

PETROLEUM DEVELOPMENT CORP Weld County CO

Well Name: **Maxey 24Q-112**

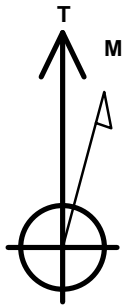
Surface Location: Maxey 24Q-HZ Pad Sec.24-T5N-R65W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 4635.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1381915.93	3247776.49	40.378350	-104.610620	

RKB - 15' WELL @ 4650.0ft (RKB - 15')

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
BHL 408'FSL, 2081'FWL, SEC.19	6600.0	44.2	4501.9	Point



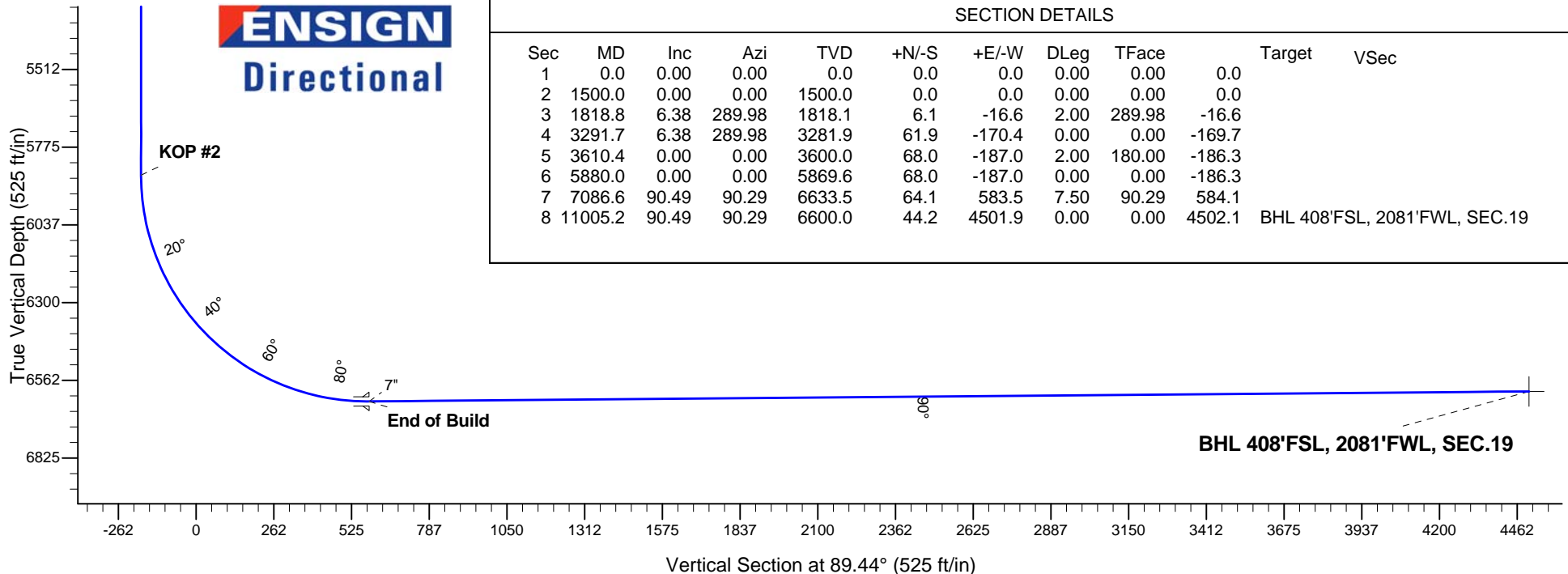
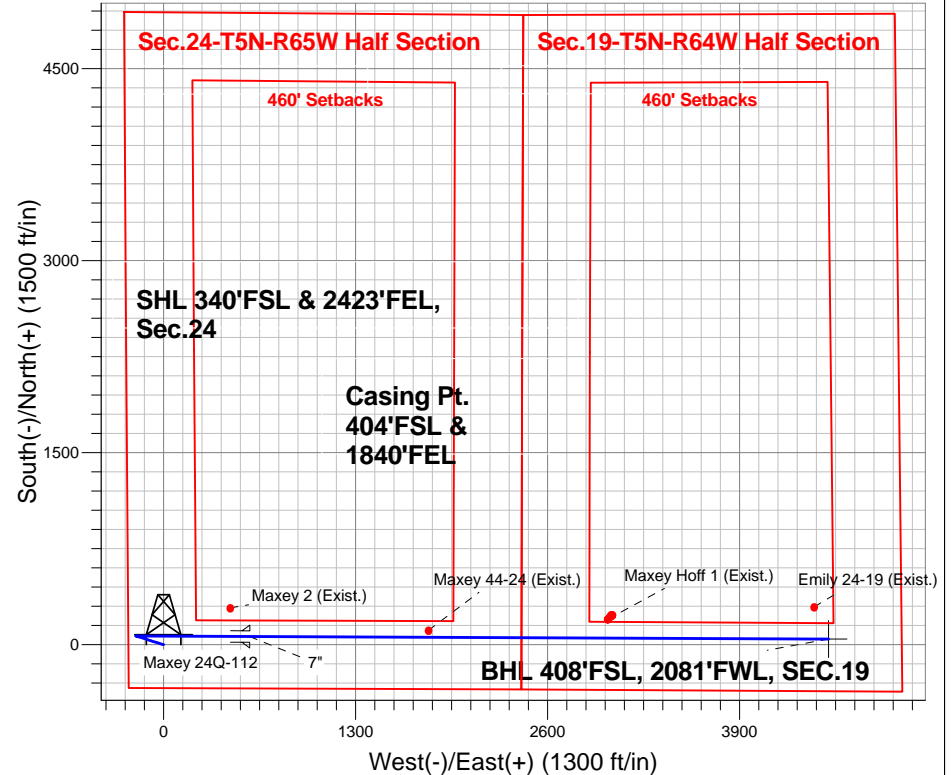
Azimuths to True North
 Magnetic North: 8.49°

Magnetic Field
 Strength: 52911.1snT
 Dip Angle: 66.98°
 Date: 8/9/2013
 Model: IGRF2010

ANNOTATIONS

TVD	MD	Annotation
1500.0	1500.0	KOP #1
5869.6	5880.0	KOP #2
6633.5	7086.6	End of Build

Maxey 24Q-HZ Pad Sec.24-T5N-R65W
 Maxey 24Q-112
 Plan #2 (8-9-13)
 9:26, August 12 2013





PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.24-T5N-R65W

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

Maxey 24Q-112

Wellbore #1

Plan: Plan #2 (8-9-13)

Standard Planning Report

12 August, 2013

Database:	Landmark	Local Co-ordinate Reference:	Well Maxey 24Q-112
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4650.0ft (RKB - 15')
Project:	SEC.24-T5N-R65W	MD Reference:	WELL @ 4650.0ft (RKB - 15')
Site:	Maxey 24Q-HZ Pad Sec.24-T5N-R65W	North Reference:	True
Well:	Maxey 24Q-112	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (8-9-13)		

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 24Q-HZ Pad Sec.24-T5N-R65W											
Site Position:						Northing:			1,381,915.64 ft			Latitude:			40.378350		
From:			Lat/Long			Easting:			3,247,745.85 ft			Longitude:			-104.610730		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.57 °		

Well	Maxey 24Q-112					
Well Position	+N-S	0.0 ft	Northing:	1,381,915.93 ft	Latitude:	40.378350
	+E-W	30.6 ft	Easting:	3,247,776.49 ft	Longitude:	-104.610620
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,635.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/9/2013	8.49	66.98	52,911

Design	Plan #2 (8-9-13)			
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	89.44

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,818.8	6.38	289.98	1,818.1	6.1	-16.6	2.00	2.00	0.00	289.98	
3,291.7	6.38	289.98	3,281.9	61.9	-170.4	0.00	0.00	0.00	0.00	
3,610.4	0.00	0.00	3,600.0	68.0	-187.0	2.00	-2.00	0.00	180.00	
5,880.0	0.00	0.00	5,869.6	68.0	-187.0	0.00	0.00	0.00	0.00	
7,086.6	90.49	90.29	6,633.5	64.1	583.5	7.50	7.50	0.00	90.29	
11,005.2	90.49	90.29	6,600.0	44.2	4,501.9	0.00	0.00	0.00	0.00	BHL 408'FSL, 2081

Database:	Landmark	Local Co-ordinate Reference:	Well Maxey 24Q-112
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4650.0ft (RKB - 15')
Project:	SEC.24-T5N-R65W	MD Reference:	WELL @ 4650.0ft (RKB - 15')
Site:	Maxey 24Q-HZ Pad Sec.24-T5N-R65W	North Reference:	True
Well:	Maxey 24Q-112	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (8-9-13)		

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
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP #1									
1,600.0	2.00	289.98	1,600.0	0.6	-1.6	-1.6	2.00	2.00	0.00
1,700.0	4.00	289.98	1,699.8	2.4	-6.6	-6.5	2.00	2.00	0.00
1,800.0	6.00	289.98	1,799.5	5.4	-14.7	-14.7	2.00	2.00	0.00
1,818.8	6.38	289.98	1,818.1	6.1	-16.6	-16.6	2.00	2.00	0.00
1,900.0	6.38	289.98	1,898.8	9.1	-25.1	-25.0	0.00	0.00	0.00
2,000.0	6.38	289.98	1,998.2	12.9	-35.6	-35.4	0.00	0.00	0.00
2,100.0	6.38	289.98	2,097.6	16.7	-46.0	-45.8	0.00	0.00	0.00
2,200.0	6.38	289.98	2,197.0	20.5	-56.4	-56.2	0.00	0.00	0.00
2,300.0	6.38	289.98	2,296.4	24.3	-66.9	-66.6	0.00	0.00	0.00
2,400.0	6.38	289.98	2,395.7	28.1	-77.3	-77.0	0.00	0.00	0.00
2,500.0	6.38	289.98	2,495.1	31.9	-87.7	-87.4	0.00	0.00	0.00
2,600.0	6.38	289.98	2,594.5	35.7	-98.2	-97.8	0.00	0.00	0.00
2,700.0	6.38	289.98	2,693.9	39.5	-108.6	-108.2	0.00	0.00	0.00
2,800.0	6.38	289.98	2,793.3	43.3	-119.0	-118.6	0.00	0.00	0.00
2,900.0	6.38	289.98	2,892.7	47.1	-129.5	-129.0	0.00	0.00	0.00
3,000.0	6.38	289.98	2,992.0	50.9	-139.9	-139.4	0.00	0.00	0.00
3,100.0	6.38	289.98	3,091.4	54.7	-150.4	-149.8	0.00	0.00	0.00
3,200.0	6.38	289.98	3,190.8	58.5	-160.8	-160.2	0.00	0.00	0.00
3,291.7	6.38	289.98	3,281.9	61.9	-170.4	-169.7	0.00	0.00	0.00
3,300.0	6.21	289.98	3,290.2	62.3	-171.2	-170.6	2.00	-2.00	0.00
3,400.0	4.21	289.98	3,389.8	65.4	-179.7	-179.1	2.00	-2.00	0.00
3,500.0	2.21	289.98	3,489.6	67.3	-185.0	-184.3	2.00	-2.00	0.00
3,600.0	0.21	289.98	3,589.6	68.0	-187.0	-186.3	2.00	-2.00	0.00
3,610.4	0.00	0.00	3,600.0	68.0	-187.0	-186.3	2.00	-2.00	0.00
3,700.0	0.00	0.00	3,689.6	68.0	-187.0	-186.3	0.00	0.00	0.00
3,800.0	0.00	0.00	3,789.6	68.0	-187.0	-186.3	0.00	0.00	0.00
3,900.0	0.00	0.00	3,889.6	68.0	-187.0	-186.3	0.00	0.00	0.00
4,000.0	0.00	0.00	3,989.6	68.0	-187.0	-186.3	0.00	0.00	0.00
4,100.0	0.00	0.00	4,089.6	68.0	-187.0	-186.3	0.00	0.00	0.00
4,200.0	0.00	0.00	4,189.6	68.0	-187.0	-186.3	0.00	0.00	0.00
4,300.0	0.00	0.00	4,289.6	68.0	-187.0	-186.3	0.00	0.00	0.00
4,400.0	0.00	0.00	4,389.6	68.0	-187.0	-186.3	0.00	0.00	0.00
4,500.0	0.00	0.00	4,489.6	68.0	-187.0	-186.3	0.00	0.00	0.00
4,600.0	0.00	0.00	4,589.6	68.0	-187.0	-186.3	0.00	0.00	0.00
4,700.0	0.00	0.00	4,689.6	68.0	-187.0	-186.3	0.00	0.00	0.00
4,800.0	0.00	0.00	4,789.6	68.0	-187.0	-186.3	0.00	0.00	0.00

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Well:	Maxey 24Q-112	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (8-9-13)		

