

PETROLEUM DEVELOPMENT CORP Weld County CO

Well Name: **Trimar Farms 29T-221**

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	1377222.11	3290454.71	40.364190	-104.457640	
RKB - 13' WELL @ 4586.0ft (RKB - 13')						

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 335'FSL & 2000'FEL	1.0	0.0	0.0	Point
BHL 500'FNL & 970'FEL	6358.0	4437.3	1033.7	Point



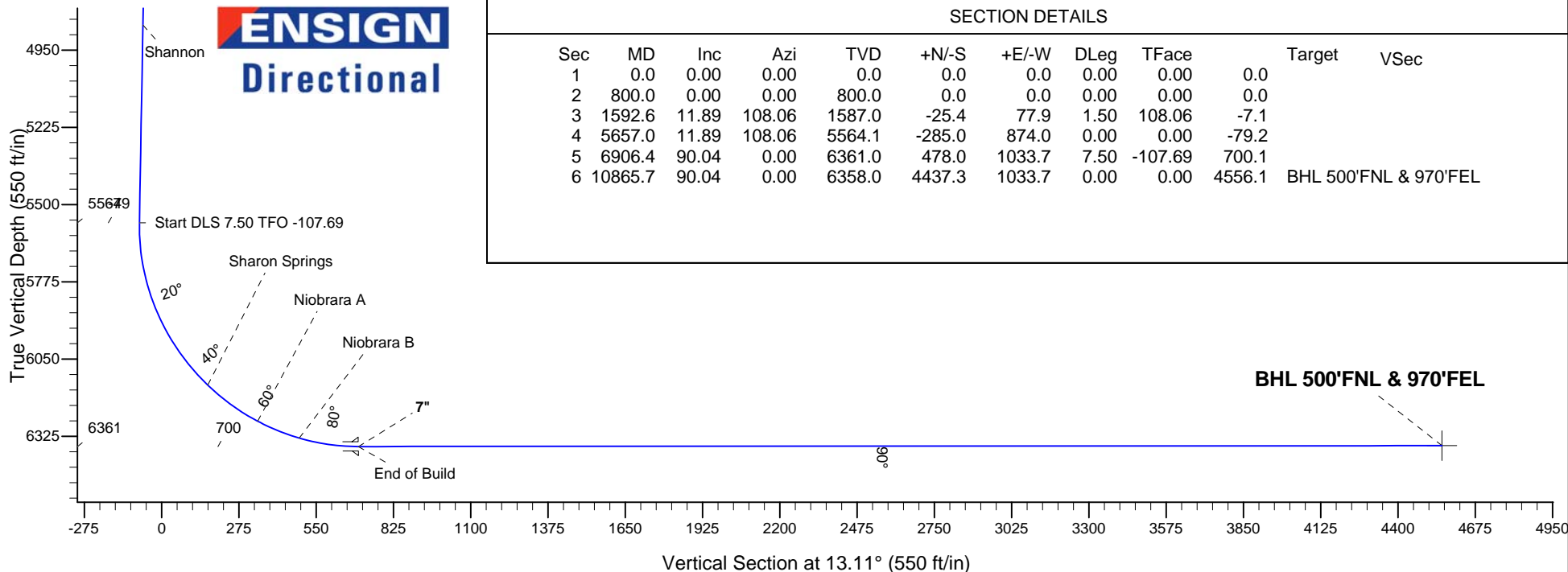
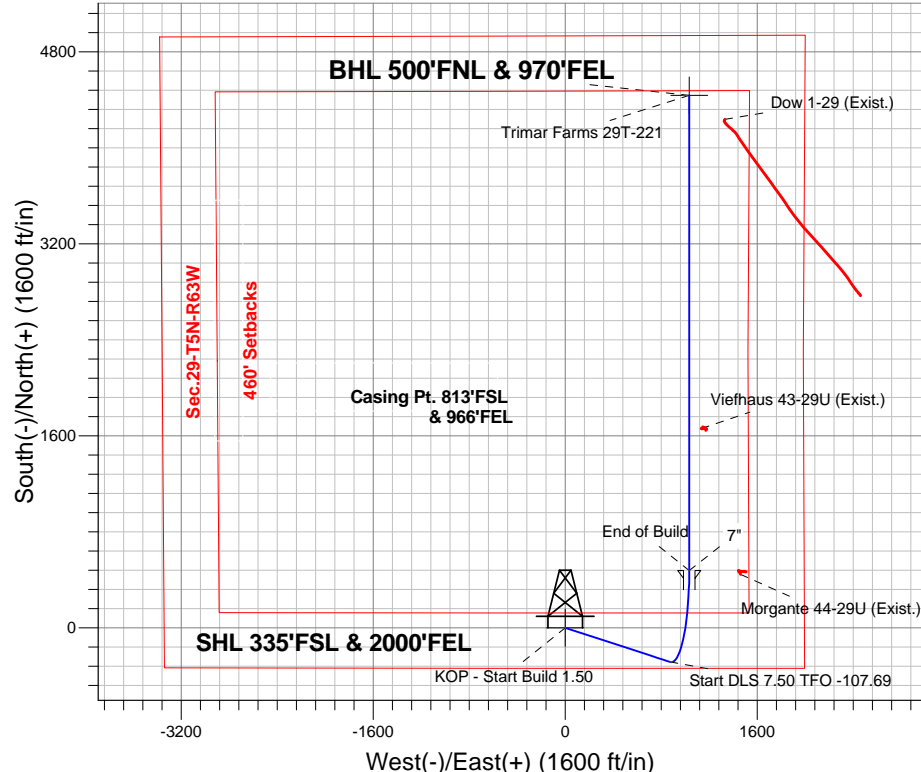
Azimuths to True North
Magnetic North: 8.20°

