

PETROLEUM DEVELOPMENT CORP Weld County CO

Well Name: Maxey 24P-312

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

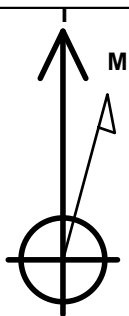
Ground Elevation: 4637.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1383922.41	3247686.72	40.383860	-104.610870	

RKB - 15' WELL @ 4652.0ft (RKB - 15')

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape Point
BHL 1728'FSL & 2140'FWL, Sec.19	6799.0	-644.4	4635.8	Point



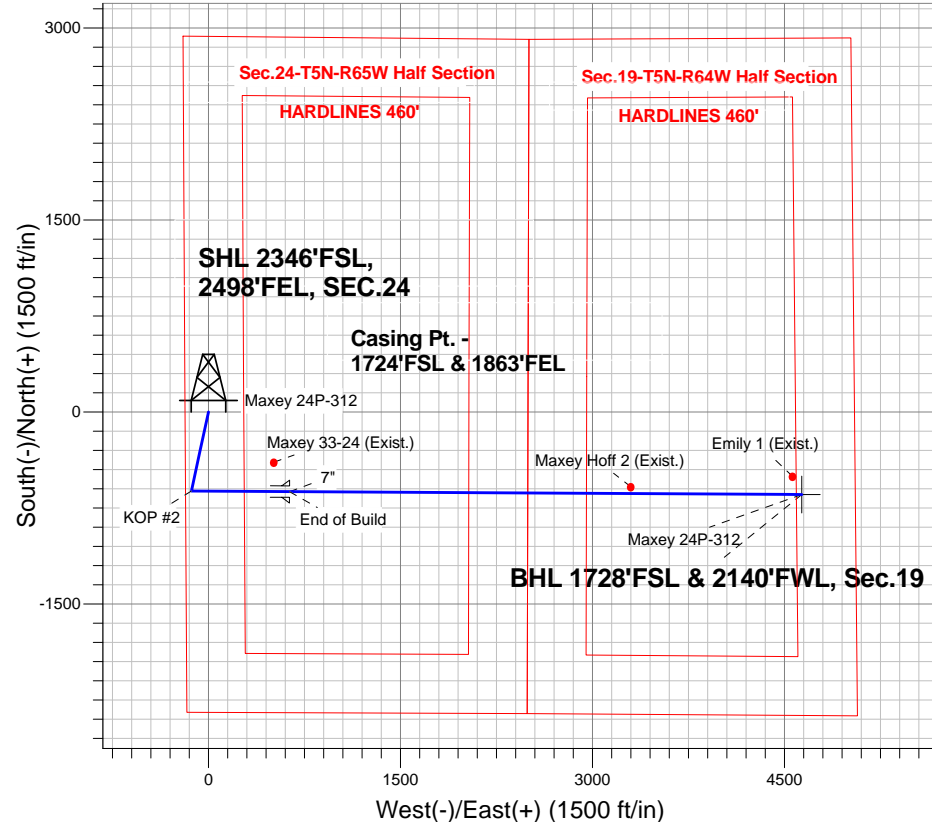
Azimuths to True North
Magnetic North: 8.55°

Magnetic Field
Strength: 52959.4nT
Dip Angle: 67.00°
Date: 3/5/2013
Model: IGRF2010

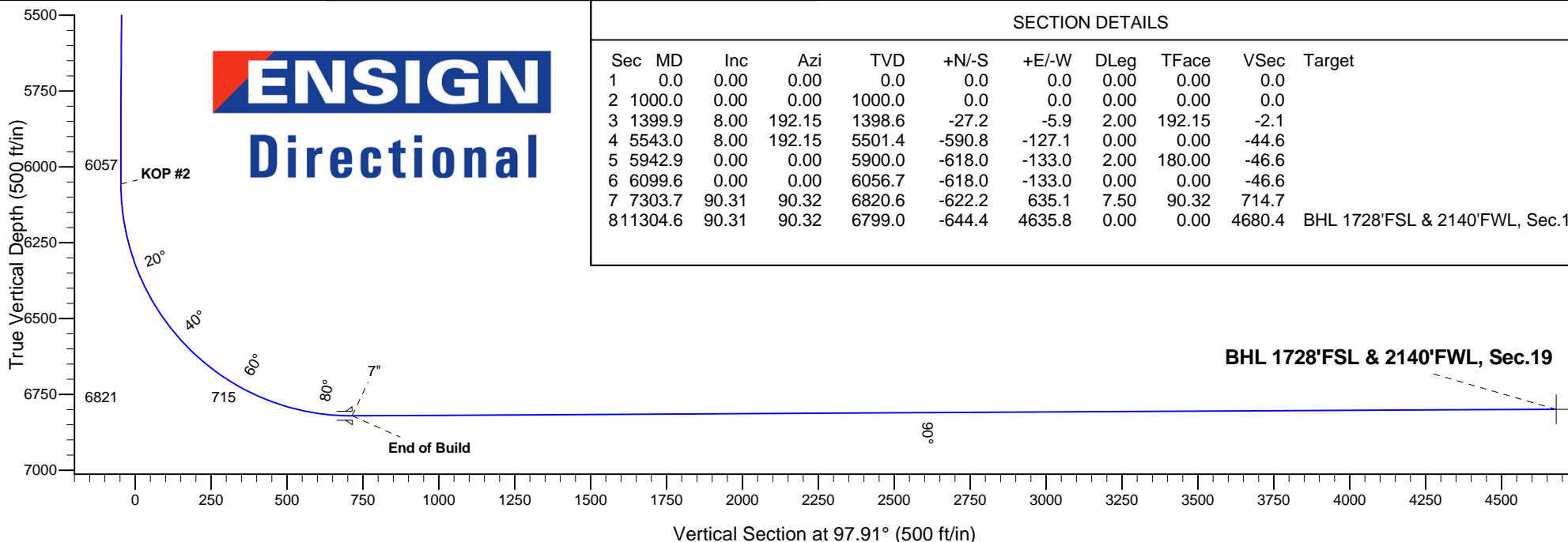
ANNOTATIONS

TVD	MD	Annotation
1000.0	1000.0	KOP #1
6056.7	6099.6	KOP #2
6820.6	7303.7	End of Build

Maxey 24O-HZ Pad Sec.24-T5N-R65W
Maxey 24P-312
Plan #1 (3-5-13)



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	1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0	
3	1399.9	8.00	192.15	1398.6	-27.2	-5.9	2.00	192.15	-2.1	
4	5543.0	8.00	192.15	5501.4	-590.8	-127.1	0.00	0.00	-44.6	
5	5942.9	0.00	0.00	5900.0	-618.0	-133.0	2.00	180.00	-46.6	
6	6099.6	0.00	0.00	6056.7	-618.0	-133.0	0.00	0.00	-46.6	
7	7303.7	90.31	90.32	6820.6	-622.2	635.1	7.50	90.32	714.7	
8	11304.6	90.31	90.32	6799.0	-644.4	4635.8	0.00	0.00	4680.4	BHL 1728'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 24P-312

Wellbore #1

Plan: Plan #1 (3-5-13)

Standard Planning Report

11 March, 2013

Database:	Landmark	Local Co-ordinate Reference:	Well Maxey 24P-312
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4652.0ft (RKB - 15')
Project:	SEC.24-T5N-R65W	MD Reference:	WELL @ 4652.0ft (RKB - 15')
Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	North Reference:	True
Well:	Maxey 24P-312	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-5-13)		

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 24P-312					
Well Position	+N-S	0.0 ft	Northing:	1,383,922.41 ft	Latitude:	40.383860
	+E-W	30.6 ft	Easting:	3,247,686.72 ft	Longitude:	-104.610870
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,637.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/5/2013	8.55	67.00	52,959

Design	Plan #1 (3-5-13)			
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	97.91

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	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,399.9	8.00	192.15	1,398.6	-27.2	-5.9	2.00	2.00	0.00	192.15	
5,543.0	8.00	192.15	5,501.4	-590.8	-127.1	0.00	0.00	0.00	0.00	
5,942.9	0.00	0.00	5,900.0	-618.0	-133.0	2.00	-2.00	0.00	180.00	
6,099.6	0.00	0.00	6,056.7	-618.0	-133.0	0.00	0.00	0.00	0.00	
7,303.7	90.31	90.32	6,820.6	-622.2	635.1	7.50	7.50	0.00	90.32	
11,304.6	90.31	90.32	6,799.0	-644.4	4,635.8	0.00	0.00	0.00	0.00	BHL 1728'FSL & 21

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Project:	SEC.24-T5N-R65W	MD Reference:	WELL @ 4652.0ft (RKB - 15')
Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	North Reference:	True
Well:	Maxey 24P-312	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-5-13)		

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
KOP #1									
1,040.0	0.80	192.15	1,040.0	-0.3	-0.1	0.0	2.00	2.00	0.00
1,080.0	1.60	192.15	1,080.0	-1.1	-0.2	-0.1	2.00	2.00	0.00
1,120.0	2.40	192.15	1,120.0	-2.5	-0.5	-0.2	2.00	2.00	0.00
1,160.0	3.20	192.15	1,159.9	-4.4	-0.9	-0.3	2.00	2.00	0.00
1,200.0	4.00	192.15	1,199.8	-6.8	-1.5	-0.5	2.00	2.00	0.00
1,240.0	4.80	192.15	1,239.7	-9.8	-2.1	-0.7	2.00	2.00	0.00
1,280.0	5.60	192.15	1,279.6	-13.4	-2.9	-1.0	2.00	2.00	0.00
1,320.0	6.40	192.15	1,319.3	-17.5	-3.8	-1.3	2.00	2.00	0.00
1,360.0	7.20	192.15	1,359.1	-22.1	-4.8	-1.7	2.00	2.00	0.00
1,399.9	8.00	192.15	1,398.6	-27.2	-5.9	-2.1	2.00	2.00	0.00
1,400.0	8.00	192.15	1,398.7	-27.3	-5.9	-2.1	0.00	0.00	0.00
1,440.0	8.00	192.15	1,438.3	-32.7	-7.0	-2.5	0.00	0.00	0.00
1,480.0	8.00	192.15	1,477.9	-38.1	-8.2	-2.9	0.00	0.00	0.00
1,520.0	8.00	192.15	1,517.5	-43.6	-9.4	-3.3	0.00	0.00	0.00
1,560.0	8.00	192.15	1,557.1	-49.0	-10.5	-3.7	0.00	0.00	0.00
1,600.0	8.00	192.15	1,596.8	-54.5	-11.7	-4.1	0.00	0.00	0.00
1,640.0	8.00	192.15	1,636.4	-59.9	-12.9	-4.5	0.00	0.00	0.00
1,680.0	8.00	192.15	1,676.0	-65.3	-14.1	-4.9	0.00	0.00	0.00
1,720.0	8.00	192.15	1,715.6	-70.8	-15.2	-5.3	0.00	0.00	0.00
1,760.0	8.00	192.15	1,755.2	-76.2	-16.4	-5.8	0.00	0.00	0.00
1,800.0	8.00	192.15	1,794.8	-81.7	-17.6	-6.2	0.00	0.00	0.00
1,840.0	8.00	192.15	1,834.4	-87.1	-18.7	-6.6	0.00	0.00	0.00
1,880.0	8.00	192.15	1,874.0	-92.5	-19.9	-7.0	0.00	0.00	0.00
1,920.0	8.00	192.15	1,913.6	-98.0	-21.1	-7.4	0.00	0.00	0.00
1,960.0	8.00	192.15	1,953.3	-103.4	-22.3	-7.8	0.00	0.00	0.00
2,000.0	8.00	192.15	1,992.9	-108.9	-23.4	-8.2	0.00	0.00	0.00

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Project:	SEC.24-T5N-R65W	MD Reference:	WELL @ 4652.0ft (RKB - 15')
Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	North Reference:	True
Well:	Maxey 24P-312	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-5-13)		

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)
2,040.0	8.00	192.15	2,032.5	-114.3	-24.6	-8.6	0.00	0.00	0.00
2,080.0	8.00	192.15	2,072.1	-119.7	-25.8	-9.0	0.00	0.00	0.00
2,120.0	8.00	192.15	2,111.7	-125.2	-26.9	-9.4	0.00	0.00	0.00
2,160.0	8.00	192.15	2,151.3	-130.6	-28.1	-9.9	0.00	0.00	0.00
2,200.0	8.00	192.15	2,190.9	-136.1	-29.3	-10.3	0.00	0.00	0.00
2,240.0	8.00	192.15	2,230.5	-141.5	-30.5	-10.7	0.00	0.00	0.00
2,280.0	8.00	192.15	2,270.1	-146.9	-31.6	-11.1	0.00	0.00	0.00
2,320.0	8.00	192.15	2,309.8	-152.4	-32.8	-11.5	0.00	0.00	0.00
2,360.0	8.00	192.15	2,349.4	-157.8	-34.0	-11.9	0.00	0.00	0.00
2,400.0	8.00	192.15	2,389.0	-163.3	-35.1	-12.3	0.00	0.00	0.00
2,440.0	8.00	192.15	2,428.6	-168.7	-36.3	-12.7	0.00	0.00	0.00
2,480.0	8.00	192.15	2,468.2	-174.1	-37.5	-13.1	0.00	0.00	0.00
2,520.0	8.00	192.15	2,507.8	-179.6	-38.6	-13.6	0.00	0.00	0.00
2,560.0	8.00	192.15	2,547.4	-185.0	-39.8	-14.0	0.00	0.00	0.00
2,600.0	8.00	192.15	2,587.0	-190.5	-41.0	-14.4	0.00	0.00	0.00
2,640.0	8.00	192.15	2,626.6	-195.9	-42.2	-14.8	0.00	0.00	0.00
2,680.0	8.00	192.15	2,666.3	-201.4	-43.3	-15.2	0.00	0.00	0.00
2,720.0	8.00	192.15	2,705.9	-206.8	-44.5	-15.6	0.00	0.00	0.00
2,760.0	8.00	192.15	2,745.5	-212.2	-45.7	-16.0	0.00	0.00	0.00
2,800.0	8.00	192.15	2,785.1	-217.7	-46.8	-16.4	0.00	0.00	0.00
2,840.0	8.00	192.15	2,824.7	-223.1	-48.0	-16.8	0.00	0.00	0.00
2,880.0	8.00	192.15	2,864.3	-228.6	-49.2	-17.3	0.00	0.00	0.00
2,920.0	8.00	192.15	2,903.9	-234.0	-50.4	-17.7	0.00	0.00	0.00
2,960.0	8.00	192.15	2,943.5	-239.4	-51.5	-18.1	0.00	0.00	0.00
3,000.0	8.00	192.15	2,983.1	-244.9	-52.7	-18.5	0.00	0.00	0.00
3,040.0	8.00	192.15	3,022.8	-250.3	-53.9	-18.9	0.00	0.00	0.00
3,080.0	8.00	192.15	3,062.4	-255.8	-55.0	-19.3	0.00	0.00	0.00
3,120.0	8.00	192.15	3,102.0	-261.2	-56.2	-19.7	0.00	0.00	0.00
3,160.0	8.00	192.15	3,141.6	-266.6	-57.4	-20.1	0.00	0.00	0.00
3,200.0	8.00	192.15	3,181.2	-272.1	-58.6	-20.5	0.00	0.00	0.00
3,240.0	8.00	192.15	3,220.8	-277.5	-59.7	-20.9	0.00	0.00	0.00
3,280.0	8.00	192.15	3,260.4	-283.0	-60.9	-21.4	0.00	0.00	0.00
3,320.0	8.00	192.15	3,300.0	-288.4	-62.1	-21.8	0.00	0.00	0.00
3,360.0	8.00	192.15	3,339.6	-293.8	-63.2	-22.2	0.00	0.00	0.00
3,400.0	8.00	192.15	3,379.3	-299.3	-64.4	-22.6	0.00	0.00	0.00
3,440.0	8.00	192.15	3,418.9	-304.7	-65.6	-23.0	0.00	0.00	0.00
3,480.0	8.00	192.15	3,458.5	-310.2	-66.8	-23.4	0.00	0.00	0.00
3,520.0	8.00	192.15	3,498.1	-315.6	-67.9	-23.8	0.00	0.00	0.00
3,560.0	8.00	192.15	3,537.7	-321.0	-69.1	-24.2	0.00	0.00	0.00
3,600.0	8.00	192.15	3,577.3	-326.5	-70.3	-24.6	0.00	0.00	0.00
3,640.0	8.00	192.15	3,616.9	-331.9	-71.4	-25.1	0.00	0.00	0.00
3,680.0	8.00	192.15	3,656.5	-337.4	-72.6	-25.5	0.00	0.00	0.00
3,720.0	8.00	192.15	3,696.1	-342.8	-73.8	-25.9	0.00	0.00	0.00
3,760.0	8.00	192.15	3,735.7	-348.2	-74.9	-26.3	0.00	0.00	0.00
3,800.0	8.00	192.15	3,775.4	-353.7	-76.1	-26.7	0.00	0.00	0.00
3,840.0	8.00	192.15	3,815.0	-359.1	-77.3	-27.1	0.00	0.00	0.00
3,880.0	8.00	192.15	3,854.6	-364.6	-78.5	-27.5	0.00	0.00	0.00
3,920.0	8.00	192.15	3,894.2	-370.0	-79.6	-27.9	0.00	0.00	0.00
3,960.0	8.00	192.15	3,933.8	-375.4	-80.8	-28.3	0.00	0.00	0.00
4,000.0	8.00	192.15	3,973.4	-380.9	-82.0	-28.8	0.00	0.00	0.00
4,040.0	8.00	192.15	4,013.0	-386.3	-83.1	-29.2	0.00	0.00	0.00
4,080.0	8.00	192.15	4,052.6	-391.8	-84.3	-29.6	0.00	0.00	0.00
4,120.0	8.00	192.15	4,092.2	-397.2	-85.5	-30.0	0.00	0.00	0.00