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)
4,900.0	0.00	0.00	4,889.6	68.0	-187.0	-186.3	0.00	0.00	0.00
5,000.0	0.00	0.00	4,989.6	68.0	-187.0	-186.3	0.00	0.00	0.00
5,100.0	0.00	0.00	5,089.6	68.0	-187.0	-186.3	0.00	0.00	0.00
5,200.0	0.00	0.00	5,189.6	68.0	-187.0	-186.3	0.00	0.00	0.00
5,300.0	0.00	0.00	5,289.6	68.0	-187.0	-186.3	0.00	0.00	0.00
5,400.0	0.00	0.00	5,389.6	68.0	-187.0	-186.3	0.00	0.00	0.00
5,500.0	0.00	0.00	5,489.6	68.0	-187.0	-186.3	0.00	0.00	0.00
5,600.0	0.00	0.00	5,589.6	68.0	-187.0	-186.3	0.00	0.00	0.00
5,700.0	0.00	0.00	5,689.6	68.0	-187.0	-186.3	0.00	0.00	0.00
5,800.0	0.00	0.00	5,789.6	68.0	-187.0	-186.3	0.00	0.00	0.00
5,880.0	0.00	0.00	5,869.6	68.0	-187.0	-186.3	0.00	0.00	0.00
KOP #2									
5,900.0	1.50	90.29	5,889.6	68.0	-186.7	-186.1	7.49	7.49	0.00
6,000.0	9.00	90.29	5,989.1	68.0	-177.6	-176.9	7.50	7.50	0.00
6,100.0	16.50	90.29	6,086.5	67.8	-155.5	-154.9	7.50	7.50	0.00
6,200.0	24.00	90.29	6,180.3	67.7	-121.0	-120.3	7.50	7.50	0.00
6,300.0	31.50	90.29	6,268.7	67.4	-74.4	-73.8	7.50	7.50	0.00
6,400.0	39.00	90.29	6,350.3	67.1	-16.8	-16.1	7.50	7.50	0.00
6,500.0	46.50	90.29	6,423.7	66.8	51.1	51.7	7.50	7.50	0.00
6,600.0	54.00	90.29	6,487.6	66.4	127.9	128.5	7.50	7.50	0.00
6,700.0	61.50	90.29	6,541.0	66.0	212.4	213.0	7.50	7.50	0.00
6,800.0	69.00	90.29	6,582.8	65.5	303.1	303.8	7.50	7.50	0.00
6,900.0	76.50	90.29	6,612.4	65.0	398.6	399.2	7.50	7.50	0.00
7,000.0	84.00	90.29	6,629.4	64.5	497.1	497.7	7.50	7.50	0.00
7,086.6	90.49	90.29	6,633.5	64.1	583.5	584.1	7.50	7.50	0.00
End of Build - 7"									
7,100.0	90.49	90.29	6,633.4	64.0	596.9	597.5	0.00	0.00	0.00
7,200.0	90.49	90.29	6,632.5	63.5	696.9	697.5	0.00	0.00	0.00
7,300.0	90.49	90.29	6,631.7	63.0	796.9	797.5	0.00	0.00	0.00
7,400.0	90.49	90.29	6,630.8	62.5	896.9	897.5	0.00	0.00	0.00
7,500.0	90.49	90.29	6,630.0	62.0	996.9	997.5	0.00	0.00	0.00
7,600.0	90.49	90.29	6,629.1	61.5	1,096.9	1,097.4	0.00	0.00	0.00
7,700.0	90.49	90.29	6,628.3	61.0	1,196.9	1,197.4	0.00	0.00	0.00
7,800.0	90.49	90.29	6,627.4	60.5	1,296.9	1,297.4	0.00	0.00	0.00
7,900.0	90.49	90.29	6,626.6	59.9	1,396.9	1,397.4	0.00	0.00	0.00
8,000.0	90.49	90.29	6,625.7	59.4	1,496.9	1,497.4	0.00	0.00	0.00
8,100.0	90.49	90.29	6,624.8	58.9	1,596.9	1,597.4	0.00	0.00	0.00
8,200.0	90.49	90.29	6,624.0	58.4	1,696.9	1,697.4	0.00	0.00	0.00
8,300.0	90.49	90.29	6,623.1	57.9	1,796.9	1,797.3	0.00	0.00	0.00
8,400.0	90.49	90.29	6,622.3	57.4	1,896.9	1,897.3	0.00	0.00	0.00
8,500.0	90.49	90.29	6,621.4	56.9	1,996.8	1,997.3	0.00	0.00	0.00
8,600.0	90.49	90.29	6,620.6	56.4	2,096.8	2,097.3	0.00	0.00	0.00
8,700.0	90.49	90.29	6,619.7	55.9	2,196.8	2,197.3	0.00	0.00	0.00
8,800.0	90.49	90.29	6,618.9	55.4	2,296.8	2,297.3	0.00	0.00	0.00
8,900.0	90.49	90.29	6,618.0	54.9	2,396.8	2,397.2	0.00	0.00	0.00
9,000.0	90.49	90.29	6,617.1	54.4	2,496.8	2,497.2	0.00	0.00	0.00
9,100.0	90.49	90.29	6,616.3	53.8	2,596.8	2,597.2	0.00	0.00	0.00
9,200.0	90.49	90.29	6,615.4	53.3	2,696.8	2,697.2	0.00	0.00	0.00
9,300.0	90.49	90.29	6,614.6	52.8	2,796.8	2,797.2	0.00	0.00	0.00
9,400.0	90.49	90.29	6,613.7	52.3	2,896.8	2,897.2	0.00	0.00	0.00
9,500.0	90.49	90.29	6,612.9	51.8	2,996.8	2,997.2	0.00	0.00	0.00
9,600.0	90.49	90.29	6,612.0	51.3	3,096.8	3,097.1	0.00	0.00	0.00
9,700.0	90.49	90.29	6,611.2	50.8	3,196.8	3,197.1	0.00	0.00	0.00

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Project:	SEC.24-T5N-R65W	MD Reference:	WELL @ 4650.0ft (RKB - 15')
Site:	Maxey 24Q-HZ Pad Sec.24-T5N-R65W	North Reference:	True
Well:	Maxey 24Q-112	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (8-9-13)		

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)
9,800.0	90.49	90.29	6,610.3	50.3	3,296.8	3,297.1	0.00	0.00	0.00
9,900.0	90.49	90.29	6,609.5	49.8	3,396.8	3,397.1	0.00	0.00	0.00
10,000.0	90.49	90.29	6,608.6	49.3	3,496.8	3,497.1	0.00	0.00	0.00
10,100.0	90.49	90.29	6,607.7	48.8	3,596.8	3,597.1	0.00	0.00	0.00
10,200.0	90.49	90.29	6,606.9	48.3	3,696.8	3,697.1	0.00	0.00	0.00
10,300.0	90.49	90.29	6,606.0	47.7	3,796.8	3,797.0	0.00	0.00	0.00
10,400.0	90.49	90.29	6,605.2	47.2	3,896.8	3,897.0	0.00	0.00	0.00
10,500.0	90.49	90.29	6,604.3	46.7	3,996.7	3,997.0	0.00	0.00	0.00
10,600.0	90.49	90.29	6,603.5	46.2	4,096.7	4,097.0	0.00	0.00	0.00
10,700.0	90.49	90.29	6,602.6	45.7	4,196.7	4,197.0	0.00	0.00	0.00
10,800.0	90.49	90.29	6,601.8	45.2	4,296.7	4,297.0	0.00	0.00	0.00
10,900.0	90.49	90.29	6,600.9	44.7	4,396.7	4,397.0	0.00	0.00	0.00
11,000.0	90.49	90.29	6,600.0	44.2	4,496.7	4,496.9	0.00	0.00	0.00
11,005.2	90.49	90.29	6,600.0	44.2	4,501.9	4,502.1	0.00	0.00	0.00
BHL 408'FSL, 2081'FWL, SEC.19									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,086.6	6,633.5	7"	7	7-1/2

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,500.0	1,500.0	0.0	0.0	KOP #1
5,880.0	5,869.6	68.0	-187.0	KOP #2
7,086.6	6,633.5	64.1	583.5	End of Build



PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.24-T5N-R65W

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

Maxey 24Q-112

Wellbore #1

Plan #2 (8-9-13)

Anticollision Report

12 August, 2013



Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Maxey 24Q-112
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4650.0ft (RKB - 15')
Reference Site:	Maxey 24Q-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4650.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24Q-112	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 #2 (8-9-13)	Offset TVD Reference:	Offset Datum

Reference	Plan #2 (8-9-13)
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	8/9/2013		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	11,005.2	Plan #2 (8-9-13) (Wellbore #1)	MWD	MWD - Standard	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Maxey 24Q-HZ Pad Sec.24-T5N-R65W						
Emily 24-19 (Exist.) - Wellbore #1 - Wellbore #1	10,906.8	6,579.8	250.8	118.1	1.889	CC, ES, SF
Maxey 2 (Exist.) - Wellbore #1 - Wellbore #1	6,952.7	6,608.0	223.1	195.4	8.056	CC, ES
Maxey 2 (Exist.) - Wellbore #1 - Wellbore #1	7,000.0	6,614.4	227.9	199.4	7.976	SF
Maxey 24P-232 - Wellbore #1 - Plan #2 (8-9-13)	200.0	200.0	61.3	60.6	90.901	CC
Maxey 24P-232 - Wellbore #1 - Plan #2 (8-9-13)	300.0	299.6	61.6	60.5	54.761	ES
Maxey 24P-232 - Wellbore #1 - Plan #2 (8-9-13)	11,005.2	11,176.8	700.0	447.2	2.769	SF
Maxey 24P-332 - Wellbore #1 - Plan #2 (8-9-13)	1,000.0	1,000.0	30.6	26.4	7.176	CC, ES
Maxey 24P-332 - Wellbore #1 - Plan #2 (8-9-13)	11,005.2	11,223.7	369.3	140.1	1.611	SF
Maxey 24Q-302 - Wellbore #1 - Plan #2 (8-9-13)	1,500.0	1,500.0	30.6	24.1	4.702	CC, ES
Maxey 24Q-302 - Wellbore #1 - Plan #2 (8-9-13)	11,005.2	11,211.9	372.6	142.8	1.621	SF
Maxey 44-24 (Exist.) - Wellbore #1 - Wellbore #1	8,297.1	6,605.2	55.1	-5.7	0.906	Level 1, CC, SF
Maxey 44-24 (Exist.) - Wellbore #1 - Wellbore #1	8,300.0	6,605.1	55.2	-5.7	0.906	Level 1, ES
Maxey Hoff 1 (Exist.) - Wellbore #1 - Wellbore #1	9,509.2	6,593.3	145.1	46.4	1.471	Level 3, CC, ES, SF

Offset Design												
Maxey 24Q-HZ Pad Sec.24-T5N-R65W - Emily 24-19 (Exist.) - Wellbore #1 - Wellbore #1												
Survey Program: 7300-MWD												
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
10,000.0	6,608.6	6,587.6	6,587.6	100.1	7.4	-91.77	295.5	4,404.8	940.8	833.3	107.50	8.752
10,100.0	6,607.7	6,586.7	6,586.7	102.9	7.4	-91.58	295.5	4,404.8	844.9	734.6	110.28	7.661
10,200.0	6,606.9	6,585.9	6,585.9	105.7	7.4	-91.38	295.5	4,404.8	750.0	636.9	113.07	6.633
10,300.0	6,606.0	6,585.0	6,585.0	108.5	7.4	-91.19	295.5	4,404.8	656.6	540.7	115.86	5.667
10,400.0	6,605.2	6,584.2	6,584.2	111.3	7.4	-90.99	295.5	4,404.8	565.5	446.8	118.64	4.766
10,500.0	6,604.3	6,583.3	6,583.3	114.1	7.4	-90.79	295.5	4,404.8	477.9	356.5	121.43	3.935
10,600.0	6,603.5	6,582.5	6,582.5	116.8	7.4	-90.60	295.5	4,404.8	396.3	272.1	124.22	3.190
10,700.0	6,602.6	6,581.6	6,581.6	119.6	7.4	-90.40	295.5	4,404.8	325.1	198.1	127.01	2.559
10,800.0	6,601.8	6,580.8	6,580.8	122.4	7.4	-90.21	295.5	4,404.8	272.6	142.8	129.80	2.100
10,900.0	6,600.9	6,579.9	6,579.9	125.2	7.4	-90.01	295.5	4,404.8	250.9	118.3	132.59	1.893
10,906.8	6,600.8	6,579.8	6,579.8	125.4	7.4	-90.00	295.5	4,404.8	250.8	118.1	132.78	1.889 CC, ES, SF
11,000.0	6,600.0	6,579.0	6,579.0	128.0	7.4	-89.82	295.5	4,404.8	267.6	132.2	135.38	1.977
11,005.2	6,600.0	6,579.0	6,579.0	128.1	7.4	-89.81	295.5	4,404.8	269.4	133.9	135.52	1.988

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 24Q-112
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4650.0ft (RKB - 15')
Reference Site:	Maxey 24Q-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4650.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24Q-112	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 #2 (8-9-13)	Offset TVD Reference:	Offset Datum

