

PETROLEUM DEVELOPMENT CORP Weld County CO

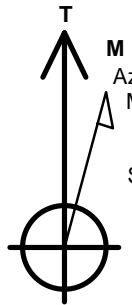
Well Name: **Trimar Farms 29Y-201**

Surface Location: Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 4573.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1377163.82	3290455.40	40.364030	-104.457640	
RKB - 13' WELL @ 4586.0ft (RKB - 13')						

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 275'FSL & 2000'FEL	1.0	0.0	0.0	Point
BHL 500'FNL & 181'FEL	6358.0	4499.3	1822.2	Point



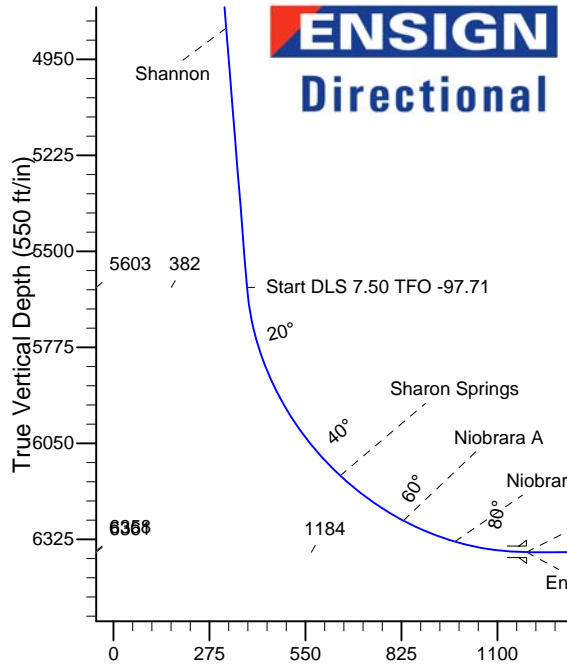
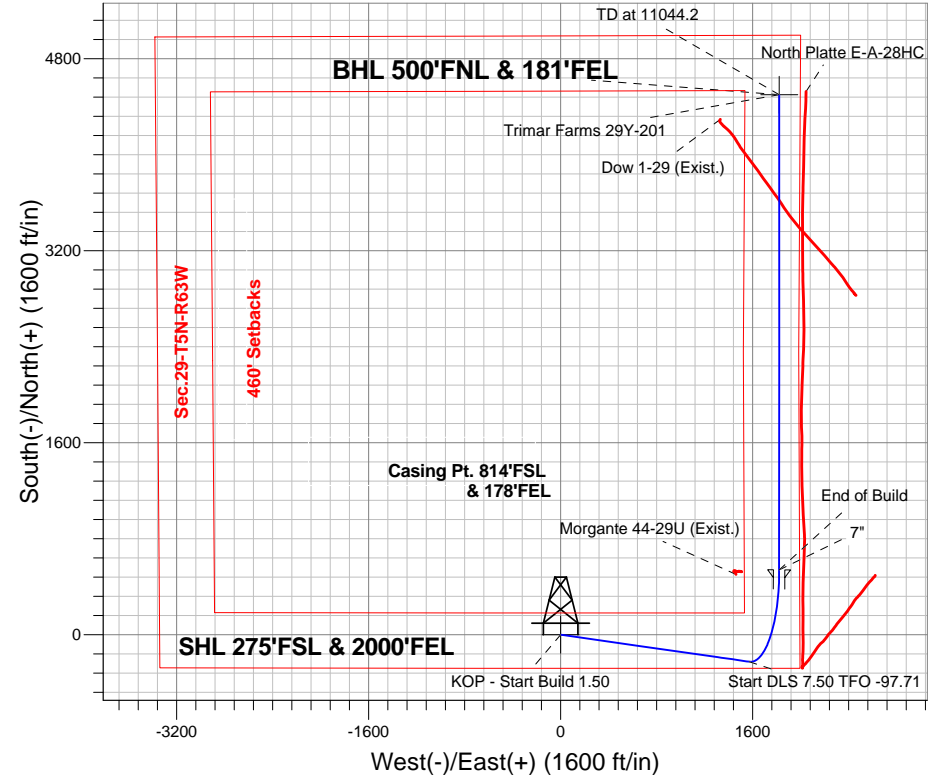
Azimuths to True North
 Magnetic North: 8.20°

Magnetic Field
 Strength: 52755.9snT
 Dip Angle: 66.94°
 Date: 2/27/2015
 Model: IGRF2010

ANNOTATIONS

TVD	MD	Annotation
200.0	200.0	KOP - Start Build 1.50
5603.0	5849.2	Start DLS 7.50 TFO -97.71
6361.0	7083.8	End of Build
6358.0	11044.2	TD at 11044.2

Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W
 Trimar Farms 29Y-201
 Plan #2 (2-26-15)
 15:22, February 27 2015



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	Target	VSec
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	1424.5	18.37	98.13	1403.6	-27.5	192.6	1.50	98.13	46.8	
4	5849.2	18.37	98.13	5603.0	-224.7	1572.9	0.00	0.00	382.1	
5	7083.8	90.04	360.00	6361.0	539.0	1822.2	7.50	-97.71	1183.6	
6	11044.2	90.04	360.00	6358.0	4499.3	1822.2	0.00	0.00	4854.3	BHL 500'FNL & 181'FEL

BHL 500'FNL & 181'FEL

TD at 11044.2

Vertical Section at 22.05° (550 ft/in)



PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.29-T5N-R63W

Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W

Trimar Farms 29Y-201

Wellbore #1

Plan: Plan #2 (2-26-15)

Standard Planning Report

27 February, 2015

Database:	Landmark	Local Co-ordinate Reference:	Well Trimar Farms 29Y-201
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4586.0ft (RKB - 13')
Project:	SEC.29-T5N-R63W	MD Reference:	WELL @ 4586.0ft (RKB - 13')
Site:	Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W	North Reference:	True
Well:	Trimar Farms 29Y-201	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (2-26-15)		

Project	SEC.29-T5N-R63W, 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						Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W											
Site Position:						Northing:			1,377,291.98 ft			Latitude:			40.364380		
From:			Lat/Long			Easting:			3,290,509.63 ft			Longitude:			-104.457440		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.67 °		

Well	Trimar Farms 29Y-201					
Well Position	+N/-S	-127.5 ft	Northing:	1,377,163.82 ft	Latitude:	40.364030
	+E/-W	-55.7 ft	Easting:	3,290,455.40 ft	Longitude:	-104.457640
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,573.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	2/27/2015	8.20	66.94	52,756

Design	Plan #2 (2-26-15)				
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	22.05	

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	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,424.5	18.37	98.13	1,403.6	-27.5	192.6	1.50	1.50	0.00	98.13	
5,849.2	18.37	98.13	5,603.0	-224.7	1,572.9	0.00	0.00	0.00	0.00	
7,083.8	90.04	360.00	6,361.0	539.0	1,822.2	7.50	5.81	-7.95	-97.71	
11,044.2	90.04	360.00	6,358.0	4,499.3	1,822.2	0.00	0.00	0.00	0.00	BHL 500'FNL & 181

Database:	Landmark	Local Co-ordinate Reference:	Well Trimar Farms 29Y-201
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4586.0ft (RKB - 13')
Project:	SEC.29-T5N-R63W	MD Reference:	WELL @ 4586.0ft (RKB - 13')
Site:	Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W	North Reference:	True
Well:	Trimar Farms 29Y-201	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (2-26-15)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
1.0	0.00	0.00	1.0	0.0	0.0	0.0	0.00	0.00	0.00
SHL 275'FSL & 2000'FEL									
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
KOP - Start Build 1.50									
300.0	1.50	98.13	300.0	-0.2	1.3	0.3	1.50	1.50	0.00
400.0	3.00	98.13	399.9	-0.7	5.2	1.3	1.50	1.50	0.00
500.0	4.50	98.13	499.7	-1.7	11.7	2.8	1.50	1.50	0.00
600.0	6.00	98.13	599.3	-3.0	20.7	5.0	1.50	1.50	0.00
700.0	7.50	98.13	698.6	-4.6	32.3	7.9	1.50	1.50	0.00
800.0	9.00	98.13	797.5	-6.7	46.6	11.3	1.50	1.50	0.00
900.0	10.50	98.13	896.1	-9.0	63.3	15.4	1.50	1.50	0.00
1,000.0	12.00	98.13	994.2	-11.8	82.6	20.1	1.50	1.50	0.00
1,100.0	13.50	98.13	1,091.7	-14.9	104.5	25.4	1.50	1.50	0.00
1,200.0	15.00	98.13	1,188.6	-18.4	128.8	31.3	1.50	1.50	0.00
1,300.0	16.50	98.13	1,284.9	-22.2	155.7	37.8	1.50	1.50	0.00
1,400.0	18.00	98.13	1,380.4	-26.4	185.1	45.0	1.50	1.50	0.00
1,424.5	18.37	98.13	1,403.6	-27.5	192.6	46.8	1.50	1.50	0.00
1,500.0	18.37	98.13	1,475.3	-30.9	216.2	52.5	0.00	0.00	0.00
1,600.0	18.37	98.13	1,570.2	-35.3	247.4	60.1	0.00	0.00	0.00
1,700.0	18.37	98.13	1,665.1	-39.8	278.6	67.7	0.00	0.00	0.00
1,800.0	18.37	98.13	1,760.0	-44.3	309.8	75.3	0.00	0.00	0.00
1,900.0	18.37	98.13	1,854.9	-48.7	341.0	82.8	0.00	0.00	0.00
2,000.0	18.37	98.13	1,949.8	-53.2	372.2	90.4	0.00	0.00	0.00
2,100.0	18.37	98.13	2,044.7	-57.6	403.4	98.0	0.00	0.00	0.00
2,200.0	18.37	98.13	2,139.6	-62.1	434.5	105.6	0.00	0.00	0.00
2,300.0	18.37	98.13	2,234.5	-66.5	465.7	113.1	0.00	0.00	0.00
2,400.0	18.37	98.13	2,329.4	-71.0	496.9	120.7	0.00	0.00	0.00
2,500.0	18.37	98.13	2,424.3	-75.5	528.1	128.3	0.00	0.00	0.00
2,600.0	18.37	98.13	2,519.3	-79.9	559.3	135.9	0.00	0.00	0.00
2,700.0	18.37	98.13	2,614.2	-84.4	590.5	143.5	0.00	0.00	0.00
2,800.0	18.37	98.13	2,709.1	-88.8	621.7	151.0	0.00	0.00	0.00
2,900.0	18.37	98.13	2,804.0	-93.3	652.9	158.6	0.00	0.00	0.00
3,000.0	18.37	98.13	2,898.9	-97.7	684.1	166.2	0.00	0.00	0.00
3,100.0	18.37	98.13	2,993.8	-102.2	715.3	173.8	0.00	0.00	0.00
3,200.0	18.37	98.13	3,088.7	-106.7	746.5	181.4	0.00	0.00	0.00
3,300.0	18.37	98.13	3,183.6	-111.1	777.7	188.9	0.00	0.00	0.00
3,400.0	18.37	98.13	3,278.5	-115.6	808.9	196.5	0.00	0.00	0.00
3,427.9	18.37	98.13	3,305.0	-116.8	817.6	198.6	0.00	0.00	0.00
Parkman									
3,500.0	18.37	98.13	3,373.4	-120.0	840.1	204.1	0.00	0.00	0.00
3,600.0	18.37	98.13	3,468.3	-124.5	871.2	211.7	0.00	0.00	0.00
3,700.0	18.37	98.13	3,563.2	-128.9	902.4	219.2	0.00	0.00	0.00
3,800.0	18.37	98.13	3,658.1	-133.4	933.6	226.8	0.00	0.00	0.00
3,900.0	18.37	98.13	3,753.0	-137.9	964.8	234.4	0.00	0.00	0.00
4,000.0	18.37	98.13	3,847.9	-142.3	996.0	242.0	0.00	0.00	0.00
4,002.2	18.37	98.13	3,850.0	-142.4	996.7	242.1	0.00	0.00	0.00
Sussex									
4,100.0	18.37	98.13	3,942.8	-146.8	1,027.2	249.6	0.00	0.00	0.00
4,200.0	18.37	98.13	4,037.7	-151.2	1,058.4	257.1	0.00	0.00	0.00
4,300.0	18.37	98.13	4,132.7	-155.7	1,089.6	264.7	0.00	0.00	0.00

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Site:	Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W	North Reference:	True
Well:	Trimar Farms 29Y-201	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (2-26-15)		