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Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	North Reference:	True
Well:	Maxey 24P-312	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-5-13)		

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)
4,160.0	8.00	192.15	4,131.9	-402.6	-86.7	-30.4	0.00	0.00	0.00
4,200.0	8.00	192.15	4,171.5	-408.1	-87.8	-30.8	0.00	0.00	0.00
4,240.0	8.00	192.15	4,211.1	-413.5	-89.0	-31.2	0.00	0.00	0.00
4,280.0	8.00	192.15	4,250.7	-419.0	-90.2	-31.6	0.00	0.00	0.00
4,320.0	8.00	192.15	4,290.3	-424.4	-91.3	-32.0	0.00	0.00	0.00
4,360.0	8.00	192.15	4,329.9	-429.8	-92.5	-32.4	0.00	0.00	0.00
4,400.0	8.00	192.15	4,369.5	-435.3	-93.7	-32.9	0.00	0.00	0.00
4,440.0	8.00	192.15	4,409.1	-440.7	-94.9	-33.3	0.00	0.00	0.00
4,480.0	8.00	192.15	4,448.7	-446.2	-96.0	-33.7	0.00	0.00	0.00
4,520.0	8.00	192.15	4,488.4	-451.6	-97.2	-34.1	0.00	0.00	0.00
4,560.0	8.00	192.15	4,528.0	-457.1	-98.4	-34.5	0.00	0.00	0.00
4,600.0	8.00	192.15	4,567.6	-462.5	-99.5	-34.9	0.00	0.00	0.00
4,640.0	8.00	192.15	4,607.2	-467.9	-100.7	-35.3	0.00	0.00	0.00
4,680.0	8.00	192.15	4,646.8	-473.4	-101.9	-35.7	0.00	0.00	0.00
4,720.0	8.00	192.15	4,686.4	-478.8	-103.0	-36.1	0.00	0.00	0.00
4,760.0	8.00	192.15	4,726.0	-484.3	-104.2	-36.6	0.00	0.00	0.00
4,800.0	8.00	192.15	4,765.6	-489.7	-105.4	-37.0	0.00	0.00	0.00
4,840.0	8.00	192.15	4,805.2	-495.1	-106.6	-37.4	0.00	0.00	0.00
4,880.0	8.00	192.15	4,844.9	-500.6	-107.7	-37.8	0.00	0.00	0.00
4,920.0	8.00	192.15	4,884.5	-506.0	-108.9	-38.2	0.00	0.00	0.00
4,960.0	8.00	192.15	4,924.1	-511.5	-110.1	-38.6	0.00	0.00	0.00
5,000.0	8.00	192.15	4,963.7	-516.9	-111.2	-39.0	0.00	0.00	0.00
5,040.0	8.00	192.15	5,003.3	-522.3	-112.4	-39.4	0.00	0.00	0.00
5,080.0	8.00	192.15	5,042.9	-527.8	-113.6	-39.8	0.00	0.00	0.00
5,120.0	8.00	192.15	5,082.5	-533.2	-114.8	-40.3	0.00	0.00	0.00
5,160.0	8.00	192.15	5,122.1	-538.7	-115.9	-40.7	0.00	0.00	0.00
5,200.0	8.00	192.15	5,161.7	-544.1	-117.1	-41.1	0.00	0.00	0.00
5,240.0	8.00	192.15	5,201.4	-549.5	-118.3	-41.5	0.00	0.00	0.00
5,280.0	8.00	192.15	5,241.0	-555.0	-119.4	-41.9	0.00	0.00	0.00
5,320.0	8.00	192.15	5,280.6	-560.4	-120.6	-42.3	0.00	0.00	0.00
5,360.0	8.00	192.15	5,320.2	-565.9	-121.8	-42.7	0.00	0.00	0.00
5,400.0	8.00	192.15	5,359.8	-571.3	-123.0	-43.1	0.00	0.00	0.00
5,440.0	8.00	192.15	5,399.4	-576.7	-124.1	-43.5	0.00	0.00	0.00
5,480.0	8.00	192.15	5,439.0	-582.2	-125.3	-43.9	0.00	0.00	0.00
5,520.0	8.00	192.15	5,478.6	-587.6	-126.5	-44.4	0.00	0.00	0.00
5,543.0	8.00	192.15	5,501.4	-590.8	-127.1	-44.6	0.00	0.00	0.00
5,560.0	7.66	192.15	5,518.3	-593.0	-127.6	-44.8	2.00	-2.00	0.00
5,600.0	6.86	192.15	5,557.9	-598.0	-128.7	-45.1	2.00	-2.00	0.00
5,640.0	6.06	192.15	5,597.7	-602.4	-129.6	-45.5	2.00	-2.00	0.00
5,680.0	5.26	192.15	5,637.5	-606.2	-130.5	-45.8	2.00	-2.00	0.00
5,720.0	4.46	192.15	5,677.3	-609.5	-131.2	-46.0	2.00	-2.00	0.00
5,760.0	3.66	192.15	5,717.2	-612.3	-131.8	-46.2	2.00	-2.00	0.00
5,800.0	2.86	192.15	5,757.2	-614.5	-132.3	-46.4	2.00	-2.00	0.00
5,840.0	2.06	192.15	5,797.1	-616.2	-132.6	-46.5	2.00	-2.00	0.00
5,880.0	1.26	192.15	5,837.1	-617.3	-132.9	-46.6	2.00	-2.00	0.00
5,920.0	0.46	192.15	5,877.1	-617.9	-133.0	-46.6	2.00	-2.00	0.00
5,942.9	0.00	0.00	5,900.0	-618.0	-133.0	-46.6	2.00	-2.00	0.00
5,960.0	0.00	0.00	5,917.1	-618.0	-133.0	-46.6	0.00	0.00	0.00
6,000.0	0.00	0.00	5,957.1	-618.0	-133.0	-46.6	0.00	0.00	0.00
6,040.0	0.00	0.00	5,997.1	-618.0	-133.0	-46.6	0.00	0.00	0.00
6,080.0	0.00	0.00	6,037.1	-618.0	-133.0	-46.6	0.00	0.00	0.00
6,099.6	0.00	0.00	6,056.7	-618.0	-133.0	-46.6	0.00	0.00	0.00
KOP #2									

Database:	Landmark	Local Co-ordinate Reference:	Well Maxey 24P-312
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4652.0ft (RKB - 15')
Project:	SEC.24-T5N-R65W	MD Reference:	WELL @ 4652.0ft (RKB - 15')
Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	North Reference:	True
Well:	Maxey 24P-312	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-5-13)		

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)
6,120.0	1.53	90.32	6,077.1	-618.0	-132.7	-46.4	7.50	7.50	0.00
6,160.0	4.53	90.32	6,117.0	-618.0	-130.6	-44.3	7.50	7.50	0.00
6,200.0	7.53	90.32	6,156.8	-618.0	-126.4	-40.1	7.50	7.50	0.00
6,240.0	10.53	90.32	6,196.3	-618.1	-120.1	-33.9	7.50	7.50	0.00
6,280.0	13.53	90.32	6,235.4	-618.1	-111.8	-25.6	7.50	7.50	0.00
6,320.0	16.53	90.32	6,274.1	-618.2	-101.4	-15.4	7.50	7.50	0.00
6,360.0	19.53	90.32	6,312.1	-618.2	-89.0	-3.1	7.50	7.50	0.00
6,400.0	22.53	90.32	6,349.4	-618.3	-74.7	11.1	7.50	7.50	0.00
6,440.0	25.53	90.32	6,386.0	-618.4	-58.4	27.3	7.50	7.50	0.00
6,480.0	28.53	90.32	6,421.6	-618.5	-40.2	45.3	7.50	7.50	0.00
6,520.0	31.53	90.32	6,456.2	-618.6	-20.2	65.1	7.50	7.50	0.00
6,560.0	34.53	90.32	6,489.7	-618.7	1.6	86.8	7.50	7.50	0.00
6,600.0	37.53	90.32	6,522.1	-618.9	25.1	110.1	7.50	7.50	0.00
6,640.0	40.53	90.32	6,553.2	-619.0	50.3	135.0	7.50	7.50	0.00
6,680.0	43.53	90.32	6,582.9	-619.2	77.1	161.6	7.50	7.50	0.00
6,720.0	46.53	90.32	6,611.1	-619.3	105.4	189.6	7.50	7.50	0.00
6,760.0	49.53	90.32	6,637.9	-619.5	135.1	219.1	7.50	7.50	0.00
6,800.0	52.53	90.32	6,663.0	-619.6	166.2	249.9	7.50	7.50	0.00
6,840.0	55.53	90.32	6,686.5	-619.8	198.6	282.0	7.50	7.50	0.00
6,880.0	58.53	90.32	6,708.3	-620.0	232.1	315.3	7.50	7.50	0.00
6,920.0	61.53	90.32	6,728.3	-620.2	266.8	349.6	7.50	7.50	0.00
6,960.0	64.53	90.32	6,746.4	-620.4	302.4	384.9	7.50	7.50	0.00
7,000.0	67.53	90.32	6,762.7	-620.6	339.0	421.2	7.50	7.50	0.00
7,040.0	70.53	90.32	6,777.0	-620.8	376.3	458.2	7.50	7.50	0.00
7,080.0	73.53	90.32	6,789.3	-621.0	414.3	495.9	7.50	7.50	0.00
7,120.0	76.53	90.32	6,799.6	-621.2	453.0	534.2	7.50	7.50	0.00
7,160.0	79.53	90.32	6,807.9	-621.5	492.1	573.0	7.50	7.50	0.00
7,200.0	82.53	90.32	6,814.2	-621.7	531.6	612.1	7.50	7.50	0.00
7,240.0	85.53	90.32	6,818.3	-621.9	571.4	651.6	7.50	7.50	0.00
7,280.0	88.53	90.32	6,820.4	-622.1	611.3	691.2	7.50	7.50	0.00
7,303.7	90.31	90.32	6,820.6	-622.2	635.0	714.7	7.50	7.50	0.00
End of Build - 7"									
7,320.0	90.31	90.32	6,820.6	-622.3	651.3	730.8	0.02	0.02	0.00
7,360.0	90.31	90.32	6,820.3	-622.6	691.3	770.5	0.00	0.00	0.00
7,400.0	90.31	90.32	6,820.1	-622.8	731.3	810.1	0.00	0.00	0.00
7,440.0	90.31	90.32	6,819.9	-623.0	771.3	849.8	0.00	0.00	0.00
7,480.0	90.31	90.32	6,819.7	-623.2	811.3	889.4	0.00	0.00	0.00
7,520.0	90.31	90.32	6,819.5	-623.4	851.3	929.1	0.00	0.00	0.00
7,560.0	90.31	90.32	6,819.3	-623.7	891.3	968.7	0.00	0.00	0.00
7,600.0	90.31	90.32	6,819.0	-623.9	931.3	1,008.3	0.00	0.00	0.00
7,640.0	90.31	90.32	6,818.8	-624.1	971.3	1,048.0	0.00	0.00	0.00
7,680.0	90.31	90.32	6,818.6	-624.3	1,011.3	1,087.6	0.00	0.00	0.00
7,720.0	90.31	90.32	6,818.4	-624.5	1,051.3	1,127.3	0.00	0.00	0.00
7,760.0	90.31	90.32	6,818.2	-624.8	1,091.3	1,166.9	0.00	0.00	0.00
7,800.0	90.31	90.32	6,818.0	-625.0	1,131.3	1,206.6	0.00	0.00	0.00
7,840.0	90.31	90.32	6,817.7	-625.2	1,171.3	1,246.2	0.00	0.00	0.00
7,880.0	90.31	90.32	6,817.5	-625.4	1,211.3	1,285.9	0.00	0.00	0.00
7,920.0	90.31	90.32	6,817.3	-625.7	1,251.3	1,325.5	0.00	0.00	0.00
7,960.0	90.31	90.32	6,817.1	-625.9	1,291.3	1,365.2	0.00	0.00	0.00
8,000.0	90.31	90.32	6,816.9	-626.1	1,331.3	1,404.8	0.00	0.00	0.00
8,040.0	90.31	90.32	6,816.7	-626.3	1,371.3	1,444.5	0.00	0.00	0.00
8,080.0	90.31	90.32	6,816.4	-626.5	1,411.3	1,484.1	0.00	0.00	0.00
8,120.0	90.31	90.32	6,816.2	-626.8	1,451.3	1,523.8	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Maxey 24P-312
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4652.0ft (RKB - 15')
Project:	SEC.24-T5N-R65W	MD Reference:	WELL @ 4652.0ft (RKB - 15')
Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	North Reference:	True
Well:	Maxey 24P-312	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-5-13)		