Offset Design Maxey 24Q-HZ Pad Sec.24-T5N-R65W - Maxey 2 (Exist.) - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 ft
Survey Program: 7300-MWDD												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	0.0	0.0	0.0	0.0	57.47	287.8	451.3	535.5				
100.0	100.0	85.0	85.0	0.1	0.1	57.47	287.8	451.3	535.3	535.1	0.21	2,572.288	
200.0	200.0	185.0	185.0	0.3	0.2	57.47	287.8	451.3	535.3	534.8	0.55	981.764	
300.0	300.0	285.0	285.0	0.6	0.3	57.47	287.8	451.3	535.3	534.4	0.88	606.652	
400.0	400.0	385.0	385.0	0.8	0.4	57.47	287.8	451.3	535.3	534.1	1.22	438.942	
500.0	500.0	485.0	485.0	1.0	0.5	57.47	287.8	451.3	535.3	533.8	1.56	343.876	
600.0	600.0	585.0	585.0	1.2	0.7	57.47	287.8	451.3	535.3	533.4	1.89	282.658	
700.0	700.0	685.0	685.0	1.5	0.8	57.47	287.8	451.3	535.3	533.1	2.23	239.943	
800.0	800.0	785.0	785.0	1.7	0.9	57.47	287.8	451.3	535.3	532.7	2.57	208.443	
900.0	900.0	885.0	885.0	1.9	1.0	57.47	287.8	451.3	535.3	532.4	2.91	184.254	
1,000.0	1,000.0	985.0	985.0	2.1	1.1	57.47	287.8	451.3	535.3	532.1	3.24	165.095	
1,100.0	1,100.0	1,085.0	1,085.0	2.4	1.2	57.47	287.8	451.3	535.3	531.7	3.58	149.546	
1,200.0	1,200.0	1,185.0	1,185.0	2.6	1.3	57.47	287.8	451.3	535.3	531.4	3.92	136.673	
1,300.0	1,300.0	1,285.0	1,285.0	2.8	1.4	57.47	287.8	451.3	535.3	531.1	4.25	125.841	
1,400.0	1,400.0	1,385.0	1,385.0	3.0	1.6	57.47	287.8	451.3	535.3	530.7	4.59	116.600	
1,500.0	1,500.0	1,485.0	1,485.0	3.3	1.7	57.47	287.8	451.3	535.3	530.4	4.93	108.623	
1,600.0	1,600.0	1,585.0	1,585.0	3.5	1.8	127.62	287.8	451.3	536.4	531.1	5.26	102.057	
1,700.0	1,699.8	1,684.8	1,684.8	3.7	1.9	128.01	287.8	451.3	539.6	534.0	5.58	96.781	
1,800.0	1,799.5	1,784.5	1,784.5	3.9	2.0	128.65	287.8	451.3	545.0	539.1	5.90	92.393	
1,900.0	1,898.8	1,883.8	1,883.8	4.1	2.1	129.52	287.8	451.3	552.0	545.8	6.23	88.571	
2,000.0	1,998.2	1,983.2	1,983.2	4.4	2.2	130.39	287.8	451.3	559.1	552.6	6.57	85.079	
2,100.0	2,097.6	2,082.6	2,082.6	4.6	2.3	131.25	287.8	451.3	566.4	559.5	6.92	81.897	
2,200.0	2,197.0	2,182.0	2,182.0	4.9	2.5	132.08	287.8	451.3	573.8	566.6	7.26	78.996	
2,300.0	2,296.4	2,281.4	2,281.4	5.2	2.6	132.89	287.8	451.3	581.4	573.7	7.61	76.348	
2,400.0	2,395.7	2,380.7	2,380.7	5.4	2.7	133.68	287.8	451.3	589.0	581.0	7.97	73.928	
2,500.0	2,495.1	2,480.1	2,480.1	5.7	2.8	134.44	287.8	451.3	596.7	588.4	8.32	71.713	
2,600.0	2,594.5	2,579.5	2,579.5	6.0	2.9	135.19	287.8	451.3	604.6	595.9	8.68	69.680	
2,700.0	2,693.9	2,678.9	2,678.9	6.3	3.0	135.92	287.8	451.3	612.5	603.5	9.03	67.813	
2,800.0	2,793.3	2,778.3	2,778.3	6.5	3.1	136.63	287.8	451.3	620.6	611.2	9.39	66.093	
2,900.0	2,892.7	2,877.7	2,877.7	6.8	3.2	137.33	287.8	451.3	628.7	619.0	9.75	64.506	
3,000.0	2,992.0	2,977.0	2,977.0	7.1	3.3	138.00	287.8	451.3	637.0	626.9	10.10	63.038	
3,100.0	3,091.4	3,076.4	3,076.4	7.4	3.5	138.66	287.8	451.3	645.3	634.8	10.46	61.678	
3,200.0	3,190.8	3,175.8	3,175.8	7.7	3.6	139.30	287.8	451.3	653.7	642.9	10.82	60.416	
3,300.0	3,290.2	3,275.2	3,275.2	8.0	3.7	139.93	287.8	451.3	662.2	651.0	11.18	59.249	
3,400.0	3,389.8	3,374.8	3,374.8	8.2	3.8	140.52	287.8	451.3	669.1	657.7	11.49	58.236	
3,500.0	3,489.6	3,474.6	3,474.6	8.4	3.9	140.88	287.8	451.3	673.5	661.7	11.79	57.108	
3,600.0	3,589.6	3,574.6	3,574.6	8.6	4.0	141.01	287.8	451.3	675.1	663.0	12.08	55.871	
3,700.0	3,689.6	3,674.6	3,674.6	8.7	4.1	71.00	287.8	451.3	675.1	662.5	12.60	53.562	
3,800.0	3,789.6	3,774.6	3,774.6	8.9	4.2	71.00	287.8	451.3	675.1	662.2	12.92	52.241	
3,900.0	3,889.6	3,874.6	3,874.6	9.1	4.4	71.00	287.8	451.3	675.1	661.9	13.24	50.979	
4,000.0	3,989.6	3,974.6	3,974.6	9.3	4.5	71.00	287.8	451.3	675.1	661.6	13.56	49.774	
4,100.0	4,089.6	4,074.6	4,074.6	9.5	4.6	71.00	287.8	451.3	675.1	661.3	13.89	48.623	
4,200.0	4,189.6	4,174.6	4,174.6	9.7	4.7	71.00	287.8	451.3	675.1	660.9	14.21	47.520	
4,300.0	4,289.6	4,274.6	4,274.6	10.0	4.8	71.00	287.8	451.3	675.1	660.6	14.53	46.465	
4,400.0	4,389.6	4,374.6	4,374.6	10.2	4.9	71.00	287.8	451.3	675.1	660.3	14.85	45.453	
4,500.0	4,489.6	4,474.6	4,474.6	10.4	5.0	71.00	287.8	451.3	675.1	660.0	15.18	44.483	
4,600.0	4,589.6	4,574.6	4,574.6	10.6	5.1	71.00	287.8	451.3	675.1	659.6	15.50	43.552	
4,700.0	4,689.6	4,674.6	4,674.6	10.8	5.3	71.00	287.8	451.3	675.1	659.3	15.83	42.658	
4,800.0	4,789.6	4,774.6	4,774.6	11.0	5.4	71.00	287.8	451.3	675.1	659.0	16.15	41.798	
4,900.0	4,889.6	4,874.6	4,874.6	11.2	5.5	71.00	287.8	451.3	675.1	658.7	16.48	40.971	
5,000.0	4,989.6	4,974.6	4,974.6	11.4	5.6	71.00	287.8	451.3	675.1	658.3	16.80	40.175	

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 24Q-112
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4650.0ft (RKB - 15')
Reference Site:	Maxey 24Q-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4650.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24Q-112	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 #2 (8-9-13)	Offset TVD Reference:	Offset Datum

Offset Design Maxey 24Q-HZ Pad Sec.24-T5N-R65W - Maxey 2 (Exist.) - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 ft
Survey Program: 7300-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Minimum Separation (ft)	Separation Factor	Warning		
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Between Centres (ft)	Between Ellipses (ft)					
5,100.0	5,089.6	5,074.6	5,074.6	11.6	5.7	71.00	287.8	451.3	675.1	658.0	17.13	39.409	
5,200.0	5,189.6	5,174.6	5,174.6	11.8	5.8	71.00	287.8	451.3	675.1	657.7	17.46	38.670	
5,300.0	5,289.6	5,274.6	5,274.6	12.1	5.9	71.00	287.8	451.3	675.1	657.3	17.79	37.958	
5,400.0	5,389.6	5,374.6	5,374.6	12.3	6.0	71.00	287.8	451.3	675.1	657.0	18.11	37.271	
5,500.0	5,489.6	5,474.6	5,474.6	12.5	6.2	71.00	287.8	451.3	675.1	656.7	18.44	36.607	
5,600.0	5,589.6	5,574.6	5,574.6	12.7	6.3	71.00	287.8	451.3	675.1	656.4	18.77	35.967	
5,700.0	5,689.6	5,674.6	5,674.6	12.9	6.4	71.00	287.8	451.3	675.1	656.0	19.10	35.347	
5,800.0	5,789.6	5,774.6	5,774.6	13.1	6.5	71.00	287.8	451.3	675.1	655.7	19.43	34.748	
5,900.0	5,889.6	5,874.6	5,874.6	13.3	6.6	-19.31	287.8	451.3	674.9	655.3	19.58	34.475	
6,000.0	5,989.1	5,974.1	5,974.1	13.5	6.7	-19.79	287.8	451.3	666.3	646.5	19.73	33.769	
6,100.0	6,086.5	6,071.5	6,071.5	13.6	6.8	-21.01	287.8	451.3	645.5	625.8	19.73	32.725	
6,200.0	6,180.3	6,165.3	6,165.3	13.7	6.9	-23.15	287.8	451.3	613.2	593.6	19.59	31.294	
6,300.0	6,268.7	6,253.7	6,253.7	13.9	7.0	-26.50	287.8	451.3	570.1	550.7	19.41	29.372	
6,400.0	6,350.3	6,335.3	6,335.3	14.1	7.1	-31.58	287.8	451.3	517.5	498.2	19.32	26.786	
6,500.0	6,423.7	6,408.7	6,408.7	14.6	7.2	-39.07	287.8	451.3	457.3	437.7	19.60	23.324	
6,600.0	6,487.6	6,472.6	6,472.6	15.3	7.3	-49.66	287.8	451.3	392.0	371.4	20.63	18.998	
6,700.0	6,541.0	6,526.0	6,526.0	16.3	7.3	-63.04	287.8	451.3	326.1	303.6	22.51	14.485	
6,800.0	6,582.8	6,567.8	6,567.8	17.6	7.4	-76.71	287.8	451.3	267.2	242.5	24.70	10.819	
6,900.0	6,612.4	6,597.4	6,597.4	19.3	7.4	-86.91	287.8	451.3	229.0	202.3	26.67	8.584	
6,952.7	6,623.0	6,608.0	6,608.0	20.3	7.4	-90.00	287.8	451.3	223.1	195.4	27.69	8.056 CC, ES	
7,000.0	6,629.4	6,614.4	6,614.4	21.2	7.4	-91.26	287.8	451.3	227.9	199.4	28.58	7.976 SF	
7,100.0	6,633.4	6,618.4	6,618.4	23.2	7.4	-89.68	287.8	451.3	267.0	236.3	30.65	8.711	
7,200.0	6,632.5	6,617.5	6,617.5	25.4	7.4	-89.46	287.8	451.3	332.6	299.8	32.84	10.129	
7,300.0	6,631.7	6,616.7	6,616.7	27.7	7.4	-89.24	287.8	451.3	412.3	377.1	35.14	11.734	
7,400.0	6,630.8	6,615.8	6,615.8	30.1	7.4	-89.02	287.8	451.3	499.3	461.8	37.52	13.308	
7,500.0	6,630.0	6,615.0	6,615.0	32.5	7.4	-88.80	287.8	451.3	590.4	550.5	39.97	14.772	
7,600.0	6,629.1	6,614.1	6,614.1	35.0	7.4	-88.58	287.8	451.3	684.1	641.6	42.48	16.105	
7,700.0	6,628.3	6,613.3	6,613.3	37.6	7.4	-88.36	287.8	451.3	779.3	734.3	45.02	17.309	
7,800.0	6,627.4	6,612.4	6,612.4	40.2	7.4	-88.14	287.8	451.3	875.6	828.0	47.60	18.394	
7,900.0	6,626.6	6,611.6	6,611.6	42.8	7.4	-87.92	287.8	451.3	972.6	922.4	50.21	19.372	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Maxey 24Q-112
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4650.0ft (RKB - 15')
Reference Site:	Maxey 24Q-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4650.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24Q-112	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 #2 (8-9-13)	Offset TVD Reference:	Offset Datum