Magnetic Field
Strength: 52756.0snT
Dip Angle: 66.94°
Date: 2/27/2015
Model: IGRF2010

ANNOTATIONS

TVD	MD	Annotation
800.0	800.0	KOP - Start Build 1.50
5564.1	5657.0	Start DLS 7.50 TFO -107.69
6361.0	6906.4	End of Build
6358.0	10865.7	TD at 10865.7

Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W
Trimar Farms 29T-221
Plan #2 (2-26-15)
15:05, 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	800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.0	
3	1592.6	11.89	108.06	1587.0	-25.4	77.9	1.50	108.06	-7.1	
4	5657.0	11.89	108.06	5564.1	-285.0	874.0	0.00	0.00	-79.2	
5	6906.4	90.04	0.00	6361.0	478.0	1033.7	7.50	-107.69	700.1	
6	10865.7	90.04	0.00	6358.0	4437.3	1033.7	0.00	0.00	4556.1	BHL 500'FNL & 970'FEL



PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.29-T5N-R63W

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

Trimar Farms 29T-221

Wellbore #1

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

Standard Planning Report

27 February, 2015

Database:	Landmark	Local Co-ordinate Reference:	Well Trimar Farms 29T-221
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 29T-221	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 29T-221					
Well Position	+N/-S	-69.2 ft	Northing:	1,377,222.11 ft	Latitude:	40.364190
	+E/-W	-55.7 ft	Easting:	3,290,454.71 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	9/26/2014	8.25	66.96	52,801

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	13.11

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	
800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,592.6	11.89	108.06	1,587.0	-25.4	77.9	1.50	1.50	0.00	108.06	
5,657.0	11.89	108.06	5,564.1	-285.0	874.0	0.00	0.00	0.00	0.00	
6,906.4	90.04	0.00	6,361.0	478.0	1,033.7	7.50	6.26	-8.65	-107.69	
10,865.7	90.04	0.00	6,358.0	4,437.3	1,033.7	0.00	0.00	0.00	0.00	BHL 500'FNL & 97C