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)
8,160.0	90.31	90.32	6,816.0	-627.0	1,491.3	1,563.4	0.00	0.00	0.00
8,200.0	90.31	90.32	6,815.8	-627.2	1,531.3	1,603.1	0.00	0.00	0.00
8,240.0	90.31	90.32	6,815.6	-627.4	1,571.3	1,642.7	0.00	0.00	0.00
8,280.0	90.31	90.32	6,815.4	-627.6	1,611.3	1,682.4	0.00	0.00	0.00
8,320.0	90.31	90.32	6,815.1	-627.9	1,651.3	1,722.0	0.00	0.00	0.00
8,360.0	90.31	90.32	6,814.9	-628.1	1,691.3	1,761.7	0.00	0.00	0.00
8,400.0	90.31	90.32	6,814.7	-628.3	1,731.3	1,801.3	0.00	0.00	0.00
8,440.0	90.31	90.32	6,814.5	-628.5	1,771.3	1,841.0	0.00	0.00	0.00
8,480.0	90.31	90.32	6,814.3	-628.8	1,811.3	1,880.6	0.00	0.00	0.00
8,520.0	90.31	90.32	6,814.1	-629.0	1,851.3	1,920.3	0.00	0.00	0.00
8,560.0	90.31	90.32	6,813.8	-629.2	1,891.3	1,959.9	0.00	0.00	0.00
8,600.0	90.31	90.32	6,813.6	-629.4	1,931.3	1,999.6	0.00	0.00	0.00
8,640.0	90.31	90.32	6,813.4	-629.6	1,971.3	2,039.2	0.00	0.00	0.00
8,680.0	90.31	90.32	6,813.2	-629.9	2,011.3	2,078.9	0.00	0.00	0.00
8,720.0	90.31	90.32	6,813.0	-630.1	2,051.3	2,118.5	0.00	0.00	0.00
8,760.0	90.31	90.32	6,812.8	-630.3	2,091.3	2,158.2	0.00	0.00	0.00
8,800.0	90.31	90.32	6,812.6	-630.5	2,131.3	2,197.8	0.00	0.00	0.00
8,840.0	90.31	90.32	6,812.3	-630.7	2,171.3	2,237.4	0.00	0.00	0.00
8,880.0	90.31	90.32	6,812.1	-631.0	2,211.3	2,277.1	0.00	0.00	0.00
8,920.0	90.31	90.32	6,811.9	-631.2	2,251.3	2,316.7	0.00	0.00	0.00
8,960.0	90.31	90.32	6,811.7	-631.4	2,291.3	2,356.4	0.00	0.00	0.00
9,000.0	90.31	90.32	6,811.5	-631.6	2,331.3	2,396.0	0.00	0.00	0.00
9,040.0	90.31	90.32	6,811.3	-631.9	2,371.3	2,435.7	0.00	0.00	0.00
9,080.0	90.31	90.32	6,811.0	-632.1	2,411.3	2,475.3	0.00	0.00	0.00
9,120.0	90.31	90.32	6,810.8	-632.3	2,451.3	2,515.0	0.00	0.00	0.00
9,160.0	90.31	90.32	6,810.6	-632.5	2,491.3	2,554.6	0.00	0.00	0.00
9,200.0	90.31	90.32	6,810.4	-632.7	2,531.3	2,594.3	0.00	0.00	0.00
9,240.0	90.31	90.32	6,810.2	-633.0	2,571.3	2,633.9	0.00	0.00	0.00
9,280.0	90.31	90.32	6,810.0	-633.2	2,611.3	2,673.6	0.00	0.00	0.00
9,320.0	90.31	90.32	6,809.7	-633.4	2,651.3	2,713.2	0.00	0.00	0.00
9,360.0	90.31	90.32	6,809.5	-633.6	2,691.3	2,752.9	0.00	0.00	0.00
9,400.0	90.31	90.32	6,809.3	-633.8	2,731.3	2,792.5	0.00	0.00	0.00
9,440.0	90.31	90.32	6,809.1	-634.1	2,771.3	2,832.2	0.00	0.00	0.00
9,480.0	90.31	90.32	6,808.9	-634.3	2,811.3	2,871.8	0.00	0.00	0.00
9,520.0	90.31	90.32	6,808.7	-634.5	2,851.3	2,911.5	0.00	0.00	0.00
9,560.0	90.31	90.32	6,808.4	-634.7	2,891.3	2,951.1	0.00	0.00	0.00
9,600.0	90.31	90.32	6,808.2	-635.0	2,931.3	2,990.8	0.00	0.00	0.00
9,640.0	90.31	90.32	6,808.0	-635.2	2,971.3	3,030.4	0.00	0.00	0.00
9,680.0	90.31	90.32	6,807.8	-635.4	3,011.3	3,070.1	0.00	0.00	0.00
9,720.0	90.31	90.32	6,807.6	-635.6	3,051.3	3,109.7	0.00	0.00	0.00
9,760.0	90.31	90.32	6,807.4	-635.8	3,091.3	3,149.4	0.00	0.00	0.00
9,800.0	90.31	90.32	6,807.1	-636.1	3,131.3	3,189.0	0.00	0.00	0.00
9,840.0	90.31	90.32	6,806.9	-636.3	3,171.3	3,228.7	0.00	0.00	0.00
9,880.0	90.31	90.32	6,806.7	-636.5	3,211.3	3,268.3	0.00	0.00	0.00
9,920.0	90.31	90.32	6,806.5	-636.7	3,251.3	3,308.0	0.00	0.00	0.00
9,960.0	90.31	90.32	6,806.3	-636.9	3,291.3	3,347.6	0.00	0.00	0.00
10,000.0	90.31	90.32	6,806.1	-637.2	3,331.3	3,387.3	0.00	0.00	0.00
10,040.0	90.31	90.32	6,805.8	-637.4	3,371.2	3,426.9	0.00	0.00	0.00
10,080.0	90.31	90.32	6,805.6	-637.6	3,411.2	3,466.5	0.00	0.00	0.00
10,120.0	90.31	90.32	6,805.4	-637.8	3,451.2	3,506.2	0.00	0.00	0.00
10,160.0	90.31	90.32	6,805.2	-638.1	3,491.2	3,545.8	0.00	0.00	0.00
10,200.0	90.31	90.32	6,805.0	-638.3	3,531.2	3,585.5	0.00	0.00	0.00
10,240.0	90.31	90.32	6,804.8	-638.5	3,571.2	3,625.1	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Maxey 24P-312
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4652.0ft (RKB - 15')
Project:	SEC.24-T5N-R65W	MD Reference:	WELL @ 4652.0ft (RKB - 15')
Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	North Reference:	True
Well:	Maxey 24P-312	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (3-5-13)		

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)
10,280.0	90.31	90.32	6,804.5	-638.7	3,611.2	3,664.8	0.00	0.00	0.00
10,320.0	90.31	90.32	6,804.3	-638.9	3,651.2	3,704.4	0.00	0.00	0.00
10,360.0	90.31	90.32	6,804.1	-639.2	3,691.2	3,744.1	0.00	0.00	0.00
10,400.0	90.31	90.32	6,803.9	-639.4	3,731.2	3,783.7	0.00	0.00	0.00
10,440.0	90.31	90.32	6,803.7	-639.6	3,771.2	3,823.4	0.00	0.00	0.00
10,480.0	90.31	90.32	6,803.5	-639.8	3,811.2	3,863.0	0.00	0.00	0.00
10,520.0	90.31	90.32	6,803.2	-640.0	3,851.2	3,902.7	0.00	0.00	0.00
10,560.0	90.31	90.32	6,803.0	-640.3	3,891.2	3,942.3	0.00	0.00	0.00
10,600.0	90.31	90.32	6,802.8	-640.5	3,931.2	3,982.0	0.00	0.00	0.00
10,640.0	90.31	90.32	6,802.6	-640.7	3,971.2	4,021.6	0.00	0.00	0.00
10,680.0	90.31	90.32	6,802.4	-640.9	4,011.2	4,061.3	0.00	0.00	0.00
10,720.0	90.31	90.32	6,802.2	-641.2	4,051.2	4,100.9	0.00	0.00	0.00
10,760.0	90.31	90.32	6,801.9	-641.4	4,091.2	4,140.6	0.00	0.00	0.00
10,800.0	90.31	90.32	6,801.7	-641.6	4,131.2	4,180.2	0.00	0.00	0.00
10,840.0	90.31	90.32	6,801.5	-641.8	4,171.2	4,219.9	0.00	0.00	0.00
10,880.0	90.31	90.32	6,801.3	-642.0	4,211.2	4,259.5	0.00	0.00	0.00
10,920.0	90.31	90.32	6,801.1	-642.3	4,251.2	4,299.2	0.00	0.00	0.00
10,960.0	90.31	90.32	6,800.9	-642.5	4,291.2	4,338.8	0.00	0.00	0.00
11,000.0	90.31	90.32	6,800.6	-642.7	4,331.2	4,378.5	0.00	0.00	0.00
11,040.0	90.31	90.32	6,800.4	-642.9	4,371.2	4,418.1	0.00	0.00	0.00
11,080.0	90.31	90.32	6,800.2	-643.1	4,411.2	4,457.8	0.00	0.00	0.00
11,120.0	90.31	90.32	6,800.0	-643.4	4,451.2	4,497.4	0.00	0.00	0.00
11,160.0	90.31	90.32	6,799.8	-643.6	4,491.2	4,537.1	0.00	0.00	0.00
11,200.0	90.31	90.32	6,799.6	-643.8	4,531.2	4,576.7	0.00	0.00	0.00
11,240.0	90.31	90.32	6,799.3	-644.0	4,571.2	4,616.4	0.00	0.00	0.00
11,280.0	90.31	90.32	6,799.1	-644.3	4,611.2	4,656.0	0.00	0.00	0.00
11,304.6	90.31	90.32	6,799.0	-644.4	4,635.8	4,680.4	0.00	0.00	0.00

Casing Points				
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,303.7	6,820.6	7"	7	7-1/2

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,000.0	1,000.0	0.0	0.0	KOP #1
6,099.6	6,056.7	-618.0	-133.0	KOP #2
7,303.7	6,820.6	-622.2	635.0	End of Build



Directional

PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.24-T5N-R65W

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

Maxey 24P-312

Wellbore #1

Plan #1 (3-5-13)

Anticollision Report

11 March, 2013



Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Maxey 24P-312
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4652.0ft (RKB - 15')
Reference Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4652.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24P-312	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 (3-5-13)	Offset TVD Reference:	Offset Datum

Reference	Plan #1 (3-5-13)
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	11,304.6	Plan #1 (3-5-13) (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)	1,000.0	999.0	30.6	26.4	7.180	CC
Maxey 24O-232 - Wellbore #1 - Plan #1 (3-7-13)	1,100.0	1,099.0	31.1	26.4	6.624	ES
Maxey 24O-232 - Wellbore #1 - Plan #1 (3-7-13)	11,304.6	11,196.9	339.2	84.1	1.330	Level 3, SF
Maxey 24O-402 - Wellbore #1 - Plan #1 (3-7-13)	1,000.0	999.0	58.6	54.3	13.733	CC
Maxey 24O-402 - Wellbore #1 - Plan #1 (3-7-13)	1,100.0	1,099.0	58.9	54.2	12.562	ES
Maxey 24O-402 - Wellbore #1 - Plan #1 (3-7-13)	11,304.6	11,354.5	687.1	429.3	2.665	SF
Maxey 24P-402 - Wellbore #1 - Plan #1 (3-5-13)	200.0	200.0	30.6	30.0	45.447	CC
Maxey 24P-402 - Wellbore #1 - Plan #1 (3-5-13)	300.0	299.9	30.9	29.8	28.065	ES
Maxey 24P-402 - Wellbore #1 - Plan #1 (3-5-13)	11,304.6	11,408.1	319.4	74.5	1.304	Level 3, SF
Maxey 24Q-HZ Pad Sec.24-T5N-R65W						
Emily 1 (Exist.) - Wellbore #1 - Wellbore #1	11,231.4	6,775.4	141.7	5.4	1.040	Level 2, CC, ES, SF
Maxey 33-24 (Exist.) - Wellbore #1 - Wellbore #1	7,176.7	6,794.8	228.1	199.8	8.051	CC, ES
Maxey 33-24 (Exist.) - Wellbore #1 - Wellbore #1	7,200.0	6,798.2	229.3	200.5	7.968	SF
Maxey Hoff 2 (Exist.) - Wellbore #1 - Wellbore #1	9,967.0	6,785.2	54.3	-46.8	0.537	Level 1, CC, ES, SF

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	
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)				
0.0	0.0	0.0	0.0	0.0	0.0	90.00	0.0	30.6	30.7						
100.0	100.0	99.0	99.0	0.1	0.1	90.00	0.0	30.6	30.6	30.4	0.22	137.025			
200.0	200.0	199.0	199.0	0.3	0.3	90.00	0.0	30.6	30.6	30.0	0.67	45.599			
300.0	300.0	299.0	299.0	0.6	0.6	90.00	0.0	30.6	30.6	29.5	1.12	27.323			
400.0	400.0	399.0	399.0	0.8	0.8	90.00	0.0	30.6	30.6	29.1	1.57	19.505			
500.0	500.0	499.0	499.0	1.0	1.0	90.00	0.0	30.6	30.6	28.6	2.02	15.166			
600.0	600.0	599.0	599.0	1.2	1.2	90.00	0.0	30.6	30.6	28.2	2.47	12.406			
700.0	700.0	699.0	699.0	1.5	1.5	90.00	0.0	30.6	30.6	27.7	2.92	10.496			
800.0	800.0	799.0	799.0	1.7	1.7	90.00	0.0	30.6	30.6	27.3	3.37	9.095			
900.0	900.0	899.0	899.0	1.9	1.9	90.00	0.0	30.6	30.6	26.8	3.82	8.025			
1,000.0	1,000.0	999.0	999.0	2.1	2.1	90.00	0.0	30.6	30.6	26.4	4.27	7.180	CC		
1,100.0	1,100.0	1,099.0	1,099.0	2.3	2.4	-105.29	0.0	30.6	31.1	26.4	4.69	6.624	ES		