Offset Design Maxey 24Q-HZ Pad Sec.24-T5N-R65W - Maxey 24P-232 - Wellbore #1 - Plan #2 (8-9-13)													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	0.0	0.0	0.0	0.0	-90.02	-90.02	0.0	-61.3	61.3				
100.0	100.0	100.0	100.0	0.1	0.1	-90.02	-90.02	0.0	-61.3	61.3	61.1	0.22	272.703	
200.0	200.0	200.0	200.0	0.3	0.3	-90.02	-90.02	0.0	-61.3	61.3	60.6	0.67	90.901 CC	
300.0	300.0	299.6	299.6	0.6	0.6	-88.44	-88.44	1.7	-61.6	61.6	60.5	1.13	54.761 ES	
400.0	400.0	398.9	398.8	0.8	0.8	-83.82	-83.82	6.8	-62.5	62.9	61.3	1.59	39.683	
500.0	500.0	497.8	497.2	1.0	1.0	-76.66	-76.66	15.2	-64.1	65.9	63.9	2.05	32.177	
600.0	600.0	595.9	594.7	1.2	1.3	-67.92	-67.92	26.9	-66.2	71.6	69.1	2.52	28.473	
700.0	700.0	693.9	691.6	1.5	1.6	-58.94	-58.94	41.5	-68.8	80.8	77.8	3.00	26.941	
800.0	800.0	792.7	789.1	1.7	2.0	-51.62	-51.62	56.7	-71.6	92.0	88.5	3.49	26.341	
900.0	900.0	891.5	886.6	1.9	2.3	-45.95	-45.95	72.0	-74.4	104.4	100.4	4.01	26.033	
1,000.0	1,000.0	990.2	984.2	2.1	2.6	-41.50	-41.50	87.2	-77.2	117.5	113.0	4.54	25.873	
1,100.0	1,100.0	1,089.0	1,081.7	2.4	3.0	-37.96	-37.96	102.5	-80.0	131.3	126.2	5.09	25.796	
1,200.0	1,200.0	1,187.8	1,179.2	2.6	3.3	-35.10	-35.10	117.7	-82.7	145.4	139.7	5.64	25.768	
1,300.0	1,300.0	1,286.5	1,276.8	2.8	3.7	-32.74	-32.74	133.0	-85.5	159.8	153.6	6.20	25.769	
1,400.0	1,400.0	1,385.3	1,374.3	3.0	4.1	-30.78	-30.78	148.2	-88.3	174.4	167.7	6.76	25.788	
1,500.0	1,500.0	1,484.0	1,471.8	3.3	4.4	-29.12	-29.12	163.5	-91.1	189.2	181.9	7.33	25.817	
1,600.0	1,600.0	1,582.9	1,569.5	3.5	4.8	42.47	42.47	178.7	-93.8	202.9	195.7	7.24	28.023	
1,700.0	1,699.8	1,681.9	1,667.3	3.7	5.1	44.49	44.49	194.0	-96.6	214.3	206.6	7.68	27.890	
1,800.0	1,799.5	1,781.0	1,765.1	3.9	5.5	46.95	46.95	209.3	-99.4	223.5	215.4	8.12	27.513	
1,900.0	1,898.8	1,880.0	1,862.9	4.1	5.9	49.75	49.75	224.6	-102.2	231.7	223.1	8.58	27.014	
2,000.0	1,998.2	1,979.1	1,960.8	4.4	6.2	52.39	52.39	239.9	-105.0	240.3	231.3	9.04	26.580	
2,100.0	2,097.6	2,078.1	2,058.6	4.6	6.6	54.84	54.84	255.2	-107.8	249.4	239.9	9.52	26.202	
2,200.0	2,197.0	2,177.1	2,156.4	4.9	6.9	57.11	57.11	270.5	-110.5	259.0	249.0	10.01	25.869	
2,300.0	2,296.4	2,276.2	2,254.2	5.2	7.3	59.22	59.22	285.8	-113.3	268.9	258.4	10.51	25.575	
2,400.0	2,395.7	2,375.2	2,352.0	5.4	7.7	61.19	61.19	301.1	-116.1	279.2	268.2	11.03	25.313	
2,500.0	2,495.1	2,474.2	2,449.8	5.7	8.0	63.01	63.01	316.4	-118.9	289.8	278.2	11.55	25.078	
2,600.0	2,594.5	2,573.2	2,547.6	6.0	8.4	64.70	64.70	331.7	-121.7	300.6	288.5	12.09	24.867	
2,700.0	2,693.9	2,672.3	2,645.4	6.3	8.7	66.27	66.27	347.0	-124.5	311.7	299.1	12.63	24.677	
2,800.0	2,793.3	2,771.3	2,743.2	6.5	9.1	67.74	67.74	362.3	-127.3	323.0	309.8	13.18	24.505	
2,900.0	2,892.7	2,870.3	2,841.0	6.8	9.5	69.10	69.10	377.6	-130.0	334.5	320.8	13.74	24.350	
3,000.0	2,992.0	2,969.4	2,938.8	7.1	9.8	70.38	70.38	392.9	-132.8	346.2	331.9	14.30	24.209	
3,100.0	3,091.4	3,068.4	3,036.6	7.4	10.2	71.57	71.57	408.2	-135.6	358.0	343.1	14.87	24.081	
3,200.0	3,190.8	3,167.4	3,134.4	7.7	10.5	72.69	72.69	423.4	-138.4	370.0	354.6	15.44	23.965	
3,300.0	3,290.2	3,266.5	3,232.2	8.0	10.9	73.75	73.75	438.7	-141.2	382.1	366.1	16.01	23.863	
3,400.0	3,389.8	3,365.5	3,330.0	8.2	11.3	74.69	74.69	454.0	-144.0	394.9	378.4	16.51	23.923	
3,500.0	3,489.6	3,464.6	3,427.8	8.4	11.6	75.14	75.14	469.3	-146.7	408.6	391.6	16.97	24.082	
3,600.0	3,589.6	3,563.5	3,525.5	8.6	12.0	75.12	75.12	484.6	-149.5	423.2	405.8	17.39	24.334	
3,700.0	3,689.6	3,662.2	3,623.0	8.7	12.3	4.59	4.59	499.9	-152.3	438.3	418.2	20.16	21.743	
3,800.0	3,789.6	3,761.0	3,720.6	8.9	12.7	4.08	4.08	515.1	-155.1	453.5	432.8	20.75	21.862	
3,900.0	3,889.6	3,859.7	3,818.1	9.1	13.1	3.61	3.61	530.4	-157.9	468.8	447.4	21.33	21.975	
4,000.0	3,989.6	3,958.5	3,915.6	9.3	13.4	3.16	3.16	545.6	-160.6	484.0	462.1	21.92	22.084	
4,100.0	4,089.6	4,057.3	4,013.2	9.5	13.8	2.74	2.74	560.9	-163.4	499.3	476.8	22.50	22.189	
4,200.0	4,189.6	4,156.0	4,110.7	9.7	14.2	2.35	2.35	576.1	-166.2	514.6	491.5	23.09	22.290	
4,300.0	4,289.6	4,254.8	4,208.3	10.0	14.5	1.97	1.97	591.4	-169.0	530.0	506.3	23.67	22.386	
4,400.0	4,389.6	4,353.5	4,305.8	10.2	14.9	1.62	1.62	606.6	-171.7	545.3	521.1	24.26	22.479	
4,500.0	4,489.6	4,452.3	4,403.3	10.4	15.2	1.29	1.29	621.9	-174.5	560.7	535.8	24.84	22.569	
4,600.0	4,589.6	4,551.1	4,500.9	10.6	15.6	0.98	0.98	637.1	-177.3	576.1	550.6	25.43	22.655	
4,700.0	4,689.6	4,649.8	4,598.4	10.8	16.0	0.68	0.68	652.4	-180.1	591.5	565.5	26.01	22.738	
4,800.0	4,789.6	4,748.6	4,695.9	11.0	16.3	0.40	0.40	667.6	-182.8	606.9	580.3	26.60	22.817	
4,900.0	4,889.6	4,847.3	4,793.5	11.2	16.7	0.13	0.13	682.9	-185.6	622.3	595.2	27.18	22.894	
5,000.0	4,989.6	4,946.1	4,891.0	11.4	17.0	-0.13	-0.13	698.1	-188.4	637.8	610.0	27.77	22.969	

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 24Q-112
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4650.0ft (RKB - 15')
Reference Site:	Maxey 24Q-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4650.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24Q-112	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 #2 (8-9-13)	Offset TVD Reference:	Offset Datum

Offset Design Maxey 24Q-HZ Pad Sec.24-T5N-R65W - Maxey 24P-232 - Wellbore #1 - Plan #2 (8-9-13)													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	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	
5,100.0	5,089.6	5,044.9	4,988.5	11.6	17.4	-0.37	713.4	-191.2	653.3	624.9	28.35	23.040		
5,200.0	5,189.6	5,154.5	5,096.8	11.8	17.8	-0.62	729.9	-194.2	668.4	639.5	28.95	23.088		
5,300.0	5,289.6	5,283.8	5,225.2	12.1	18.1	-0.84	745.0	-196.9	680.1	650.6	29.52	23.043		
5,400.0	5,389.6	5,414.2	5,355.3	12.3	18.4	-0.97	754.4	-198.6	687.3	657.3	30.00	22.913		
5,500.0	5,489.6	5,545.3	5,486.3	12.5	18.6	-1.02	757.9	-199.3	690.1	659.7	30.41	22.689		
5,600.0	5,589.6	5,648.5	5,589.6	12.7	18.7	-1.02	758.0	-199.3	690.1	659.3	30.77	22.425		
5,700.0	5,689.6	5,748.5	5,689.6	12.9	18.8	-1.02	758.0	-199.3	690.1	659.0	31.14	22.163		
5,800.0	5,789.6	5,848.5	5,789.6	13.1	19.0	-1.02	758.0	-199.3	690.1	658.6	31.50	21.907		
5,858.4	5,848.0	5,907.0	5,848.0	13.2	19.1	-91.35	758.0	-199.3	690.1	662.8	27.28	25.301		
5,900.0	5,889.6	5,948.5	5,889.6	13.3	19.1	-91.33	758.0	-199.3	690.1	662.6	27.45	25.142		
6,000.0	5,989.1	6,048.4	5,989.5	13.5	19.3	-92.06	758.0	-199.2	690.4	662.6	27.77	24.860		
6,100.0	6,086.5	6,151.8	6,092.4	13.6	19.4	-93.21	757.9	-190.7	691.0	663.0	28.01	24.669		
6,200.0	6,180.3	6,257.3	6,195.3	13.7	19.5	-94.31	757.8	-167.7	691.9	663.6	28.24	24.499		
6,300.0	6,268.7	6,364.8	6,295.9	13.9	19.6	-95.34	757.6	-130.0	692.9	664.4	28.53	24.286		
6,400.0	6,350.3	6,474.3	6,391.8	14.1	19.7	-96.28	757.3	-77.4	694.1	665.1	28.99	23.939		
6,500.0	6,423.7	6,585.7	6,480.7	14.6	19.8	-97.11	757.0	-10.4	695.3	665.5	29.76	23.359		
6,600.0	6,487.6	6,698.9	6,560.1	15.3	19.9	-97.82	756.5	70.0	696.3	665.3	31.02	22.446		
6,700.0	6,541.0	6,813.4	6,627.4	16.3	20.2	-98.37	756.0	162.6	697.2	664.3	32.92	21.183		
6,800.0	6,582.8	6,929.1	6,680.7	17.6	20.8	-98.76	755.5	265.1	697.9	662.4	35.51	19.653		
6,900.0	6,612.4	7,045.5	6,718.0	19.3	21.9	-98.97	754.9	375.3	698.3	659.5	38.79	18.001		
7,000.0	6,629.4	7,162.2	6,738.2	21.2	23.7	-99.01	754.3	490.1	698.3	655.7	42.66	16.370		
7,097.6	6,634.2	7,270.8	6,741.7	23.2	25.7	-98.86	753.7	598.6	698.0	651.3	46.74	14.934		
7,100.0	6,633.4	7,273.3	6,741.7	23.2	25.7	-98.92	753.7	601.1	698.1	651.3	46.83	14.909		
7,200.0	6,632.5	7,373.3	6,741.3	25.4	27.8	-98.96	753.1	701.0	698.2	647.0	51.13	13.656		
7,300.0	6,631.7	7,473.2	6,740.9	27.7	29.9	-99.00	752.6	801.0	698.2	642.6	55.64	12.549		
7,400.0	6,630.8	7,573.2	6,740.5	30.1	32.2	-99.03	752.1	901.0	698.3	637.9	60.32	11.575		
7,500.0	6,630.0	7,673.2	6,740.1	32.5	34.6	-99.07	751.5	1,001.0	698.3	633.2	65.14	10.719		
7,600.0	6,629.1	7,773.2	6,739.7	35.0	37.0	-99.11	751.0	1,101.0	698.3	628.3	70.07	9.966		
7,700.0	6,628.3	7,873.2	6,739.3	37.6	39.5	-99.14	750.5	1,201.0	698.4	623.3	75.08	9.302		
7,800.0	6,627.4	7,973.2	6,738.9	40.2	42.0	-99.18	749.9	1,301.0	698.4	618.3	80.16	8.713		
7,900.0	6,626.6	8,073.2	6,738.5	42.8	44.5	-99.22	749.4	1,401.0	698.5	613.2	85.30	8.188		
8,000.0	6,625.7	8,173.2	6,738.1	45.4	47.1	-99.26	748.8	1,501.0	698.5	608.0	90.48	7.720		
8,100.0	6,624.8	8,273.2	6,737.7	48.1	49.7	-99.29	748.3	1,601.0	698.6	602.9	95.71	7.299		
8,200.0	6,624.0	8,373.2	6,737.3	50.8	52.4	-99.33	747.8	1,701.0	698.6	597.6	100.96	6.920		
8,300.0	6,623.1	8,473.2	6,736.9	53.4	55.0	-99.37	747.2	1,801.0	698.7	592.4	106.24	6.576		
8,400.0	6,622.3	8,573.2	6,736.5	56.1	57.7	-99.40	746.7	1,901.0	698.7	587.1	111.55	6.264		
8,500.0	6,621.4	8,673.2	6,736.0	58.9	60.4	-99.44	746.2	2,001.0	698.7	581.9	116.88	5.978		
8,600.0	6,620.6	8,773.2	6,735.6	61.6	63.0	-99.48	745.6	2,101.0	698.8	576.6	122.22	5.717		
8,700.0	6,619.7	8,873.2	6,735.2	64.3	65.7	-99.52	745.1	2,201.0	698.8	571.3	127.58	5.478		
8,800.0	6,618.9	8,973.2	6,734.8	67.0	68.5	-99.55	744.6	2,301.0	698.9	565.9	132.95	5.257		
8,900.0	6,618.0	9,073.2	6,734.4	69.8	71.2	-99.59	744.0	2,401.0	698.9	560.6	138.33	5.053		
9,000.0	6,617.1	9,173.2	6,734.0	72.5	73.9	-99.63	743.5	2,501.0	699.0	555.3	143.73	4.863		
9,100.0	6,616.3	9,273.2	6,733.6	75.3	76.6	-99.66	742.9	2,601.0	699.0	549.9	149.13	4.687		
9,200.0	6,615.4	9,373.2	6,733.2	78.0	79.3	-99.70	742.4	2,701.0	699.1	544.5	154.54	4.524		
9,300.0	6,614.6	9,473.2	6,732.8	80.8	82.1	-99.74	741.9	2,801.0	699.1	539.2	159.95	4.371		
9,400.0	6,613.7	9,573.2	6,732.4	83.5	84.8	-99.78	741.3	2,901.0	699.2	533.8	165.38	4.228		
9,500.0	6,612.9	9,673.2	6,732.0	86.3	87.6	-99.81	740.8	3,001.0	699.2	528.4	170.80	4.094		
9,600.0	6,612.0	9,773.2	6,731.6	89.1	90.3	-99.85	740.3	3,101.0	699.3	523.0	176.24	3.968		
9,700.0	6,611.2	9,873.2	6,731.2	91.8	93.1	-99.89	739.7	3,201.0	699.3	517.7	181.67	3.849		
9,800.0	6,610.3	9,973.2	6,730.8	94.6	95.8	-99.92	739.2	3,301.0	699.4	512.3	187.11	3.738		
9,900.0	6,609.5	10,073.2	6,730.4	97.4	98.6	-99.96	738.6	3,401.0	699.4	506.9	192.55	3.632		