Database:	Landmark	Local Co-ordinate Reference:	Well Trimar Farms 29T-221
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 29T-221	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 335'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
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 1.50									
900.0	1.50	108.06	900.0	-0.4	1.2	-0.1	1.50	1.50	0.00
1,000.0	3.00	108.06	999.9	-1.6	5.0	-0.5	1.50	1.50	0.00
1,100.0	4.50	108.06	1,099.7	-3.6	11.2	-1.0	1.50	1.50	0.00
1,200.0	6.00	108.06	1,199.3	-6.5	19.9	-1.8	1.50	1.50	0.00
1,300.0	7.50	108.06	1,298.6	-10.1	31.1	-2.8	1.50	1.50	0.00
1,400.0	9.00	108.06	1,397.5	-14.6	44.7	-4.1	1.50	1.50	0.00
1,500.0	10.50	108.06	1,496.1	-19.8	60.8	-5.5	1.50	1.50	0.00
1,592.6	11.89	108.06	1,587.0	-25.4	77.9	-7.1	1.50	1.50	0.00
1,600.0	11.89	108.06	1,594.2	-25.9	79.4	-7.2	0.00	0.00	0.00
1,700.0	11.89	108.06	1,692.0	-32.3	98.9	-9.0	0.00	0.00	0.00
1,800.0	11.89	108.06	1,789.9	-38.6	118.5	-10.7	0.00	0.00	0.00
1,900.0	11.89	108.06	1,887.7	-45.0	138.1	-12.5	0.00	0.00	0.00
2,000.0	11.89	108.06	1,985.6	-51.4	157.7	-14.3	0.00	0.00	0.00
2,100.0	11.89	108.06	2,083.4	-57.8	177.3	-16.1	0.00	0.00	0.00
2,200.0	11.89	108.06	2,181.3	-64.2	196.9	-17.8	0.00	0.00	0.00
2,300.0	11.89	108.06	2,279.1	-70.6	216.5	-19.6	0.00	0.00	0.00
2,400.0	11.89	108.06	2,377.0	-77.0	236.1	-21.4	0.00	0.00	0.00
2,500.0	11.89	108.06	2,474.9	-83.3	255.6	-23.2	0.00	0.00	0.00
2,600.0	11.89	108.06	2,572.7	-89.7	275.2	-24.9	0.00	0.00	0.00
2,700.0	11.89	108.06	2,670.6	-96.1	294.8	-26.7	0.00	0.00	0.00
2,800.0	11.89	108.06	2,768.4	-102.5	314.4	-28.5	0.00	0.00	0.00
2,900.0	11.89	108.06	2,866.3	-108.9	334.0	-30.3	0.00	0.00	0.00
3,000.0	11.89	108.06	2,964.1	-115.3	353.6	-32.1	0.00	0.00	0.00
3,100.0	11.89	108.06	3,062.0	-121.7	373.2	-33.8	0.00	0.00	0.00
3,200.0	11.89	108.06	3,159.8	-128.0	392.8	-35.6	0.00	0.00	0.00
3,300.0	11.89	108.06	3,257.7	-134.4	412.3	-37.4	0.00	0.00	0.00
3,348.3	11.89	108.06	3,305.0	-137.5	421.8	-38.2	0.00	0.00	0.00
Parkman									
3,400.0	11.89	108.06	3,355.5	-140.8	431.9	-39.2	0.00	0.00	0.00
3,500.0	11.89	108.06	3,453.4	-147.2	451.5	-40.9	0.00	0.00	0.00
3,600.0	11.89	108.06	3,551.3	-153.6	471.1	-42.7	0.00	0.00	0.00
3,700.0	11.89	108.06	3,649.1	-160.0	490.7	-44.5	0.00	0.00	0.00
3,800.0	11.89	108.06	3,747.0	-166.4	510.3	-46.3	0.00	0.00	0.00
3,900.0	11.89	108.06	3,844.8	-172.8	529.9	-48.0	0.00	0.00	0.00
3,905.3	11.89	108.06	3,850.0	-173.1	530.9	-48.1	0.00	0.00	0.00
Sussex									
4,000.0	11.89	108.06	3,942.7	-179.1	549.5	-49.8	0.00	0.00	0.00
4,100.0	11.89	108.06	4,040.5	-185.5	569.1	-51.6	0.00	0.00	0.00
4,200.0	11.89	108.06	4,138.4	-191.9	588.6	-53.4	0.00	0.00	0.00
4,300.0	11.89	108.06	4,236.2	-198.3	608.2	-55.1	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Trimar Farms 29T-221