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 24P-312
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4652.0ft (RKB - 15')
Reference Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4652.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24P-312	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 (3-5-13)	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)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
1,200.0	1,199.8	1,198.8	1,198.8	2.5	2.6	-114.09		0.0	30.6	32.8	27.7	5.09	6.452	
1,300.0	1,299.5	1,298.5	1,298.5	2.7	2.8	-126.32		0.0	30.6	37.3	31.8	5.50	6.777	
1,400.0	1,398.7	1,397.7	1,397.7	2.9	3.0	-138.61		0.0	30.6	45.6	39.7	5.91	7.711	
1,500.0	1,497.7	1,496.7	1,496.7	3.2	3.3	-147.91		0.0	30.6	56.8	50.5	6.33	8.969	
1,600.0	1,596.8	1,598.1	1,598.0	3.4	3.5	-153.94		-1.5	29.8	67.4	60.6	6.73	10.005	
1,700.0	1,695.8	1,700.2	1,700.0	3.7	3.6	-158.06		-6.1	27.3	75.0	67.9	7.12	10.529	
1,800.0	1,794.8	1,802.7	1,802.2	4.0	3.8	-161.32		-14.0	23.0	79.3	71.8	7.52	10.548	
1,900.0	1,893.8	1,902.9	1,901.8	4.3	4.0	-164.18		-23.6	17.7	81.7	73.8	7.92	10.313	
2,000.0	1,992.9	2,002.8	2,001.1	4.6	4.2	-166.86		-33.2	12.4	84.3	75.9	8.33	10.113	
2,100.0	2,091.9	2,102.7	2,100.4	4.9	4.5	-169.38		-42.8	7.2	87.0	78.2	8.75	9.944	
2,200.0	2,190.9	2,202.6	2,199.7	5.2	4.7	-171.74		-52.3	1.9	89.9	80.7	9.17	9.800	
2,300.0	2,289.9	2,302.5	2,298.9	5.5	4.9	-173.96		-61.9	-3.3	92.9	83.3	9.60	9.677	
2,400.0	2,389.0	2,402.4	2,398.2	5.9	5.2	-176.02		-71.5	-8.6	96.1	86.1	10.04	9.571	
2,500.0	2,488.0	2,502.3	2,497.5	6.2	5.5	-177.96		-81.1	-13.8	99.4	88.9	10.49	9.478	
2,600.0	2,587.0	2,602.2	2,596.8	6.5	5.7	-179.77		-90.6	-19.1	102.8	91.8	10.94	9.396	
2,700.0	2,686.1	2,702.1	2,696.1	6.8	6.0	-178.54		-100.2	-24.3	106.3	94.9	11.40	9.323	
2,800.0	2,785.1	2,802.0	2,795.4	7.2	6.3	-176.96		-109.8	-29.6	109.8	98.0	11.86	9.258	
2,900.0	2,884.1	2,901.9	2,894.7	7.5	6.5	-175.47		-119.4	-34.8	113.5	101.1	12.34	9.199	
3,000.0	2,983.1	3,001.7	2,994.0	7.9	6.8	-174.08		-129.0	-40.1	117.2	104.4	12.82	9.145	
3,100.0	3,082.2	3,101.6	3,093.3	8.2	7.1	-172.78		-138.5	-45.4	121.0	107.7	13.30	9.095	
3,200.0	3,181.2	3,201.5	3,192.6	8.5	7.4	-171.56		-148.1	-50.6	124.8	111.0	13.80	9.049	
3,300.0	3,280.2	3,301.4	3,291.9	8.9	7.7	-170.41		-157.7	-55.9	128.7	114.4	14.29	9.007	
3,400.0	3,379.3	3,401.3	3,391.2	9.2	7.9	-169.33		-167.3	-61.1	132.7	117.9	14.80	8.967	
3,500.0	3,478.3	3,501.2	3,490.5	9.6	8.2	-168.31		-176.8	-66.4	136.7	121.4	15.31	8.930	
3,600.0	3,577.3	3,601.1	3,589.7	9.9	8.5	-167.35		-186.4	-71.6	140.7	124.9	15.82	8.896	
3,700.0	3,676.3	3,701.0	3,689.0	10.2	8.8	-166.44		-196.0	-76.9	144.8	128.4	16.34	8.863	
3,800.0	3,775.4	3,800.9	3,788.3	10.6	9.1	-165.58		-205.6	-82.1	148.9	132.0	16.86	8.832	
3,900.0	3,874.4	3,900.8	3,887.6	10.9	9.4	-164.77		-215.1	-87.4	153.0	135.6	17.38	8.803	
4,000.0	3,973.4	4,000.7	3,986.9	11.3	9.7	-164.00		-224.7	-92.6	157.2	139.3	17.91	8.776	
4,100.0	4,072.4	4,100.5	4,086.2	11.6	10.0	-163.27		-234.3	-97.9	161.4	142.9	18.45	8.749	
4,200.0	4,171.5	4,200.4	4,185.5	12.0	10.3	-162.58		-243.9	-103.2	165.6	146.6	18.98	8.725	
4,300.0	4,270.5	4,300.3	4,284.8	12.3	10.6	-161.92		-253.5	-108.4	169.8	150.3	19.52	8.701	
4,400.0	4,369.5	4,400.2	4,384.1	12.7	10.9	-161.30		-263.0	-113.7	174.1	154.0	20.06	8.679	
4,500.0	4,468.6	4,500.1	4,483.4	13.0	11.2	-160.70		-272.6	-118.9	178.4	157.8	20.60	8.658	
4,600.0	4,567.6	4,595.3	4,578.1	13.3	11.4	-160.43		-280.5	-123.2	183.9	162.8	21.10	8.718	
4,700.0	4,666.6	4,689.9	4,672.5	13.7	11.6	-160.74		-285.5	-126.0	192.2	170.6	21.53	8.926	
4,800.0	4,765.6	4,784.0	4,766.6	14.0	11.8	-161.53		-287.8	-127.3	203.1	181.1	21.91	9.267	
4,900.0	4,864.7	4,881.1	4,863.7	14.4	12.0	-162.64		-288.0	-127.4	216.1	193.9	22.28	9.700	
5,000.0	4,963.7	4,980.1	4,962.7	14.7	12.1	-163.68		-288.0	-127.4	229.5	206.8	22.66	10.128	
5,100.0	5,062.7	5,079.1	5,061.7	15.1	12.3	-164.60		-288.0	-127.4	242.9	219.8	23.04	10.541	
5,200.0	5,161.7	5,178.1	5,160.7	15.4	12.5	-165.42		-288.0	-127.4	256.3	232.9	23.43	10.939	
5,300.0	5,260.8	5,277.2	5,259.8	15.8	12.7	-166.17		-288.0	-127.4	269.8	246.0	23.83	11.323	
5,400.0	5,359.8	5,376.2	5,358.8	16.1	12.8	-166.84		-288.0	-127.4	283.3	259.1	24.23	11.693	
5,500.0	5,458.8	5,475.2	5,457.8	16.5	13.0	-167.45		-288.0	-127.4	296.9	272.3	24.64	12.050	
5,600.0	5,557.9	5,574.3	5,556.9	16.8	13.2	-168.02		-288.0	-127.4	310.0	284.9	25.06	12.371	
5,700.0	5,657.4	5,673.8	5,656.4	17.0	13.4	-168.44		-288.0	-127.4	320.0	294.5	25.44	12.577	
5,800.0	5,757.2	5,773.6	5,756.2	17.2	13.5	-168.70		-288.0	-127.4	326.5	300.7	25.80	12.655	
5,900.0	5,857.1	5,873.5	5,856.1	17.4	13.7	-168.82		-288.0	-127.4	329.7	303.6	26.14	12.612	
6,000.0	5,957.1	5,973.5	5,956.1	17.5	13.9	-168.98		-288.0	-127.4	330.0	299.1	30.98	10.655	
6,024.2	5,981.3	5,997.7	5,980.3	17.5	14.0	-89.34		-288.0	-127.4	330.0	303.4	26.60	12.407	
6,100.0	6,057.1	6,072.9	6,055.4	17.6	14.1	-88.69		-288.0	-123.6	330.1	303.3	26.83	12.301	

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 24P-312
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4652.0ft (RKB - 15')
Reference Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4652.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24P-312	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 (3-5-13)	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		
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor				
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)					
6,200.0	6,156.8	6,170.8	6,151.9	17.8	14.2	-87.03	-288.1	-107.8	330.5	303.4	27.06	12.212				
6,300.0	6,254.8	6,267.6	6,244.6	17.9	14.3	-85.42	-288.2	-80.1	331.1	303.8	27.26	12.148				
6,400.0	6,349.4	6,363.3	6,332.1	18.0	14.4	-83.90	-288.4	-41.5	331.9	304.5	27.47	12.082				
6,500.0	6,439.0	6,458.0	6,413.3	18.1	14.5	-82.50	-288.7	7.3	332.9	305.1	27.79	11.980				
6,600.0	6,522.1	6,551.9	6,487.2	18.2	14.6	-81.23	-289.0	65.1	334.0	305.7	28.31	11.799				
6,700.0	6,597.2	6,645.1	6,552.9	18.3	14.7	-80.11	-289.3	131.0	335.1	306.0	29.14	11.498				
6,800.0	6,663.0	6,737.5	6,609.8	18.5	15.3	-79.15	-289.7	203.8	336.1	305.7	30.41	11.055				
6,900.0	6,718.5	6,829.5	6,657.2	18.9	16.3	-78.37	-290.1	282.6	337.1	304.9	32.18	10.476				
7,000.0	6,762.7	6,921.1	6,694.6	19.5	17.6	-77.77	-290.6	366.1	337.9	303.4	34.49	9.797				
7,100.0	6,794.7	7,012.3	6,721.8	20.7	19.1	-77.36	-291.0	453.1	338.4	301.1	37.31	9.071				
7,200.0	6,814.2	7,103.4	6,738.3	22.2	20.8	-77.14	-291.5	542.6	338.7	298.1	40.58	8.347				
7,300.0	6,820.7	7,194.4	6,744.1	24.1	22.7	-77.12	-292.0	633.4	338.8	294.6	44.20	7.665				
7,330.7	6,820.6	7,224.5	6,744.0	24.7	23.3	-77.11	-292.1	663.5	338.8	293.3	45.49	7.449				
7,400.0	6,820.1	7,293.7	6,743.7	26.2	24.8	-77.14	-292.5	732.7	338.8	290.4	48.43	6.995				
7,500.0	6,819.6	7,393.7	6,743.3	28.4	27.1	-77.15	-293.0	832.7	338.8	285.9	52.92	6.403				
7,600.0	6,819.0	7,493.7	6,742.8	30.7	29.5	-77.17	-293.5	932.7	338.8	281.2	57.57	5.885				
7,700.0	6,818.5	7,593.7	6,742.4	33.1	32.0	-77.18	-294.1	1,032.7	338.8	276.5	62.37	5.433				
7,800.0	6,818.0	7,693.7	6,741.9	35.5	34.5	-77.20	-294.6	1,132.7	338.8	271.6	67.27	5.037				
7,900.0	6,817.4	7,793.7	6,741.4	38.0	37.0	-77.22	-295.1	1,232.7	338.8	266.6	72.25	4.690				
8,000.0	6,816.9	7,893.7	6,741.0	40.5	39.6	-77.23	-295.6	1,332.7	338.9	261.5	77.31	4.383				
8,100.0	6,816.3	7,993.7	6,740.5	43.1	42.2	-77.25	-296.1	1,432.7	338.9	256.4	82.43	4.111				
8,200.0	6,815.8	8,093.7	6,740.1	45.7	44.9	-77.26	-296.7	1,532.7	338.9	251.3	87.59	3.869				
8,300.0	6,815.3	8,193.7	6,739.6	48.4	47.5	-77.28	-297.2	1,632.7	338.9	246.1	92.79	3.652				
8,400.0	6,814.7	8,293.7	6,739.2	51.0	50.2	-77.29	-297.7	1,732.7	338.9	240.9	98.02	3.458				
8,500.0	6,814.2	8,393.7	6,738.7	53.7	52.9	-77.31	-298.2	1,832.7	338.9	235.6	103.28	3.282				
8,600.0	6,813.6	8,493.7	6,738.3	56.3	55.6	-77.32	-298.8	1,932.7	338.9	230.4	108.56	3.122				
8,700.0	6,813.1	8,593.7	6,737.8	59.0	58.3	-77.34	-299.3	2,032.7	338.9	225.1	113.87	2.976				
8,800.0	6,812.6	8,693.7	6,737.4	61.7	61.0	-77.36	-299.8	2,132.7	338.9	219.8	119.19	2.844				
8,900.0	6,812.0	8,793.7	6,736.9	64.4	63.7	-77.37	-300.3	2,232.7	339.0	214.4	124.53	2.722				
9,000.0	6,811.5	8,893.7	6,736.5	67.2	66.5	-77.39	-300.8	2,332.7	339.0	209.1	129.89	2.610				
9,100.0	6,810.9	8,993.7	6,736.0	69.9	69.2	-77.40	-301.4	2,432.7	339.0	203.7	135.26	2.506				
9,200.0	6,810.4	9,093.7	6,735.5	72.6	71.9	-77.42	-301.9	2,532.7	339.0	198.4	140.63	2.410				
9,300.0	6,809.8	9,193.7	6,735.1	75.3	74.7	-77.43	-302.4	2,632.7	339.0	193.0	146.02	2.322				
9,400.0	6,809.3	9,293.7	6,734.6	78.1	77.4	-77.45	-302.9	2,732.7	339.0	187.6	151.42	2.239				
9,500.0	6,808.8	9,393.7	6,734.2	80.8	80.2	-77.46	-303.5	2,832.7	339.0	182.2	156.82	2.162				
9,600.0	6,808.2	9,493.7	6,733.7	83.6	83.0	-77.48	-304.0	2,932.7	339.0	176.8	162.23	2.090				
9,700.0	6,807.7	9,593.7	6,733.3	86.3	85.7	-77.50	-304.5	3,032.7	339.1	171.4	167.65	2.022				
9,800.0	6,807.1	9,693.7	6,732.8	89.1	88.5	-77.51	-305.0	3,132.7	339.1	166.0	173.08	1.959				
9,900.0	6,806.6	9,793.7	6,732.4	91.9	91.3	-77.53	-305.5	3,232.6	339.1	160.6	178.51	1.900				
10,000.0	6,806.1	9,893.7	6,731.9	94.6	94.0	-77.54	-306.1	3,332.6	339.1	155.1	183.94	1.843				
10,100.0	6,805.5	9,993.7	6,731.5	97.4	96.8	-77.56	-306.6	3,432.6	339.1	149.7	189.38	1.791				
10,200.0	6,805.0	10,093.7	6,731.0	100.2	99.6	-77.57	-307.1	3,532.6	339.1	144.3	194.83	1.741				
10,300.0	6,804.4	10,193.7	6,730.6	102.9	102.4	-77.59	-307.6	3,632.6	339.1	138.8	200.27	1.693				
10,400.0	6,803.9	10,293.7	6,730.1	105.7	105.1	-77.60	-308.2	3,732.6	339.1	133.4	205.73	1.648				
10,500.0	6,803.4	10,393.7	6,729.6	108.5	107.9	-77.62	-308.7	3,832.6	339.1	128.0	211.18	1.606				
10,600.0	6,802.8	10,493.7	6,729.2	111.3	110.7	-77.64	-309.2	3,932.6	339.2	122.5	216.64	1.566				
10,700.0	6,802.3	10,593.7	6,728.7	114.0	113.5	-77.65	-309.7	4,032.6	339.2	117.1	222.10	1.527				
10,800.0	6,801.7	10,693.7	6,728.3	116.8	116.3	-77.67	-310.2	4,132.6	339.2	111.6	227.57	1.490 Level 3				
10,900.0	6,801.2	10,793.7	6,727.8	119.6	119.1	-77.68	-310.8	4,232.6	339.2	106.2	233.04	1.456 Level 3				
11,000.0	6,800.6	10,893.7	6,727.4	122.4	121.9	-77.70	-311.3	4,332.6	339.2	100.7	238.51	1.422 Level 3				
11,100.0	6,800.1	10,993.7	6,726.9	125.2	124.6	-77.71	-311.8	4,432.6	339.2	95.2	243.98	1.390 Level 3				

