3	28.7	29.4	82.16	82.16	-619.9	818.5	681.4	624.3	57.12	11.928	
7,700.0	6,911.4	7,645.7	6,818.8	31.1	31.8	82.11	82.11	-620.5	918.5	681.5	619.7	61.86	11.018	
7,800.0	6,911.4	7,745.7	6,818.3	33.6	34.2	82.06	82.06	-621.0	1,018.5	681.7	615.0	66.72	10.217	
7,900.0	6,911.4	7,845.7	6,817.7	36.1	36.6	82.02	82.02	-621.6	1,118.5	681.8	610.2	71.68	9.512	
8,000.0	6,911.4	7,945.7	6,817.2	38.6	39.2	81.97	81.97	-622.2	1,218.5	682.0	605.3	76.73	8.889	
8,100.0	6,911.4	8,045.7	6,816.6	41.2	41.7	81.93	81.93	-622.7	1,318.5	682.1	600.3	81.84	8.335	
8,200.0	6,911.4	8,145.7	6,816.1	43.8	44.3	81.88	81.88	-623.3	1,418.5	682.3	595.3	87.00	7.842	
8,300.0	6,911.5	8,245.7	6,815.6	46.4	46.9	81.84	81.84	-623.8	1,518.5	682.4	590.2	92.21	7.401	
8,400.0	6,911.5	8,345.7	6,815.0	49.1	49.6	81.79	81.79	-624.4	1,618.5	682.6	585.1	97.45	7.004	
8,500.0	6,911.5	8,445.7	6,814.5	51.7	52.2	81.74	81.74	-624.9	1,718.5	682.7	580.0	102.73	6.646	
8,600.0	6,911.5	8,545.7	6,813.9	54.4	54.9	81.70	81.70	-625.5	1,818.4	682.9	574.8	108.03	6.321	
8,700.0	6,911.5	8,645.7	6,813.4	57.1	57.6	81.65	81.65	-626.0	1,918.4	683.0	569.7	113.36	6.025	
8,800.0	6,911.6	8,745.7	6,812.8	59.8	60.3	81.61	81.61	-626.6	2,018.4	683.2	564.5	118.70	5.755	
8,900.0	6,911.6	8,845.7	6,812.3	62.5	63.0	81.56	81.56	-627.1	2,118.4	683.3	559.2	124.06	5.508	
9,000.0	6,911.6	8,945.7	6,811.8	65.3	65.7	81.52	81.52	-627.7	2,218.4	683.5	554.0	129.44	5.280	
9,100.0	6,911.6	9,045.6	6,811.2	68.0	68.4	81.47	81.47	-628.2	2,318.4	683.6	548.8	134.83	5.070	
9,200.0	6,911.6	9,145.6	6,810.7	70.7	71.1	81.43	81.43	-628.8	2,418.4	683.8	543.5	140.23	4.876	
9,300.0	6,911.6	9,245.6	6,810.1	73.5	73.9	81.38	81.38	-629.3	2,518.4	683.9	538.3	145.64	4.696	
9,400.0	6,911.7	9,345.6	6,809.6	76.2	76.6	81.33	81.33	-629.9	2,618.4	684.1	533.0	151.06	4.529	
9,500.0	6,911.7	9,445.6	6,809.1	79.0	79.3	81.29	81.29	-630.5	2,718.4	684.2	527.7	156.48	4.373	
9,600.0	6,911.7	9,545.6	6,808.5	81.7	82.1	81.24	81.24	-631.0	2,818.4	684.4	522.5	161.91	4.227	
9,700.0	6,911.7	9,645.6	6,808.0	84.5	84.8	81.20	81.20	-631.6	2,918.4	684.5	517.2	167.35	4.090	
9,800.0	6,911.7	9,745.6	6,807.4	87.2	87.6	81.15	81.15	-632.1	3,018.4	684.7	511.9	172.79	3.962	
9,900.0	6,911.7	9,845.6	6,806.9	90.0	90.4	81.11	81.11	-632.7	3,118.4	684.8	506.6	178.24	3.842	

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Maxey 24O-402
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (Original Well Elev)
Reference Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4651.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24O-402	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (3-7-13)	Offset TVD Reference:	Offset Datum

Maxey 24O-HZ Pad Sec.24-T5N-R65W - Maxey 24P-312 - Wellbore #1 - Plan #1 (3-5-13)												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)		
10,000.0	6,911.8	9,945.6	6,806.4	92.8	93.1	81.06	-633.2	3,218.4	685.0	501.3	183.69	3.729	