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)	
4,400.0	18.37	98.13	4,227.6	-160.1	1,120.8	272.3	0.00	0.00	0.00	
4,500.0	18.37	98.13	4,322.5	-164.6	1,152.0	279.9	0.00	0.00	0.00	
4,600.0	18.37	98.13	4,417.4	-169.1	1,183.2	287.4	0.00	0.00	0.00	
4,700.0	18.37	98.13	4,512.3	-173.5	1,214.4	295.0	0.00	0.00	0.00	
4,800.0	18.37	98.13	4,607.2	-178.0	1,245.6	302.6	0.00	0.00	0.00	
4,900.0	18.37	98.13	4,702.1	-182.4	1,276.8	310.2	0.00	0.00	0.00	
5,000.0	18.37	98.13	4,797.0	-186.9	1,308.0	317.8	0.00	0.00	0.00	
5,066.4	18.37	98.13	4,860.0	-189.8	1,328.7	322.8	0.00	0.00	0.00	
Shannon										
5,100.0	18.37	98.13	4,891.9	-191.3	1,339.1	325.3	0.00	0.00	0.00	
5,200.0	18.37	98.13	4,986.8	-195.8	1,370.3	332.9	0.00	0.00	0.00	
5,300.0	18.37	98.13	5,081.7	-200.3	1,401.5	340.5	0.00	0.00	0.00	
5,400.0	18.37	98.13	5,176.6	-204.7	1,432.7	348.1	0.00	0.00	0.00	
5,500.0	18.37	98.13	5,271.5	-209.2	1,463.9	355.6	0.00	0.00	0.00	
5,600.0	18.37	98.13	5,366.4	-213.6	1,495.1	363.2	0.00	0.00	0.00	
5,700.0	18.37	98.13	5,461.3	-218.1	1,526.3	370.8	0.00	0.00	0.00	
5,800.0	18.37	98.13	5,556.2	-222.5	1,557.5	378.4	0.00	0.00	0.00	
5,849.2	18.37	98.13	5,602.9	-224.7	1,572.8	382.1	0.00	0.00	0.00	
Start DLS 7.50 TFO -97.71										
5,900.0	18.24	85.99	5,651.2	-225.3	1,588.7	387.5	7.50	-0.26	-23.90	
6,000.0	20.13	63.75	5,745.7	-216.6	1,619.8	407.3	7.50	1.89	-22.24	
6,100.0	24.22	46.97	5,838.4	-195.0	1,650.3	438.8	7.50	4.09	-16.78	
6,200.0	29.60	35.37	5,927.6	-160.8	1,679.6	481.5	7.50	5.38	-11.61	
6,300.0	35.70	27.24	6,011.8	-114.6	1,707.3	534.6	7.50	6.10	-8.13	
6,400.0	42.20	21.27	6,089.6	-57.3	1,732.8	597.3	7.50	6.50	-5.97	
6,473.7	47.15	17.77	6,142.0	-8.5	1,750.1	649.1	7.50	6.72	-4.75	
Sharon Springs										
6,500.0	48.94	16.65	6,159.6	10.2	1,755.9	668.6	7.50	6.81	-4.24	
6,600.0	55.83	12.91	6,220.6	86.8	1,775.9	747.1	7.50	6.89	-3.75	
6,698.7	62.73	9.77	6,271.0	169.9	1,792.5	830.4	7.50	6.99	-3.18	
Niobrara A										
6,700.0	62.82	9.73	6,271.6	171.0	1,792.7	831.5	7.50	7.02	-2.96	
6,800.0	69.87	6.93	6,311.7	261.6	1,805.9	920.4	7.50	7.05	-2.80	
6,862.8	74.32	5.31	6,331.0	321.0	1,812.3	977.8	7.50	7.08	-2.59	
Niobrara B										
6,900.0	76.96	4.38	6,340.2	356.9	1,815.3	1,012.2	7.50	7.10	-2.50	
7,000.0	84.07	1.97	6,356.7	455.3	1,820.8	1,105.5	7.50	7.11	-2.41	
7,083.8	90.04	0.00	6,361.0	539.0	1,822.2	1,183.6	7.50	7.12	-2.35	
End of Build - 7"										
7,100.0	90.04	360.00	6,361.0	555.2	1,822.2	1,198.6	0.02	0.02	-0.01	
7,200.0	90.04	360.00	6,360.9	655.2	1,822.2	1,291.3	0.00	0.00	0.00	
7,300.0	90.04	360.00	6,360.8	755.2	1,822.2	1,383.9	0.00	0.00	0.00	
7,400.0	90.04	360.00	6,360.8	855.2	1,822.2	1,476.6	0.00	0.00	0.00	
7,500.0	90.04	360.00	6,360.7	955.2	1,822.2	1,569.3	0.00	0.00	0.00	
7,600.0	90.04	360.00	6,360.6	1,055.2	1,822.2	1,662.0	0.00	0.00	0.00	
7,700.0	90.04	360.00	6,360.5	1,155.2	1,822.2	1,754.7	0.00	0.00	0.00	
7,800.0	90.04	360.00	6,360.5	1,255.2	1,822.2	1,847.4	0.00	0.00	0.00	
7,900.0	90.04	360.00	6,360.4	1,355.2	1,822.2	1,940.1	0.00	0.00	0.00	
8,000.0	90.04	360.00	6,360.3	1,455.2	1,822.2	2,032.8	0.00	0.00	0.00	
8,100.0	90.04	360.00	6,360.2	1,555.2	1,822.2	2,125.4	0.00	0.00	0.00	
8,200.0	90.04	360.00	6,360.2	1,655.2	1,822.2	2,218.1	0.00	0.00	0.00	

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Well:	Trimar Farms 29Y-201	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (2-26-15)		

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)	
8,300.0	90.04	360.00	6,360.1	1,755.2	1,822.2	2,310.8	0.00	0.00	0.00	
8,400.0	90.04	360.00	6,360.0	1,855.2	1,822.2	2,403.5	0.00	0.00	0.00	
8,500.0	90.04	360.00	6,359.9	1,955.2	1,822.2	2,496.2	0.00	0.00	0.00	
8,600.0	90.04	360.00	6,359.9	2,055.2	1,822.2	2,588.9	0.00	0.00	0.00	
8,700.0	90.04	360.00	6,359.8	2,155.2	1,822.2	2,681.6	0.00	0.00	0.00	
8,800.0	90.04	360.00	6,359.7	2,255.2	1,822.2	2,774.3	0.00	0.00	0.00	
8,900.0	90.04	360.00	6,359.6	2,355.2	1,822.2	2,866.9	0.00	0.00	0.00	
9,000.0	90.04	360.00	6,359.6	2,455.2	1,822.2	2,959.6	0.00	0.00	0.00	
9,100.0	90.04	360.00	6,359.5	2,555.2	1,822.2	3,052.3	0.00	0.00	0.00	
9,200.0	90.04	360.00	6,359.4	2,655.2	1,822.2	3,145.0	0.00	0.00	0.00	
9,300.0	90.04	360.00	6,359.3	2,755.2	1,822.2	3,237.7	0.00	0.00	0.00	
9,400.0	90.04	360.00	6,359.3	2,855.2	1,822.2	3,330.4	0.00	0.00	0.00	
9,500.0	90.04	360.00	6,359.2	2,955.2	1,822.2	3,423.1	0.00	0.00	0.00	
9,600.0	90.04	360.00	6,359.1	3,055.2	1,822.2	3,515.7	0.00	0.00	0.00	
9,700.0	90.04	360.00	6,359.0	3,155.2	1,822.2	3,608.4	0.00	0.00	0.00	
9,800.0	90.04	360.00	6,359.0	3,255.2	1,822.2	3,701.1	0.00	0.00	0.00	
9,900.0	90.04	360.00	6,358.9	3,355.2	1,822.2	3,793.8	0.00	0.00	0.00	
10,000.0	90.04	360.00	6,358.8	3,455.2	1,822.2	3,886.5	0.00	0.00	0.00	
10,100.0	90.04	360.00	6,358.7	3,555.2	1,822.2	3,979.2	0.00	0.00	0.00	
10,200.0	90.04	360.00	6,358.7	3,655.2	1,822.2	4,071.9	0.00	0.00	0.00	
10,300.0	90.04	360.00	6,358.6	3,755.2	1,822.2	4,164.6	0.00	0.00	0.00	
10,400.0	90.04	360.00	6,358.5	3,855.2	1,822.2	4,257.2	0.00	0.00	0.00	
10,500.0	90.04	360.00	6,358.4	3,955.2	1,822.2	4,349.9	0.00	0.00	0.00	
10,600.0	90.04	360.00	6,358.4	4,055.2	1,822.2	4,442.6	0.00	0.00	0.00	
10,700.0	90.04	360.00	6,358.3	4,155.2	1,822.2	4,535.3	0.00	0.00	0.00	
10,800.0	90.04	360.00	6,358.2	4,255.2	1,822.2	4,628.0	0.00	0.00	0.00	
10,900.0	90.04	360.00	6,358.1	4,355.2	1,822.2	4,720.7	0.00	0.00	0.00	
11,000.0	90.04	360.00	6,358.1	4,455.2	1,822.2	4,813.4	0.00	0.00	0.00	
11,044.2	90.04	360.00	6,358.0	4,499.3	1,822.2	4,854.3	0.00	0.00	0.00	
BHL 500'FNL & 181'FEL										

Targets										
Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
SHL 275'FSL & 2000'I	- plan hits target center	0.00	0.00	1.0	0.0	0.0	1,377,163.83	3,290,455.40	40.364030	-104.457640
	- Point									
BHL 500'FNL & 181'F	- plan hits target center	0.00	0.00	6,358.0	4,499.3	1,822.2	1,381,684.05	3,292,224.48	40.376380	-104.451100
	- Point									

Casing Points										
Measured Depth (ft)	Vertical Depth (ft)	Name					Casing Diameter (")	Hole Diameter (")		
7,083.8	6,361.0	7"					7	7-1/2		

Database:	Landmark	Local Co-ordinate Reference:	Well Trimar Farms 29Y-201
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4586.0ft (RKB - 13')
Project:	SEC.29-T5N-R63W	MD Reference:	WELL @ 4586.0ft (RKB - 13')
Site:	Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W	North Reference:	True
Well:	Trimar Farms 29Y-201	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (2-26-15)		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,427.9	3,305.0	Parkman		0.00		
4,002.2	3,850.0	Sussex		0.00		
5,066.4	4,860.0	Shannon		0.00		
6,473.7	6,142.0	Sharon Springs		0.00		
6,698.7	6,271.0	Niobrara A		0.00		
6,862.8	6,331.0	Niobrara B		0.00		
	6,416.0	Niobrara C		0.00		
	6,504.0	Ft Hays		0.00		
	6,528.0	Codell		0.00		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
200.0	200.0	0.0	0.0	KOP - Start Build 1.50	
5,849.2	5,603.0	-27.5	192.6	Start DLS 7.50 TFO -97.71	
7,083.8	6,361.0	-224.7	1,572.9	End of Build	
11,044.2	6,358.0	539.0	1,822.2	TD at 11044.2	



PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.29-T5N-R63W

Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W

Trimar Farms 29Y-201

Wellbore #1

Plan #2 (2-26-15)

Anticollision Report

27 February, 2015



Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Trimar Farms 29Y-201
Project:	SEC.29-T5N-R63W	TVD Reference:	WELL @ 4586.0ft (RKB - 13')
Reference Site:	Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W	MD Reference:	WELL @ 4586.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Trimar Farms 29Y-201	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 (2-26-15)	Offset TVD Reference:	Offset Datum

Reference	Plan #2 (2-26-15)
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	2/27/2015		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	11,044.2	Plan #2 (2-26-15) (Wellbore #1)	MWD	MWD - Standard	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Existing Wells Sec.29-T5N-R63W						
Morgante 44-29U (Exist.) - Wellbore #1 - Wellbore #1	7,058.4	6,338.3	366.9	333.8	11.087	CC, ES
Morgante 44-29U (Exist.) - Wellbore #1 - Wellbore #1	7,100.0	6,337.6	368.7	335.4	11.059	SF
North Platte E-A-28HC Pad Sec.28-T5N-R63W						
Dow 1-29 (Exist.) - Wellbore #1 - Wellbore #1	10,814.6	6,700.4	491.4	386.9	4.700	CC, ES
Dow 1-29 (Exist.) - Wellbore #1 - Wellbore #1	10,900.0	6,703.3	498.8	392.6	4.697	SF
North Platte E-A-28HC - Wellbore #1 - Wellbore #1	8,019.4	8,023.2	248.0	202.4	5.440	CC
North Platte E-A-28HC - Wellbore #1 - Wellbore #1	11,000.0	10,995.3	279.1	146.1	2.099	ES
North Platte E-A-28HC - Wellbore #1 - Wellbore #1	11,044.2	11,041.0	280.6	146.2	2.088	SF
Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W						
Trimar Farms 29T-221 - Wellbore #1 - Plan #2 (2-26-15)	200.0	200.0	58.3	57.6	86.451	CC
Trimar Farms 29T-221 - Wellbore #1 - Plan #2 (2-26-15)	300.0	300.0	58.5	57.4	52.627	ES
Trimar Farms 29T-221 - Wellbore #1 - Plan #2 (2-26-15)	11,044.2	10,865.7	788.5	612.5	4.479	SF
Trimar Farms 29T-401 - Wellbore #1 - Plan #2 (2-25-15)	200.0	200.0	87.4	86.8	129.661	CC
Trimar Farms 29T-401 - Wellbore #1 - Plan #2 (2-25-15)	300.0	300.0	87.6	86.5	78.838	ES
Trimar Farms 29T-401 - Wellbore #1 - Plan #2 (2-25-15)	11,044.2	10,989.4	994.3	819.3	5.681	SF
Trimar Farms 29Y-341 - Wellbore #1 - Plan #2 (2-26-15)	200.0	200.0	29.1	28.5	43.222	CC
Trimar Farms 29Y-341 - Wellbore #1 - Plan #2 (2-26-15)	300.0	300.0	29.4	28.2	26.414	ES
Trimar Farms 29Y-341 - Wellbore #1 - Plan #2 (2-26-15)	11,044.2	11,045.4	276.3	101.3	1.579	SF