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 24P-312
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4652.0ft (RKB - 15')
Reference Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4652.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24P-312	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 (3-5-13)	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
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	
11,200.0	6,799.6	11,093.7	6,726.5	127.9	127.4	-77.73	-312.3	4,532.6	339.2	89.8	249.46	1.360	Level 3	
11,300.0	6,799.0	11,193.7	6,726.0	130.7	130.2	-77.74	-312.9	4,632.6	339.2	84.3	254.94	1.331	Level 3	
11,300.0	6,799.0	11,193.7	6,726.0	130.7	130.2	-77.74	-312.9	4,632.6	339.2	84.3	254.94	1.331	Level 3	
11,304.6	6,799.0	11,196.9	6,726.0	130.9	130.3	-77.74	-312.9	4,635.8	339.2	84.1	255.15	1.330	Level 3, SF	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Maxey 24P-312
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4652.0ft (RKB - 15')
Reference Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4652.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24P-312	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 (3-5-13)	Offset TVD Reference:	Offset Datum

Offset Design Maxey 24O-HZ Pad Sec.24-T5N-R65W - Maxey 24O-402 - 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 (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	93.56		-3.6	58.5	58.6				
100.0	100.0	99.0	99.0	0.1	0.1	93.56		-3.6	58.5	58.6	58.4	0.22	262.099	
200.0	200.0	199.0	199.0	0.3	0.3	93.56		-3.6	58.5	58.6	57.9	0.67	87.221	
300.0	300.0	299.0	299.0	0.6	0.6	93.56		-3.6	58.5	58.6	57.5	1.12	52.263	
400.0	400.0	399.0	399.0	0.8	0.8	93.56		-3.6	58.5	58.6	57.0	1.57	37.309	
500.0	500.0	499.0	499.0	1.0	1.0	93.56		-3.6	58.5	58.6	56.6	2.02	29.009	
600.0	600.0	599.0	599.0	1.2	1.2	93.56		-3.6	58.5	58.6	56.1	2.47	23.730	
700.0	700.0	699.0	699.0	1.5	1.5	93.56		-3.6	58.5	58.6	55.7	2.92	20.076	
800.0	800.0	799.0	799.0	1.7	1.7	93.56		-3.6	58.5	58.6	55.2	3.37	17.398	
900.0	900.0	899.0	899.0	1.9	1.9	93.56		-3.6	58.5	58.6	54.8	3.82	15.350	
1,000.0	1,000.0	999.0	999.0	2.1	2.1	93.56		-3.6	58.5	58.6	54.3	4.27	13.733 CC	
1,100.0	1,100.0	1,099.0	1,099.0	2.3	2.4	-100.25		-3.6	58.5	58.9	54.2	4.69	12.562 ES	
1,200.0	1,199.8	1,198.8	1,198.8	2.5	2.6	-105.14		-3.6	58.5	60.1	55.0	5.09	11.802	
1,300.0	1,299.5	1,298.5	1,298.5	2.7	2.8	-112.75		-3.6	58.5	62.9	57.4	5.50	11.435	
1,400.0	1,398.7	1,397.7	1,397.7	2.9	3.0	-122.04		-3.6	58.5	68.6	62.6	5.93	11.571	
1,500.0	1,497.7	1,496.7	1,496.7	3.2	3.3	-130.81		-3.6	58.5	76.9	70.5	6.36	12.088	
1,600.0	1,596.8	1,595.8	1,595.8	3.4	3.5	-137.76		-3.6	58.5	86.7	79.9	6.80	12.746	
1,700.0	1,695.8	1,694.8	1,694.8	3.7	3.7	-143.24		-3.6	58.5	97.5	90.2	7.24	13.461	
1,800.0	1,794.8	1,793.8	1,793.8	4.0	3.9	-147.61		-3.6	58.5	109.0	101.3	7.68	14.185	
1,900.0	1,893.8	1,892.8	1,892.8	4.3	4.1	-151.14		-3.6	58.5	121.0	112.9	8.12	14.892	
2,000.0	1,992.9	1,991.9	1,991.9	4.6	4.4	-154.02		-3.6	58.5	133.4	124.8	8.57	15.566	
2,100.0	2,091.9	2,092.3	2,092.3	4.9	4.6	-157.00		-3.2	57.1	145.6	136.6	9.00	16.171	
2,200.0	2,190.9	2,192.6	2,192.5	5.2	4.8	-160.74		-1.7	52.3	157.2	147.8	9.42	16.687	
2,300.0	2,289.9	2,292.4	2,291.9	5.5	5.0	-165.10		0.8	44.3	168.8	159.0	9.84	17.152	
2,400.0	2,389.0	2,390.8	2,389.8	5.9	5.2	-169.49		3.9	34.3	181.0	170.7	10.27	17.624	
2,500.0	2,488.0	2,489.2	2,487.5	6.2	5.5	-173.33		7.0	24.4	194.2	183.4	10.71	18.120	
2,600.0	2,587.0	2,587.5	2,585.3	6.5	5.7	-176.67		10.1	14.4	208.0	196.9	11.17	18.620	
2,700.0	2,686.1	2,685.8	2,683.1	6.8	5.9	-179.59		13.2	4.5	222.6	210.9	11.64	19.116	
2,800.0	2,785.1	2,784.2	2,780.9	7.2	6.2	-177.85		16.3	-5.5	237.6	225.5	12.12	19.597	
2,900.0	2,884.1	2,882.5	2,878.7	7.5	6.4	-175.60		19.4	-15.5	253.0	240.4	12.61	20.061	
3,000.0	2,983.1	2,980.8	2,976.5	7.9	6.7	-173.60		22.4	-25.4	268.8	255.7	13.11	20.504	
3,100.0	3,082.2	3,079.2	3,074.2	8.2	7.0	-171.83		25.5	-35.4	284.8	271.2	13.61	20.925	
3,200.0	3,181.2	3,177.5	3,172.0	8.5	7.2	-170.24		28.6	-45.3	301.1	287.0	14.12	21.325	
3,300.0	3,280.2	3,275.9	3,269.8	8.9	7.5	-168.82		31.7	-55.3	317.6	303.0	14.63	21.704	
3,400.0	3,379.3	3,374.2	3,367.6	9.2	7.7	-167.54		34.8	-65.2	334.3	319.1	15.15	22.063	
3,500.0	3,478.3	3,472.5	3,465.4	9.6	8.0	-166.38		37.9	-75.2	351.1	335.4	15.67	22.403	
3,600.0	3,577.3	3,570.9	3,563.2	9.9	8.3	-165.32		41.0	-85.2	368.0	351.8	16.20	22.724	
3,700.0	3,676.3	3,669.2	3,660.9	10.2	8.6	-164.36		44.1	-95.1	385.1	368.4	16.72	23.028	
3,800.0	3,775.4	3,767.5	3,758.7	10.6	8.8	-163.48		47.2	-105.1	402.2	385.0	17.25	23.316	
3,900.0	3,874.4	3,865.9	3,856.5	10.9	9.1	-162.68		50.3	-115.0	419.5	401.7	17.78	23.589	
4,000.0	3,973.4	3,967.9	3,958.0	11.3	9.4	-161.99		53.3	-124.7	436.5	418.2	18.30	23.853	
4,100.0	4,072.4	4,073.0	4,062.9	11.6	9.6	-161.74		55.4	-131.4	452.3	433.6	18.77	24.096	
4,200.0	4,171.5	4,178.6	4,168.5	12.0	9.8	-161.96		56.3	-134.3	466.7	447.5	19.21	24.295	
4,300.0	4,270.5	4,279.7	4,269.5	12.3	10.0	-162.47		56.4	-134.5	480.0	460.4	19.64	24.448	
4,400.0	4,369.5	4,378.7	4,368.5	12.7	10.2	-162.95		56.4	-134.5	493.3	473.3	20.08	24.574	
4,500.0	4,468.6	4,477.7	4,467.6	13.0	10.4	-163.41		56.4	-134.5	506.7	486.1	20.52	24.691	
4,600.0	4,567.6	4,576.8	4,566.6	13.3	10.6	-163.85		56.4	-134.5	520.0	499.1	20.97	24.803	
4,700.0	4,666.6	4,675.8	4,665.6	13.7	10.8	-164.27		56.4	-134.5	533.4	512.0	21.41	24.912	
4,800.0	4,765.6	4,774.8	4,764.6	14.0	11.0	-164.66		56.4	-134.5	546.8	525.0	21.86	25.016	
4,900.0	4,864.7	4,873.8	4,863.7	14.4	11.2	-165.04		56.4	-134.5	560.3	538.0	22.31	25.117	
5,000.0	4,963.7	4,972.9	4,962.7	14.7	11.4	-165.40		56.4	-134.5	573.7	551.0	22.75	25.214	

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 24P-312
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4652.0ft (RKB - 15')
Reference Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4652.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24P-312	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 (3-5-13)	Offset TVD Reference:	Offset Datum

Offset Design Maxey 24O-HZ Pad Sec.24-T5N-R65W - Maxey 24O-402 - 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
5,100.0	5,062.7	5,071.9	5,061.7	15.1	11.6	165.74		56.4	-134.5	587.2	564.0	23.20	25.308	
5,200.0	5,161.7	5,170.9	5,160.7	15.4	11.8	166.06		56.4	-134.5	600.7	577.1	23.65	25.399	
5,300.0	5,260.8	5,269.9	5,259.8	15.8	12.0	166.38		56.4	-134.5	614.2	590.1	24.10	25.486	
5,400.0	5,359.8	5,369.0	5,358.8	16.1	12.2	166.68		56.4	-134.5	627.8	603.2	24.55	25.570	
5,500.0	5,458.8	5,468.0	5,457.8	16.5	12.4	166.96		56.4	-134.5	641.3	616.3	25.00	25.652	
5,600.0	5,557.9	5,567.1	5,556.9	16.8	12.7	167.26		56.4	-134.5	654.3	628.9	25.47	25.691	
5,700.0	5,657.4	5,666.6	5,656.4	17.0	12.9	167.50		56.4	-134.5	664.3	638.4	25.91	25.640	
5,800.0	5,757.2	5,766.3	5,756.2	17.2	13.1	167.65		56.4	-134.5	670.9	644.5	26.32	25.489	
5,900.0	5,857.1	5,866.3	5,856.1	17.4	13.3	167.72		56.4	-134.5	674.0	647.3	26.70	25.244	
6,000.0	5,957.1	5,966.3	5,956.1	17.5	13.5	-0.13		56.4	-134.5	674.4	644.0	30.32	22.244	
6,066.5	6,023.6	6,032.8	6,022.6	17.6	13.6	-90.45		56.4	-134.5	674.4	647.0	27.35	24.656	
6,100.0	6,057.1	6,066.3	6,056.1	17.6	13.7	-90.44		56.4	-134.5	674.4	646.9	27.48	24.539	
6,200.0	6,156.8	6,166.3	6,156.1	17.8	13.9	-90.98		56.4	-134.3	674.4	646.6	27.87	24.201	
6,300.0	6,254.8	6,267.9	6,257.2	17.9	14.1	-91.87		56.3	-125.1	674.7	646.5	28.18	23.940	
6,400.0	6,349.4	6,371.0	6,357.7	18.0	14.2	-92.74		56.2	-102.1	675.1	646.7	28.44	23.735	
6,500.0	6,439.0	6,475.6	6,455.4	18.1	14.3	-93.57		56.0	-65.2	675.7	647.0	28.71	23.532	
6,600.0	6,522.1	6,581.6	6,548.5	18.2	14.5	-94.33		55.8	-14.6	676.4	647.3	29.10	23.246	
6,700.0	6,597.2	6,689.0	6,634.7	18.3	14.8	-95.03		55.5	49.4	677.1	647.3	29.74	22.764	
6,800.0	6,663.0	6,797.7	6,711.9	18.5	15.3	-95.63		55.1	125.7	677.8	647.0	30.84	21.978	
6,900.0	6,718.5	6,907.5	6,778.1	18.9	16.2	-96.13		54.7	213.2	678.5	645.9	32.56	20.835	
7,000.0	6,762.7	7,018.2	6,831.5	19.5	17.4	-96.51		54.2	310.1	679.0	644.0	35.02	19.391	
7,100.0	6,794.7	7,129.6	6,870.6	20.7	19.1	-96.78		53.7	414.3	679.5	641.3	38.20	17.787	
7,200.0	6,814.2	7,241.5	6,894.1	22.2	21.0	-96.91		53.2	523.6	679.7	637.7	42.01	16.180	
7,300.0	6,820.7	7,344.4	6,905.3	24.1	23.1	-97.23		52.7	625.8	680.3	634.2	46.08	14.763	
7,400.0	6,820.1	7,452.6	6,911.3	26.2	25.4	-97.77		52.1	733.9	681.2	630.7	50.49	13.492	
7,500.0	6,819.6	7,553.3	6,911.3	28.4	27.7	-97.82		51.7	834.6	681.3	626.3	55.00	12.388	
7,600.0	6,819.0	7,653.3	6,911.4	30.7	30.0	-97.87		51.2	934.6	681.5	621.8	59.66	11.422	
7,700.0	6,818.5	7,753.3	6,911.4	33.1	32.4	-97.92		50.7	1,034.6	681.6	617.2	64.47	10.573	
7,800.0	6,818.0	7,853.3	6,911.4	35.5	34.9	-97.96		50.2	1,134.6	681.8	612.4	69.39	9.825	
7,900.0	6,817.4	7,953.3	6,911.4	38.0	37.4	-98.01		49.7	1,234.6	681.9	607.5	74.40	9.166	
8,000.0	6,816.9	8,053.3	6,911.4	40.5	40.0	-98.05		49.2	1,334.6	682.1	602.6	79.48	8.582	
8,100.0	6,816.3	8,153.3	6,911.4	43.1	42.6	-98.10		48.7	1,434.6	682.2	597.6	84.62	8.062	
8,200.0	6,815.8	8,253.3	6,911.5	45.7	45.2	-98.14		48.3	1,534.6	682.4	592.5	89.81	7.598	
8,300.0	6,815.3	8,353.3	6,911.5	48.4	47.8	-98.19		47.8	1,634.6	682.5	587.5	95.03	7.182	
8,400.0	6,814.7	8,453.3	6,911.5	51.0	50.5	-98.23		47.3	1,734.6	682.6	582.4	100.30	6.806	
8,500.0	6,814.2	8,553.3	6,911.5	53.7	53.2	-98.28		46.8	1,834.6	682.8	577.2	105.59	6.467	
8,600.0	6,813.6	8,653.3	6,911.5	56.3	55.9	-98.33		46.3	1,934.6	682.9	572.0	110.90	6.158	
8,700.0	6,813.1	8,753.3	6,911.5	59.0	58.6	-98.37		45.8	2,034.5	683.1	566.9	116.24	5.877	
8,800.0	6,812.6	8,853.3	6,911.6	61.7	61.3	-98.42		45.4	2,134.5	683.2	561.6	121.60	5.619	
8,900.0	6,812.0	8,953.3	6,911.6	64.4	64.0	-98.46		44.9	2,234.5	683.4	556.4	126.97	5.382	
9,000.0	6,811.5	9,053.3	6,911.6	67.2	66.7	-98.51		44.4	2,334.5	683.5	551.2	132.35	5.165	
9,100.0	6,810.9	9,153.3	6,911.6	69.9	69.4	-98.55		43.9	2,434.5	683.7	545.9	137.74	4.964	
9,200.0	6,810.4	9,253.3	6,911.6	72.6	72.2	-98.60		43.4	2,534.5	683.8	540.7	143.15	4.777	
9,300.0	6,809.8	9,353.3	6,911.7	75.3	74.9	-98.64		42.9	2,634.5	684.0	535.4	148.56	4.604	
9,400.0	6,809.3	9,453.3	6,911.7	78.1	77.7	-98.69		42.4	2,734.5	684.1	530.2	153.98	4.443	
9,500.0	6,808.8	9,553.3	6,911.7	80.8	80.4	-98.73		42.0	2,834.5	684.3	524.9	159.41	4.293	
9,600.0	6,808.2	9,653.3	6,911.7	83.6	83.2	-98.78		41.5	2,934.5	684.5	519.6	164.85	4.152	
9,700.0	6,807.7	9,753.3	6,911.7	86.3	85.9	-98.83		41.0	3,034.5	684.6	514.3	170.29	4.020	
9,800.0	6,807.1	9,853.3	6,911.7	89.1	88.7	-98.87		40.5	3,134.5	684.8	509.0	175.73	3.897	
9,900.0	6,806.6	9,953.3	6,911.8	91.9	91.5	-98.92		40.0	3,234.5	684.9	503.7	181.18	3.780	
10,000.0	6,806.1	10,053.3	6,911.8	94.6	94.2	-98.96		39.5	3,334.5	685.1	498.4	186.63	3.671	