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 24Q-112
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4650.0ft (RKB - 15')
Reference Site:	Maxey 24Q-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4650.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24Q-112	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 #2 (8-9-13)	Offset TVD Reference:	Offset Datum

Offset Design Maxey 24Q-HZ Pad Sec.24-T5N-R65W - Maxey 24P-232 - Wellbore #1 - Plan #2 (8-9-13)												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	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
10,000.0	6,608.6	10,173.2	6,730.0	100.1	101.4	-100.00	738.1	3,501.0	699.5	501.5	198.00	3.533	
10,100.0	6,607.7	10,273.2	6,729.6	102.9	104.1	-100.03	737.6	3,601.0	699.5	496.1	203.45	3.438	
10,200.0	6,606.9	10,373.2	6,729.2	105.7	106.9	-100.07	737.0	3,701.0	699.6	490.7	208.90	3.349	
10,300.0	6,606.0	10,473.2	6,728.8	108.5	109.7	-100.11	736.5	3,800.9	699.6	485.3	214.35	3.264	
10,400.0	6,605.2	10,573.2	6,728.4	111.3	112.4	-100.15	736.0	3,900.9	699.7	479.9	219.81	3.183	
10,500.0	6,604.3	10,673.2	6,728.0	114.1	115.2	-100.18	735.4	4,000.9	699.7	474.5	225.26	3.106	
10,600.0	6,603.5	10,773.2	6,727.6	116.8	118.0	-100.22	734.9	4,100.9	699.8	469.1	230.72	3.033	
10,700.0	6,602.6	10,873.2	6,727.2	119.6	120.8	-100.26	734.4	4,200.9	699.8	463.7	236.18	2.963	
10,800.0	6,601.8	10,973.2	6,726.8	122.4	123.6	-100.29	733.8	4,300.9	699.9	458.3	241.64	2.896	
10,900.0	6,600.9	11,073.2	6,726.4	125.2	126.3	-100.33	733.3	4,400.9	699.9	452.8	247.10	2.833	
11,000.0	6,600.0	11,173.2	6,726.0	128.0	129.1	-100.37	732.7	4,500.9	700.0	447.4	252.56	2.772	
11,005.2	6,600.0	11,176.8	6,726.0	128.1	129.2	-100.37	732.7	4,504.5	700.0	447.2	252.79	2.769 SF	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Maxey 24Q-112
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4650.0ft (RKB - 15')
Reference Site:	Maxey 24Q-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4650.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24Q-112	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 #2 (8-9-13)	Offset TVD Reference:	Offset Datum

Offset Design Maxey 24Q-HZ Pad Sec.24-T5N-R65W - Maxey 24P-332 - Wellbore #1 - Plan #2 (8-9-13)													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 (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-89.99	-89.99	0.0	-30.6	30.6				
100.0	100.0	100.0	100.0	0.1	0.1	-89.99	-89.99	0.0	-30.6	30.6	30.4	0.22	136.352	
200.0	200.0	200.0	200.0	0.3	0.3	-89.99	-89.99	0.0	-30.6	30.6	30.0	0.67	45.451	
300.0	300.0	300.0	300.0	0.6	0.6	-89.99	-89.99	0.0	-30.6	30.6	29.5	1.12	27.270	
400.0	400.0	400.0	400.0	0.8	0.8	-89.99	-89.99	0.0	-30.6	30.6	29.1	1.57	19.479	
500.0	500.0	500.0	500.0	1.0	1.0	-89.99	-89.99	0.0	-30.6	30.6	28.6	2.02	15.150	
600.0	600.0	600.0	600.0	1.2	1.2	-89.99	-89.99	0.0	-30.6	30.6	28.2	2.47	12.396	
700.0	700.0	700.0	700.0	1.5	1.5	-89.99	-89.99	0.0	-30.6	30.6	27.7	2.92	10.489	
800.0	800.0	800.0	800.0	1.7	1.7	-89.99	-89.99	0.0	-30.6	30.6	27.3	3.37	9.090	
900.0	900.0	900.0	900.0	1.9	1.9	-89.99	-89.99	0.0	-30.6	30.6	26.8	3.82	8.021	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-89.99	-89.99	0.0	-30.6	30.6	26.4	4.27	7.176 CC, ES	
1,100.0	1,100.0	1,099.6	1,099.5	2.4	2.4	-87.06	-87.06	1.6	-31.3	31.3	26.6	4.72	6.642	
1,200.0	1,200.0	1,198.9	1,198.7	2.6	2.6	-79.11	-79.11	6.4	-33.2	33.9	28.7	5.17	6.555	
1,300.0	1,300.0	1,297.8	1,297.2	2.8	2.8	-68.57	-68.57	14.3	-36.5	39.3	33.7	5.62	6.985	
1,400.0	1,400.0	1,397.3	1,396.2	3.0	3.1	-59.55	-59.55	23.7	-40.3	46.9	40.8	6.08	7.712	
1,500.0	1,500.0	1,496.7	1,495.2	3.3	3.3	-53.16	-53.16	33.0	-44.1	55.3	48.8	6.54	8.455	
1,600.0	1,600.0	1,596.3	1,594.2	3.5	3.6	22.06	22.06	42.4	-47.9	62.6	55.7	6.96	8.998	
1,700.0	1,699.8	1,696.0	1,693.4	3.7	3.8	27.46	27.46	51.8	-51.7	67.2	59.9	7.39	9.100	
1,800.0	1,799.5	1,795.7	1,792.6	3.9	4.1	33.67	33.67	61.2	-55.5	69.5	61.6	7.82	8.881	
1,900.0	1,898.8	1,895.3	1,891.7	4.1	4.3	40.63	40.63	70.5	-59.4	70.7	62.4	8.28	8.537	
2,000.0	1,998.2	1,995.0	1,990.8	4.4	4.6	47.31	47.31	79.9	-63.2	72.8	64.1	8.75	8.323	
2,100.0	2,097.6	2,094.6	2,089.9	4.6	4.9	53.53	53.53	89.3	-67.0	75.9	66.7	9.24	8.216	
2,200.0	2,197.0	2,194.2	2,189.0	4.9	5.2	59.20	59.20	98.7	-70.8	79.8	70.1	9.75	8.192	
2,300.0	2,296.4	2,293.8	2,288.2	5.2	5.4	64.30	64.30	108.0	-74.6	84.5	74.2	10.27	8.227	
2,400.0	2,395.7	2,393.5	2,387.3	5.4	5.7	68.84	68.84	117.4	-78.4	89.7	78.9	10.80	8.306	
2,500.0	2,495.1	2,493.1	2,486.4	5.7	6.0	72.86	72.86	126.8	-82.3	95.4	84.1	11.34	8.414	
2,600.0	2,594.5	2,592.7	2,585.5	6.0	6.3	76.42	76.42	136.2	-86.1	101.6	89.7	11.89	8.543	
2,700.0	2,693.9	2,692.3	2,684.6	6.3	6.6	79.55	79.55	145.5	-89.9	108.1	95.6	12.45	8.684	
2,800.0	2,793.3	2,792.0	2,783.7	6.5	6.8	82.33	82.33	154.9	-93.7	114.9	101.9	13.00	8.833	
2,900.0	2,892.7	2,891.6	2,882.8	6.8	7.1	84.79	84.79	164.3	-97.5	121.9	108.3	13.56	8.985	
3,000.0	2,992.0	2,991.2	2,981.9	7.1	7.4	86.98	86.98	173.6	-101.3	129.1	115.0	14.13	9.137	
3,100.0	3,091.4	3,090.8	3,081.0	7.4	7.7	88.94	88.94	183.0	-105.1	136.5	121.8	14.69	9.288	
3,200.0	3,190.8	3,190.5	3,180.1	7.7	8.0	90.69	90.69	192.4	-109.0	144.0	128.7	15.26	9.437	
3,300.0	3,290.2	3,290.1	3,279.2	8.0	8.2	92.28	92.28	201.8	-112.8	151.7	135.8	15.82	9.584	
3,400.0	3,389.8	3,389.8	3,378.4	8.2	8.5	93.13	93.13	211.1	-116.6	159.3	143.0	16.31	9.765	
3,500.0	3,489.6	3,489.5	3,477.6	8.4	8.8	92.71	92.71	220.5	-120.4	166.7	150.0	16.77	9.945	
3,600.0	3,589.6	3,589.1	3,576.7	8.6	9.1	91.19	91.19	229.9	-124.2	174.1	156.9	17.18	10.133	
3,700.0	3,689.6	3,688.6	3,675.6	8.7	9.4	19.00	19.00	239.3	-128.0	181.7	164.8	16.89	10.756	
3,800.0	3,789.6	3,788.0	3,774.6	8.9	9.7	16.98	16.98	248.6	-131.8	189.4	172.0	17.41	10.884	
3,900.0	3,889.6	3,887.5	3,873.6	9.1	10.0	15.12	15.12	258.0	-135.7	197.4	179.5	17.92	11.016	
4,000.0	3,989.6	3,987.0	3,972.6	9.3	10.2	13.41	13.41	267.3	-139.5	205.6	187.2	18.44	11.149	
4,100.0	4,089.6	4,086.5	4,071.5	9.5	10.5	11.83	11.83	276.7	-143.3	214.0	195.0	18.97	11.283	
4,200.0	4,189.6	4,186.0	4,170.5	9.7	10.8	10.37	10.37	286.1	-147.1	222.5	203.0	19.49	11.418	
4,300.0	4,289.6	4,285.4	4,269.5	10.0	11.1	9.02	9.02	295.4	-150.9	231.1	211.1	20.01	11.552	
4,400.0	4,389.6	4,384.9	4,368.4	10.2	11.4	7.77	7.77	304.8	-154.7	239.9	219.4	20.53	11.685	
4,500.0	4,489.6	4,484.4	4,467.4	10.4	11.7	6.60	6.60	314.1	-158.5	248.8	227.7	21.05	11.817	
4,600.0	4,589.6	4,583.9	4,566.4	10.6	12.0	5.52	5.52	323.5	-162.3	257.7	236.2	21.57	11.946	
4,700.0	4,689.6	4,683.4	4,665.3	10.8	12.3	4.50	4.50	332.9	-166.1	266.8	244.7	22.10	12.074	
4,800.0	4,789.6	4,782.9	4,764.3	11.0	12.5	3.56	3.56	342.2	-169.9	275.9	253.3	22.62	12.199	
4,900.0	4,889.6	4,882.3	4,863.3	11.2	12.8	2.67	2.67	351.6	-173.8	285.1	262.0	23.14	12.322	
5,000.0	4,989.6	4,981.8	4,962.2	11.4	13.1	1.85	1.85	360.9	-177.6	294.4	270.7	23.66	12.443	

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 24Q-112
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4650.0ft (RKB - 15')
Reference Site:	Maxey 24Q-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4650.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24Q-112	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 #2 (8-9-13)	Offset TVD Reference:	Offset Datum