Offset Design												Existing Wells Sec.29-T5N-R63W - Morgante 44-29U (Exist.) - Wellbore #1 - Wellbore #1		Offset Site Error:	0.0 ft
Survey Program:												100-NS-GYRO-MS		Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance								
Measured Depth	Vertical	Measured	Vertical	Reference	Offset	Highside	Offset Wellbore Centre		Between	Between	Minimum	Separation		Warning	
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	Toolface (°)	+N/-S (ft)	+E/-W (ft)	Centres (ft)	Ellipses (ft)	Separation (ft)	Factor			
3,200.0	3,088.7	3,073.8	3,073.5	16.6	5.7	-49.98	526.1	1,496.6	981.4	961.8	19.68	49.880			
3,300.0	3,183.6	3,169.7	3,169.4	17.3	5.8	-51.48	526.2	1,494.4	959.3	938.8	20.51	46.761			
3,400.0	3,278.5	3,265.6	3,265.2	18.0	5.9	-53.06	526.4	1,492.1	937.6	916.3	21.38	43.849			
3,500.0	3,373.4	3,361.3	3,360.9	18.6	6.0	-54.72	526.6	1,489.4	916.6	894.3	22.28	41.134			
3,600.0	3,468.3	3,456.3	3,455.8	19.3	6.1	-56.45	526.7	1,486.6	896.1	872.9	23.21	38.616			
3,700.0	3,563.2	3,550.9	3,550.4	20.0	6.2	-58.25	526.8	1,483.7	876.5	852.4	24.15	36.287			

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 Trimar Farms 29Y-201
Project:	SEC.29-T5N-R63W	TVD Reference:	WELL @ 4586.0ft (RKB - 13')
Reference Site:	Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W	MD Reference:	WELL @ 4586.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Trimar Farms 29Y-201	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 (2-26-15)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Sec.29-T5N-R63W - Morgante 44-29U (Exist.) - Wellbore #1 - Wellbore #1											Offset Site Error:		0.0 ft	
Survey Program: 100-NS-GYRO-MS											Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis		Distance							Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
3,800.0	3,658.1	3,646.3	3,645.8	20.7	6.4	-60.14	527.0	1,480.7	857.7	832.6	25.13	34.130		
3,900.0	3,753.0	3,742.9	3,742.3	21.3	6.5	-62.15	527.1	1,477.2	839.7	813.5	26.13	32.129		
4,000.0	3,847.9	3,838.6	3,838.0	22.0	6.7	-64.26	527.2	1,473.2	822.4	795.2	27.16	30.284		
4,100.0	3,942.8	3,931.2	3,930.4	22.7	6.8	-66.41	527.5	1,468.8	806.2	778.0	28.18	28.610		
4,200.0	4,037.7	4,020.1	4,019.2	23.4	6.9	-68.56	528.3	1,464.5	791.7	762.5	29.20	27.113		
4,300.0	4,132.7	4,106.1	4,105.1	24.0	7.1	-70.70	529.6	1,460.7	779.3	749.1	30.21	25.799		
4,400.0	4,227.6	4,199.4	4,198.3	24.7	7.3	-73.06	531.2	1,457.1	768.8	737.6	31.24	24.610		
4,500.0	4,322.5	4,292.1	4,291.0	25.4	7.4	-75.41	532.6	1,454.2	759.9	727.6	32.26	23.556		
4,600.0	4,417.4	4,386.9	4,385.8	26.1	7.6	-77.79	533.7	1,452.1	752.5	719.2	33.27	22.618		
4,700.0	4,512.3	4,482.3	4,481.2	26.7	7.8	-80.18	534.5	1,450.4	746.3	712.1	34.26	21.786		
4,800.0	4,607.2	4,577.7	4,576.5	27.4	7.9	-82.57	535.0	1,449.2	741.5	706.2	35.22	21.051		
4,900.0	4,702.1	4,673.4	4,672.2	28.1	8.1	-84.97	535.3	1,448.2	737.9	701.7	36.16	20.405		
5,000.0	4,797.0	4,769.0	4,767.8	28.8	8.3	-87.38	535.5	1,447.2	735.6	698.6	37.07	19.843		
5,100.0	4,891.9	4,866.1	4,864.9	29.4	8.5	-89.82	535.4	1,446.4	734.6	696.6	37.95	19.358		
5,151.8	4,941.1	4,916.7	4,915.5	29.8	8.6	-91.09	535.1	1,446.1	734.4	696.0	38.38	19.134		
5,200.0	4,986.8	4,963.3	4,962.1	30.1	8.7	-92.26	534.9	1,445.7	734.6	695.8	38.78	18.943		
5,300.0	5,081.7	5,059.0	5,057.8	30.8	8.9	-94.65	534.2	1,445.0	735.7	696.2	39.56	18.596		
5,400.0	5,176.6	5,154.3	5,153.1	31.5	9.1	-97.02	533.4	1,444.3	738.2	697.9	40.31	18.315		
5,500.0	5,271.5	5,249.5	5,248.3	32.1	9.3	-99.36	532.5	1,443.8	742.0	701.0	41.00	18.097		
5,600.0	5,366.4	5,345.8	5,344.6	32.8	9.5	-101.69	531.6	1,443.5	747.0	705.4	41.65	17.937		
5,700.0	5,461.3	5,441.0	5,439.8	33.5	9.7	-103.94	530.4	1,443.4	753.1	710.9	42.25	17.827		
5,800.0	5,556.2	5,533.4	5,532.2	34.2	9.8	-106.08	529.6	1,443.4	760.7	717.9	42.80	17.772		
5,900.0	5,651.2	5,628.2	5,626.9	34.8	10.0	-96.68	528.9	1,443.5	768.0	724.8	43.27	17.749		
6,000.0	5,745.7	5,725.3	5,724.0	35.3	10.2	-78.01	528.1	1,444.0	765.2	722.1	43.09	17.758		
6,100.0	5,838.4	5,822.0	5,820.8	35.9	10.3	-65.27	527.1	1,445.3	750.7	708.5	42.19	17.794		
6,200.0	5,927.6	5,914.1	5,912.8	36.3	10.5	-58.32	525.8	1,447.0	725.0	684.4	40.62	17.849		
6,300.0	6,011.8	5,998.8	5,997.5	36.7	10.6	-55.71	524.4	1,448.7	689.6	651.1	38.51	17.908		
6,400.0	6,089.6	6,076.4	6,075.1	37.1	10.8	-56.44	523.2	1,450.3	645.8	609.7	36.05	17.914		
6,500.0	6,159.6	6,146.2	6,144.8	37.4	10.9	-59.96	522.0	1,451.8	595.5	561.9	33.61	17.719		
6,600.0	6,220.6	6,206.5	6,205.1	37.8	11.0	-65.79	520.9	1,453.0	541.3	509.6	31.72	17.062		
6,700.0	6,271.6	6,255.5	6,254.1	38.1	11.1	-73.04	520.0	1,454.0	486.5	455.6	30.89	15.752		
6,800.0	6,311.7	6,293.7	6,292.3	38.3	11.1	-80.51	519.3	1,454.6	435.8	404.7	31.09	14.017		
6,900.0	6,340.2	6,320.4	6,319.0	38.6	11.2	-86.66	518.9	1,455.1	395.1	363.2	31.83	12.411		
7,000.0	6,356.7	6,335.1	6,333.7	38.9	11.2	-90.27	518.6	1,455.3	370.9	338.3	32.64	11.365		
7,058.4	6,361.0	6,338.3	6,336.9	39.1	11.2	-90.93	518.5	1,455.4	366.9	333.8	33.09	11.087 CC, ES		
7,100.0	6,361.0	6,337.6	6,336.2	39.2	11.2	-90.81	518.6	1,455.4	368.7	335.4	33.34	11.059 SF		
7,200.0	6,360.9	6,335.8	6,334.4	39.5	11.2	-90.53	518.6	1,455.3	391.5	357.2	34.32	11.407		
7,300.0	6,360.8	6,334.0	6,332.6	40.0	11.2	-90.24	518.6	1,455.3	436.5	401.1	35.41	12.328		
7,400.0	6,360.8	6,332.2	6,330.7	40.5	11.2	-89.96	518.7	1,455.3	497.9	461.3	36.59	13.606		
7,500.0	6,360.7	6,330.3	6,328.9	41.1	11.2	-89.67	518.7	1,455.3	570.2	532.4	37.86	15.063		
7,600.0	6,360.6	6,328.5	6,327.1	41.8	11.2	-89.39	518.7	1,455.2	650.0	610.8	39.19	16.584		
7,700.0	6,360.5	6,326.7	6,325.3	42.5	11.2	-89.10	518.8	1,455.2	734.7	694.1	40.59	18.100		
7,800.0	6,360.5	6,324.9	6,323.5	43.4	11.2	-88.82	518.8	1,455.2	822.8	780.8	42.04	19.573		
7,900.0	6,360.4	6,323.1	6,321.6	44.3	11.2	-88.54	518.8	1,455.1	913.4	869.9	43.53	20.983		

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Trimar Farms 29Y-201
Project:	SEC.29-T5N-R63W	TVD Reference:	WELL @ 4586.0ft (RKB - 13')
Reference Site:	Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W	MD Reference:	WELL @ 4586.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Trimar Farms 29Y-201	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 (2-26-15)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 533- North Platte E-A-28HC Pad Sec.28-T5N-R63W - Dow 1-29 (Exist.) - Wellbore #1 - Wellbore #1													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	
10,000.0	6,358.8	6,667.6	6,269.2	74.6	22.2	-84.88	4,268.5	1,331.7	950.9	862.0	88.82	10.706		
10,100.0	6,358.7	6,672.1	6,273.7	76.3	22.2	-85.40	4,268.7	1,331.6	866.8	776.1	90.76	9.551		
10,200.0	6,358.7	6,676.4	6,278.0	78.1	22.2	-85.90	4,268.9	1,331.5	786.6	693.9	92.70	8.485		
10,300.0	6,358.6	6,680.6	6,282.2	79.8	22.2	-86.39	4,269.0	1,331.4	711.3	616.7	94.64	7.516		
10,400.0	6,358.5	6,684.7	6,286.3	81.5	22.3	-86.86	4,269.2	1,331.3	642.8	546.2	96.57	6.656		
10,500.0	6,358.4	6,688.6	6,290.3	83.3	22.3	-87.32	4,269.3	1,331.2	583.4	484.9	98.50	5.922		
10,600.0	6,358.4	6,692.5	6,294.1	85.0	22.3	-87.77	4,269.5	1,331.1	536.2	435.7	100.43	5.339		
10,700.0	6,358.3	6,696.2	6,297.9	86.8	22.3	-88.21	4,269.6	1,331.0	504.6	402.2	102.35	4.930		
10,800.0	6,358.2	6,699.8	6,301.5	88.6	22.3	-88.63	4,269.7	1,330.9	491.6	387.4	104.27	4.715		
10,814.6	6,358.2	6,700.4	6,302.0	88.8	22.3	-88.69	4,269.7	1,330.9	491.4	386.9	104.55	4.700 CC, ES		
10,900.0	6,358.1	6,703.3	6,304.9	90.3	22.3	-89.03	4,269.8	1,330.8	498.8	392.6	106.18	4.697 SF		
11,000.0	6,358.1	6,706.7	6,308.3	92.1	22.3	-89.43	4,270.0	1,330.8	525.2	417.1	108.10	4.859		
11,044.2	6,358.0	6,708.2	6,309.8	92.9	22.3	-89.61	4,270.0	1,330.7	542.3	433.4	108.94	4.978		

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Trimar Farms 29Y-201
Project:	SEC.29-T5N-R63W	TVD Reference:	WELL @ 4586.0ft (RKB - 13')
Reference Site:	Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W	MD Reference:	WELL @ 4586.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Trimar Farms 29Y-201	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 (2-26-15)	Offset TVD Reference:	Offset Datum