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 29T-221	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	11.89	108.06	4,334.1	-204.7	627.8	-56.9	0.00	0.00	0.00
4,500.0	11.89	108.06	4,431.9	-211.1	647.4	-58.7	0.00	0.00	0.00
4,600.0	11.89	108.06	4,529.8	-217.5	667.0	-60.5	0.00	0.00	0.00
4,700.0	11.89	108.06	4,627.7	-223.8	686.6	-62.2	0.00	0.00	0.00
4,800.0	11.89	108.06	4,725.5	-230.2	706.2	-64.0	0.00	0.00	0.00
4,900.0	11.89	108.06	4,823.4	-236.6	725.8	-65.8	0.00	0.00	0.00
4,937.4	11.89	108.06	4,860.0	-239.0	733.1	-66.4	0.00	0.00	0.00
Shannon									
5,000.0	11.89	108.06	4,921.2	-243.0	745.3	-67.6	0.00	0.00	0.00
5,100.0	11.89	108.06	5,019.1	-249.4	764.9	-69.3	0.00	0.00	0.00
5,200.0	11.89	108.06	5,116.9	-255.8	784.5	-71.1	0.00	0.00	0.00
5,300.0	11.89	108.06	5,214.8	-262.2	804.1	-72.9	0.00	0.00	0.00
5,400.0	11.89	108.06	5,312.6	-268.5	823.7	-74.7	0.00	0.00	0.00
5,500.0	11.89	108.06	5,410.5	-274.9	843.3	-76.4	0.00	0.00	0.00
5,600.0	11.89	108.06	5,508.4	-281.3	862.9	-78.2	0.00	0.00	0.00
5,657.0	11.89	108.06	5,564.1	-285.0	874.0	-79.2	0.00	0.00	0.00
Start DLS 7.50 TFO -107.69									
5,700.0	11.33	92.21	5,606.3	-286.5	882.5	-78.8	7.50	-1.31	-36.85
5,800.0	13.32	57.73	5,704.1	-280.7	902.1	-68.7	7.50	1.99	-34.48
5,900.0	18.37	37.07	5,800.3	-262.0	921.3	-46.1	7.50	5.05	-20.66
6,000.0	24.67	25.85	5,893.3	-230.6	940.0	-11.3	7.50	6.30	-11.23
6,100.0	31.48	19.09	5,981.5	-187.0	957.6	35.1	7.50	6.80	-6.75
6,200.0	38.52	14.58	6,063.4	-132.2	974.0	92.3	7.50	7.04	-4.52
6,300.0	45.69	11.28	6,137.6	-66.8	988.9	159.3	7.50	7.17	-3.30
6,306.4	46.15	11.10	6,142.0	-62.4	989.8	163.8	7.50	7.21	-2.85
Sharon Springs									
6,400.0	52.93	8.71	6,202.7	7.8	1,001.9	234.9	7.50	7.25	-2.55
6,500.0	60.22	6.59	6,257.8	90.5	1,013.0	317.9	7.50	7.29	-2.12
6,527.4	62.22	6.06	6,271.0	114.4	1,015.6	341.8	7.50	7.31	-1.92
Niobrara A									
6,600.0	67.54	4.76	6,301.8	179.7	1,021.8	406.9	7.50	7.32	-1.80
6,688.8	74.05	3.29	6,331.0	263.4	1,027.6	489.7	7.50	7.34	-1.65
Niobrara B									
6,700.0	74.87	3.11	6,334.0	274.1	1,028.2	500.3	7.50	7.34	-1.59
6,800.0	82.22	1.58	6,353.8	372.0	1,032.2	596.5	7.50	7.35	-1.53
6,900.0	89.58	0.09	6,361.0	471.6	1,033.7	693.9	7.50	7.35	-1.48
6,906.4	90.04	0.00	6,361.0	478.0	1,033.7	700.1	7.46	7.31	-1.46
End of Build - 7"									
7,000.0	90.04	0.00	6,360.9	571.6	1,033.7	791.2	0.00	0.00	0.00
7,100.0	90.04	0.00	6,360.9	671.6	1,033.7	888.6	0.00	0.00	0.00
7,200.0	90.04	0.00	6,360.8	771.6	1,033.7	986.0	0.00	0.00	0.00
7,300.0	90.04	0.00	6,360.7	871.6	1,033.7	1,083.4	0.00	0.00	0.00
7,400.0	90.04	0.00	6,360.6	971.6	1,033.7	1,180.8	0.00	0.00	0.00
7,500.0	90.04	0.00	6,360.6	1,071.6	1,033.7	1,278.2	0.00	0.00	0.00
7,600.0	90.04	0.00	6,360.5	1,171.6	1,033.7	1,375.6	0.00	0.00	0.00