Offset Design Maxey 24Q-HZ Pad Sec.24-T5N-R65W - Maxey 24P-332 - Wellbore #1 - Plan #2 (8-9-13)													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
5,100.0	5,089.6	5,081.3	5,061.2	11.6	13.4	1.07	1.07	370.3	-181.4	303.7	279.5	24.18	12.560	
5,200.0	5,189.6	5,180.8	5,160.2	11.8	13.7	0.33	0.33	379.7	-185.2	313.1	288.4	24.70	12.676	
5,300.0	5,289.6	5,286.2	5,265.0	12.1	14.0	-0.36	-0.36	389.1	-189.0	322.0	296.8	25.21	12.772	
5,400.0	5,389.6	5,397.7	5,376.4	12.3	14.2	-0.81	-0.81	395.5	-191.6	327.8	302.2	25.67	12.772	
5,500.0	5,489.6	5,509.7	5,488.3	12.5	14.4	-0.98	-0.98	398.0	-192.6	330.0	304.0	26.08	12.655	
5,600.0	5,589.6	5,611.0	5,589.6	12.7	14.5	-0.98	-0.98	398.0	-192.6	330.1	303.6	26.47	12.468	
5,700.0	5,689.6	5,711.0	5,689.6	12.9	14.7	-0.98	-0.98	398.0	-192.6	330.1	303.2	26.88	12.278	
5,800.0	5,789.6	5,811.0	5,789.6	13.1	14.9	-0.98	-0.98	398.0	-192.6	330.1	302.8	27.29	12.094	
5,858.5	5,848.1	5,869.5	5,848.1	13.2	15.0	-91.35	-91.35	398.0	-192.6	330.1	303.4	26.69	12.365	
5,900.0	5,889.6	5,911.0	5,889.6	13.3	15.1	-91.32	-91.32	398.0	-192.6	330.1	303.2	26.87	12.283	
6,000.0	5,989.1	6,010.5	5,989.1	13.5	15.3	-92.87	-92.87	398.0	-192.6	330.4	303.2	27.19	12.151	
6,100.0	6,086.5	6,108.9	6,087.5	13.6	15.5	-96.44	-96.44	398.0	-192.4	332.2	304.8	27.40	12.123	
6,200.0	6,180.3	6,212.5	6,190.6	13.7	15.6	-100.68	-100.68	397.9	-182.8	336.2	308.7	27.53	12.212	
6,300.0	6,268.7	6,320.2	6,295.4	13.9	15.7	-104.73	-104.73	397.8	-158.2	341.9	314.2	27.63	12.373	
6,400.0	6,350.3	6,432.2	6,399.5	14.1	15.8	-108.48	-108.48	397.6	-117.2	348.9	321.1	27.76	12.566	
6,500.0	6,423.7	6,548.8	6,500.3	14.6	15.9	-111.86	-111.86	397.3	-58.9	356.6	328.6	28.02	12.728	
6,600.0	6,487.6	6,670.0	6,594.4	15.3	16.0	-114.80	-114.80	396.8	17.2	364.5	335.9	28.55	12.764	
6,700.0	6,541.0	6,795.5	6,677.9	16.3	16.3	-117.23	-117.23	396.3	110.7	371.8	342.3	29.54	12.586	
6,800.0	6,582.8	6,924.8	6,746.8	17.6	17.4	-119.10	-119.10	395.7	220.0	378.0	346.8	31.19	12.119	
6,900.0	6,612.4	7,057.3	6,797.3	19.3	19.3	-120.37	-120.37	395.0	342.3	382.4	348.8	33.60	11.383	
7,000.0	6,629.4	7,191.7	6,826.1	21.2	21.6	-121.03	-121.03	394.3	473.5	384.7	348.0	36.78	10.460	
7,100.0	6,633.4	7,320.4	6,832.0	23.2	24.2	-121.07	-121.07	393.6	601.9	384.8	344.3	40.56	9.488	
7,200.0	6,632.5	7,420.4	6,830.4	25.4	26.4	-120.98	-120.98	393.1	701.9	384.4	340.1	44.34	8.670	
7,300.0	6,631.7	7,520.4	6,828.8	27.7	28.6	-120.89	-120.89	392.5	801.9	384.0	335.7	48.33	7.946	
7,400.0	6,630.8	7,620.4	6,827.2	30.1	31.0	-120.80	-120.80	392.0	901.8	383.6	331.1	52.48	7.309	
7,500.0	6,630.0	7,720.4	6,825.6	32.5	33.4	-120.71	-120.71	391.4	1,001.8	383.2	326.4	56.76	6.751	
7,600.0	6,629.1	7,820.4	6,824.1	35.0	35.9	-120.62	-120.62	390.9	1,101.8	382.8	321.6	61.15	6.260	
7,700.0	6,628.3	7,920.4	6,822.5	37.6	38.4	-120.53	-120.53	390.3	1,201.8	382.4	316.7	65.62	5.827	
7,800.0	6,627.4	8,020.4	6,820.9	40.2	41.0	-120.44	-120.44	389.7	1,301.8	381.9	311.8	70.16	5.444	
7,900.0	6,626.6	8,120.4	6,819.3	42.8	43.5	-120.34	-120.34	389.2	1,401.8	381.5	306.8	74.76	5.104	
8,000.0	6,625.7	8,220.4	6,817.7	45.4	46.2	-120.25	-120.25	388.6	1,501.7	381.1	301.7	79.41	4.800	
8,100.0	6,624.8	8,320.4	6,816.1	48.1	48.8	-120.16	-120.16	388.1	1,601.7	380.7	296.6	84.10	4.527	
8,200.0	6,624.0	8,420.4	6,814.5	50.8	51.4	-120.07	-120.07	387.5	1,701.7	380.3	291.5	88.83	4.281	
8,300.0	6,623.1	8,520.4	6,812.9	53.4	54.1	-119.98	-119.98	387.0	1,801.7	379.9	286.3	93.60	4.059	
8,400.0	6,622.3	8,620.4	6,811.3	56.1	56.8	-119.88	-119.88	386.4	1,901.7	379.5	281.1	98.40	3.857	
8,500.0	6,621.4	8,720.4	6,809.8	58.9	59.5	-119.79	-119.79	385.9	2,001.7	379.1	275.9	103.22	3.673	
8,600.0	6,620.6	8,820.4	6,808.2	61.6	62.2	-119.70	-119.70	385.3	2,101.6	378.7	270.6	108.07	3.504	
8,700.0	6,619.7	8,920.4	6,806.6	64.3	64.9	-119.61	-119.61	384.8	2,201.6	378.3	265.4	112.94	3.350	
8,800.0	6,618.9	9,020.4	6,805.0	67.0	67.6	-119.51	-119.51	384.2	2,301.6	377.9	260.1	117.83	3.207	
8,900.0	6,618.0	9,120.4	6,803.4	69.8	70.4	-119.42	-119.42	383.7	2,401.6	377.5	254.8	122.74	3.076	
9,000.0	6,617.1	9,220.4	6,801.8	72.5	73.1	-119.32	-119.32	383.1	2,501.6	377.1	249.4	127.67	2.954	
9,100.0	6,616.3	9,320.4	6,800.2	75.3	75.8	-119.23	-119.23	382.6	2,601.6	376.7	244.1	132.62	2.840	
9,200.0	6,615.4	9,420.4	6,798.6	78.0	78.6	-119.14	-119.14	382.0	2,701.5	376.3	238.7	137.58	2.735	
9,300.0	6,614.6	9,520.4	6,797.1	80.8	81.3	-119.04	-119.04	381.5	2,801.5	375.9	233.4	142.56	2.637	
9,400.0	6,613.7	9,620.4	6,795.5	83.5	84.1	-118.95	-118.95	380.9	2,901.5	375.5	228.0	147.55	2.545	
9,500.0	6,612.9	9,720.4	6,793.9	86.3	86.8	-118.85	-118.85	380.4	3,001.5	375.1	222.6	152.56	2.459	
9,600.0	6,612.0	9,820.4	6,792.3	89.1	89.6	-118.76	-118.76	379.8	3,101.5	374.7	217.2	157.58	2.378	
9,700.0	6,611.2	9,920.4	6,790.7	91.8	92.4	-118.66	-118.66	379.2	3,201.5	374.3	211.7	162.61	2.302	
9,800.0	6,610.3	10,020.4	6,789.1	94.6	95.1	-118.57	-118.57	378.7	3,301.4	374.0	206.3	167.65	2.231	
9,900.0	6,609.5	10,120.3	6,787.5	97.4	97.9	-118.47	-118.47	378.1	3,401.4	373.6	200.9	172.71	2.163	
10,000.0	6,608.6	10,220.3	6,785.9	100.1	100.7	-118.38	-118.38	377.6	3,501.4	373.2	195.4	177.78	2.099	

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 24Q-112
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4650.0ft (RKB - 15')
Reference Site:	Maxey 24Q-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4650.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24Q-112	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 #2 (8-9-13)	Offset TVD Reference:	Offset Datum

Offset Design Maxey 24Q-HZ Pad Sec.24-T5N-R65W - Maxey 24P-332 - Wellbore #1 - Plan #2 (8-9-13)												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	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
10,100.0	6,607.7	10,320.3	6,784.3	102.9	103.4	-118.28	377.0	3,601.4	372.8	189.9	182.86	2.039	
10,200.0	6,606.9	10,420.3	6,782.8	105.7	106.2	-118.18	376.5	3,701.4	372.4	184.5	187.95	1.981	
10,300.0	6,606.0	10,520.3	6,781.2	108.5	109.0	-118.09	375.9	3,801.4	372.0	179.0	193.05	1.927	
10,400.0	6,605.2	10,620.3	6,779.6	111.3	111.8	-117.99	375.4	3,901.3	371.6	173.5	198.17	1.875	
10,500.0	6,604.3	10,720.3	6,778.0	114.1	114.6	-117.89	374.8	4,001.3	371.3	168.0	203.29	1.826	
10,600.0	6,603.5	10,820.3	6,776.4	116.8	117.3	-117.80	374.3	4,101.3	370.9	162.5	208.42	1.779	
10,700.0	6,602.6	10,920.3	6,774.8	119.6	120.1	-117.70	373.7	4,201.3	370.5	156.9	213.57	1.735	
10,800.0	6,601.8	11,020.3	6,773.2	122.4	122.9	-117.60	373.2	4,301.3	370.1	151.4	218.72	1.692	
10,900.0	6,600.9	11,120.3	6,771.6	125.2	125.7	-117.51	372.6	4,401.3	369.7	145.9	223.88	1.651	
11,000.0	6,600.0	11,220.3	6,770.1	128.0	128.5	-117.41	372.1	4,501.2	369.4	140.3	229.06	1.613	
11,004.8	6,600.0	11,223.7	6,770.0	128.1	128.6	-117.41	372.0	4,504.6	369.3	140.1	229.27	1.611	
11,005.2	6,600.0	11,223.7	6,770.0	128.1	128.6	-117.41	372.0	4,504.6	369.3	140.1	229.28	1.611 SF	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Maxey 24Q-112
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4650.0ft (RKB - 15')
Reference Site:	Maxey 24Q-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4650.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24Q-112	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 #2 (8-9-13)	Offset TVD Reference:	Offset Datum