Offset Design North Platte E-A-28HC Pad Sec.28-T5N-R63W - North Platte E-A-28HC - Wellbore #1 - Wellbore #1														Offset Site Error:	0.0 ft
Survey Program: 63-Reference														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)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
4,400.0	4,227.6	4,401.0	4,309.2	24.7	17.5	-8.56	-165.0	2,100.5	984.9	957.6	27.23	36.173			
4,500.0	4,322.5	4,501.1	4,407.5	25.4	17.9	-7.84	-180.3	2,089.6	943.5	915.6	27.89	33.834			
4,600.0	4,417.4	4,585.8	4,490.8	26.1	18.2	-7.23	-192.6	2,080.5	902.3	873.8	28.49	31.670			
4,700.0	4,512.3	4,688.2	4,591.6	26.7	18.6	-6.44	-207.1	2,069.2	861.1	832.0	29.16	29.531			
4,800.0	4,607.2	4,780.5	4,682.3	27.4	18.9	-5.64	-220.3	2,057.8	818.8	789.0	29.80	27.475			
4,900.0	4,702.1	4,864.5	4,764.8	28.1	19.2	-4.88	-231.8	2,048.1	777.2	746.8	30.42	25.551			
5,000.0	4,797.0	4,954.5	4,853.5	28.8	19.6	-4.06	-243.2	2,038.0	736.1	705.0	31.04	23.712			
5,100.0	4,891.9	5,036.2	4,934.3	29.4	19.8	-3.37	-252.0	2,029.3	695.5	663.9	31.62	21.998			
5,200.0	4,986.8	5,115.9	5,013.4	30.1	20.1	-2.81	-258.9	2,022.4	656.7	624.5	32.17	20.413			
5,300.0	5,081.7	5,197.2	5,094.3	30.8	20.3	-2.38	-264.0	2,017.0	619.5	586.9	32.69	18.955			
5,400.0	5,176.6	5,277.3	5,174.3	31.5	20.4	-2.10	-267.4	2,013.4	584.2	551.1	33.17	17.616			
5,500.0	5,271.5	5,358.3	5,255.2	32.1	20.5	-1.96	-269.4	2,011.8	551.2	517.6	33.62	16.394			
5,600.0	5,366.4	5,449.9	5,346.8	32.8	20.7	-1.88	-271.1	2,011.5	519.5	485.5	34.08	15.246			
5,700.0	5,461.3	5,541.4	5,438.3	33.5	20.8	-1.78	-272.8	2,011.7	488.5	453.9	34.53	14.145			
5,800.0	5,556.2	5,633.5	5,530.4	34.2	20.9	-1.65	-274.8	2,012.6	458.1	423.1	34.99	13.091			
5,900.0	5,651.2	5,726.9	5,623.7	34.8	21.0	-1.41	-276.9	2,014.0	428.4	392.8	35.62	12.028			
6,000.0	5,745.7	5,825.7	5,722.5	35.3	21.1	-1.16	-276.8	2,015.7	400.5	363.9	36.67	10.923			
6,100.0	5,838.4	5,929.9	5,826.2	35.9	21.1	-0.85	-267.4	2,016.6	373.5	335.5	38.05	9.816			
6,200.0	5,927.6	6,037.5	5,931.8	36.3	21.0	-0.73	-246.9	2,017.6	349.6	309.9	39.66	8.815			
6,300.0	6,011.8	6,146.3	6,034.9	36.7	20.8	-0.64	-212.4	2,016.0	326.6	285.6	41.02	7.962			
6,400.0	6,089.6	6,244.1	6,123.0	37.1	20.5	-0.77	-170.1	2,018.1	311.2	269.7	41.51	7.496			
6,500.0	6,159.6	6,378.8	6,231.2	37.4	19.8	-1.11	-90.6	2,021.4	298.1	257.3	40.86	7.296			
6,600.0	6,220.6	6,497.4	6,313.5	37.8	19.2	-1.51	-5.2	2,019.9	283.7	244.6	39.13	7.250			
6,700.0	6,271.6	6,613.4	6,381.0	38.1	18.6	-1.20	89.0	2,021.0	274.4	237.9	36.57	7.504			
6,800.0	6,311.7	6,738.4	6,439.0	38.3	18.0	-1.13	199.5	2,020.7	267.2	233.7	33.53	7.970			
6,900.0	6,340.2	6,859.1	6,480.2	38.6	17.5	-1.22	313.0	2,019.5	262.5	231.9	30.60	8.578			
7,000.0	6,356.7	6,989.4	6,499.6	38.9	17.3	-1.21	441.5	2,020.8	257.7	228.8	28.91	8.915			
7,044.6	6,360.3	7,036.5	6,501.4	39.0	17.3	-1.26	488.5	2,022.1	256.6	227.8	28.80	8.911			
7,100.0	6,361.0	7,091.4	6,503.1	39.2	17.4	-1.26	543.3	2,024.0	258.5	229.7	28.75	8.989			
7,200.0	6,360.9	7,192.5	6,503.8	39.5	17.7	-1.21	644.4	2,028.5	262.4	232.2	30.23	8.681			
7,300.0	6,360.8	7,300.2	6,503.1	40.0	18.3	-1.27	752.0	2,032.4	264.9	232.9	31.98	8.284			
7,400.0	6,360.8	7,410.6	6,503.9	40.5	19.1	-1.27	862.3	2,030.5	264.1	230.5	33.57	7.865			
7,500.0	6,360.7	7,514.0	6,504.8	41.1	20.1	-1.28	965.6	2,024.9	260.4	225.2	35.16	7.405			
7,600.0	6,360.6	7,615.4	6,505.2	41.8	21.1	-1.29	1,066.8	2,018.7	255.9	219.1	36.82	6.951			
7,700.0	6,360.5	7,711.1	6,505.2	42.5	22.1	-1.30	1,162.3	2,013.7	252.0	213.4	38.58	6.532			
7,800.0	6,360.5	7,804.7	6,506.6	43.4	23.1	-1.31	1,256.0	2,011.0	250.8	210.4	40.40	6.209			
7,900.0	6,360.4	7,909.9	6,505.7	44.3	24.4	-1.31	1,361.1	2,010.5	249.9	207.1	42.83	5.836			
8,000.0	6,360.3	8,005.1	6,504.5	45.3	25.5	-1.31	1,456.3	2,009.0	248.0	202.9	45.12	5.496			
8,019.4	6,360.3	8,023.2	6,504.3	45.5	25.7	-1.31	1,474.4	2,009.1	248.0	202.4	45.59	5.440 CC			
8,100.0	6,360.2	8,100.1	6,504.2	46.4	26.7	-1.30	1,551.3	2,009.8	248.5	201.0	47.55	5.227			
8,200.0	6,360.2	8,205.6	6,504.2	47.5	28.2	-1.30	1,656.8	2,010.2	248.8	198.6	50.18	4.958			
8,248.9	6,360.1	8,253.0	6,504.8	48.1	28.8	-1.30	1,704.2	2,009.1	248.4	197.2	51.25	4.847			
8,300.0	6,360.1	8,299.4	6,507.2	48.7	29.4	-1.31	1,750.5	2,007.7	249.1	196.9	52.12	4.779			
8,400.0	6,360.0	8,398.4	6,512.1	50.0	30.9	-1.32	1,849.3	2,006.3	251.4	197.3	54.10	4.647			
8,500.0	6,359.9	8,497.9	6,514.5	51.3	32.4	-1.33	1,948.7	2,007.2	253.8	197.2	56.54	4.488			
8,600.0	6,359.9	8,596.0	6,515.1	52.6	33.9	-1.32	2,046.8	2,010.9	257.0	197.5	59.45	4.323			
8,700.0	6,359.8	8,697.3	6,515.9	54.0	35.4	-1.32	2,148.1	2,014.9	260.5	198.2	62.34	4.179			
8,800.0	6,359.7	8,797.9	6,515.7	55.5	36.9	-1.31	2,248.6	2,018.6	263.2	197.7	65.43	4.022			
8,900.0	6,359.6	8,898.7	6,516.0	56.9	38.4	-1.31	2,349.3	2,021.5	265.5	197.2	68.36	3.885			
9,000.0	6,359.6	9,001.7	6,514.5	58.4	40.1	-1.30	2,452.2	2,025.6	267.6	195.9	71.80	3.728			
9,100.0	6,359.5	9,104.6	6,511.7	60.0	41.7	-1.29	2,555.0	2,028.8	268.3	193.0	75.30	3.563			

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 Trimar Farms 29Y-201
Project:	SEC.29-T5N-R63W	TVD Reference:	WELL @ 4586.0ft (RKB - 13')
Reference Site:	Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W	MD Reference:	WELL @ 4586.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Trimar Farms 29Y-201	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 (2-26-15)	Offset TVD Reference:	Offset Datum

Offset Design North Platte E-A-28HC Pad Sec.28-T5N-R63W - North Platte E-A-28HC - Wellbore #1 - Wellbore #1														Offset Site Error:	0.0 ft
Survey Program: 63-Reference														Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
9,200.0	6,359.4	9,208.2	6,511.3	61.5	43.4	129.65	2,658.6	2,028.4	267.9	189.8	78.14	3.429			
9,300.0	6,359.3	9,311.6	6,513.9	63.1	45.1	130.74	2,761.9	2,023.7	266.1	186.0	80.11	3.322			
9,400.0	6,359.3	9,407.3	6,514.6	64.7	46.7	131.25	2,857.5	2,021.0	264.4	182.0	82.43	3.208			
9,487.2	6,359.2	9,492.0	6,515.2	66.1	48.0	131.58	2,942.2	2,019.4	263.7	179.1	84.51	3.120			
9,500.0	6,359.2	9,504.4	6,515.3	66.3	48.2	131.62	2,954.7	2,019.3	263.7	178.9	84.82	3.109			
9,600.0	6,359.1	9,606.5	6,516.1	67.9	49.9	132.03	3,056.7	2,017.5	262.9	175.6	87.25	3.013			
9,700.0	6,359.0	9,708.2	6,515.9	69.6	51.7	132.15	3,158.4	2,016.5	262.1	172.1	89.98	2.913			
9,800.0	6,359.0	9,809.8	6,513.4	71.3	53.4	131.72	3,260.0	2,016.7	260.6	167.3	93.27	2.794			
9,900.0	6,358.9	9,909.8	6,512.4	72.9	55.1	131.91	3,359.9	2,014.4	258.3	162.4	95.89	2.694			
10,000.0	6,358.8	10,005.9	6,510.3	74.6	56.7	131.37	3,456.0	2,015.7	257.9	158.6	99.26	2.598			
10,008.7	6,358.8	10,013.9	6,510.0	74.8	56.9	131.31	3,464.0	2,015.9	257.9	158.3	99.56	2.590			
10,100.0	6,358.7	10,101.9	6,508.9	76.3	58.3	130.82	3,551.9	2,018.0	258.9	156.2	102.61	2.523			
10,200.0	6,358.7	10,198.6	6,510.8	78.1	59.9	131.00	3,648.6	2,019.1	260.9	155.7	105.20	2.481			
10,300.0	6,358.6	10,300.2	6,513.1	79.8	61.6	131.15	3,750.2	2,020.7	263.7	155.8	107.90	2.444			
10,400.0	6,358.5	10,402.3	6,511.6	81.5	63.4	130.50	3,852.2	2,023.7	265.0	153.4	111.62	2.375			
10,500.0	6,358.4	10,502.0	6,511.8	83.3	65.0	130.23	3,951.8	2,025.9	266.9	152.1	114.81	2.325			
10,600.0	6,358.4	10,603.1	6,512.1	85.0	66.8	130.17	4,052.9	2,026.8	267.8	150.0	117.82	2.273			
10,700.0	6,358.3	10,699.3	6,511.0	86.8	68.5	129.55	4,149.1	2,030.1	269.8	148.3	121.49	2.221			
10,800.0	6,358.2	10,796.7	6,510.6	88.6	70.1	128.97	4,246.4	2,034.0	272.6	147.5	125.12	2.179			
10,900.0	6,358.1	10,898.9	6,509.5	90.3	71.9	128.14	4,348.4	2,039.1	275.8	146.6	129.22	2.135			
11,000.0	6,358.1	10,995.3	6,508.8	92.1	73.5	127.49	4,444.7	2,043.5	279.1	146.1	132.98	2.099 ES			
11,044.2	6,358.0	11,041.0	6,509.5	92.9	74.3	127.43	4,490.4	2,044.9	280.6	146.2	134.41	2.088 SF			

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Trimar Farms 29Y-201
Project:	SEC.29-T5N-R63W	TVD Reference:	WELL @ 4586.0ft (RKB - 13')
Reference Site:	Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W	MD Reference:	WELL @ 4586.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Trimar Farms 29Y-201	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 (2-26-15)	Offset TVD Reference:	Offset Datum