7,700.0	90.04	0.00	6,360.4	1,271.6	1,033.7	1,473.0	0.00	0.00	0.00
7,800.0	90.04	0.00	6,360.3	1,371.6	1,033.7	1,570.4	0.00	0.00	0.00
7,900.0	90.04	0.00	6,360.2	1,471.6	1,033.7	1,667.8	0.00	0.00	0.00
8,000.0	90.04	0.00	6,360.2	1,571.6	1,033.7	1,765.2	0.00	0.00	0.00
8,100.0	90.04	0.00	6,360.1	1,671.6	1,033.7	1,862.6	0.00	0.00	0.00
8,200.0	90.04	0.00	6,360.0	1,771.6	1,033.7	1,960.0	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Trimar Farms 29T-221
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 29T-221	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	0.00	6,359.9	1,871.6	1,033.7	2,057.3	0.00	0.00	0.00	
8,400.0	90.04	0.00	6,359.9	1,971.6	1,033.7	2,154.7	0.00	0.00	0.00	
8,500.0	90.04	0.00	6,359.8	2,071.6	1,033.7	2,252.1	0.00	0.00	0.00	
8,600.0	90.04	0.00	6,359.7	2,171.6	1,033.7	2,349.5	0.00	0.00	0.00	
8,700.0	90.04	0.00	6,359.6	2,271.6	1,033.7	2,446.9	0.00	0.00	0.00	
8,800.0	90.04	0.00	6,359.6	2,371.6	1,033.7	2,544.3	0.00	0.00	0.00	
8,900.0	90.04	0.00	6,359.5	2,471.6	1,033.7	2,641.7	0.00	0.00	0.00	
9,000.0	90.04	0.00	6,359.4	2,571.6	1,033.7	2,739.1	0.00	0.00	0.00	
9,100.0	90.04	0.00	6,359.3	2,671.6	1,033.7	2,836.5	0.00	0.00	0.00	
9,200.0	90.04	0.00	6,359.3	2,771.6	1,033.7	2,933.9	0.00	0.00	0.00	
9,300.0	90.04	0.00	6,359.2	2,871.6	1,033.7	3,031.3	0.00	0.00	0.00	
9,400.0	90.04	0.00	6,359.1	2,971.6	1,033.7	3,128.7	0.00	0.00	0.00	
9,500.0	90.04	0.00	6,359.0	3,071.6	1,033.7	3,226.1	0.00	0.00	0.00	
9,600.0	90.04	0.00	6,359.0	3,171.6	1,033.7	3,323.4	0.00	0.00	0.00	
9,700.0	90.04	0.00	6,358.9	3,271.6	1,033.7	3,420.8	0.00	0.00	0.00	
9,800.0	90.04	0.00	6,358.8	3,371.6	1,033.7	3,518.2	0.00	0.00	0.00	
9,900.0	90.04	0.00	6,358.7	3,471.6	1,033.7	3,615.6	0.00	0.00	0.00	
10,000.0	90.04	0.00	6,358.7	3,571.6	1,033.7	3,713.0	0.00	0.00	0.00	
10,100.0	90.04	0.00	6,358.6	3,671.6	1,033.7	3,810.4	0.00	0.00	0.00	
10,200.0	90.04	0.00	6,358.5	3,771.6	1,033.7	3,907.8	0.00	0.00	0.00	
10,300.0	90.04	0.00	6,358.4	3,871.6	1,033.7	4,005.2	0.00	0.00	0.00	
10,400.0	90.04	0.00	6,358.4	3,971.6	1,033.7	4,102.6	0.00	0.00	0.00	
10,500.0	90.04	0.00	6,358.3	4,071.6	1,033.7	4,200.0	0.00	0.00	0.00	
10,600.0	90.04	0.00	6,358.2	4,171.6	1,033.7	4,297.4	0.00	0.00	0.00	
10,700.0	90.04	0.00	6,358.1	4,271.6	1,033.7	4,394.8	0.00	0.00	0.00	
10,800.0	90.04	0.00	6,358.0	4,371.6	1,033.7	4,492.2	0.00	0.00	0.00	
10,865.7	90.04	0.00	6,358.0	4,437.3	1,033.7	4,556.1	0.00	0.00	0.00	
BHL 500'FNL & 970'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 335'FSL & 2000'I	- plan hits target center	0.00	0.00	1.0	0.0	0.0	1,377,222.12	3,290,454.71	40.364190	-104.457640
	- Point									
BHL 500'FNL & 970'F	- plan hits target center	0.00	0.00	6,358.0	4,437.3	1,033.7	1,381,671.09	3,291,436.12	40.376370	-104.453930
	- Point									