10,100.0	6,911.8	10,045.6	6,805.8	95.5	95.9	81.02	-633.8	3,318.4	685.1	496.0	189.14	3.622	
10,200.0	6,911.8	10,145.6	6,805.3	98.3	98.7	80.97	-634.3	3,418.4	685.3	490.7	194.60	3.522	
10,300.0	6,911.8	10,245.6	6,804.7	101.1	101.4	80.93	-634.9	3,518.4	685.5	485.4	200.06	3.426	
10,400.0	6,911.8	10,345.6	6,804.2	103.8	104.2	80.88	-635.4	3,618.4	685.6	480.1	205.52	3.336	
10,500.0	6,911.9	10,445.6	6,803.6	106.6	107.0	80.84	-636.0	3,718.4	685.8	474.8	210.99	3.250	
10,600.0	6,911.9	10,545.6	6,803.1	109.4	109.7	80.79	-636.5	3,818.4	685.9	469.5	216.45	3.169	
10,700.0	6,911.9	10,645.6	6,802.6	112.2	112.5	80.75	-637.1	3,918.4	686.1	464.2	221.92	3.092	
10,800.0	6,911.9	10,745.6	6,802.0	115.0	115.3	80.70	-637.7	4,018.3	686.2	458.8	227.39	3.018	
10,900.0	6,911.9	10,845.6	6,801.5	117.7	118.1	80.66	-638.2	4,118.3	686.4	453.5	232.86	2.948	
11,000.0	6,911.9	10,945.6	6,800.9	120.5	120.9	80.61	-638.8	4,218.3	686.6	448.2	238.33	2.881	
11,100.0	6,912.0	11,045.6	6,800.4	123.3	123.6	80.57	-639.3	4,318.3	686.7	442.9	243.80	2.817	
11,200.0	6,912.0	11,145.6	6,799.9	126.1	126.4	80.52	-639.9	4,418.3	686.9	437.6	249.27	2.756	
11,300.0	6,912.0	11,245.6	6,799.3	128.9	129.2	80.48	-640.4	4,518.3	687.0	432.3	254.74	2.697	
11,354.5	6,912.0	11,300.1	6,799.0	130.4	130.7	80.45	-640.7	4,572.8	687.1	429.4	257.72	2.666 SF	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Maxey 24O-402
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (Original Well Elev)
Reference Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4651.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24O-402	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (3-7-13)	Offset TVD Reference:	Offset Datum

Offset Design Maxey 24O-HZ Pad Sec.24-T5N-R65W - Maxey 24P-402 - Wellbore #1 - Plan #1 (3-5-13)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+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	-87.66	-87.66	3.6	-89.1	89.2	89.2	0.00	N/A	
100.0	100.0	101.0	101.0	0.1	0.1	-87.66	-87.66	3.6	-89.1	89.2	89.0	0.23	393.027	
166.3	166.3	167.3	167.3	0.3	0.3	-87.66	-87.66	3.6	-89.1	89.2	88.7	0.53	169.887 CC	
200.0	200.0	201.0	201.0	0.3	0.3	-87.66	-87.66	3.6	-89.1	89.2	88.5	0.68	131.922	
300.0	300.0	300.8	300.7	0.6	0.5	-88.80	-88.80	1.9	-89.3	89.3	88.2	1.10	80.934 ES	
400.0	400.0	400.3	400.1	0.8	0.8	-92.12	-92.12	-3.3	-89.9	89.9	88.4	1.54	58.503	
500.0	500.0	499.3	498.8	1.0	1.0	-97.48	-97.48	-11.9	-90.7	91.5	89.5	1.99	45.991	
600.0	600.0	597.7	596.4	1.2	1.3	-104.50	-104.50	-23.8	-91.9	95.1	92.6	2.47	38.528	
700.0	700.0	695.1	692.6	1.5	1.6	-112.56	-112.56	-38.8	-93.4	101.5	98.6	2.99	34.007	
800.0	800.0	793.6	789.7	1.7	2.0	-120.31	-120.31	-55.6	-95.2	110.8	107.2	3.55	31.227	
900.0	900.0	892.1	886.8	1.9	2.3	-126.78	-126.78	-72.4	-96.9	121.8	117.6	4.14	29.416	
1,000.0	1,000.0	990.7	983.8	2.1	2.7	-132.15	-132.15	-89.2	-98.6	134.0	129.3	4.75	28.221	