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 24P-312
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4652.0ft (RKB - 15')
Reference Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4652.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24P-312	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 (3-5-13)	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						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
10,100.0	6,805.5	10,153.3	6,911.8	97.4	97.0	-99.01	39.0	3,434.5	685.2	493.1	192.09	3.567	
10,200.0	6,805.0	10,253.3	6,911.8	100.2	99.8	-99.05	38.6	3,534.5	685.4	487.8	197.55	3.469	
10,300.0	6,804.4	10,353.3	6,911.8	102.9	102.5	-99.10	38.1	3,634.5	685.5	482.5	203.01	3.377	
10,400.0	6,803.9	10,453.3	6,911.8	105.7	105.3	-99.14	37.6	3,734.5	685.7	477.2	208.47	3.289	
10,500.0	6,803.4	10,553.3	6,911.9	108.5	108.1	-99.19	37.1	3,834.5	685.8	471.9	213.94	3.206	
10,600.0	6,802.8	10,653.3	6,911.9	111.3	110.9	-99.23	36.6	3,934.5	686.0	466.6	219.40	3.127	
10,700.0	6,802.3	10,753.3	6,911.9	114.0	113.7	-99.28	36.1	4,034.5	686.2	461.3	224.87	3.051	
10,800.0	6,801.7	10,853.3	6,911.9	116.8	116.4	-99.32	35.7	4,134.5	686.3	456.0	230.34	2.980	
10,900.0	6,801.2	10,953.3	6,911.9	119.6	119.2	-99.37	35.2	4,234.5	686.5	450.7	235.81	2.911	
11,000.0	6,800.6	11,053.3	6,911.9	122.4	122.0	-99.41	34.7	4,334.5	686.6	445.4	241.28	2.846	
11,100.0	6,800.1	11,153.3	6,912.0	125.2	124.8	-99.46	34.2	4,434.5	686.8	440.0	246.75	2.783	
11,200.0	6,799.6	11,253.3	6,912.0	127.9	127.6	-99.50	33.7	4,534.5	687.0	434.7	252.22	2.724	
11,300.0	6,799.0	11,353.3	6,912.0	130.7	130.4	-99.55	33.2	4,634.5	687.1	429.4	257.70	2.666	
11,304.6	6,799.0	11,354.5	6,912.0	130.9	130.4	-99.55	33.2	4,635.7	687.1	429.3	257.86	2.665 SF	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Maxey 24P-312
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4652.0ft (RKB - 15')
Reference Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4652.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24P-312	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 (3-5-13)	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		
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
0.0	0.0	0.0	0.0	0.0	0.0	-90.01	0.0	-30.6	30.6					
100.0	100.0	100.0	100.0	0.1	0.1	-90.01	0.0	-30.6	30.6	30.4	0.22	136.341		
200.0	200.0	200.0	200.0	0.3	0.3	-90.01	0.0	-30.6	30.6	30.0	0.67	45.447 CC		
300.0	300.0	299.9	299.8	0.6	0.5	-93.22	-1.7	-30.8	30.9	29.8	1.10	28.065 ES		
400.0	400.0	399.5	399.3	0.8	0.7	-102.43	-6.9	-31.3	32.1	30.6	1.53	20.958		
500.0	500.0	498.6	498.1	1.0	1.0	-115.66	-15.5	-32.2	35.8	33.8	1.99	17.973		
600.0	600.0	597.0	595.7	1.2	1.3	-129.28	-27.3	-33.4	43.4	40.9	2.46	17.633		
700.0	700.0	694.5	692.1	1.5	1.6	-140.49	-42.4	-34.9	55.5	52.6	2.93	18.954		
800.0	800.0	793.0	789.1	1.7	2.0	-148.23	-59.2	-36.6	70.4	67.0	3.38	20.822		
900.0	900.0	891.6	886.2	1.9	2.3	-153.22	-76.0	-38.3	86.2	82.4	3.83	22.489		
1,000.0	1,000.0	990.1	983.3	2.1	2.7	-156.65	-92.7	-40.0	102.4	98.1	4.29	23.884		
1,100.0	1,100.0	1,088.9	1,080.6	2.3	3.1	8.79	-109.6	-41.7	117.2	112.4	4.77	24.584		
1,200.0	1,199.8	1,188.1	1,178.4	2.5	3.5	7.12	-126.5	-43.5	128.6	123.5	5.18	24.841		
1,300.0	1,299.5	1,287.8	1,276.5	2.7	3.9	5.88	-143.5	-45.2	136.8	131.2	5.60	24.416		
1,400.0	1,398.7	1,387.6	1,374.9	2.9	4.3	4.90	-160.5	-46.9	141.4	135.4	6.03	23.451		
1,500.0	1,497.7	1,487.6	1,473.4	3.2	4.6	4.05	-177.6	-48.6	144.4	138.0	6.48	22.284		
1,600.0	1,596.8	1,587.5	1,571.8	3.4	5.0	3.22	-194.6	-50.4	147.5	140.5	6.94	21.256		
1,700.0	1,695.8	1,687.4	1,670.3	3.7	5.4	2.44	-211.6	-52.1	150.5	143.1	7.40	20.346		
1,800.0	1,794.8	1,787.4	1,768.7	4.0	5.8	1.68	-228.7	-53.8	153.6	145.8	7.86	19.535		
1,900.0	1,893.8	1,887.3	1,867.2	4.3	6.2	0.95	-245.7	-55.5	156.7	148.4	8.33	18.810		
2,000.0	1,992.9	1,987.2	1,965.7	4.6	6.6	0.25	-262.7	-57.3	159.9	151.1	8.80	18.159		
2,100.0	2,091.9	2,087.2	2,064.1	4.9	7.0	-0.42	-279.8	-59.0	163.0	153.8	9.28	17.571		
2,200.0	2,190.9	2,187.1	2,162.6	5.2	7.4	-1.07	-296.8	-60.7	166.2	156.5	9.76	17.038		
2,300.0	2,289.9	2,287.0	2,261.0	5.5	7.8	-1.69	-313.8	-62.4	169.4	159.2	10.23	16.553		
2,400.0	2,389.0	2,386.9	2,359.5	5.9	8.2	-2.29	-330.9	-64.2	172.6	161.9	10.72	16.110		
2,500.0	2,488.0	2,486.9	2,457.9	6.2	8.6	-2.86	-347.9	-65.9	175.9	164.7	11.20	15.703		
2,600.0	2,587.0	2,586.8	2,556.4	6.5	9.0	-3.42	-364.9	-67.6	179.1	167.4	11.69	15.329		
2,700.0	2,686.1	2,686.7	2,654.8	6.8	9.4	-3.96	-382.0	-69.3	182.4	170.2	12.17	14.984		
2,800.0	2,785.1	2,786.7	2,753.3	7.2	9.8	-4.47	-399.0	-71.1	185.7	173.0	12.66	14.664		
2,900.0	2,884.1	2,886.6	2,851.7	7.5	10.2	-4.97	-416.0	-72.8	189.0	175.8	13.15	14.368		
3,000.0	2,983.1	2,986.5	2,950.2	7.9	10.6	-5.45	-433.1	-74.5	192.3	178.7	13.65	14.091		
3,100.0	3,082.2	3,086.5	3,048.6	8.2	11.0	-5.92	-450.1	-76.2	195.6	181.5	14.14	13.834		
3,200.0	3,181.2	3,186.4	3,147.1	8.5	11.4	-6.37	-467.2	-78.0	199.0	184.3	14.64	13.593		
3,300.0	3,280.2	3,286.3	3,245.6	8.9	11.8	-6.80	-484.2	-79.7	202.3	187.2	15.14	13.367		
3,400.0	3,379.3	3,386.3	3,344.0	9.2	12.2	-7.23	-501.2	-81.4	205.7	190.1	15.64	13.155		
3,500.0	3,478.3	3,486.2	3,442.5	9.6	12.6	-7.63	-518.3	-83.1	209.1	192.9	16.14	12.955		
3,600.0	3,577.3	3,586.1	3,540.9	9.9	13.0	-8.03	-535.3	-84.9	212.5	195.8	16.64	12.767		
3,700.0	3,676.3	3,686.1	3,639.4	10.2	13.4	-8.41	-552.3	-86.6	215.9	198.7	17.15	12.589		
3,800.0	3,775.4	3,786.0	3,737.8	10.6	13.8	-8.78	-569.4	-88.3	219.3	201.6	17.65	12.422		
3,900.0	3,874.4	3,885.9	3,836.3	10.9	14.2	-9.14	-586.4	-90.1	222.7	204.5	18.16	12.263		
4,000.0	3,973.4	3,985.9	3,934.7	11.3	14.6	-9.49	-603.4	-91.8	226.1	207.4	18.67	12.112		
4,100.0	4,072.4	4,085.8	4,033.2	11.6	15.0	-9.82	-620.5	-93.5	229.5	210.3	19.18	11.969		
4,200.0	4,171.5	4,185.7	4,131.6	12.0	15.4	-10.15	-637.5	-95.2	233.0	213.3	19.69	11.832		
4,300.0	4,270.5	4,285.7	4,230.1	12.3	15.8	-10.47	-654.5	-97.0	236.4	216.2	20.20	11.703		
4,400.0	4,369.5	4,385.6	4,328.6	12.7	16.2	-10.78	-671.6	-98.7	239.9	219.1	20.71	11.579		
4,500.0	4,468.6	4,485.5	4,427.0	13.0	16.6	-11.08	-688.6	-100.4	243.3	222.1	21.23	11.461		
4,600.0	4,567.6	4,585.5	4,525.5	13.3	17.0	-11.37	-705.6	-102.1	246.8	225.0	21.75	11.349		
4,700.0	4,666.6	4,685.4	4,623.9	13.7	17.4	-11.65	-722.7	-103.9	250.3	228.0	22.26	11.241		
4,800.0	4,765.6	4,785.3	4,722.4	14.0	17.8	-11.93	-739.7	-105.6	253.7	231.0	22.78	11.138		
4,900.0	4,864.7	4,885.3	4,820.8	14.4	18.2	-12.20	-756.7	-107.3	257.2	233.9	23.30	11.039		
5,000.0	4,963.7	4,985.2	4,919.3	14.7	18.6	-12.46	-773.8	-109.0	260.7	236.9	23.82	10.944		