Offset Design		Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W - Trimar Farms 29T-221 - Wellbore #1 - Plan #2 (2-2)										Offset Site Error:		0.0 ft
Survey Program: 0-MWD												Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	0.00	58.3	0.0	58.3					
100.0	100.0	100.0	100.0	0.1	0.1	0.00	58.3	0.0	58.3	58.1	0.22	259.353		
200.0	200.0	200.0	200.0	0.3	0.3	0.00	58.3	0.0	58.3	57.6	0.67	86.451	CC	
300.0	300.0	300.0	300.0	0.5	0.6	-99.40	58.3	0.0	58.5	57.4	1.11	52.627	ES	
400.0	399.9	399.9	399.9	0.8	0.8	-103.13	58.3	0.0	59.3	57.7	1.55	38.186		
500.0	499.7	499.7	499.7	1.0	1.0	-109.08	58.3	0.0	61.1	59.1	2.01	30.389		
600.0	599.3	599.3	599.3	1.3	1.2	-116.69	58.3	0.0	64.7	62.2	2.48	26.033		
700.0	698.6	698.6	698.6	1.5	1.5	-125.11	58.3	0.0	70.7	67.8	2.97	23.839		
800.0	797.5	797.5	797.5	1.9	1.7	-133.41	58.3	0.0	79.9	76.5	3.45	23.140		
900.0	896.1	898.2	898.1	2.2	1.9	-140.66	57.9	1.2	91.4	87.4	3.92	23.310		
1,000.0	994.2	999.2	999.1	2.6	2.1	-146.47	56.7	4.9	103.7	99.3	4.37	23.743		
1,100.0	1,091.7	1,100.7	1,100.4	3.1	2.3	-151.22	54.6	11.2	116.6	111.8	4.82	24.198		
1,200.0	1,188.6	1,202.6	1,201.8	3.6	2.5	-155.19	51.7	20.2	130.0	124.8	5.28	24.631		
1,300.0	1,284.9	1,304.9	1,303.4	4.1	2.8	-158.59	48.0	31.7	143.7	138.0	5.74	25.025		
1,400.0	1,380.4	1,407.6	1,405.1	4.7	3.1	-161.55	43.3	45.9	157.7	151.5	6.21	25.371		
1,500.0	1,475.3	1,510.9	1,506.8	5.3	3.4	-164.16	37.8	62.7	171.1	164.4	6.71	25.495		
1,600.0	1,570.2	1,613.8	1,607.7	6.0	3.8	-166.33	31.5	82.1	182.2	175.0	7.22	25.236		
1,700.0	1,665.1	1,713.0	1,704.8	6.6	4.1	-168.17	25.2	101.5	192.8	185.0	7.74	24.905		
1,800.0	1,760.0	1,812.3	1,801.9	7.3	4.5	-169.81	18.9	120.9	203.5	195.2	8.26	24.639		
1,900.0	1,854.9	1,911.6	1,899.1	7.9	4.9	-171.29	12.5	140.4	214.3	205.5	8.79	24.389		
2,000.0	1,949.8	2,010.8	1,996.2	8.6	5.4	-172.63	6.2	159.8	225.3	216.0	9.32	24.165		
2,100.0	2,044.7	2,110.1	2,093.3	9.3	5.8	-173.84	-0.2	179.3	236.4	226.5	9.87	23.958		
2,200.0	2,139.6	2,209.4	2,190.5	9.9	6.2	-174.94	-6.5	198.7	247.6	237.1	10.42	23.765		
2,300.0	2,234.5	2,308.6	2,287.6	10.6	6.6	-175.95	-12.8	218.2	258.8	247.9	10.98	23.583		
2,400.0	2,329.4	2,407.9	2,384.7	11.3	7.1	-176.88	-19.2	237.6	270.2	258.6	11.54	23.411		
2,500.0	2,424.3	2,507.2	2,481.9	11.9	7.5	-177.72	-25.5	257.0	281.6	269.5	12.11	23.247		
2,600.0	2,519.3	2,606.4	2,579.0	12.6	7.9	-178.51	-31.8	276.5	293.0	280.3	12.69	23.091		
2,700.0	2,614.2	2,705.7	2,676.1	13.3	8.4	-179.23	-38.2	295.9	304.5	291.3	13.28	22.941		
2,800.0	2,709.1	2,805.0	2,773.3	13.9	8.8	-179.90	-44.5	315.4	316.1	302.2	13.87	22.798		
2,900.0	2,804.0	2,904.2	2,870.4	14.6	9.3	-179.47	-50.9	334.8	327.7	313.2	14.46	22.661		
3,000.0	2,898.9	3,003.5	2,967.5	15.3	9.7	-178.89	-57.2	354.3	339.3	324.3	15.06	22.529		
3,100.0	2,993.8	3,102.8	3,064.7	16.0	10.2	-178.35	-63.5	373.7	351.0	335.3	15.67	22.403		
3,200.0	3,088.7	3,202.0	3,161.8	16.6	10.6	-177.84	-69.9	393.2	362.7	346.4	16.28	22.283		
3,300.0	3,183.6	3,301.3	3,258.9	17.3	11.0	-177.36	-76.2	412.6	374.4	357.5	16.89	22.167		
3,400.0	3,278.5	3,400.5	3,356.1	18.0	11.5	-176.92	-82.6	432.0	386.1	368.6	17.51	22.055		
3,500.0	3,373.4	3,499.8	3,453.2	18.6	11.9	-176.50	-88.9	451.5	397.9	379.8	18.13	21.949		
3,600.0	3,468.3	3,599.1	3,550.4	19.3	12.4	-176.10	-95.2	470.9	409.7	390.9	18.75	21.846		
3,700.0	3,563.2	3,698.3	3,647.5	20.0	12.8	-175.73	-101.6	490.4	421.5	402.1	19.38	21.748		
3,800.0	3,658.1	3,797.6	3,744.6	20.7	13.3	-175.37	-107.9	509.8	433.3	413.3	20.01	21.653		
3,900.0	3,753.0	3,896.9	3,841.8	21.3	13.7	-175.04	-114.3	529.3	445.1	424.5	20.64	21.563		
4,000.0	3,847.9	3,996.1	3,938.9	22.0	14.2	-174.72	-120.6	548.7	457.0	435.7	21.28	21.476		
4,100.0	3,942.8	4,095.4	4,036.0	22.7	14.7	-174.42	-126.9	568.2	468.8	446.9	21.92	21.392		
4,200.0	4,037.7	4,194.7	4,133.2	23.4	15.1	-174.13	-133.3	587.6	480.7	458.2	22.56	21.311		
4,300.0	4,132.7	4,293.9	4,230.3	24.0	15.6	-173.86	-139.6	607.0	492.6	469.4	23.20	21.234		
4,400.0	4,227.6	4,393.2	4,327.4	24.7	16.0	-173.60	-146.0	626.5	504.5	480.7	23.84	21.159		
4,500.0	4,322.5	4,492.5	4,424.6	25.4	16.5	-173.35	-152.3	645.9	516.4	491.9	24.49	21.087		
4,600.0	4,417.4	4,591.7	4,521.7	26.1	16.9	-173.11	-158.6	665.4	528.3	503.2	25.14	21.018		
4,700.0	4,512.3	4,691.0	4,618.8	26.7	17.4	-172.88	-165.0	684.8	540.2	514.5	25.79	20.952		
4,800.0	4,607.2	4,790.2	4,716.0	27.4	17.8	-172.67	-171.3	704.3	552.2	525.7	26.44	20.887		
4,900.0	4,702.1	4,889.5	4,813.1	28.1	18.3	-172.46	-177.6	723.7	564.1	537.0	27.09	20.825		
5,000.0	4,797.0	4,988.8	4,910.2	28.8	18.7	-172.26	-184.0	743.1	576.1	548.3	27.74	20.766		

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 Trimar Farms 29Y-201
Project:	SEC.29-T5N-R63W	TVD Reference:	WELL @ 4586.0ft (RKB - 13')
Reference Site:	Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W	MD Reference:	WELL @ 4586.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Trimar Farms 29Y-201	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 (2-26-15)	Offset TVD Reference:	Offset Datum

Offset Design		Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W - Trimar Farms 29T-221 - Wellbore #1 - Plan #2 (2-2)										Offset Site Error:		0.0 ft	
Survey Program: 0-MWD												Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
5,100.0	4,891.9	5,088.0	5,007.4	29.4	19.2	172.07	-190.3	762.6	588.0	559.6	28.40	20.708			
5,200.0	4,986.8	5,187.3	5,104.5	30.1	19.6	171.89	-196.7	782.0	600.0	570.9	29.05	20.652			
5,300.0	5,081.7	5,286.6	5,201.6	30.8	20.1	171.71	-203.0	801.5	611.9	582.2	29.71	20.598			
5,400.0	5,176.6	5,385.8	5,298.8	31.5	20.6	171.54	-209.3	820.9	623.9	593.5	30.37	20.546			
5,500.0	5,271.5	5,485.1	5,395.9	32.1	21.0	171.38	-215.7	840.4	635.9	604.9	31.02	20.496			
5,600.0	5,366.4	5,584.4	5,493.1	32.8	21.5	171.22	-222.0	859.8	647.9	616.2	31.68	20.447			
5,700.0	5,461.3	5,684.0	5,590.6	33.5	21.9	171.11	-227.9	879.3	659.8	627.5	32.33	20.412			
5,800.0	5,556.2	5,783.8	5,688.3	34.2	22.3	171.82	-224.2	898.9	671.7	639.0	32.68	20.552			
5,900.0	5,651.2	5,880.3	5,781.5	34.8	22.5	-174.61	-208.4	917.6	683.9	651.2	32.69	20.923			
6,000.0	5,745.7	5,974.2	5,869.7	35.3	22.8	-151.07	-181.6	935.2	696.6	663.9	32.66	21.326			
6,100.0	5,838.4	6,066.1	5,952.2	35.9	22.9	-133.15	-144.8	951.7	709.5	676.7	32.85	21.601			
6,200.0	5,927.6	6,156.2	6,028.4	36.3	23.1	-120.60	-99.3	967.0	722.3	689.1	33.25	21.726			
6,300.0	6,011.8	6,244.7	6,097.6	36.7	23.2	-111.76	-45.9	980.9	734.7	700.8	33.83	21.715			
6,400.0	6,089.6	6,332.0	6,159.5	37.1	23.3	-105.34	14.4	993.3	746.3	711.8	34.56	21.598			
6,500.0	6,159.6	6,418.2	6,213.5	37.4	23.4	-100.55	80.5	1,004.1	757.0	721.6	35.35	21.413			
6,600.0	6,220.6	6,500.0	6,257.8	37.8	23.6	-96.97	148.7	1,013.0	766.4	730.2	36.15	21.200			
6,700.0	6,271.6	6,588.0	6,297.1	38.1	23.7	-94.24	227.0	1,020.8	774.3	737.3	37.03	20.913			
6,800.0	6,311.7	6,672.0	6,326.2	38.3	23.9	-92.28	305.6	1,026.7	780.6	742.7	37.91	20.589			
6,900.0	6,340.2	6,755.6	6,346.6	38.6	24.2	-90.95	386.5	1,030.8	785.1	746.3	38.86	20.205			
7,000.0	6,356.7	6,838.9	6,358.1	38.9	24.5	-90.21	468.9	1,033.1	787.8	747.9	39.90	19.742			
7,100.0	6,361.0	6,925.2	6,361.0	39.2	24.9	-90.00	555.2	1,033.7	788.5	747.3	41.21	19.132			
7,200.0	6,360.9	7,025.2	6,360.9	39.5	25.6	-90.00	655.2	1,033.7	788.5	745.2	43.35	18.191			
7,300.0	6,360.8	7,125.2	6,360.8	40.0	26.4	-90.00	755.2	1,033.7	788.5	742.8	45.68	17.261			
7,400.0	6,360.8	7,225.2	6,360.8	40.5	27.4	-90.00	855.2	1,033.7	788.5	740.3	48.21	16.355			
7,500.0	6,360.7	7,325.2	6,360.7	41.1	28.5	-90.00	955.2	1,033.7	788.5	737.6	50.91	15.490			
7,600.0	6,360.6	7,425.2	6,360.6	41.8	29.7	-90.00	1,055.2	1,033.7	788.5	734.8	53.74	14.673			
7,700.0	6,360.5	7,525.2	6,360.5	42.5	31.0	-90.00	1,155.2	1,033.7	788.5	731.8	56.69	13.909			
7,800.0	6,360.5	7,625.2	6,360.5	43.4	32.3	-90.00	1,255.2	1,033.7	788.5	728.8	59.74	13.198			
7,900.0	6,360.4	7,725.2	6,360.4	44.3	33.8	-90.00	1,355.2	1,033.7	788.5	725.6	62.88	12.539			
8,000.0	6,360.3	7,825.2	6,360.3	45.3	35.3	-90.00	1,455.2	1,033.7	788.5	722.4	66.10	11.930			
8,100.0	6,360.2	7,925.2	6,360.2	46.4	36.8	-90.00	1,555.2	1,033.7	788.5	719.1	69.37	11.366			
8,200.0	6,360.2	8,025.2	6,360.2	47.5	38.3	-90.00	1,655.2	1,033.7	788.5	715.8	72.71	10.845			
8,300.0	6,360.1	8,125.2	6,360.1	48.7	39.9	-90.00	1,755.2	1,033.7	788.5	712.4	76.09	10.364			
8,400.0	6,360.0	8,225.2	6,360.0	50.0	41.5	-90.00	1,855.2	1,033.7	788.5	709.0	79.51	9.918			
8,500.0	6,359.9	8,325.2	6,359.9	51.3	43.2	-90.00	1,955.2	1,033.7	788.5	705.5	82.97	9.504			
8,600.0	6,359.9	8,425.2	6,359.8	52.6	44.9	-90.00	2,055.2	1,033.7	788.5	702.1	86.46	9.120			
8,700.0	6,359.8	8,525.2	6,359.8	54.0	46.6	-90.00	2,155.2	1,033.7	788.5	698.5	89.97	8.764			
8,800.0	6,359.7	8,625.2	6,359.7	55.5	48.3	-90.00	2,255.2	1,033.7	788.5	695.0	93.52	8.432			
8,900.0	6,359.6	8,725.2	6,359.6	56.9	50.0	-90.00	2,355.2	1,033.7	788.5	691.4	97.09	8.122			
9,000.0	6,359.6	8,825.2	6,359.5	58.4	51.7	-90.00	2,455.2	1,033.7	788.5	687.8	100.67	7.832			
9,100.0	6,359.5	8,925.2	6,359.5	60.0	53.5	-90.00	2,555.2	1,033.7	788.5	684.2	104.28	7.562			
9,200.0	6,359.4	9,025.2	6,359.4	61.5	55.2	-90.00	2,655.2	1,033.7	788.5	680.6	107.90	7.308			
9,300.0	6,359.3	9,125.2	6,359.3	63.1	57.0	-90.00	2,755.2	1,033.7	788.5	677.0	111.53	7.070			
9,400.0	6,359.3	9,225.2	6,359.2	64.7	58.8	-90.00	2,855.2	1,033.7	788.5	673.3	115.18	6.846			
9,500.0	6,359.2	9,325.2	6,359.2	66.3	60.6	-90.00	2,955.2	1,033.7	788.5	669.7	118.84	6.635			
9,600.0	6,359.1	9,425.2	6,359.1	67.9	62.4	-90.00	3,055.2	1,033.7	788.5	666.0	122.52	6.436			
9,700.0	6,359.0	9,525.2	6,359.0	69.6	64.2	-90.00	3,155.2	1,033.7	788.5	662.3	126.20	6.248			
9,800.0	6,359.0	9,625.2	6,358.9	71.3	66.0	-90.00	3,255.2	1,033.7	788.5	658.6	129.89	6.071			
9,900.0	6,358.9	9,725.2	6,358.9	72.9	67.8	-90.00	3,355.2	1,033.7	788.5	654.9	133.59	5.902			
10,000.0	6,358.8	9,825.2	6,358.8	74.6	69.6	-90.00	3,455.2	1,033.7	788.5	651.2	137.30	5.743			