1,100.0	1,100.0	1,089.2	1,080.9	2.4	3.1	-136.59	-136.59	-106.0	-100.3	147.3	141.9	5.37	27.432	
1,200.0	1,200.0	1,187.7	1,178.0	2.6	3.5	-140.30	-140.30	-122.8	-102.0	161.3	155.3	5.99	26.911	
1,300.0	1,300.0	1,286.2	1,275.0	2.8	3.9	-143.40	-143.40	-139.6	-103.7	175.8	169.2	6.62	26.568	
1,400.0	1,400.0	1,384.8	1,372.1	3.0	4.2	-146.03	-146.03	-156.4	-105.4	190.8	183.5	7.24	26.344	
1,500.0	1,500.0	1,483.3	1,469.2	3.3	4.6	-148.27	-148.27	-173.2	-107.1	206.1	198.2	7.86	26.202	
1,600.0	1,600.0	1,581.8	1,566.2	3.5	5.0	-150.21	-150.21	-190.0	-108.8	221.6	213.2	8.49	26.115	
1,700.0	1,700.0	1,680.3	1,663.3	3.7	5.4	-151.89	-151.89	-206.8	-110.5	237.4	228.3	9.11	26.068	
1,800.0	1,800.0	1,778.8	1,760.4	3.9	5.8	-153.36	-153.36	-223.6	-112.2	253.4	243.7	9.73	26.048	
1,900.0	1,900.0	1,877.4	1,857.4	4.2	6.2	-154.65	-154.65	-240.4	-113.9	269.5	259.2	10.35	26.047	
2,000.0	2,000.0	1,975.9	1,954.5	4.4	6.6	-155.80	-155.80	-257.2	-115.6	285.7	274.8	10.97	26.059	
2,100.0	2,100.0	2,074.3	2,051.5	4.6	7.0	-84.10	-84.10	-273.9	-117.3	301.9	292.2	9.65	31.283	
2,200.0	2,199.8	2,172.5	2,148.2	4.8	7.4	-85.62	-85.62	-290.7	-119.0	317.9	307.8	10.08	31.529	
2,300.0	2,299.5	2,270.4	2,244.6	5.0	7.8	-87.55	-87.55	-307.4	-120.7	334.1	323.6	10.51	31.785	
2,400.0	2,398.9	2,368.0	2,340.8	5.3	8.1	-89.89	-89.89	-324.0	-122.3	350.8	339.8	10.94	32.067	
2,500.0	2,498.3	2,465.6	2,436.9	5.5	8.5	-92.03	-92.03	-340.6	-124.0	367.9	356.6	11.38	32.335	
2,600.0	2,597.8	2,563.2	2,533.1	5.7	8.9	-93.98	-93.98	-357.3	-125.7	385.6	373.8	11.83	32.586	
2,700.0	2,697.2	2,660.8	2,629.3	6.0	9.3	-95.77	-95.77	-373.9	-127.4	403.6	391.3	12.30	32.819	
2,800.0	2,796.6	2,758.4	2,725.4	6.2	9.7	-97.40	-97.40	-390.5	-129.1	422.0	409.3	12.78	33.036	
2,900.0	2,896.1	2,856.0	2,821.6	6.5	10.1	-98.89	-98.89	-407.2	-130.8	440.7	427.5	13.26	33.237	
3,000.0	2,995.5	2,953.6	2,917.7	6.7	10.5	-100.26	-100.26	-423.8	-132.5	459.7	446.0	13.75	33.423	
3,100.0	3,094.9	3,051.2	3,013.9	7.0	10.9	-101.53	-101.53	-440.5	-134.1	478.9	464.7	14.26	33.596	
3,200.0	3,194.4	3,148.8	3,110.1	7.3	11.3	-102.69	-102.69	-457.1	-135.8	498.3	483.6	14.76	33.757	
3,300.0	3,293.8	3,246.4	3,206.2	7.5	11.6	-103.78	-103.78	-473.7	-137.5	517.9	502.7	15.28	33.907	
3,400.0	3,393.3	3,344.0	3,302.4	7.8	12.0	-104.78	-104.78	-490.4	-139.2	537.7	521.9	15.79	34.047	
3,500.0	3,492.7	3,441.6	3,398.5	8.1	12.4	-105.71	-105.71	-507.0	-140.9	557.6	541.3	16.32	34.178	
3,600.0	3,592.1	3,539.2	3,494.7	8.4	12.8	-106.58	-106.58	-523.7	-142.6	577.7	560.8	16.84	34.301	
3,700.0	3,691.6	3,636.8	3,590.9	8.6	13.2	-107.39	-107.39	-540.3	-144.3	597.9	580.5	17.37	34.417	
3,800.0	3,791.0	3,734.4	3,687.0	8.9	13.6	-108.14	-108.14	-556.9	-145.9	618.1	600.2	17.90	34.526	
3,900.0	3,890.4	3,832.0	3,783.2	9.2	14.0	-108.85	-108.85	-573.6	-147.6	638.5	620.1	18.44	34.629	
4,000.0	3,990.0	3,929.8	3,879.5	9.4	14.4	-109.75	-109.75	-590.2	-149.3	658.5	639.5	18.96	34.722	