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 24P-312
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4652.0ft (RKB - 15')
Reference Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4652.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24P-312	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 (3-5-13)	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
5,100.0	5,062.7	5,085.1	5,017.7	15.1	19.0	-12.71	-790.8	-110.8	264.2	239.9	24.34	10.854		
5,200.0	5,161.7	5,185.0	5,116.2	15.4	19.4	-12.96	-807.9	-112.5	267.7	242.8	24.86	10.766		
5,300.0	5,260.8	5,285.0	5,214.6	15.8	19.8	-13.20	-824.9	-114.2	271.2	245.8	25.39	10.682		
5,400.0	5,359.8	5,384.9	5,313.1	16.1	20.2	-13.44	-841.9	-115.9	274.7	248.8	25.91	10.602		
5,500.0	5,458.8	5,484.8	5,411.6	16.5	20.6	-13.67	-859.0	-117.7	278.2	251.8	26.44	10.524		
5,600.0	5,557.9	5,584.8	5,510.1	16.8	21.0	-13.87	-876.0	-119.4	282.3	255.4	26.94	10.477		
5,700.0	5,657.4	5,685.6	5,619.6	17.0	21.3	-14.00	-892.8	-121.1	287.5	260.1	27.35	10.511		
5,800.0	5,757.2	5,806.7	5,729.9	17.2	21.5	-14.05	-905.3	-122.4	292.2	264.5	27.70	10.550		
5,900.0	5,857.1	5,917.9	5,840.8	17.4	21.7	-14.02	-913.6	-123.2	296.5	268.5	28.00	10.592		
6,000.0	5,957.1	6,029.3	5,952.1	17.5	21.9	178.20	-917.6	-123.6	299.8	260.8	39.02	7.683		
6,100.0	6,057.1	6,134.3	6,057.1	17.6	22.0	87.90	-918.0	-123.6	300.1	271.5	28.68	10.466		
6,200.0	6,156.8	6,233.9	6,156.7	17.8	22.1	89.11	-918.0	-123.4	300.0	271.1	28.91	10.376		
6,244.4	6,200.7	6,278.0	6,200.7	17.8	22.1	90.01	-918.0	-121.0	299.9	271.0	28.98	10.352		
6,300.0	6,254.8	6,333.4	6,255.8	17.9	22.2	91.14	-918.0	-114.4	300.0	270.9	29.06	10.323		
6,400.0	6,349.4	6,434.4	6,354.2	18.0	22.3	93.16	-918.2	-92.3	300.4	271.2	29.22	10.279		
6,500.0	6,439.0	6,536.8	6,450.1	18.1	22.4	95.13	-918.3	-56.8	301.1	271.7	29.47	10.220		
6,600.0	6,522.1	6,640.6	6,541.7	18.2	22.5	97.01	-918.6	-8.0	302.2	272.3	29.87	10.118		
6,700.0	6,597.2	6,746.0	6,627.0	18.3	22.6	98.77	-918.9	53.7	303.5	272.9	30.53	9.939		
6,800.0	6,663.0	6,852.7	6,703.9	18.5	22.8	100.38	-919.3	127.6	304.9	273.3	31.58	9.656		
6,900.0	6,718.5	6,960.8	6,770.5	18.9	23.1	101.79	-919.8	212.6	306.4	273.3	33.11	9.254		
7,000.0	6,762.7	7,070.0	6,825.0	19.5	23.5	102.99	-920.3	307.1	307.7	272.6	35.19	8.746		
7,100.0	6,794.7	7,180.3	6,865.8	20.7	24.2	103.95	-920.8	409.5	308.9	271.1	37.83	8.166		
7,200.0	6,814.2	7,291.3	6,891.5	22.2	25.3	104.65	-921.4	517.4	309.9	268.9	41.00	7.558		
7,300.0	6,820.7	7,395.7	6,903.7	24.1	26.7	105.48	-921.9	621.0	311.2	266.8	44.35	7.016		
7,400.0	6,820.1	7,502.6	6,911.0	26.2	28.5	106.87	-922.5	727.7	313.2	265.0	48.21	6.497		
7,500.0	6,819.6	7,604.7	6,911.3	28.4	30.4	107.02	-923.0	829.7	313.4	260.9	52.55	5.964		
7,600.0	6,819.0	7,704.7	6,911.4	30.7	32.5	107.12	-923.6	929.7	313.6	256.5	57.04	5.498		
7,700.0	6,818.5	7,804.7	6,911.4	33.1	34.7	107.22	-924.1	1,029.7	313.7	252.1	61.66	5.088		
7,800.0	6,818.0	7,904.7	6,911.4	35.5	37.0	107.32	-924.6	1,129.7	313.9	247.5	66.38	4.728		
7,900.0	6,817.4	8,004.7	6,911.4	38.0	39.4	107.42	-925.1	1,229.7	314.0	242.8	71.19	4.411		
8,000.0	6,816.9	8,104.7	6,911.4	40.5	41.9	107.51	-925.7	1,329.7	314.1	238.1	76.07	4.130		
8,100.0	6,816.3	8,204.7	6,911.4	43.1	44.3	107.61	-926.2	1,429.7	314.3	233.3	81.00	3.880		
8,200.0	6,815.8	8,304.7	6,911.5	45.7	46.9	107.71	-926.7	1,529.7	314.4	228.5	85.97	3.657		
8,300.0	6,815.3	8,404.6	6,911.5	48.4	49.4	107.81	-927.3	1,629.7	314.6	223.6	90.98	3.458		
8,400.0	6,814.7	8,504.6	6,911.5	51.0	52.0	107.91	-927.8	1,729.7	314.7	218.7	96.02	3.278		
8,500.0	6,814.2	8,604.6	6,911.5	53.7	54.6	108.01	-928.3	1,829.7	314.9	213.8	101.08	3.115		
8,600.0	6,813.6	8,704.6	6,911.5	56.3	57.3	108.10	-928.8	1,929.7	315.0	208.9	106.16	2.967		
8,700.0	6,813.1	8,804.6	6,911.5	59.0	59.9	108.20	-929.4	2,029.7	315.2	203.9	111.26	2.833		
8,800.0	6,812.6	8,904.6	6,911.6	61.7	62.6	108.30	-929.9	2,129.7	315.3	199.0	116.37	2.710		
8,900.0	6,812.0	9,004.6	6,911.6	64.4	65.2	108.40	-930.4	2,229.7	315.5	194.0	121.49	2.597		
9,000.0	6,811.5	9,104.6	6,911.6	67.2	67.9	108.50	-931.0	2,329.7	315.6	189.0	126.62	2.493		
9,100.0	6,810.9	9,204.6	6,911.6	69.9	70.6	108.59	-931.5	2,429.7	315.8	184.0	131.75	2.397		
9,200.0	6,810.4	9,304.6	6,911.6	72.6	73.3	108.69	-932.0	2,529.7	315.9	179.0	136.89	2.308		
9,300.0	6,809.8	9,404.6	6,911.7	75.3	76.0	108.79	-932.5	2,629.7	316.1	174.1	142.03	2.225		
9,400.0	6,809.3	9,504.6	6,911.7	78.1	78.8	108.89	-933.1	2,729.7	316.2	169.1	147.18	2.149		
9,500.0	6,808.8	9,604.6	6,911.7	80.8	81.5	108.98	-933.6	2,829.7	316.4	164.1	152.33	2.077		
9,600.0	6,808.2	9,704.6	6,911.7	83.6	84.2	109.08	-934.1	2,929.7	316.6	159.1	157.48	2.010		
9,700.0	6,807.7	9,804.6	6,911.7	86.3	87.0	109.18	-934.6	3,029.7	316.7	154.1	162.63	1.947		
9,800.0	6,807.1	9,904.6	6,911.7	89.1	89.7	109.27	-935.2	3,129.7	316.9	149.1	167.78	1.889		
9,900.0	6,806.6	10,004.6	6,911.8	91.9	92.4	109.37	-935.7	3,229.7	317.0	144.1	172.93	1.833		
10,000.0	6,806.1	10,104.6	6,911.8	94.6	95.2	109.47	-936.2	3,329.7	317.2	139.1	178.08	1.781		

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 24P-312
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4652.0ft (RKB - 15')
Reference Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4652.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24P-312	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 (3-5-13)	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	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	6,805.5	10,204.6	6,911.8	97.4	97.9	109.56	-936.8	3,429.6	317.4	134.1	183.23	1.732	
10,200.0	6,805.0	10,304.6	6,911.8	100.2	100.7	109.66	-937.3	3,529.6	317.5	129.2	188.37	1.686	
10,300.0	6,804.4	10,404.6	6,911.8	102.9	103.5	109.76	-937.8	3,629.6	317.7	124.2	193.51	1.642	
10,400.0	6,803.9	10,504.6	6,911.8	105.7	106.2	109.85	-938.3	3,729.6	317.9	119.2	198.65	1.600	
10,500.0	6,803.4	10,604.6	6,911.9	108.5	109.0	109.95	-938.9	3,829.6	318.0	114.2	203.79	1.561	
10,600.0	6,802.8	10,704.6	6,911.9	111.3	111.7	110.05	-939.4	3,929.6	318.2	109.3	208.92	1.523	
10,700.0	6,802.3	10,804.6	6,911.9	114.0	114.5	110.14	-939.9	4,029.6	318.4	104.3	214.05	1.487 Level 3	
10,800.0	6,801.7	10,904.6	6,911.9	116.8	117.3	110.24	-940.5	4,129.6	318.5	99.4	219.17	1.453 Level 3	
10,900.0	6,801.2	11,004.6	6,911.9	119.6	120.1	110.33	-941.0	4,229.6	318.7	94.4	224.29	1.421 Level 3	
11,000.0	6,800.6	11,104.6	6,911.9	122.4	122.8	110.43	-941.5	4,329.6	318.9	89.5	229.41	1.390 Level 3	
11,100.0	6,800.1	11,204.6	6,912.0	125.2	125.6	110.52	-942.0	4,429.6	319.0	84.5	234.52	1.360 Level 3	
11,200.0	6,799.6	11,304.6	6,912.0	127.9	128.4	110.62	-942.6	4,529.6	319.2	79.6	239.63	1.332 Level 3	
11,300.0	6,799.0	11,404.6	6,912.0	130.7	131.2	110.71	-943.1	4,629.6	319.4	74.7	244.73	1.305 Level 3	
11,304.6	6,799.0	11,408.1	6,912.0	130.9	131.3	110.72	-943.1	4,633.1	319.4	74.5	244.94	1.304 Level 3, SF	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Maxey 24P-312
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4652.0ft (RKB - 15')
Reference Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4652.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24P-312	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 (3-5-13)	Offset TVD Reference:	Offset Datum

Offset Design Maxey 24Q-HZ Pad Sec.24-T5N-R65W - Emily 1 (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 (°)	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)			
10,300.0	6,804.4	6,780.4	6,780.4	102.9	7.6	-92.04	-502.3	4,563.4	942.1	831.7	110.33	8.539	
10,400.0	6,803.9	6,779.9	6,779.9	105.7	7.6	-91.82	-502.3	4,563.4	843.3	730.2	113.11	7.456	
10,500.0	6,803.4	6,779.4	6,779.4	108.5	7.6	-91.60	-502.3	4,563.4	745.0	629.1	115.89	6.428	
10,600.0	6,802.8	6,778.8	6,778.8	111.3	7.6	-91.38	-502.3	4,563.4	647.1	528.4	118.68	5.452	
10,700.0	6,802.3	6,778.3	6,778.3	114.0	7.6	-91.16	-502.3	4,563.4	549.9	428.5	121.47	4.527	
10,800.0	6,801.7	6,777.7	6,777.7	116.8	7.6	-90.94	-502.3	4,563.4	454.0	329.8	124.25	3.654	
10,900.0	6,801.2	6,777.2	6,777.2	119.6	7.6	-90.73	-502.3	4,563.4	360.4	233.3	127.04	2.837	
11,000.0	6,800.6	6,776.6	6,776.6	122.4	7.6	-90.51	-502.3	4,563.4	271.3	141.5	129.82	2.090	
11,100.0	6,800.1	6,776.1	6,776.1	125.2	7.6	-90.29	-502.3	4,563.4	193.2	60.6	132.61	1.457 Level 3	
11,200.0	6,799.6	6,775.6	6,775.6	127.9	7.6	-90.07	-502.3	4,563.4	145.1	9.7	135.39	1.072 Level 2	
11,231.4	6,799.4	6,775.4	6,775.4	128.8	7.6	-90.00	-502.3	4,563.4	141.7	5.4	136.27	1.040 Level 2, CC, ES, SF	
11,300.0	6,799.0	6,775.0	6,775.0	130.7	7.6	-89.85	-502.3	4,563.4	157.4	19.2	138.18	1.139 Level 2	
11,304.6	6,799.0	6,775.0	6,775.0	130.9	7.6	-89.84	-502.3	4,563.4	159.5	21.2	138.31	1.153 Level 2	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Maxey 24P-312
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4652.0ft (RKB - 15')
Reference Site:	Maxey 24Q-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4652.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24P-312	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 (3-5-13)	Offset TVD Reference:	Offset Datum

Offset Design												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)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)					
0.0	0.0	0.0	0.0	0.0	0.0	127.66	-393.5	509.8	644.2				
100.0	100.0	84.0	84.0	0.1	0.1	127.66	-393.5	509.8	644.0	643.8	0.21	3,111.334	
200.0	200.0	184.0	184.0	0.3	0.2	127.66	-393.5	509.8	644.0	643.4	0.54	1,183.528	
300.0	300.0	284.0	284.0	0.6	0.3	127.66	-393.5	509.8	644.0	643.1	0.88	730.750	
400.0	400.0	384.0	384.0	0.8	0.4	127.66	-393.5	509.8	644.0	642.8	1.22	528.546	
500.0	500.0	484.0	484.0	1.0	0.5	127.66	-393.5	509.8	644.0	642.4	1.56	413.991	
600.0	600.0	584.0	584.0	1.2	0.7	127.66	-393.5	509.8	644.0	642.1	1.89	340.248	
700.0	700.0	684.0	684.0	1.5	0.8	127.66	-393.5	509.8	644.0	641.8	2.23	288.804	
800.0	800.0	784.0	784.0	1.7	0.9	127.66	-393.5	509.8	644.0	641.4	2.57	250.873	
900.0	900.0	884.0	884.0	1.9	1.0	127.66	-393.5	509.8	644.0	641.1	2.90	221.748	
1,000.0	1,000.0	984.0	984.0	2.1	1.1	127.66	-393.5	509.8	644.0	640.8	3.24	198.683	
1,100.0	1,100.0	1,084.0	1,084.0	2.3	1.2	-64.64	-393.5	509.8	643.2	639.7	3.55	181.212	
1,200.0	1,199.8	1,183.8	1,183.8	2.5	1.3	-65.10	-393.5	509.8	641.0	637.2	3.84	167.043	
1,300.0	1,299.5	1,283.5	1,283.5	2.7	1.4	-65.88	-393.5	509.8	637.4	633.2	4.14	153.980	
1,400.0	1,398.7	1,382.7	1,382.7	2.9	1.6	-66.97	-393.5	509.8	632.5	628.0	4.46	141.722	
1,500.0	1,497.7	1,481.7	1,481.7	3.2	1.7	-68.13	-393.5	509.8	627.1	622.3	4.81	130.329	
1,600.0	1,596.8	1,580.8	1,580.8	3.4	1.8	-69.31	-393.5	509.8	622.0	616.9	5.18	120.098	
1,700.0	1,695.8	1,679.8	1,679.8	3.7	1.9	-70.51	-393.5	509.8	617.2	611.6	5.56	110.966	
1,800.0	1,794.8	1,778.8	1,778.8	4.0	2.0	-71.72	-393.5	509.8	612.7	606.7	5.96	102.838	
1,900.0	1,893.8	1,877.8	1,877.8	4.3	2.1	-72.96	-393.5	509.8	608.4	602.0	6.36	95.608	
2,000.0	1,992.9	1,976.9	1,976.9	4.6	2.2	-74.20	-393.5	509.8	604.4	597.7	6.78	89.171	
2,100.0	2,091.9	2,075.9	2,075.9	4.9	2.3	-75.47	-393.5	509.8	600.8	593.6	7.20	83.431	
2,200.0	2,190.9	2,174.9	2,174.9	5.2	2.4	-76.75	-393.5	509.8	597.4	589.8	7.63	78.302	
2,300.0	2,289.9	2,273.9	2,273.9	5.5	2.6	-78.04	-393.5	509.8	594.3	586.3	8.06	73.709	
2,400.0	2,389.0	2,373.0	2,373.0	5.9	2.7	-79.35	-393.5	509.8	591.6	583.1	8.50	69.585	
2,500.0	2,488.0	2,472.0	2,472.0	6.2	2.8	-80.67	-393.5	509.8	589.1	580.2	8.94	65.874	
2,600.0	2,587.0	2,571.0	2,571.0	6.5	2.9	-81.99	-393.5	509.8	587.0	577.6	9.39	62.527	
2,700.0	2,686.1	2,670.1	2,670.1	6.8	3.0	-83.33	-393.5	509.8	585.2	575.4	9.84	59.502	
2,800.0	2,785.1	2,769.1	2,769.1	7.2	3.1	-84.67	-393.5	509.8	583.8	573.5	10.28	56.761	
2,900.0	2,884.1	2,868.1	2,868.1	7.5	3.2	-86.02	-393.5	509.8	582.6	571.9	10.73	54.275	
3,000.0	2,983.1	2,967.1	2,967.1	7.9	3.3	-87.38	-393.5	509.8	581.8	570.6	11.19	52.015	
3,100.0	3,082.2	3,066.2	3,066.2	8.2	3.4	-88.73	-393.5	509.8	581.3	569.7	11.64	49.958	
3,193.3	3,174.6	3,158.6	3,158.6	8.5	3.5	-90.00	-393.5	509.8	581.2	569.1	12.06	48.203	
3,200.0	3,181.2	3,165.2	3,165.2	8.5	3.6	-90.09	-393.5	509.8	581.2	569.1	12.09	48.083	
3,300.0	3,280.2	3,264.2	3,264.2	8.9	3.7	-91.45	-393.5	509.8	581.4	568.8	12.54	46.372	
3,400.0	3,379.3	3,363.3	3,363.3	9.2	3.8	-92.80	-393.5	509.8	581.9	568.9	12.99	44.809	
3,500.0	3,478.3	3,462.3	3,462.3	9.6	3.9	-94.16	-393.5	509.8	582.8	569.3	13.43	43.379	
3,600.0	3,577.3	3,561.3	3,561.3	9.9	4.0	-95.51	-393.5	509.8	583.9	570.1	13.88	42.071	
3,700.0	3,676.3	3,660.3	3,660.3	10.2	4.1	-96.85	-393.5	509.8	585.5	571.1	14.32	40.874	
3,800.0	3,775.4	3,759.4	3,759.4	10.6	4.2	-98.18	-393.5	509.8	587.3	572.5	14.76	39.777	
3,900.0	3,874.4	3,858.4	3,858.4	10.9	4.3	-99.51	-393.5	509.8	589.5	574.2	15.20	38.771	
4,000.0	3,973.4	3,957.4	3,957.4	11.3	4.4	-100.83	-393.5	509.8	591.9	576.3	15.64	37.849	
4,100.0	4,072.4	4,056.4	4,056.4	11.6	4.6	-102.13	-393.5	509.8	594.7	578.7	16.07	37.004	
4,200.0	4,171.5	4,155.5	4,155.5	12.0	4.7	-103.42	-393.5	509.8	597.8	581.3	16.50	36.229	
4,300.0	4,270.5	4,254.5	4,254.5	12.3	4.8	-104.70	-393.5	509.8	601.2	584.3	16.93	35.519	
4,400.0	4,369.5	4,353.5	4,353.5	12.7	4.9	-105.96	-393.5	509.8	605.0	587.6	17.35	34.868	
4,500.0	4,468.6	4,452.6	4,452.6	13.0	5.0	-107.21	-393.5	509.8	609.0	591.2	17.77	34.271	
4,600.0	4,567.6	4,551.6	4,551.6	13.3	5.1	-108.44	-393.5	509.8	613.3	595.1	18.18	33.724	
4,700.0	4,666.6	4,650.6	4,650.6	13.7	5.2	-109.65	-393.5	509.8	617.8	599.2	18.60	33.224	
4,800.0	4,765.6	4,749.6	4,749.6	14.0	5.3	-110.85	-393.5	509.8	622.7	603.7	19.00	32.767	
4,900.0	4,864.7	4,848.7	4,848.7	14.4	5.4	-112.03	-393.5	509.8	627.8	608.4	19.41	32.348	