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 Trimar Farms 29Y-201
Project:	SEC.29-T5N-R63W	TVD Reference:	WELL @ 4586.0ft (RKB - 13')
Reference Site:	Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W	MD Reference:	WELL @ 4586.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Trimar Farms 29Y-201	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 (2-26-15)	Offset TVD Reference:	Offset Datum

Offset Design										Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W - Trimar Farms 29T-221 - Wellbore #1 - Plan #2 (2-2)				Offset Site Error:		0.0 ft	
Survey Program: 0-MWD														Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance										
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning				
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)						
10,100.0	6,358.7	9,925.2	6,358.7	76.3	71.4	-90.00	3,555.2	1,033.7	788.5	647.5	141.01	5.592					
10,200.0	6,358.7	10,025.2	6,358.6	78.1	73.3	-90.00	3,655.2	1,033.7	788.5	643.8	144.73	5.448					
10,300.0	6,358.6	10,125.2	6,358.6	79.8	75.1	-90.00	3,755.2	1,033.7	788.5	640.0	148.46	5.311					
10,400.0	6,358.5	10,225.2	6,358.5	81.5	76.9	-90.00	3,855.2	1,033.7	788.5	636.3	152.19	5.181					
10,500.0	6,358.4	10,325.2	6,358.4	83.3	78.8	-90.00	3,955.2	1,033.7	788.5	632.6	155.93	5.057					
10,600.0	6,358.4	10,425.2	6,358.3	85.0	80.6	-90.00	4,055.2	1,033.7	788.5	628.8	159.67	4.938					
10,700.0	6,358.3	10,525.2	6,358.3	86.8	82.5	-90.00	4,155.2	1,033.7	788.5	625.1	163.42	4.825					
10,800.0	6,358.2	10,625.2	6,358.2	88.6	84.3	-90.00	4,255.2	1,033.7	788.5	621.3	167.17	4.717					
10,900.0	6,358.1	10,725.2	6,358.1	90.3	86.2	-90.00	4,355.2	1,033.7	788.5	617.6	170.93	4.613					
11,000.0	6,358.1	10,825.2	6,358.0	92.1	88.0	-90.00	4,455.2	1,033.7	788.5	613.9	174.60	4.516					
11,033.1	6,358.0	10,858.4	6,358.0	92.7	88.5	-90.00	4,488.3	1,033.7	788.5	612.8	175.72	4.487					
11,044.2	6,358.0	10,865.7	6,358.0	92.9	88.6	-90.00	4,495.6	1,033.7	788.5	612.5	176.04	4.479 SF					

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Trimar Farms 29Y-201
Project:	SEC.29-T5N-R63W	TVD Reference:	WELL @ 4586.0ft (RKB - 13')
Reference Site:	Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W	MD Reference:	WELL @ 4586.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Trimar Farms 29Y-201	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 (2-26-15)	Offset TVD Reference:	Offset Datum

Offset Design												Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W - Trimar Farms 29T-401 - Wellbore #1 - Plan #2 (2-2		Offset Site Error:		0.0 ft
Survey Program: 0-MWD														Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance									
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning			
0.0	0.0	0.0	0.0	0.0	0.0	0.00	87.4	0.0	87.4							
100.0	100.0	100.0	100.0	0.1	0.1	0.00	87.4	0.0	87.4	87.2	0.22	388.983				
200.0	200.0	200.0	200.0	0.3	0.3	0.00	87.4	0.0	87.4	86.8	0.67	129.661	CC			
300.0	300.0	300.0	300.0	0.5	0.6	-98.98	87.4	0.0	87.6	86.5	1.11	78.838	ES			
400.0	399.9	399.9	399.9	0.8	0.8	-101.48	87.4	0.0	88.3	86.8	1.55	56.913				
500.0	499.7	499.7	499.7	1.0	1.0	-105.54	87.4	0.0	89.9	87.8	2.01	44.692				
600.0	599.3	599.3	599.3	1.3	1.2	-110.93	87.4	0.0	92.7	90.2	2.49	37.282				
700.0	698.6	698.6	698.6	1.5	1.5	-117.29	87.4	0.0	97.6	94.6	2.98	32.740				
800.0	797.5	797.5	797.5	1.9	1.7	-124.13	87.4	0.0	105.0	101.5	3.48	30.137				
900.0	896.1	896.1	896.1	2.2	1.9	-130.93	87.4	0.0	115.4	111.4	3.99	28.938				
1,000.0	994.2	994.2	994.2	2.6	2.1	-137.28	87.4	0.0	129.1	124.6	4.49	28.776				
1,100.0	1,091.7	1,093.9	1,093.9	3.1	2.3	-142.97	87.1	0.7	145.6	140.6	4.96	29.326				
1,200.0	1,188.6	1,194.0	1,193.9	3.6	2.5	-147.79	86.1	3.0	163.7	158.3	5.42	30.216				
1,300.0	1,284.9	1,294.2	1,294.1	4.1	2.7	-151.91	84.4	6.9	183.3	177.4	5.87	31.228				
1,400.0	1,380.4	1,394.6	1,394.3	4.7	2.9	-155.45	81.9	12.4	204.3	198.0	6.32	32.307				
1,500.0	1,475.3	1,495.3	1,494.7	5.3	3.2	-158.56	78.8	19.6	226.0	219.2	6.79	33.263				
1,600.0	1,570.2	1,596.9	1,595.8	6.0	3.4	-161.13	74.9	28.4	246.5	239.2	7.27	33.893				
1,700.0	1,665.1	1,699.2	1,697.4	6.6	3.6	-163.31	70.2	39.0	265.6	257.9	7.76	34.240				
1,800.0	1,760.0	1,802.2	1,799.5	7.3	3.9	-165.20	64.7	51.3	283.3	275.1	8.25	34.336				
1,900.0	1,854.9	1,905.8	1,902.0	7.9	4.2	-166.88	58.5	65.3	299.5	290.7	8.75	34.214				
2,000.0	1,949.8	2,010.0	2,004.8	8.6	4.6	-168.42	51.5	81.2	314.1	304.8	9.26	33.904				
2,100.0	2,044.7	2,111.0	2,104.1	9.3	4.9	-169.79	44.1	97.9	327.4	317.6	9.78	33.488				
2,200.0	2,139.6	2,209.8	2,201.3	9.9	5.2	-171.03	36.8	114.4	340.7	330.4	10.29	33.100				
2,300.0	2,234.5	2,308.7	2,298.5	10.6	5.6	-172.18	29.5	130.8	354.2	343.4	10.82	32.742				
2,400.0	2,329.4	2,407.5	2,395.7	11.3	6.0	-173.25	22.2	147.3	367.9	356.5	11.35	32.408				
2,500.0	2,424.3	2,506.4	2,492.9	11.9	6.3	-174.24	15.0	163.8	381.6	369.7	11.89	32.096				
2,600.0	2,519.3	2,605.2	2,590.0	12.6	6.7	-175.15	7.7	180.2	395.5	383.0	12.44	31.801				
2,700.0	2,614.2	2,704.0	2,687.2	13.3	7.1	-176.01	0.4	196.7	409.4	396.4	12.99	31.521				
2,800.0	2,709.1	2,802.9	2,784.4	13.9	7.5	-176.81	-6.9	213.2	423.4	409.9	13.55	31.254				
2,900.0	2,804.0	2,901.7	2,881.6	14.6	7.9	-177.56	-14.2	229.6	437.5	423.4	14.11	31.001				
3,000.0	2,898.9	3,000.6	2,978.8	15.3	8.2	-178.27	-21.5	246.1	451.7	437.0	14.69	30.758				
3,100.0	2,993.8	3,099.4	3,076.0	16.0	8.6	-178.93	-28.8	262.6	466.0	450.7	15.26	30.526				
3,200.0	3,088.7	3,198.3	3,173.2	16.6	9.0	-179.55	-36.1	279.0	480.2	464.4	15.85	30.303				
3,300.0	3,183.6	3,297.1	3,270.4	17.3	9.4	-179.87	-43.3	295.5	494.6	478.2	16.44	30.090				
3,400.0	3,278.5	3,395.9	3,367.6	18.0	9.8	-179.32	-50.6	312.0	509.0	492.0	17.03	29.885				
3,500.0	3,373.4	3,494.8	3,464.7	18.6	10.2	-178.80	-57.9	328.4	523.4	505.8	17.63	29.689				
3,600.0	3,468.3	3,593.6	3,561.9	19.3	10.6	-178.30	-65.2	344.9	537.9	519.7	18.23	29.500				
3,700.0	3,563.2	3,692.5	3,659.1	20.0	11.0	-177.83	-72.5	361.3	552.4	533.6	18.84	29.319				
3,800.0	3,658.1	3,791.3	3,756.3	20.7	11.4	-177.39	-79.8	377.8	567.0	547.5	19.45	29.144				
3,900.0	3,753.0	3,890.2	3,853.5	21.3	11.8	-176.97	-87.1	394.3	581.6	561.5	20.07	28.977				
4,000.0	3,847.9	3,989.0	3,950.7	22.0	12.2	-176.57	-94.4	410.7	596.2	575.5	20.69	28.815				
4,100.0	3,942.8	4,087.8	4,047.9	22.7	12.6	-176.18	-101.7	427.2	610.8	589.5	21.31	28.660				
4,200.0	4,037.7	4,186.7	4,145.1	23.4	13.0	-175.82	-108.9	443.7	625.5	603.5	21.94	28.511				
4,300.0	4,132.7	4,285.5	4,242.3	24.0	13.5	-175.47	-116.2	460.1	640.1	617.6	22.57	28.367				
4,400.0	4,227.6	4,384.4	4,339.4	24.7	13.9	-175.14	-123.5	476.6	654.9	631.7	23.20	28.229				
4,500.0	4,322.5	4,483.2	4,436.6	25.4	14.3	-174.82	-130.8	493.1	669.6	645.8	23.83	28.096				
4,600.0	4,417.4	4,582.1	4,533.8	26.1	14.7	-174.52	-138.1	509.5	684.3	659.9	24.47	27.967				
4,700.0	4,512.3	4,680.9	4,631.0	26.7	15.1	-174.23	-145.4	526.0	699.1	674.0	25.11	27.843				
4,800.0	4,607.2	4,779.7	4,728.2	27.4	15.5	-173.95	-152.7	542.5	713.9	688.1	25.75	27.724				
4,900.0	4,702.1	4,878.6	4,825.4	28.1	15.9	-173.68	-160.0	558.9	728.7	702.3	26.39	27.608				
5,000.0	4,797.0	4,977.4	4,922.6	28.8	16.3	-173.43	-167.2	575.4	743.5	716.5	27.04	27.497				

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 Trimar Farms 29Y-201
Project:	SEC.29-T5N-R63W	TVD Reference:	WELL @ 4586.0ft (RKB - 13')
Reference Site:	Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W	MD Reference:	WELL @ 4586.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Trimar Farms 29Y-201	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 (2-26-15)	Offset TVD Reference:	Offset Datum