4,100.0	4,089.9	4,028.0	3,976.3	9.6	14.8	-110.33	-110.33	-607.0	-151.0	677.3	657.9	19.44	34.840	
4,200.0	4,189.8	4,126.4	4,073.2	9.8	15.2	-110.61	-110.61	-623.8	-152.7	695.0	675.1	19.90	34.930	
4,300.0	4,289.8	4,225.0	4,170.3	10.0	15.6	-110.85	-110.85	-640.5	-154.4	711.9	687.1	20.36	35.005	
4,400.0	4,389.8	4,323.5	4,267.4	10.2	15.9	-111.06	-111.06	-657.3	-156.1	728.8	703.4	20.81	35.073	
4,500.0	4,489.8	4,422.0	4,364.4	10.4	16.3	-111.24	-111.24	-674.1	-157.8	745.8	719.7	21.26	35.137	
4,600.0	4,589.8	4,520.5	4,461.5	10.6	16.7	-111.40	-111.40	-690.9	-159.5	762.7	736.1	21.70	35.197	
4,700.0	4,689.8	4,619.0	4,558.5	10.8	17.1	-111.54	-111.54	-707.7	-161.2	779.7	752.4	22.14	35.254	
4,800.0	4,789.8	4,717.6	4,655.6	11.0	17.5	-111.66	-111.66	-724.5	-162.9	796.7	768.8	22.57	35.309	
4,900.0	4,889.8	4,816.1	4,752.7	11.2	17.9	-111.77	-111.77	-741.3	-164.6	813.6	785.2	23.00	35.363	

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Maxey 24O-402
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (Original Well Elev)
Reference Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4651.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24O-402	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (3-7-13)	Offset TVD Reference:	Offset Datum

Offset Design Maxey 24O-HZ Pad Sec.24-T5N-R65W - Maxey 24P-402 - Wellbore #1 - Plan #1 (3-5-13)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.0	4,989.8	4,914.6	4,849.7	11.5	18.3	178.13		-758.1	-166.3	830.6	801.5	29.08	28.564	
5,100.0	5,089.8	5,013.1	4,946.8	11.7	18.7	178.29		-774.9	-168.0	847.6	817.9	29.69	28.547	
5,200.0	5,189.8	5,111.6	5,043.9	11.9	19.1	178.43		-791.7	-169.7	864.6	834.3	30.30	28.531	
5,300.0	5,289.8	5,210.2	5,140.9	12.1	19.5	178.58		-808.5	-171.4	881.6	850.7	30.92	28.515	
5,400.0	5,389.8	5,308.7	5,238.0	12.3	19.9	178.71		-825.3	-173.1	898.6	867.1	31.53	28.499	
5,500.0	5,489.8	5,407.2	5,335.1	12.5	20.3	178.85		-842.1	-174.8	915.6	883.5	32.14	28.484	
5,600.0	5,589.8	5,505.7	5,432.1	12.7	20.7	178.97		-858.9	-176.5	932.6	899.9	32.76	28.470	
5,700.0	5,689.8	5,614.2	5,539.1	12.9	21.1	179.11		-877.2	-178.4	949.5	916.2	33.38	28.446	
5,800.0	5,789.8	5,762.5	5,685.9	13.1	21.4	179.25		-897.2	-180.4	963.0	929.0	33.95	28.364	
5,900.0	5,889.8	5,912.5	5,835.4	13.4	21.7	179.33		-909.6	-181.7	971.3	936.8	34.45	28.193	
6,000.0	5,989.8	6,063.3	5,986.1	13.6	21.9	179.36		-914.3	-182.1	974.4	939.5	34.88	27.932	
6,100.0	6,089.8	6,168.0	6,090.8	13.8	22.0	179.36		-914.4	-182.1	974.4	939.2	35.22	27.667	
6,200.0	6,189.8	6,266.9	6,189.7	14.0	22.1	89.08		-914.4	-180.4	974.4	945.5	28.94	33.666	
6,300.0	6,288.8	6,364.9	6,286.7	14.1	22.2	89.09		-914.4	-167.4	974.4	945.2	29.23	33.332	
6,400.0	6,385.3	6,462.9	6,381.3	14.3	22.3	89.11		-914.6	-142.2	974.4	944.9	29.48	33.052	
6,500.0	6,477.5	6,560.9	6,472.0	14.4	22.4	89.15		-914.8	-105.1	974.4	944.7	29.74	32.763	