Casing Points										
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")						
6,906.4	6,361.0	7"	7	7-1/2						

Database:	Landmark	Local Co-ordinate Reference:	Well Trimar Farms 29T-221
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 29T-221	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 (°)	
3,348.3	3,305.0	Parkman		0.00		
3,905.3	3,850.0	Sussex		0.00		
4,937.4	4,860.0	Shannon		0.00		
6,306.4	6,142.0	Sharon Springs		0.00		
6,527.4	6,271.0	Niobrara A		0.00		
6,688.8	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		Comment
		+N/-S (ft)	+E/-W (ft)	
800.0	800.0	0.0	0.0	KOP - Start Build 1.50
5,657.0	5,564.1	-25.4	77.9	Start DLS 7.50 TFO -107.69
6,906.4	6,361.0	-285.0	874.0	End of Build
10,865.7	6,358.0	478.0	1,033.7	TD at 10865.7



PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.29-T5N-R63W

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

Trimar Farms 29T-221

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 29T-221
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 29T-221	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	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,000.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date 2/27/2015			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	10,865.1	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	6,890.4	6,325.3	421.6	391.5	14.006	CC, ES
Morgante 44-29U (Exist.) - Wellbore #1 - Wellbore #1	7,000.0	6,323.5	436.0	404.7	13.939	SF
Viefhaus 43-29U (Exist.) - Wellbore #1 - Wellbore #1	8,088.5	6,326.2	101.0	-9.0	0.918	Level 1, CC, ES, SF
North Platte E-A-28HC Pad Sec.28-T5N-R63W						
Dow 1-29 (Exist.) - Wellbore #1 - Wellbore #1	10,640.4	6,718.1	296.9	193.5	2.870	CC, ES, SF
Trimar Farms 5N63W29T Pad Sec.29-T5N-R63W						
Trimar Farms 29T-301 - Wellbore #1 - Plan #2 (2-25-15)	800.0	799.0	61.9	58.6	18.381	CC
Trimar Farms 29T-301 - Wellbore #1 - Plan #2 (2-25-15)	900.0	899.0	62.3	58.5	16.401	ES
Trimar Farms 29T-301 - Wellbore #1 - Plan #2 (2-25-15)	10,865.7	10,904.8	425.5	253.1	2.468	SF
Trimar Farms 29T-401 - Wellbore #1 - Plan #2 (2-25-15)	800.0	800.0	29.1	25.8	8.642	CC
Trimar Farms 29T-401 - Wellbore #1 - Plan #2 (2-25-15)	900.0	900.0	29.6	25.8	7.774	ES
Trimar Farms 29T-401 - Wellbore #1 - Plan #2 (2-25-15)	10,865.7	10,988.4	261.2	121.9	1.876	SF
Trimar Farms 29Y-201 - Wellbore #1 - Plan #2 (2-26-15)	200.0	200.0	58.3	57.6	86.451	CC
Trimar Farms 29Y-201 - Wellbore #1 - Plan #2 (2-26-15)	300.0	299.7	58.5	57.4	52.694	ES
Trimar Farms 29Y-201 - Wellbore #1 - Plan #2 (2-26-15)	10,865.7	11,090.8	788.5	612.3	4.475	SF
Trimar Farms 29Y-341 - Wellbore #1 - Plan #2 (2-26-15)	400.0	400.0	29.1	27.6	18.526	CC
Trimar Farms 29Y-341 - Wellbore #1 - Plan #2 (2-26-15)	500.0	499.8	29.4	27.4	14.665	ES
Trimar Farms 29Y-341 - Wellbore #1 - Plan #2 (2-26-15)	10,865.7	11,066.5	525.6	352.4	3.034	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 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)						
5,100.0	5,019.1	5,000.7	4,999.5	19.2	8.8	-65.48	476.3	1,445.5	994.9	967.8	27.11	36.700					
5,200.0	5,116.9	5,099.1	5,097.9	19.7	9.0	-66.56	475.5	1,444.7	985.3	957.5	27.82	35.413					
5,300.0	5,214.8	5,196.6	5,195.4	20.2	9.2	-67.64	474.7	1,444.1	976.0	947.5	28.54	34.203					
5,400.0	5,312.6	5,292.5	5,291.3	20.6	9.4	-68.72	473.8	1,443.6	967.2	938.0	29.24	33.075					
5,500.0	5,410.5	5,392.3	5,391.0	21.1	9.6	-69.83	472.7	1,443.4	958.8	928.8	29.96	32.007					
5,600.0	5,508.4	5,486.2	5,484.9	21.5	9.7	-70.89	471.6	1,443.4	950.8	920.1	30.65	31.021					