Offset Design		Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W - Trimar Farms 29T-401 - Wellbore #1 - Plan #2 (2-2)										Offset Site Error:		0.0 ft
Survey Program: 0-MWD												Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	4,891.9	5,076.3	5,019.8	29.4	16.7	173.18	-174.5	591.9	758.3	730.6	27.69	27.389		
5,200.0	4,986.8	5,175.1	5,117.0	30.1	17.1	172.94	-181.8	608.3	773.2	744.8	28.34	27.285		
5,300.0	5,081.7	5,274.0	5,214.1	30.8	17.5	172.71	-189.1	624.8	788.0	759.0	28.99	27.185		
5,400.0	5,176.6	5,372.8	5,311.3	31.5	17.9	172.49	-196.4	641.3	802.9	773.2	29.64	27.088		
5,500.0	5,271.5	5,471.6	5,408.5	32.1	18.4	172.28	-203.7	657.7	817.8	787.5	30.29	26.994		
5,600.0	5,366.4	5,570.5	5,505.7	32.8	18.8	172.08	-211.0	674.2	832.7	801.7	30.95	26.903		
5,700.0	5,461.3	5,669.3	5,602.9	33.5	19.2	171.88	-218.3	690.7	847.5	815.9	31.61	26.815		
5,800.0	5,556.2	5,768.2	5,700.1	34.2	19.6	171.69	-225.5	707.1	862.5	830.2	32.27	26.730		
5,900.0	5,651.2	5,867.3	5,797.7	34.8	19.9	-176.12	-227.1	723.7	877.4	844.7	32.65	26.873		
6,000.0	5,745.7	5,966.1	5,894.4	35.3	20.2	-153.79	-215.9	740.0	892.2	859.4	32.79	27.212		
6,100.0	5,838.4	6,064.6	5,988.7	35.9	20.4	-136.98	-192.2	756.0	906.8	873.9	32.93	27.541		
6,200.0	5,927.6	6,163.0	6,079.0	36.3	20.5	-125.43	-156.4	771.2	920.9	887.8	33.12	27.805		
6,300.0	6,011.8	6,261.2	6,163.9	36.7	20.6	-117.48	-109.3	785.6	934.2	900.8	33.42	27.957		
6,400.0	6,089.6	6,359.4	6,242.1	37.1	20.7	-111.83	-51.6	798.8	946.5	912.6	33.85	27.963		
6,500.0	6,159.6	6,457.6	6,312.4	37.4	20.7	-107.70	15.9	810.6	957.6	923.1	34.44	27.802		
6,600.0	6,220.6	6,555.8	6,373.6	37.8	20.8	-104.65	91.9	820.9	967.3	932.0	35.22	27.467		
6,700.0	6,271.6	6,654.1	6,424.8	38.1	20.9	-102.39	175.3	829.4	975.4	939.2	36.18	26.961		
6,800.0	6,311.7	6,752.4	6,464.9	38.3	21.0	-100.76	264.8	836.2	981.8	944.5	37.33	26.303		
6,900.0	6,340.2	6,850.8	6,493.4	38.6	21.3	-99.67	358.7	840.9	986.4	947.7	38.67	25.510		
7,000.0	6,356.7	6,949.2	6,509.8	38.9	21.7	-99.06	455.6	843.6	989.1	948.9	40.19	24.611		
7,100.0	6,361.0	7,048.0	6,514.1	39.2	22.2	-98.90	554.2	844.2	989.9	948.0	41.93	23.610		
7,200.0	6,360.9	7,148.0	6,514.7	39.5	23.1	-98.94	654.2	844.2	990.0	946.0	44.05	22.473		
7,300.0	6,360.8	7,248.0	6,515.3	40.0	24.0	-98.98	754.2	844.2	990.1	943.7	46.38	21.348		
7,400.0	6,360.8	7,348.0	6,515.9	40.5	25.2	-99.02	854.2	844.2	990.2	941.3	48.89	20.254		
7,500.0	6,360.7	7,448.0	6,516.5	41.1	26.4	-99.05	954.2	844.2	990.3	938.8	51.56	19.208		
7,600.0	6,360.6	7,548.0	6,517.1	41.8	27.7	-99.09	1,054.2	844.2	990.4	936.1	54.36	18.219		
7,700.0	6,360.5	7,648.0	6,517.7	42.5	29.1	-99.13	1,154.2	844.2	990.5	933.3	57.28	17.293		
7,800.0	6,360.5	7,748.0	6,518.3	43.4	30.6	-99.17	1,254.2	844.2	990.7	930.4	60.30	16.430		
7,900.0	6,360.4	7,848.0	6,518.9	44.3	32.1	-99.21	1,354.2	844.2	990.8	927.4	63.40	15.628		
8,000.0	6,360.3	7,948.0	6,519.5	45.3	33.6	-99.25	1,454.2	844.2	990.9	924.3	66.57	14.885		
8,100.0	6,360.2	8,048.0	6,520.1	46.4	35.2	-99.29	1,554.2	844.2	991.0	921.2	69.80	14.197		
8,200.0	6,360.2	8,148.0	6,520.7	47.5	36.8	-99.32	1,654.2	844.2	991.1	918.0	73.09	13.560		
8,300.0	6,360.1	8,248.0	6,521.3	48.7	38.5	-99.36	1,754.2	844.2	991.2	914.8	76.42	12.970		
8,400.0	6,360.0	8,348.0	6,521.9	50.0	40.2	-99.40	1,854.2	844.2	991.3	911.5	79.79	12.423		
8,500.0	6,359.9	8,448.0	6,522.5	51.3	41.8	-99.44	1,954.2	844.2	991.4	908.2	83.20	11.916		
8,600.0	6,359.9	8,548.0	6,523.1	52.6	43.6	-99.48	2,054.2	844.2	991.5	904.9	86.64	11.444		
8,700.0	6,359.8	8,647.9	6,523.7	54.0	45.3	-99.52	2,154.2	844.2	991.6	901.5	90.11	11.004		
8,800.0	6,359.7	8,747.9	6,524.3	55.5	47.0	-99.55	2,254.2	844.2	991.7	898.1	93.60	10.595		
8,900.0	6,359.6	8,847.9	6,524.9	56.9	48.8	-99.59	2,354.2	844.2	991.8	894.7	97.12	10.213		
9,000.0	6,359.6	8,947.9	6,525.5	58.4	50.5	-99.63	2,454.2	844.2	992.0	891.3	100.65	9.855		
9,100.0	6,359.5	9,047.9	6,526.1	60.0	52.3	-99.67	2,554.2	844.2	992.1	887.9	104.20	9.520		
9,200.0	6,359.4	9,147.9	6,526.7	61.5	54.1	-99.71	2,654.2	844.2	992.2	884.4	107.77	9.206		
9,300.0	6,359.3	9,247.9	6,527.3	63.1	55.9	-99.75	2,754.2	844.2	992.3	880.9	111.35	8.911		
9,400.0	6,359.3	9,347.9	6,527.9	64.7	57.7	-99.78	2,854.2	844.2	992.4	877.5	114.94	8.634		
9,500.0	6,359.2	9,447.9	6,528.5	66.3	59.5	-99.82	2,954.2	844.2	992.5	874.0	118.55	8.372		
9,600.0	6,359.1	9,547.9	6,529.1	67.9	61.3	-99.86	3,054.1	844.2	992.6	870.5	122.16	8.125		
9,700.0	6,359.0	9,647.9	6,529.7	69.6	63.2	-99.90	3,154.1	844.2	992.8	867.0	125.79	7.892		
9,800.0	6,359.0	9,747.9	6,530.3	71.3	65.0	-99.94	3,254.1	844.2	992.9	863.4	129.42	7.672		
9,900.0	6,358.9	9,847.9	6,530.9	72.9	66.8	-99.98	3,354.1	844.2	993.0	859.9	133.06	7.463		
10,000.0	6,358.8	9,947.9	6,531.5	74.6	68.7	-100.01	3,454.1	844.2	993.1	856.4	136.71	7.264		

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 Trimar Farms 29Y-201
Project:	SEC.29-T5N-R63W	TVD Reference:	WELL @ 4586.0ft (RKB - 13')
Reference Site:	Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W	MD Reference:	WELL @ 4586.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Trimar Farms 29Y-201	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 (2-26-15)	Offset TVD Reference:	Offset Datum

Offset Design										Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W - Trimar Farms 29T-401 - Wellbore #1 - Plan #2 (2-2			Offset Site Error:		0.0 ft
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
10,100.0	6,358.7	10,047.9	6,532.1	76.3	70.5	-100.05	3,554.1	844.2	993.2	852.9	140.36	7.076			
10,200.0	6,358.7	10,147.9	6,532.7	78.1	72.3	-100.09	3,654.1	844.2	993.3	849.3	144.02	6.897			
10,300.0	6,358.6	10,247.9	6,533.3	79.8	74.2	-100.13	3,754.1	844.2	993.4	845.8	147.69	6.727			
10,400.0	6,358.5	10,347.9	6,533.9	81.5	76.0	-100.17	3,854.1	844.2	993.6	842.2	151.36	6.564			
10,500.0	6,358.4	10,447.9	6,534.5	83.3	77.9	-100.21	3,954.1	844.2	993.7	838.7	155.03	6.410			
10,600.0	6,358.4	10,547.9	6,535.1	85.0	79.8	-100.24	4,054.1	844.2	993.8	835.1	158.71	6.262			
10,700.0	6,358.3	10,647.9	6,535.7	86.8	81.6	-100.28	4,154.1	844.2	993.9	831.5	162.39	6.120			
10,800.0	6,358.2	10,747.9	6,536.3	88.6	83.5	-100.32	4,254.1	844.2	994.0	828.0	166.08	5.985			
10,900.0	6,358.1	10,847.9	6,536.9	90.3	85.4	-100.36	4,354.1	844.2	994.2	824.4	169.77	5.856			
11,000.0	6,358.1	10,947.9	6,537.5	92.1	87.2	-100.40	4,454.1	844.2	994.3	820.8	173.46	5.732			
11,044.2	6,358.0	10,989.4	6,537.8	92.9	88.0	-100.41	4,495.6	844.2	994.3	819.3	175.04	5.681 SF			

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Trimar Farms 29Y-201
Project:	SEC.29-T5N-R63W	TVD Reference:	WELL @ 4586.0ft (RKB - 13')
Reference Site:	Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W	MD Reference:	WELL @ 4586.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Trimar Farms 29Y-201	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 (2-26-15)	Offset TVD Reference:	Offset Datum

Offset Design											Offset Site Error:		0.0 ft
Survey Program: 0-MWD											Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	0.00	29.1	0.0	29.1				
100.0	100.0	100.0	100.0	0.1	0.1	0.00	29.1	0.0	29.1	28.9	0.22	129.667	
200.0	200.0	200.0	200.0	0.3	0.3	0.00	29.1	0.0	29.1	28.5	0.67	43.222	CC
300.0	300.0	300.0	300.0	0.5	0.6	-100.66	29.1	0.0	29.4	28.2	1.11	26.414	ES
400.0	399.9	399.9	399.9	0.8	0.8	-107.95	29.1	0.0	30.3	28.8	1.55	19.544	
500.0	499.7	500.1	500.1	1.0	1.0	-116.85	28.9	1.3	32.3	30.3	1.99	16.188	
600.0	599.3	600.5	600.4	1.3	1.2	-124.69	28.2	5.2	34.8	32.4	2.44	14.251	
700.0	698.6	701.0	700.6	1.5	1.4	-131.48	26.9	11.6	37.8	34.9	2.91	12.985	
800.0	797.5	801.6	800.8	1.9	1.7	-137.32	25.2	20.7	41.1	37.7	3.39	12.121	
900.0	896.1	902.3	900.9	2.2	2.0	-142.36	23.0	32.4	44.8	40.9	3.89	11.508	
1,000.0	994.2	1,003.2	1,000.7	2.6	2.3	-146.72	20.2	46.7	48.6	44.2	4.40	11.058	
1,100.0	1,091.7	1,104.3	1,100.3	3.1	2.6	-150.54	17.0	63.6	52.6	47.7	4.91	10.716	
1,200.0	1,188.6	1,205.5	1,199.5	3.6	3.0	-153.90	13.3	83.1	56.7	51.3	5.43	10.449	
1,300.0	1,284.9	1,306.8	1,298.3	4.1	3.4	-156.90	9.1	105.2	60.9	55.0	5.95	10.233	
1,400.0	1,380.4	1,408.2	1,396.6	4.7	3.9	-159.59	4.4	129.9	65.2	58.7	6.48	10.054	
1,500.0	1,475.3	1,509.1	1,493.7	5.3	4.4	-161.89	-0.8	156.9	69.0	62.0	7.04	9.801	
1,600.0	1,570.2	1,609.1	1,589.7	6.0	5.0	-163.85	-5.9	184.0	72.5	64.9	7.60	9.541	
1,700.0	1,665.1	1,709.0	1,685.7	6.6	5.6	-165.63	-11.1	211.2	76.1	67.9	8.16	9.327	
1,800.0	1,760.0	1,808.9	1,781.7	7.3	6.1	-167.25	-16.3	238.3	79.7	71.0	8.72	9.149	
1,900.0	1,854.9	1,908.8	1,877.7	7.9	6.7	-168.72	-21.5	265.5	83.4	74.2	9.27	8.998	
2,000.0	1,949.8	2,008.7	1,973.7	8.6	7.3	-170.07	-26.6	292.6	87.2	77.4	9.83	8.866	
2,100.0	2,044.7	2,108.6	2,069.7	9.3	7.8	-171.31	-31.8	319.8	91.0	80.6	10.40	8.750	
2,200.0	2,139.6	2,208.5	2,165.8	9.9	8.4	-172.44	-37.0	346.9	94.8	83.9	10.97	8.646	
2,300.0	2,234.5	2,308.4	2,261.8	10.6	9.0	-173.49	-42.2	374.0	98.7	87.2	11.54	8.551	
2,400.0	2,329.4	2,408.3	2,357.8	11.3	9.6	-174.46	-47.3	401.2	102.6	90.5	12.12	8.464	
2,500.0	2,424.3	2,508.2	2,453.8	11.9	10.2	-175.36	-52.5	428.3	106.5	93.8	12.71	8.383	
2,600.0	2,519.3	2,608.1	2,549.8	12.6	10.8	-176.19	-57.7	455.5	110.5	97.2	13.30	8.307	
2,700.0	2,614.2	2,708.1	2,645.8	13.3	11.3	-176.97	-62.8	482.6	114.5	100.6	13.90	8.236	
2,800.0	2,709.1	2,808.0	2,741.8	13.9	11.9	-177.69	-68.0	509.8	118.5	104.0	14.50	8.169	
2,900.0	2,804.0	2,907.9	2,837.8	14.6	12.5	-178.37	-73.2	536.9	122.5	107.4	15.11	8.106	
3,000.0	2,898.9	3,007.8	2,933.9	15.3	13.1	-179.00	-78.4	564.1	126.5	110.8	15.72	8.046	
3,100.0	2,993.8	3,107.7	3,029.9	16.0	13.7	-179.60	-83.5	591.2	130.6	114.2	16.34	7.989	
3,200.0	3,088.7	3,207.6	3,125.9	16.6	14.3	-179.84	-88.7	618.3	134.6	117.7	16.97	7.934	
3,300.0	3,183.6	3,307.5	3,221.9	17.3	14.9	-179.32	-93.9	645.5	138.7	121.1	17.59	7.882	
3,400.0	3,278.5	3,407.4	3,317.9	18.0	15.5	-178.82	-99.1	672.6	142.8	124.5	18.23	7.833	
3,500.0	3,373.4	3,507.3	3,413.9	18.6	16.1	-178.35	-104.2	699.8	146.9	128.0	18.86	7.785	
3,600.0	3,468.3	3,607.2	3,509.9	19.3	16.6	-177.91	-109.4	726.9	151.0	131.5	19.50	7.740	
3,700.0	3,563.2	3,707.1	3,605.9	20.0	17.2	-177.49	-114.6	754.1	155.1	134.9	20.15	7.696	
3,800.0	3,658.1	3,807.1	3,701.9	20.7	17.8	-177.09	-119.8	781.2	159.2	138.4	20.80	7.654	
3,900.0	3,753.0	3,907.0	3,798.0	21.3	18.4	-176.72	-124.9	808.4	163.3	141.9	21.45	7.614	
4,000.0	3,847.9	4,006.9	3,894.0	22.0	19.0	-176.36	-130.1	835.5	167.4	145.3	22.10	7.576	
4,100.0	3,942.8	4,106.8	3,990.0	22.7	19.6	-176.02	-135.3	862.6	171.6	148.8	22.76	7.539	
4,200.0	4,037.7	4,206.7	4,086.0	23.4	20.2	-175.69	-140.5	889.8	175.7	152.3	23.42	7.503	
4,300.0	4,132.7	4,306.6	4,182.0	24.0	20.8	-175.38	-145.6	916.9	179.9	155.8	24.08	7.469	
4,400.0	4,227.6	4,406.5	4,278.0	24.7	21.4	-175.08	-150.8	944.1	184.0	159.3	24.75	7.436	
4,500.0	4,322.5	4,506.4	4,374.0	25.4	22.0	-174.80	-156.0	971.2	188.2	162.8	25.41	7.404	
4,600.0	4,417.4	4,606.3	4,470.0	26.1	22.6	-174.53	-161.2	998.4	192.3	166.3	26.08	7.374	
4,700.0	4,512.3	4,706.2	4,566.1	26.7	23.2	-174.27	-166.3	1,025.5	196.5	169.7	26.75	7.345	
4,800.0	4,607.2	4,806.2	4,662.1	27.4	23.8	-174.02	-171.5	1,052.7	200.7	173.2	27.43	7.316	
4,900.0	4,702.1	4,906.1	4,758.1	28.1	24.3	-173.78	-176.7	1,079.8	204.8	176.7	28.10	7.289	
5,000.0	4,797.0	5,006.0	4,854.1	28.8	24.9	-173.55	-181.9	1,106.9	209.0	180.2	28.78	7.263	