6,600.0	6,563.9	6,659.1	6,557.2	14.6	22.5	89.20		-915.0	-56.5	974.4	944.3	30.11	32.367	
6,700.0	6,643.0	6,757.3	6,635.7	14.9	22.7	89.27		-915.3	2.6	974.4	943.7	30.70	31.744	
6,800.0	6,713.4	6,855.8	6,706.0	15.4	22.8	89.35		-915.7	71.4	974.5	942.8	31.66	30.775	
6,900.0	6,774.0	6,954.4	6,766.9	16.1	23.1	89.44		-916.1	148.8	974.5	941.3	33.14	29.401	
7,000.0	6,823.7	7,053.2	6,817.5	17.2	23.4	89.54		-916.5	233.6	974.5	939.3	35.23	27.658	
7,100.0	6,861.7	7,152.3	6,856.9	18.6	24.0	89.64		-917.0	324.5	974.5	936.6	37.96	25.676	
7,200.0	6,887.3	7,251.6	6,884.1	20.3	24.9	89.76		-917.5	419.9	974.6	933.3	41.26	23.621	
7,300.0	6,900.7	7,351.2	6,899.0	22.2	26.1	89.85		-918.1	518.3	974.6	929.6	45.03	21.641	
7,400.0	6,909.7	7,451.1	6,908.7	24.3	27.6	89.89		-918.6	617.8	974.6	925.5	49.16	19.826	
7,500.0	6,911.3	7,551.0	6,911.3	26.5	29.4	89.94		-919.1	717.6	974.7	921.2	53.52	18.212	
7,600.0	6,911.3	7,651.0	6,911.3	28.7	31.4	89.94		-919.6	817.6	974.7	916.6	58.10	16.776	
7,700.0	6,911.4	7,751.0	6,911.4	31.1	33.5	89.94		-920.2	917.6	974.8	911.9	62.84	15.511	
7,800.0	6,911.4	7,851.0	6,911.4	33.6	35.8	89.94		-920.7	1,017.6	974.8	907.1	67.72	14.394	
7,900.0	6,911.4	7,951.0	6,911.4	36.1	38.1	89.94		-921.2	1,117.6	974.8	902.1	72.71	13.408	
8,000.0	6,911.4	8,051.0	6,911.4	38.6	40.5	89.94		-921.7	1,217.6	974.9	897.1	77.78	12.534	
8,100.0	6,911.4	8,151.0	6,911.4	41.2	43.0	89.94		-922.3	1,317.6	974.9	892.0	82.92	11.757	
8,200.0	6,911.4	8,251.0	6,911.4	43.8	45.5	89.94		-922.8	1,417.6	975.0	886.9	88.12	11.064	
8,300.0	6,911.5	8,351.0	6,911.5	46.4	48.1	89.94		-923.3	1,517.6	975.0	881.7	93.37	10.443	
8,400.0	6,911.5	8,451.0	6,911.5	49.1	50.6	89.94		-923.9	1,617.6	975.1	876.4	98.66	9.883	
8,500.0	6,911.5	8,551.0	6,911.5	51.7	53.2	89.94		-924.4	1,717.6	975.1	871.1	103.98	9.377	
8,600.0	6,911.5	8,651.0	6,911.5	54.4	55.8	89.94		-924.9	1,817.6	975.2	865.8	109.34	8.919	
8,700.0	6,911.5	8,751.0	6,911.5	57.1	58.5	89.94		-925.4	1,917.6	975.2	860.5	114.72	8.501	
8,800.0	6,911.6	8,851.0	6,911.6	59.8	61.1	89.94		-926.0	2,017.6	975.2	855.1	120.12	8.119	
8,900.0	6,911.6	8,951.0	6,911.6	62.5	63.8	89.94		-926.5	2,117.6	975.3	849.7	125.54	7.769	
9,000.0	6,911.6	9,051.0	6,911.6	65.3	66.5	89.94		-927.0	2,217.6	975.3	844.3	130.97	7.447	
9,100.0	6,911.6	9,151.0	6,911.6	68.0	69.2	89.94		-927.6	2,317.6	975.4	838.9	136.42	7.149	
9,200.0	6,911.6	9,251.0	6,911.6	70.7	71.9	89.94		-928.1	2,417.6	975.4	833.5	141.89	6.874	
9,300.0	6,911.6	9,351.0	6,911.6	73.5	74.6	89.94		-928.6	2,517.6	975.5	828.1	147.37	6.619	
9,400.0	6,911.7	9,451.0	6,911.7	76.2	77.3	89.94		-929.1	2,617.6	975.5	822.6	152.85	6.382	
9,500.0	6,911.7	9,551.0	6,911.7	79.0	80.0	89.94		-929.7	2,717.6	975.5	817.2	158.35	6.161	
9,600.0	6,911.7	9,651.0	6,911.7	81.7	82.8	89.94		-930.2	2,817.6	975.6	811.7	163.85	5.954	
9,700.0	6,911.7	9,751.0	6,911.7	84.5	85.5	89.94		-930.7	2,917.6	975.6	806.3	169.36	5.761	