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 29T-221
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 29T-221	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			
5,700.0	5,606.3	5,582.4	5,581.2	22.0	9.9	-56.26	470.9	1,443.5	942.5	911.3	31.25	30.165			
5,800.0	5,704.1	5,678.6	5,677.4	22.3	10.1	-22.49	470.2	1,443.7	925.9	894.6	31.29	29.587			
5,900.0	5,800.3	5,772.5	5,771.3	22.6	10.2	-1.57	469.3	1,444.5	899.2	868.4	30.82	29.178			
6,000.0	5,893.3	5,865.0	5,863.8	22.8	10.4	11.06	468.2	1,446.0	862.8	832.9	29.86	28.889			
6,100.0	5,981.5	5,953.2	5,951.9	23.0	10.5	20.59	466.9	1,447.7	817.2	788.7	28.55	28.626			
6,200.0	6,063.4	6,034.7	6,033.4	23.1	10.7	29.55	465.6	1,449.4	763.7	736.6	27.10	28.177			
6,300.0	6,137.6	6,108.1	6,106.8	23.3	10.8	39.24	464.3	1,451.0	704.0	678.1	25.95	27.129			
6,400.0	6,202.7	6,172.9	6,171.6	23.4	10.9	50.21	463.2	1,452.3	640.5	614.9	25.61	25.006			
6,500.0	6,257.8	6,227.3	6,225.9	23.6	11.0	61.98	462.2	1,453.4	576.4	550.1	26.29	21.926			
6,600.0	6,301.8	6,270.4	6,269.0	23.7	11.1	73.13	461.5	1,454.2	516.1	488.6	27.48	18.782			
6,700.0	6,334.0	6,301.4	6,300.0	24.0	11.2	81.98	460.9	1,454.8	465.7	437.1	28.54	16.316			
6,800.0	6,353.8	6,319.8	6,318.4	24.3	11.2	87.42	460.6	1,455.1	432.1	402.7	29.35	14.720			
6,890.4	6,360.8	6,325.3	6,323.9	24.8	11.2	89.06	460.5	1,455.2	421.6	391.5	30.10	14.006 CC, ES			
6,900.0	6,361.0	6,325.3	6,323.9	24.8	11.2	89.05	460.5	1,455.2	421.7	391.5	30.18	13.971			
7,000.0	6,360.9	6,323.5	6,322.0	25.4	11.2	88.78	460.5	1,455.1	436.0	404.7	31.28	13.939 SF			
7,100.0	6,360.9	6,321.6	6,320.2	26.2	11.2	88.53	460.6	1,455.1	471.5	439.0	32.47	14.518			
7,200.0	6,360.8	6,319.7	6,318.3	27.1	11.2	88.28	460.6	1,455.1	523.9	490.1	33.77	15.514			
7,300.0	6,360.7	6,317.9	6,316.5	28.2	11.2	88.02	460.6	1,455.0	588.8	553.7	35.15	16.751			
7,400.0	6,360.6	6,316.0	6,314.6	29.4	11.2	87.77	460.6	1,455.0	662.5	625.9	36.60	18.100			
7,500.0	6,360.6	6,314.2	6,312.8	30.7	11.2	87.52	460.7	1,455.0	742.3	704.2	38.11	19.478			
7,600.0	6,360.5	6,312.3	6,310.9	32.0	11.2	87.27	460.7	1,455.0	826.6	786.9	39.67	20.837			
7,700.0	6,360.4	6,310.5	6,309.1	33.4	11.2	87.02	460.7	1,454.9	914.0	872.8	41.27	22.148			