Offset Design Maxey 24Q-HZ Pad Sec.24-T5N-R65W - Maxey 24Q-302 - Wellbore #1 - Plan #2 (8-9-13)													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	0.0	0.0	0.0	0.0	90.02	90.02	0.0	30.6	30.6				
100.0	100.0	100.0	100.0	0.1	0.1	90.02	90.02	0.0	30.6	30.6	30.4	0.22	136.352	
200.0	200.0	200.0	200.0	0.3	0.3	90.02	90.02	0.0	30.6	30.6	30.0	0.67	45.451	
300.0	300.0	300.0	300.0	0.6	0.6	90.02	90.02	0.0	30.6	30.6	29.5	1.12	27.270	
400.0	400.0	400.0	400.0	0.8	0.8	90.02	90.02	0.0	30.6	30.6	29.1	1.57	19.479	
500.0	500.0	500.0	500.0	1.0	1.0	90.02	90.02	0.0	30.6	30.6	28.6	2.02	15.150	
600.0	600.0	600.0	600.0	1.2	1.2	90.02	90.02	0.0	30.6	30.6	28.2	2.47	12.396	
700.0	700.0	700.0	700.0	1.5	1.5	90.02	90.02	0.0	30.6	30.6	27.7	2.92	10.489	
800.0	800.0	800.0	800.0	1.7	1.7	90.02	90.02	0.0	30.6	30.6	27.3	3.37	9.090	
900.0	900.0	900.0	900.0	1.9	1.9	90.02	90.02	0.0	30.6	30.6	26.8	3.82	8.021	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	90.02	90.02	0.0	30.6	30.6	26.4	4.27	7.176	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	90.02	90.02	0.0	30.6	30.6	25.9	4.72	6.493	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	90.02	90.02	0.0	30.6	30.6	25.5	5.17	5.928	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	90.02	90.02	0.0	30.6	30.6	25.0	5.62	5.454	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	90.02	90.02	0.0	30.6	30.6	24.6	6.07	5.050	
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	90.02	90.02	0.0	30.6	30.6	24.1	6.52	4.702 CC, ES	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	161.09	161.09	0.0	30.6	32.3	25.3	6.96	4.643	
1,700.0	1,699.8	1,699.8	1,699.8	3.7	3.7	163.67	163.67	0.0	30.6	37.3	29.9	7.38	5.052	
1,800.0	1,799.5	1,800.3	1,800.3	3.9	3.9	168.62	168.62	-1.4	29.5	44.8	37.0	7.77	5.764	
1,900.0	1,898.8	1,900.5	1,900.3	4.1	4.1	175.84	175.84	-5.4	26.2	53.3	45.2	8.15	6.542	
2,000.0	1,998.2	2,000.5	2,000.0	4.4	4.3	-175.92	-175.92	-12.1	20.6	61.5	53.0	8.56	7.190	
2,100.0	2,097.6	2,099.8	2,098.6	4.6	4.5	-167.72	-167.72	-20.7	13.5	70.3	61.3	8.99	7.823	
2,200.0	2,197.0	2,199.0	2,197.2	4.9	4.7	-161.35	-161.35	-29.4	6.3	80.2	70.7	9.44	8.495	
2,300.0	2,296.4	2,298.1	2,295.7	5.2	4.9	-156.41	-156.41	-38.1	-0.9	90.8	80.9	9.91	9.168	
2,400.0	2,395.7	2,397.3	2,394.2	5.4	5.2	-152.53	-152.53	-46.8	-8.1	102.0	91.6	10.39	9.819	
2,500.0	2,495.1	2,496.5	2,492.7	5.7	5.4	-149.42	-149.42	-55.5	-15.3	113.5	102.7	10.88	10.436	
2,600.0	2,594.5	2,595.6	2,591.2	6.0	5.6	-146.90	-146.90	-64.2	-22.5	125.3	114.0	11.38	11.015	
2,700.0	2,693.9	2,694.8	2,689.8	6.3	5.9	-144.80	-144.80	-72.8	-29.7	137.4	125.5	11.89	11.554	
2,800.0	2,793.3	2,794.0	2,788.3	6.5	6.2	-143.05	-143.05	-81.5	-36.9	149.5	137.1	12.40	12.056	
2,900.0	2,892.7	2,893.1	2,886.8	6.8	6.4	-141.56	-141.56	-90.2	-44.0	161.8	148.9	12.92	12.521	
3,000.0	2,992.0	2,992.3	2,985.3	7.1	6.7	-140.28	-140.28	-98.9	-51.2	174.2	160.7	13.45	12.953	
3,100.0	3,091.4	3,091.4	3,083.8	7.4	7.0	-139.17	-139.17	-107.6	-58.4	186.6	172.6	13.98	13.353	
3,200.0	3,190.8	3,190.6	3,182.4	7.7	7.2	-138.20	-138.20	-116.2	-65.6	199.1	184.6	14.51	13.726	
3,300.0	3,290.2	3,289.8	3,280.9	8.0	7.5	-137.36	-137.36	-124.9	-72.8	211.7	196.6	15.04	14.072	
3,400.0	3,389.8	3,389.1	3,379.5	8.2	7.8	-136.39	-136.39	-133.6	-80.0	222.8	207.3	15.53	14.344	
3,500.0	3,489.6	3,488.5	3,478.3	8.4	8.1	-134.90	-134.90	-142.3	-87.2	231.6	215.5	16.01	14.464	
3,600.0	3,589.6	3,587.9	3,577.0	8.6	8.4	-132.88	-132.88	-151.0	-94.4	238.1	221.6	16.47	14.458	
3,700.0	3,689.6	3,687.2	3,675.7	8.7	8.7	-129.45	-129.45	-159.7	-101.6	243.6	227.3	16.29	14.955	
3,800.0	3,789.6	3,786.6	3,774.4	8.9	9.0	-126.70	-126.70	-168.4	-108.8	249.5	232.7	16.74	14.900	
3,900.0	3,889.6	3,885.9	3,873.2	9.1	9.3	-123.85	-123.85	-177.1	-116.0	255.7	238.5	17.21	14.861	
4,000.0	3,989.6	3,985.3	3,971.9	9.3	9.5	-121.90	-121.90	-185.8	-123.2	262.3	244.6	17.68	14.836	
4,100.0	4,089.6	4,084.6	4,070.6	9.5	9.8	-119.84	-119.84	-194.5	-130.4	269.2	251.0	18.16	14.824	
4,200.0	4,189.6	4,184.0	4,169.3	9.7	10.1	-117.69	-117.69	-203.2	-137.6	276.4	257.8	18.65	14.822	
4,300.0	4,289.6	4,283.3	4,268.0	10.0	10.4	-115.44	-115.44	-211.9	-144.9	283.9	264.7	19.14	14.829	
4,400.0	4,389.6	4,382.7	4,366.7	10.2	10.7	-113.10	-113.10	-220.6	-152.1	291.6	272.0	19.64	14.845	
4,500.0	4,489.6	4,482.0	4,465.4	10.4	11.0	-110.67	-110.67	-229.3	-159.3	299.6	279.4	20.15	14.867	
4,600.0	4,589.6	4,581.4	4,564.1	10.6	11.3	-108.16	-108.16	-238.0	-166.5	307.7	287.1	20.66	14.895	
4,700.0	4,689.6	4,680.7	4,662.8	10.8	11.6	-105.77	-105.77	-246.7	-173.7	316.1	294.9	21.18	14.929	
4,800.0	4,789.6	4,788.3	4,769.9	11.0	11.9	-103.84	-103.84	-254.9	-180.4	323.5	301.9	21.66	14.936	
4,900.0	4,889.6	4,897.6	4,879.0	11.2	12.1	-101.60	-101.60	-260.0	-184.7	328.2	306.1	22.12	14.839	
5,000.0	4,989.6	5,007.3	4,988.6	11.4	12.3	-100.00	-100.00	-262.0	-186.3	330.0	307.4	22.55	14.635	

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 24Q-112
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4650.0ft (RKB - 15')
Reference Site:	Maxey 24Q-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4650.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24Q-112	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 #2 (8-9-13)	Offset TVD Reference:	Offset Datum

Offset Design Maxey 24Q-HZ Pad Sec.24-T5N-R65W - Maxey 24Q-302 - Wellbore #1 - Plan #2 (8-9-13)													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
5,100.0	5,089.6	5,108.3	5,089.6	11.6	12.5	179.89	179.89	-262.0	-186.4	330.0	307.1	22.95	14.377	
5,200.0	5,189.6	5,208.3	5,189.6	11.8	12.7	179.89	179.89	-262.0	-186.4	330.0	306.7	23.36	14.130	
5,300.0	5,289.6	5,308.3	5,289.6	12.1	12.8	179.89	179.89	-262.0	-186.4	330.0	306.3	23.76	13.890	
5,400.0	5,389.6	5,408.3	5,389.6	12.3	13.0	179.89	179.89	-262.0	-186.4	330.0	305.8	24.16	13.657	
5,500.0	5,489.6	5,508.3	5,489.6	12.5	13.2	179.89	179.89	-262.0	-186.4	330.0	305.4	24.57	13.431	
5,600.0	5,589.6	5,608.3	5,589.6	12.7	13.4	179.89	179.89	-262.0	-186.4	330.0	305.0	24.98	13.212	
5,700.0	5,689.6	5,708.3	5,689.6	12.9	13.6	179.89	179.89	-262.0	-186.4	330.0	304.6	25.39	12.999	
5,800.0	5,789.6	5,808.3	5,789.6	13.1	13.7	179.89	179.89	-262.0	-186.4	330.0	304.2	25.80	12.793	
5,900.0	5,889.6	5,908.3	5,889.6	13.3	13.9	89.64	89.64	-262.0	-186.4	330.0	303.6	26.43	12.487	
5,939.6	5,929.2	5,947.8	5,929.2	13.4	14.0	90.00	90.00	-262.0	-186.4	330.0	303.4	26.56	12.423	
6,000.0	5,989.1	6,007.8	5,989.1	13.5	14.1	91.21	91.21	-262.0	-186.4	330.1	303.3	26.75	12.338	
6,100.0	6,086.5	6,106.0	6,087.3	13.6	14.3	94.83	94.83	-262.0	-186.1	331.3	304.3	26.99	12.272	
6,200.0	6,180.3	6,208.1	6,188.9	13.7	14.4	99.12	99.12	-262.1	-176.8	334.5	307.4	27.15	12.323	
6,300.0	6,268.7	6,314.2	6,292.2	13.9	14.5	103.24	103.24	-262.2	-152.8	339.6	312.4	27.24	12.466	
6,400.0	6,350.3	6,424.6	6,395.0	14.1	14.6	107.11	107.11	-262.4	-113.0	346.2	318.8	27.35	12.658	
6,500.0	6,423.7	6,539.4	6,494.7	14.6	14.7	110.63	110.63	-262.7	-56.3	353.7	326.2	27.57	12.831	
6,600.0	6,487.6	6,658.8	6,588.2	15.3	14.7	113.72	113.72	-263.1	17.8	361.7	333.6	28.07	12.886	
6,700.0	6,541.0	6,782.6	6,671.7	16.3	15.0	116.34	116.34	-263.6	109.1	369.3	340.3	29.05	12.712	
6,800.0	6,582.8	6,910.6	6,741.4	17.6	16.2	118.41	118.41	-264.2	216.2	376.0	345.3	30.71	12.247	
6,900.0	6,612.4	7,041.9	6,793.3	19.3	18.0	119.91	119.91	-264.8	336.7	381.2	348.1	33.16	11.498	
7,000.0	6,629.4	7,175.7	6,824.1	21.2	20.3	120.78	120.78	-265.5	466.7	384.5	348.1	36.40	10.562	
7,100.0	6,633.4	7,307.7	6,832.0	23.2	23.0	121.02	121.02	-266.3	598.3	385.4	345.1	40.28	9.569	
7,200.0	6,632.5	7,407.7	6,830.4	25.4	25.1	120.93	120.93	-266.8	698.3	385.0	341.0	44.06	8.739	
7,300.0	6,631.7	7,507.7	6,828.8	27.7	27.4	120.83	120.83	-267.3	798.2	384.7	336.6	48.05	8.005	
7,400.0	6,630.8	7,607.7	6,827.2	30.1	29.8	120.74	120.74	-267.9	898.2	384.3	332.1	52.21	7.361	
7,500.0	6,630.0	7,707.7	6,825.7	32.5	32.2	120.64	120.64	-268.4	998.2	384.0	327.5	56.51	6.796	
7,600.0	6,629.1	7,807.7	6,824.1	35.0	34.7	120.54	120.54	-269.0	1,098.2	383.7	322.7	60.91	6.299	
7,700.0	6,628.3	7,907.7	6,822.5	37.6	37.3	120.45	120.45	-269.5	1,198.2	383.3	317.9	65.39	5.862	
7,800.0	6,627.4	8,007.7	6,820.9	40.2	39.9	120.35	120.35	-270.0	1,298.2	383.0	313.0	69.95	5.475	
7,900.0	6,626.6	8,107.7	6,819.3	42.8	42.5	120.25	120.25	-270.6	1,398.1	382.6	308.1	74.56	5.131	
8,000.0	6,625.7	8,207.7	6,817.7	45.4	45.1	120.15	120.15	-271.1	1,498.1	382.3	303.1	79.23	4.825	
8,100.0	6,624.8	8,307.7	6,816.1	48.1	47.8	120.06	120.06	-271.7	1,598.1	381.9	298.0	83.94	4.550	
8,200.0	6,624.0	8,407.7	6,814.5	50.8	50.4	119.96	119.96	-272.2	1,698.1	381.6	292.9	88.70	4.302	
8,300.0	6,623.1	8,507.7	6,812.9	53.4	53.1	119.86	119.86	-272.7	1,798.1	381.3	287.8	93.48	4.079	
8,400.0	6,622.3	8,607.7	6,811.4	56.1	55.8	119.76	119.76	-273.3	1,898.1	380.9	282.6	98.30	3.875	
8,500.0	6,621.4	8,707.7	6,809.8	58.9	58.5	119.66	119.66	-273.8	1,998.0	380.6	277.5	103.14	3.690	
8,600.0	6,620.6	8,807.7	6,808.2	61.6	61.2	119.57	119.57	-274.4	2,098.0	380.3	272.3	108.01	3.521	
8,700.0	6,619.7	8,907.6	6,806.6	64.3	63.9	119.47	119.47	-274.9	2,198.0	379.9	267.0	112.90	3.365	
8,800.0	6,618.9	9,007.6	6,805.0	67.0	66.7	119.37	119.37	-275.4	2,298.0	379.6	261.8	117.81	3.222	
8,900.0	6,618.0	9,107.6	6,803.4	69.8	69.4	119.27	119.27	-276.0	2,398.0	379.3	256.5	122.74	3.090	
9,000.0	6,617.1	9,207.6	6,801.8	72.5	72.2	119.17	119.17	-276.5	2,498.0	378.9	251.2	127.69	2.968	
9,100.0	6,616.3	9,307.6	6,800.2	75.3	74.9	119.07	119.07	-277.1	2,597.9	378.6	245.9	132.66	2.854	
9,200.0	6,615.4	9,407.6	6,798.7	78.0	77.6	118.97	118.97	-277.6	2,697.9	378.3	240.6	137.65	2.748	
9,300.0	6,614.6	9,507.6	6,797.1	80.8	80.4	118.87	118.87	-278.2	2,797.9	378.0	235.3	142.64	2.650	
9,400.0	6,613.7	9,607.6	6,795.5	83.5	83.2	118.77	118.77	-278.7	2,897.9	377.6	230.0	147.66	2.557	
9,500.0	6,612.9	9,707.6	6,793.9	86.3	85.9	118.67	118.67	-279.2	2,997.9	377.3	224.6	152.69	2.471	
9,600.0	6,612.0	9,807.6	6,792.3	89.1	88.7	118.57	118.57	-279.8	3,097.9	377.0	219.3	157.73	2.390	
9,700.0	6,611.2	9,907.6	6,790.7	91.8	91.5	118.47	118.47	-280.3	3,197.8	376.7	213.9	162.78	2.314	
9,800.0	6,610.3	10,007.6	6,789.1	94.6	94.2	118.37	118.37	-280.9	3,297.8	376.3	208.5	167.85	2.242	
9,900.0	6,609.5	10,107.6	6,787.5	97.4	97.0	118.27	118.27	-281.4	3,397.8	376.0	203.1	172.93	2.174	
10,000.0	6,608.6	10,207.6	6,785.9	100.1	99.8	118.17	118.17	-281.9	3,497.8	375.7	197.7	178.02	2.110	

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 24Q-112
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4650.0ft (RKB - 15')
Reference Site:	Maxey 24Q-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4650.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24Q-112	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 #2 (8-9-13)	Offset TVD Reference:	Offset Datum