9,800.0	6,911.7	9,851.0	6,911.7	87.2	88.2	89.94		-931.3	3,017.6	975.7	800.8	174.88	5.579	
9,900.0	6,911.7	9,951.0	6,911.7	90.0	91.0	89.94		-931.8	3,117.6	975.7	795.3	180.40	5.408	
10,000.0	6,911.8	10,051.0	6,911.8	92.8	93.7	89.94		-932.3	3,217.6	975.8	789.8	185.93	5.248	

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Maxey 24O-402
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (Original Well Elev)
Reference Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4651.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24O-402	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (3-7-13)	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		Highside Toolface (°)	Distance				Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			Minimum Separation (ft)
10,100.0	6,911.8	10,151.0	6,911.8	95.5	96.5	89.94	-932.8	3,317.5	975.8	784.3	191.47	5.096	
10,200.0	6,911.8	10,251.0	6,911.8	98.3	99.2	89.94	-933.4	3,417.5	975.8	778.8	197.01	4.953	
10,300.0	6,911.8	10,351.0	6,911.8	101.1	102.0	89.94	-933.9	3,517.5	975.9	773.3	202.55	4.818	
10,400.0	6,911.8	10,451.0	6,911.8	103.8	104.7	89.94	-934.4	3,617.5	975.9	767.8	208.10	4.690	
10,500.0	6,911.9	10,551.0	6,911.9	106.6	107.5	89.94	-934.9	3,717.5	976.0	762.3	213.65	4.568	
10,600.0	6,911.9	10,651.0	6,911.9	109.4	110.3	89.94	-935.5	3,817.5	976.0	756.8	219.21	4.452	
10,700.0	6,911.9	10,751.0	6,911.9	112.2	113.0	89.94	-936.0	3,917.5	976.1	751.3	224.77	4.343	
10,800.0	6,911.9	10,851.0	6,911.9	115.0	115.8	89.94	-936.5	4,017.5	976.1	745.8	230.33	4.238	
10,900.0	6,911.9	10,951.0	6,911.9	117.7	118.6	89.94	-937.1	4,117.5	976.1	740.2	235.89	4.138	
11,000.0	6,911.9	11,051.0	6,911.9	120.5	121.3	89.94	-937.6	4,217.5	976.2	734.7	241.46	4.043	
11,100.0	6,912.0	11,151.0	6,912.0	123.3	124.1	89.94	-938.1	4,317.5	976.2	729.2	247.03	3.952	
11,200.0	6,912.0	11,251.0	6,912.0	126.1	126.9	89.94	-938.6	4,417.5	976.3	723.7	252.60	3.865	
11,300.0	6,912.0	11,351.0	6,912.0	128.9	129.7	89.94	-939.2	4,517.5	976.3	718.1	258.17	3.782	
11,354.5	6,912.0	11,405.5	6,912.0	130.4	131.2	89.94	-939.5	4,572.0	976.3	715.1	261.21	3.738 SF	

Reference Depths are relative to WELL @ 4651.0ft (Original Well Elev) Coordinates are relative to: Maxey 240-402
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.500000 ° Grid Convergence at Surface is: 0.57°



Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Maxey 24O-402
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (Original Well Elev)
Reference Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4651.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24O-402	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (3-7-13)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4651.0ft (Original Well Elev) Coordinates are relative to: Maxey 24O-402
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.57°