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 24P-312
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4652.0ft (RKB - 15')
Reference Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4652.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24P-312	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 (3-5-13)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 7300-MWD												Offset Well Error:	0.0 ft
Maxey 24Q-HZ Pad Sec.24-T5N-R65W - Maxey 33-24 (Exist.) - Wellbore #1 - Wellbore #1													
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.0	4,963.7	4,947.7	4,947.7	14.7	5.6	-113.18	-393.5	509.8	633.2	613.4	19.81	31.966	
5,100.0	5,062.7	5,046.7	5,046.7	15.1	5.7	-114.32	-393.5	509.8	638.9	618.7	20.21	31.618	
5,200.0	5,161.7	5,145.7	5,145.7	15.4	5.8	-115.44	-393.5	509.8	644.8	624.2	20.60	31.301	
5,300.0	5,260.8	5,244.8	5,244.8	15.8	5.9	-116.54	-393.5	509.8	650.9	629.9	20.99	31.012	
5,400.0	5,359.8	5,343.8	5,343.8	16.1	6.0	-117.61	-393.5	509.8	657.3	635.9	21.38	30.750	
5,500.0	5,458.8	5,442.8	5,442.8	16.5	6.1	-118.67	-393.5	509.8	663.9	642.1	21.76	30.512	
5,600.0	5,557.9	5,541.9	5,541.9	16.8	6.2	-119.73	-393.5	509.8	670.5	648.4	22.11	30.324	
5,700.0	5,657.4	5,641.4	5,641.4	17.0	6.3	-120.56	-393.5	509.8	675.6	653.2	22.39	30.181	
5,800.0	5,757.2	5,741.2	5,741.2	17.2	6.5	-121.11	-393.5	509.8	679.1	656.4	22.65	29.981	
5,900.0	5,857.1	5,841.1	5,841.1	17.4	6.6	-121.37	-393.5	509.8	680.7	657.8	22.90	29.724	
6,000.0	5,957.1	5,941.1	5,941.1	17.5	6.7	70.75	-393.5	509.8	680.9	659.6	21.33	31.922	
6,100.0	6,057.1	6,041.1	6,041.1	17.6	6.8	-19.57	-393.5	509.8	680.9	657.5	23.42	29.073	
6,200.0	6,156.8	6,140.8	6,140.8	17.8	6.9	-19.92	-393.5	509.8	674.7	651.2	23.50	28.716	
6,300.0	6,254.8	6,238.8	6,238.8	17.9	7.0	-20.99	-393.5	509.8	656.3	633.0	23.33	28.134	
6,400.0	6,349.4	6,333.4	6,333.4	18.0	7.1	-22.95	-393.5	509.8	626.3	603.3	22.94	27.299	
6,500.0	6,439.0	6,423.0	6,423.0	18.1	7.2	-26.05	-393.5	509.8	585.3	562.9	22.38	26.147	
6,600.0	6,522.1	6,506.1	6,506.1	18.2	7.3	-30.75	-393.5	509.8	534.6	512.8	21.78	24.546	
6,700.0	6,597.2	6,581.2	6,581.2	18.3	7.4	-37.70	-393.5	509.8	475.8	454.4	21.37	22.264	
6,800.0	6,663.0	6,647.0	6,647.0	18.5	7.5	-47.60	-393.5	509.8	411.4	389.8	21.59	19.059	
6,900.0	6,718.5	6,702.5	6,702.5	18.9	7.5	-60.41	-393.5	509.8	345.3	322.5	22.80	15.143	
7,000.0	6,762.7	6,746.7	6,746.7	19.5	7.6	-74.13	-393.5	509.8	284.2	259.5	24.76	11.481	
7,100.0	6,794.7	6,778.7	6,778.7	20.7	7.6	-85.15	-393.5	509.8	240.1	213.3	26.80	8.960	
7,176.7	6,810.8	6,794.8	6,794.8	21.8	7.6	-90.00	-393.5	509.8	228.1	199.8	28.33	8.051 CC, ES	
7,200.0	6,814.2	6,798.2	6,798.2	22.2	7.6	-90.75	-393.5	509.8	229.3	200.5	28.77	7.968 SF	
7,300.0	6,820.7	6,804.7	6,804.7	24.1	7.6	-89.98	-393.5	509.8	259.0	228.2	30.80	8.411	
7,400.0	6,820.1	6,804.1	6,804.1	26.2	7.6	-89.70	-393.5	509.8	318.8	285.9	32.95	9.675	
7,500.0	6,819.6	6,803.6	6,803.6	28.4	7.6	-89.56	-393.5	509.8	395.2	360.0	35.23	11.217	
7,600.0	6,819.0	6,803.0	6,803.0	30.7	7.6	-89.43	-393.5	509.8	480.4	442.8	37.60	12.775	
7,700.0	6,818.5	6,802.5	6,802.5	33.1	7.6	-89.29	-393.5	509.8	570.4	530.3	40.04	14.245	
7,800.0	6,818.0	6,802.0	6,802.0	35.5	7.6	-89.15	-393.5	509.8	663.2	620.7	42.53	15.594	
7,900.0	6,817.4	6,801.4	6,801.4	38.0	7.6	-89.02	-393.5	509.8	757.9	712.8	45.07	16.817	
8,000.0	6,816.9	6,800.9	6,800.9	40.5	7.6	-88.88	-393.5	509.8	853.8	806.2	47.64	17.922	
8,100.0	6,816.3	6,800.3	6,800.3	43.1	7.6	-88.75	-393.5	509.8	950.5	900.3	50.24	18.919	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Maxey 24P-312
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4652.0ft (RKB - 15')
Reference Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4652.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24P-312	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 (3-5-13)	Offset TVD Reference:	Offset Datum

Offset Design												Maxey 24Q-HZ Pad Sec.24-T5N-R65W - Maxey Hoff 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			Distance							Warning		
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor				
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)					
9,000.0	6,811.5	6,790.5	6,790.5	67.2	7.6	-95.50	-582.7	3,298.6	968.5	894.2	74.32	13.032				
9,100.0	6,810.9	6,789.9	6,789.9	69.9	7.6	-94.94	-582.7	3,298.6	868.7	791.6	77.08	11.269				
9,200.0	6,810.4	6,789.4	6,789.4	72.6	7.6	-94.37	-582.7	3,298.6	768.9	689.1	79.86	9.629				
9,300.0	6,809.8	6,788.8	6,788.8	75.3	7.6	-93.80	-582.7	3,298.6	669.2	586.6	82.63	8.099				
9,400.0	6,809.3	6,788.3	6,788.3	78.1	7.6	-93.23	-582.7	3,298.6	569.6	484.2	85.41	6.669				
9,500.0	6,808.8	6,787.8	6,787.8	80.8	7.6	-92.66	-582.7	3,298.6	470.2	382.0	88.18	5.332				
9,600.0	6,808.2	6,787.2	6,787.2	83.6	7.6	-92.09	-582.7	3,298.6	371.0	280.0	90.96	4.079				
9,700.0	6,807.7	6,786.7	6,786.7	86.3	7.6	-91.52	-582.7	3,298.6	272.5	178.7	93.73	2.907				
9,800.0	6,807.1	6,786.1	6,786.1	89.1	7.6	-90.95	-582.7	3,298.6	175.6	79.1	96.50	1.820				
9,900.0	6,806.6	6,785.6	6,785.6	91.9	7.6	-90.38	-582.7	3,298.6	86.3	-13.0	99.26	0.869	Level 1			
9,967.0	6,806.2	6,785.2	6,785.2	93.7	7.6	-90.00	-582.7	3,298.6	54.3	-46.8	101.11	0.537	Level 1, CC, ES, SF			
10,000.0	6,806.1	6,785.1	6,785.1	94.6	7.6	-89.81	-582.7	3,298.6	63.5	-38.5	102.02	0.623	Level 1			
10,100.0	6,805.5	6,784.5	6,784.5	97.4	7.6	-89.24	-582.7	3,298.6	143.6	38.9	104.77	1.371	Level 3			
10,200.0	6,805.0	6,784.0	6,784.0	100.2	7.6	-88.67	-582.7	3,298.6	239.2	131.7	107.52	2.225				
10,300.0	6,804.4	6,783.4	6,783.4	102.9	7.6	-88.10	-582.7	3,298.6	337.4	227.1	110.26	3.060				
10,400.0	6,803.9	6,782.9	6,782.9	105.7	7.6	-87.53	-582.7	3,298.6	436.4	323.4	112.99	3.862				
10,500.0	6,803.4	6,782.4	6,782.4	108.5	7.6	-86.96	-582.7	3,298.6	535.7	420.0	115.70	4.630				
10,600.0	6,802.8	6,781.8	6,781.8	111.3	7.6	-86.39	-582.7	3,298.6	635.3	516.9	118.41	5.365				
10,700.0	6,802.3	6,781.3	6,781.3	114.0	7.6	-85.82	-582.7	3,298.6	735.0	613.9	121.11	6.069				
10,800.0	6,801.7	6,780.7	6,780.7	116.8	7.6	-85.26	-582.7	3,298.6	834.7	711.0	123.79	6.743				
10,900.0	6,801.2	6,780.2	6,780.2	119.6	7.6	-84.69	-582.7	3,298.6	934.6	808.1	126.46	7.390				

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Maxey 24P-312
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4652.0ft (RKB - 15')
Reference Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4652.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24P-312	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 (3-5-13)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4652.0ft (RKB - 15')

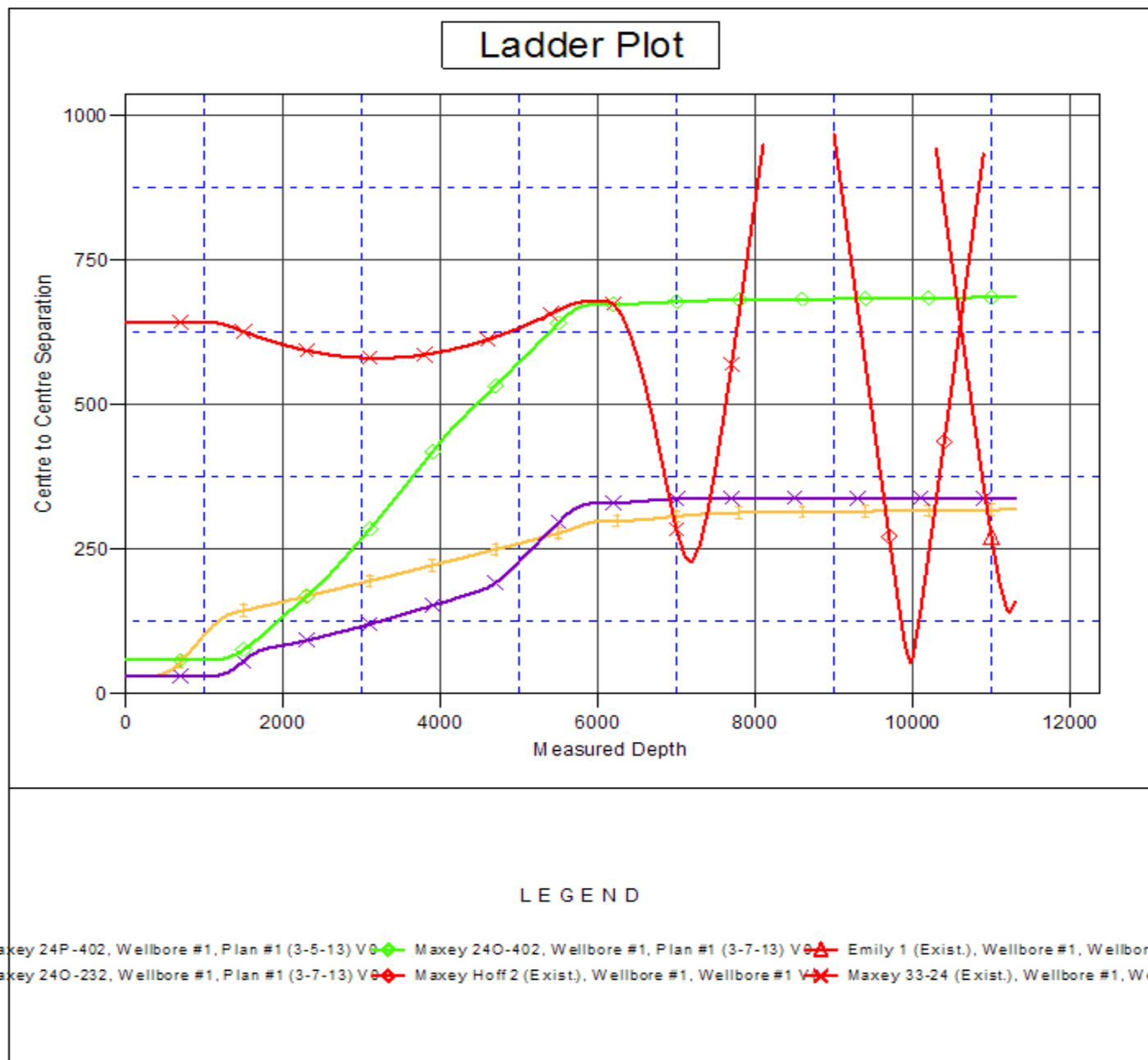
Offset Depths are relative to Offset Datum

Central Meridian is -105.500000 °

Coordinates are relative to: Maxey 24P-312

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 24P-312
Project:	SEC.24-T5N-R65W	TVD Reference:	WELL @ 4652.0ft (RKB - 15')
Reference Site:	Maxey 24O-HZ Pad Sec.24-T5N-R65W	MD Reference:	WELL @ 4652.0ft (RKB - 15')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Maxey 24P-312	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 (3-5-13)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4652.0ft (RKB - 15')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Maxey 24P-312
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.57°