Offset Design Maxey 24Q-HZ Pad Sec.24-T5N-R65W - Maxey 24Q-302 - Wellbore #1 - Plan #2 (8-9-13)												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
10,100.0	6,607.7	10,307.6	6,784.4	102.9	102.5	118.07	-282.5	3,597.8	375.4	192.3	183.13	2.050	
10,200.0	6,606.9	10,407.6	6,782.8	105.7	105.3	117.97	-283.0	3,697.8	375.1	186.8	188.24	1.992	
10,300.0	6,606.0	10,507.6	6,781.2	108.5	108.1	117.87	-283.6	3,797.7	374.8	181.4	193.37	1.938	
10,400.0	6,605.2	10,607.6	6,779.6	111.3	110.9	117.77	-284.1	3,897.7	374.4	175.9	198.51	1.886	
10,500.0	6,604.3	10,707.6	6,778.0	114.1	113.7	117.66	-284.6	3,997.7	374.1	170.5	203.66	1.837	
10,600.0	6,603.5	10,807.6	6,776.4	116.8	116.5	117.56	-285.2	4,097.7	373.8	165.0	208.81	1.790	
10,700.0	6,602.6	10,907.6	6,774.8	119.6	119.2	117.46	-285.7	4,197.7	373.5	159.5	213.98	1.746	
10,800.0	6,601.8	11,007.6	6,773.2	122.4	122.0	117.36	-286.3	4,297.7	373.2	154.0	219.16	1.703	
10,900.0	6,600.9	11,107.6	6,771.7	125.2	124.8	117.26	-286.8	4,397.6	372.9	148.5	224.35	1.662	
11,000.0	6,600.0	11,207.6	6,770.1	128.0	127.6	117.15	-287.3	4,497.6	372.6	143.0	229.55	1.623	
11,005.2	6,600.0	11,211.9	6,770.0	128.1	127.7	117.15	-287.4	4,501.9	372.6	142.8	229.79	1.621 SF	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Maxey 24Q-112
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4650.0ft (RKB - 15')
Reference Site:	Maxey 24Q-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4650.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24Q-112	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 #2 (8-9-13)	Offset TVD Reference:	Offset Datum

Offset Design Maxey 24Q-HZ Pad Sec.24-T5N-R65W - Maxey 44-24 (Exist.) - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 ft
Survey Program: 7300-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
7,300.0	6,631.7	6,613.7	6,613.7	27.7	7.4	-98.80	113.0	1,794.2	998.6	963.8	34.80	28.699	
7,400.0	6,630.8	6,612.8	6,612.8	30.1	7.4	-97.93	113.0	1,794.2	898.8	861.6	37.22	24.149	
7,500.0	6,630.0	6,612.0	6,612.0	32.5	7.4	-97.05	113.0	1,794.2	799.0	759.3	39.71	20.120	
7,600.0	6,629.1	6,611.1	6,611.1	35.0	7.4	-96.18	113.0	1,794.2	699.3	657.0	42.26	16.547	
7,700.0	6,628.3	6,610.3	6,610.3	37.6	7.4	-95.30	113.0	1,794.2	599.6	554.8	44.85	13.369	
7,800.0	6,627.4	6,609.4	6,609.4	40.2	7.4	-94.41	113.0	1,794.2	500.1	452.7	47.48	10.534	
7,900.0	6,626.6	6,608.6	6,608.6	42.8	7.4	-93.53	113.0	1,794.2	400.9	350.8	50.13	7.998	
8,000.0	6,625.7	6,607.7	6,607.7	45.4	7.4	-92.64	113.0	1,794.2	302.2	249.4	52.80	5.723	
8,100.0	6,624.8	6,606.8	6,606.8	48.1	7.4	-91.75	113.0	1,794.2	204.7	149.2	55.48	3.689	
8,200.0	6,624.0	6,606.0	6,606.0	50.8	7.4	-90.86	113.0	1,794.2	111.6	53.5	58.17	1.919	
8,297.1	6,623.2	6,605.2	6,605.2	53.4	7.4	-90.00	113.0	1,794.2	55.1	-5.7	60.79	0.906	Level 1, CC, SF
8,300.0	6,623.1	6,605.1	6,605.1	53.4	7.4	-89.97	113.0	1,794.2	55.2	-5.7	60.87	0.906	Level 1, ES
8,400.0	6,622.3	6,604.3	6,604.3	56.1	7.4	-89.08	113.0	1,794.2	116.7	53.1	63.56	1.836	
8,500.0	6,621.4	6,603.4	6,603.4	58.9	7.4	-88.20	113.0	1,794.2	210.2	144.0	66.25	3.173	
8,600.0	6,620.6	6,602.6	6,602.6	61.6	7.4	-87.31	113.0	1,794.2	307.8	238.9	68.94	4.465	
8,700.0	6,619.7	6,601.7	6,601.7	64.3	7.4	-86.42	113.0	1,794.2	406.6	335.0	71.62	5.678	
8,800.0	6,618.9	6,600.9	6,600.9	67.0	7.4	-85.54	113.0	1,794.2	505.9	431.6	74.28	6.810	
8,900.0	6,618.0	6,600.0	6,600.0	69.8	7.4	-84.65	113.0	1,794.2	605.4	528.4	76.93	7.869	
9,000.0	6,617.1	6,599.1	6,599.1	72.5	7.4	-83.77	113.0	1,794.2	705.0	625.5	79.57	8.861	
9,100.0	6,616.3	6,598.3	6,598.3	75.3	7.4	-82.90	113.0	1,794.2	804.7	722.6	82.18	9.793	
9,200.0	6,615.4	6,597.4	6,597.4	78.0	7.4	-82.02	113.0	1,794.2	904.5	819.8	84.77	10.670	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Maxey 24Q-112
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4650.0ft (RKB - 15')
Reference Site:	Maxey 24Q-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4650.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24Q-112	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 #2 (8-9-13)	Offset TVD Reference:	Offset Datum

Offset Design Maxey 24Q-HZ Pad Sec.24-T5N-R65W - Maxey Hoff 1 (Exist.) - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 ft
Survey Program: 100-NS-GYRO-MS												Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	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
8,600.0	6,620.6	6,605.0	6,604.3	61.6	12.1	-94.13	197.0	3,006.7	920.6	847.1	73.51	12.524	
8,700.0	6,619.7	6,603.7	6,603.0	64.3	12.1	-93.63	197.0	3,006.7	822.1	745.8	76.27	10.778	
8,800.0	6,618.9	6,602.4	6,601.7	67.0	12.1	-93.13	196.9	3,006.7	723.8	644.8	79.04	9.158	
8,900.0	6,618.0	6,601.1	6,600.5	69.8	12.1	-92.63	196.9	3,006.7	626.2	544.4	81.80	7.655	
9,000.0	6,617.1	6,600.0	6,599.3	72.5	12.1	-92.18	196.9	3,006.7	529.4	444.9	84.57	6.260	
9,100.0	6,616.3	6,598.6	6,597.9	75.3	12.1	-91.62	196.9	3,006.7	434.1	346.8	87.35	4.970	
9,200.0	6,615.4	6,597.3	6,596.6	78.0	12.1	-91.12	196.9	3,006.7	341.5	251.4	90.12	3.790	
9,300.0	6,614.6	6,596.0	6,595.3	80.8	12.1	-90.61	196.9	3,006.7	254.6	161.7	92.88	2.741	
9,400.0	6,613.7	6,594.7	6,594.0	83.5	12.1	-90.10	196.9	3,006.7	181.6	86.0	95.65	1.899	
9,500.0	6,612.9	6,593.4	6,592.7	86.3	12.1	-89.59	196.9	3,006.7	145.4	47.0	98.41	1.477 Level 3	
9,509.2	6,612.8	6,593.3	6,592.6	86.5	12.1	-89.54	196.9	3,006.7	145.1	46.4	98.67	1.471 Level 3, CC, ES, SF	
9,600.0	6,612.0	6,592.1	6,591.5	89.1	12.1	-89.08	196.9	3,006.7	171.2	70.0	101.17	1.692	
9,700.0	6,611.2	6,590.8	6,590.2	91.8	12.1	-88.56	196.9	3,006.7	239.7	135.8	103.92	2.306	
9,800.0	6,610.3	6,589.5	6,588.8	94.6	12.1	-88.05	196.8	3,006.7	325.0	218.3	106.67	3.047	
9,900.0	6,609.5	6,588.2	6,587.5	97.4	12.1	-87.53	196.8	3,006.8	416.8	307.4	109.41	3.810	
10,000.0	6,608.6	6,586.9	6,586.2	100.1	12.1	-87.02	196.8	3,006.8	511.8	399.6	112.13	4.564	
10,100.0	6,607.7	6,585.6	6,584.9	102.9	12.1	-86.50	196.8	3,006.8	608.3	493.4	114.86	5.296	
10,200.0	6,606.9	6,584.3	6,583.6	105.7	12.1	-85.98	196.8	3,006.8	705.8	588.2	117.57	6.004	
10,300.0	6,606.0	6,583.0	6,582.3	108.5	12.1	-85.46	196.8	3,006.8	803.9	683.7	120.27	6.685	
10,400.0	6,605.2	6,581.6	6,581.0	111.3	12.1	-84.94	196.8	3,006.8	902.5	779.5	122.95	7.340	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Maxey 24Q-112
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4650.0ft (RKB - 15')
Reference Site:	Maxey 24Q-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4650.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24Q-112	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 #2 (8-9-13)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4650.0ft (RKB - 15')

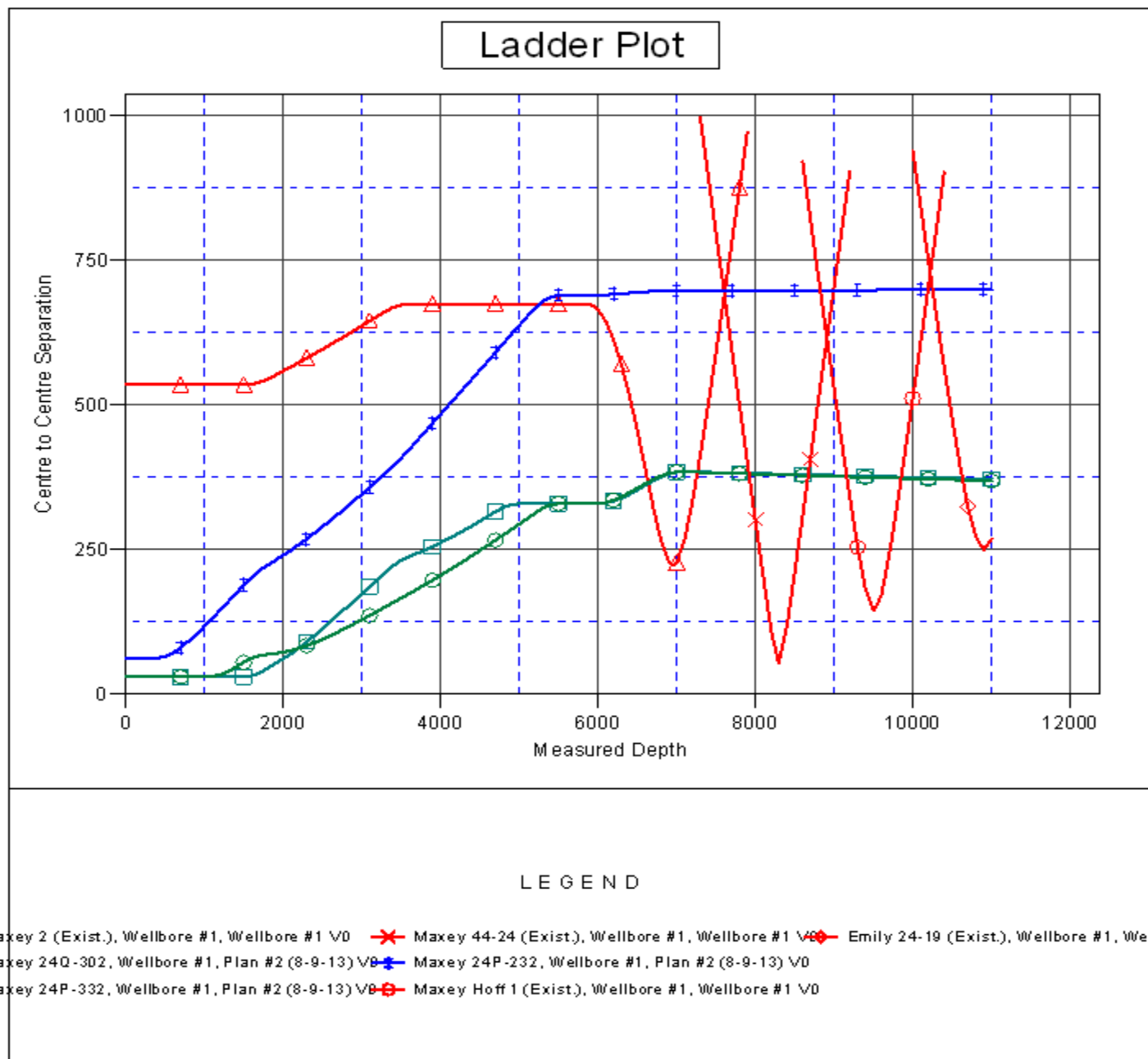
Offset Depths are relative to Offset Datum

Central Meridian is -105.500000 °

Coordinates are relative to: Maxey 24Q-112

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.57°



Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Maxey 24Q-112
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4650.0ft (RKB - 15')
Reference Site:	Maxey 24Q-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4650.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24Q-112	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 #2 (8-9-13)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4650.0ft (RKB - 15')

Offset Depths are relative to Offset Datum

Central Meridian is -105.500000 °

Coordinates are relative to: Maxey 24Q-112

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.57°