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Trimar Farms 29Y-201
Project:	SEC.29-T5N-R63W	TVD Reference:	WELL @ 4586.0ft (RKB - 13')
Reference Site:	Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W	MD Reference:	WELL @ 4586.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Trimar Farms 29Y-201	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 (2-26-15)	Offset TVD Reference:	Offset Datum

Offset Design		Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W - Trimar Farms 29Y-341 - Wellbore #1 - Plan #2 (2-2)										Offset Site Error:		0.0 ft	
Survey Program: 0-MWD												Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
5,100.0	4,891.9	5,105.9	4,950.1	29.4	25.5	173.33	-187.0	1,134.1	213.2	183.7	29.46	7.237			
5,200.0	4,986.8	5,205.8	5,046.1	30.1	26.1	173.12	-192.2	1,161.2	217.4	187.2	30.14	7.213			
5,300.0	5,081.7	5,305.7	5,142.1	30.8	26.7	172.92	-197.4	1,188.4	221.6	190.7	30.82	7.189			
5,400.0	5,176.6	5,405.6	5,238.1	31.5	27.3	172.72	-202.5	1,215.5	225.8	194.3	31.50	7.166			
5,500.0	5,271.5	5,505.5	5,334.2	32.1	27.9	172.53	-207.7	1,242.7	230.0	197.8	32.19	7.144			
5,600.0	5,366.4	5,605.4	5,430.2	32.8	28.5	172.35	-212.9	1,269.8	234.1	201.3	32.88	7.122			
5,700.0	5,461.3	5,705.3	5,526.2	33.5	29.1	172.17	-218.1	1,297.0	238.3	204.8	33.56	7.101			
5,800.0	5,556.2	5,805.2	5,622.2	34.2	29.7	172.00	-223.2	1,324.1	242.5	208.3	34.25	7.081			
5,900.0	5,651.2	5,905.2	5,718.3	34.8	30.2	-176.36	-226.3	1,351.3	246.7	211.9	34.82	7.086			
6,000.0	5,745.7	6,005.3	5,814.2	35.3	30.7	-154.97	-217.4	1,378.4	250.9	215.7	35.20	7.129			
6,100.0	5,838.4	6,105.3	5,908.0	35.9	31.1	-139.06	-195.5	1,404.9	255.0	219.5	35.51	7.182			
6,200.0	5,927.6	6,205.3	5,998.3	36.3	31.5	-128.36	-161.2	1,430.5	258.9	223.1	35.80	7.233			
6,300.0	6,011.8	6,305.3	6,083.5	36.7	31.8	-121.19	-114.9	1,454.6	262.6	226.5	36.12	7.271			
6,400.0	6,089.6	6,405.3	6,162.2	37.1	32.1	-116.25	-57.4	1,476.9	266.0	229.5	36.54	7.280			
6,500.0	6,159.6	6,505.3	6,232.9	37.4	32.4	-112.75	10.2	1,496.9	269.1	232.0	37.11	7.252			
6,600.0	6,220.6	6,605.3	6,294.6	37.8	32.6	-110.23	86.9	1,514.4	271.8	233.9	37.87	7.177			
6,700.0	6,271.6	6,705.3	6,346.1	38.1	32.9	-108.42	171.2	1,529.0	274.0	235.2	38.84	7.054			
6,800.0	6,311.7	6,805.2	6,386.5	38.3	33.1	-107.13	261.9	1,540.5	275.7	235.7	40.05	6.884			
6,900.0	6,340.2	6,905.2	6,415.3	38.6	33.4	-106.28	357.2	1,548.7	277.0	235.5	41.50	6.674			
7,000.0	6,356.7	7,005.1	6,431.8	38.9	33.7	-105.80	455.6	1,553.5	277.7	234.5	43.17	6.432			
7,100.0	6,361.0	7,105.1	6,436.0	39.2	34.0	-105.66	555.3	1,554.7	277.8	232.8	45.04	6.168			
7,200.0	6,360.9	7,205.1	6,435.7	39.5	34.4	-105.63	655.3	1,554.7	277.8	230.7	47.08	5.900			
7,300.0	6,360.8	7,305.1	6,435.5	40.0	34.9	-105.60	755.3	1,554.7	277.7	228.4	49.32	5.631			
7,400.0	6,360.8	7,405.1	6,435.3	40.5	35.5	-105.57	855.3	1,554.7	277.7	226.0	51.73	5.368			
7,500.0	6,360.7	7,505.1	6,435.1	41.1	36.3	-105.54	955.3	1,554.7	277.6	223.4	54.29	5.114			
7,600.0	6,360.6	7,605.1	6,434.8	41.8	37.1	-105.51	1,055.3	1,554.7	277.6	220.6	56.98	4.872			
7,700.0	6,360.5	7,705.1	6,434.6	42.5	38.0	-105.48	1,155.3	1,554.7	277.6	217.8	59.78	4.643			
7,800.0	6,360.5	7,805.1	6,434.4	43.4	39.0	-105.45	1,255.3	1,554.7	277.5	214.8	62.68	4.428			
7,900.0	6,360.4	7,905.1	6,434.2	44.3	40.1	-105.42	1,355.3	1,554.7	277.5	211.8	65.66	4.226			
8,000.0	6,360.3	8,005.1	6,433.9	45.3	41.2	-105.39	1,455.3	1,554.7	277.4	208.7	68.71	4.038			
8,100.0	6,360.2	8,105.1	6,433.7	46.4	42.5	-105.36	1,555.3	1,554.7	277.4	205.6	71.83	3.862			
8,200.0	6,360.2	8,205.1	6,433.5	47.5	43.8	-105.33	1,655.3	1,554.7	277.4	202.4	75.00	3.698			
8,300.0	6,360.1	8,305.1	6,433.2	48.7	45.1	-105.30	1,755.3	1,554.7	277.3	199.1	78.23	3.545			
8,400.0	6,360.0	8,405.1	6,433.0	50.0	46.5	-105.27	1,855.3	1,554.7	277.3	195.8	81.50	3.402			
8,500.0	6,359.9	8,505.1	6,432.8	51.3	47.9	-105.24	1,955.3	1,554.7	277.2	192.4	84.80	3.269			
8,600.0	6,359.9	8,605.1	6,432.6	52.6	49.4	-105.21	2,055.3	1,554.7	277.2	189.1	88.14	3.145			
8,700.0	6,359.8	8,705.1	6,432.3	54.0	50.9	-105.18	2,155.3	1,554.7	277.2	185.6	91.52	3.029			
8,800.0	6,359.7	8,805.1	6,432.1	55.5	52.5	-105.15	2,255.3	1,554.7	277.1	182.2	94.91	2.920			
8,900.0	6,359.6	8,905.1	6,431.9	56.9	54.0	-105.11	2,355.3	1,554.7	277.1	178.7	98.34	2.818			
9,000.0	6,359.6	9,005.1	6,431.7	58.4	55.6	-105.08	2,455.3	1,554.7	277.0	175.2	101.79	2.722			
9,100.0	6,359.5	9,105.1	6,431.4	60.0	57.3	-105.05	2,555.3	1,554.7	277.0	171.7	105.25	2.632			
9,200.0	6,359.4	9,205.1	6,431.2	61.5	58.9	-105.02	2,655.3	1,554.7	277.0	168.2	108.74	2.547			
9,300.0	6,359.3	9,305.1	6,431.0	63.1	60.6	-104.99	2,755.3	1,554.7	276.9	164.7	112.24	2.467			
9,400.0	6,359.3	9,405.1	6,430.8	64.7	62.2	-104.96	2,855.3	1,554.7	276.9	161.1	115.76	2.392			
9,500.0	6,359.2	9,505.1	6,430.5	66.3	63.9	-104.93	2,955.3	1,554.7	276.8	157.5	119.29	2.321			
9,600.0	6,359.1	9,605.1	6,430.3	67.9	65.6	-104.90	3,055.3	1,554.7	276.8	154.0	122.84	2.253			
9,700.0	6,359.0	9,705.1	6,430.1	69.6	67.3	-104.87	3,155.3	1,554.7	276.8	150.4	126.39	2.190			
9,800.0	6,359.0	9,805.1	6,429.9	71.3	69.1	-104.84	3,255.3	1,554.7	276.7	146.8	129.96	2.129			
9,900.0	6,358.9	9,905.1	6,429.6	72.9	70.8	-104.81	3,355.3	1,554.7	276.7	143.1	133.54	2.072			
10,000.0	6,358.8	10,005.1	6,429.4	74.6	72.5	-104.78	3,455.3	1,554.7	276.6	139.5	137.13	2.017			

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 Trimar Farms 29Y-201
Project:	SEC.29-T5N-R63W	TVD Reference:	WELL @ 4586.0ft (RKB - 13')
Reference Site:	Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W	MD Reference:	WELL @ 4586.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Trimar Farms 29Y-201	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 (2-26-15)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W - Trimar Farms 29Y-341 - Wellbore #1 - Plan #2 (2-2													Offset Well Error:	0.0 ft
Survey Program: 0-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)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
10,100.0	6,358.7	10,105.1	6,429.2	76.3	74.3	-104.75	3,555.3	1,554.7	276.6	135.9	140.73	1.966		
10,200.0	6,358.7	10,205.1	6,428.9	78.1	76.1	-104.72	3,655.3	1,554.7	276.6	132.2	144.33	1.916		
10,300.0	6,358.6	10,305.1	6,428.7	79.8	77.8	-104.69	3,755.3	1,554.7	276.5	128.6	147.94	1.869		
10,400.0	6,358.5	10,405.1	6,428.5	81.5	79.6	-104.66	3,855.3	1,554.7	276.5	124.9	151.56	1.824		
10,500.0	6,358.4	10,505.1	6,428.3	83.3	81.4	-104.63	3,955.3	1,554.7	276.4	121.3	155.19	1.781		
10,600.0	6,358.4	10,605.1	6,428.0	85.0	83.2	-104.60	4,055.3	1,554.7	276.4	117.6	158.82	1.740		
10,700.0	6,358.3	10,705.1	6,427.8	86.8	85.0	-104.57	4,155.3	1,554.7	276.4	113.9	162.46	1.701		
10,800.0	6,358.2	10,805.1	6,427.6	88.6	86.8	-104.54	4,255.3	1,554.7	276.3	110.2	166.11	1.664		
10,900.0	6,358.1	10,905.1	6,427.4	90.3	88.6	-104.51	4,355.3	1,554.7	276.3	106.5	169.76	1.628		
11,000.0	6,358.1	11,005.1	6,427.1	92.1	90.4	-104.48	4,455.3	1,554.7	276.2	102.8	173.41	1.593		
11,033.7	6,358.0	11,038.8	6,427.1	92.7	91.0	-104.47	4,489.0	1,554.7	276.2	101.6	174.65	1.582		
11,044.2	6,358.0	11,045.4	6,427.0	92.9	91.1	-104.47	4,495.7	1,554.7	276.3	101.3	174.96	1.579 SF		

Reference Depths are relative to WELL @ 4586.0ft (RKB - 13')	Coordinates are relative to: Trimar Farms 29Y-201
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.500000 °	Grid Convergence at Surface is: 0.67°



Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Trimar Farms 29Y-201
Project:	SEC.29-T5N-R63W	TVD Reference:	WELL @ 4586.0ft (RKB - 13')
Reference Site:	Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W	MD Reference:	WELL @ 4586.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Trimar Farms 29Y-201	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 (2-26-15)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4586.0ft (RKB - 13')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Trimar Farms 29Y-201
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.67°