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Trimar Farms 29T-221
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 29T-221	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 - Viefhaus 43-29U (Exist.) - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 ft
Survey Program: 100-UNKNOWN												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)		
7,100.0	6,360.9	6,318.5	6,317.0	26.2	73.8	85.44	1,660.0	1,134.7	993.6	899.1	94.50	10.514	
7,200.0	6,360.8	6,319.3	6,317.8	27.1	73.8	85.88	1,660.0	1,134.7	894.1	798.3	95.84	9.329	
7,300.0	6,360.7	6,320.0	6,318.6	28.2	73.7	86.33	1,660.0	1,134.7	794.9	697.6	97.26	8.173	
7,400.0	6,360.6	6,320.8	6,319.4	29.4	73.7	86.77	1,660.0	1,134.7	695.8	597.1	98.74	7.046	
7,500.0	6,360.6	6,321.6	6,320.2	30.7	73.7	87.22	1,660.0	1,134.7	597.0	496.8	100.28	5.953	
7,600.0	6,360.5	6,322.4	6,321.0	32.0	73.7	87.66	1,660.0	1,134.7	498.8	396.9	101.87	4.896	
7,700.0	6,360.4	6,323.2	6,321.7	33.4	73.7	88.10	1,660.1	1,134.7	401.4	297.9	103.49	3.878	
7,800.0	6,360.3	6,323.9	6,322.5	34.9	73.7	88.54	1,660.1	1,134.7	305.6	200.5	105.15	2.907	
7,900.0	6,360.2	6,324.7	6,323.3	36.4	73.7	88.97	1,660.1	1,134.7	213.8	107.0	106.82	2.002	
8,000.0	6,360.2	6,325.5	6,324.1	37.9	73.7	89.41	1,660.1	1,134.7	134.3	25.8	108.52	1.237 Level 2	
8,088.5	6,360.1	6,326.2	6,324.7	39.3	73.7	89.79	1,660.1	1,134.7	101.0	-9.0	110.05	0.918 Level 1, CC, ES, SF	
8,100.0	6,360.1	6,326.2	6,324.8	39.5	73.7	89.84	1,660.1	1,134.7	101.7	-8.5	110.24	0.923 Level 1	
8,200.0	6,360.0	6,327.0	6,325.6	41.1	73.7	90.27	1,660.1	1,134.7	150.5	38.5	111.97	1.344 Level 3	
8,300.0	6,359.9	6,327.8	6,326.3	42.8	73.7	90.70	1,660.1	1,134.7	234.4	120.7	113.72	2.062	
8,400.0	6,359.9	6,328.5	6,327.1	44.4	73.7	91.13	1,660.1	1,134.7	327.5	212.1	115.47	2.836	
8,500.0	6,359.8	6,329.3	6,327.8	46.1	73.7	91.55	1,660.1	1,134.7	423.8	306.5	117.23	3.615	
8,600.0	6,359.7	6,330.0	6,328.6	47.8	73.7	91.98	1,660.1	1,134.7	521.4	402.4	119.00	4.382	
8,700.0	6,359.6	6,330.8	6,329.3	49.5	73.7	92.40	1,660.1	1,134.7	619.8	499.1	120.76	5.133	
8,800.0	6,359.6	6,331.5	6,330.1	51.3	73.7	92.82	1,660.1	1,134.7	718.7	596.1	122.54	5.865	
8,900.0	6,359.5	6,332.2	6,330.8	53.0	73.7	93.24	1,660.1	1,134.7	817.8	693.5	124.31	6.579	
9,000.0	6,359.4	6,333.0	6,331.6	54.8	73.7	93.65	1,660.1	1,134.8	917.1	791.0	126.08	7.274	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Trimar Farms 29T-221
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 29T-221	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 - Dow 1-29 (Exist.) - Wellbore #1 - Wellbore #1														Offset Site Error:	0.0 ft
Survey Program: 533-Reference														Offset Well Error:	0.0 ft
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		
9,700.0	6,358.9	6,685.1	6,286.7	67.3	22.3	84.92	4,210.9	1,331.3	985.6	900.1	85.56	11.519			
9,800.0	6,358.8	6,689.0	6,290.6	69.1	22.3	85.66	4,211.0	1,331.2	890.9	803.4	87.50	10.182			
9,900.0	6,358.7	6,692.7	6,294.4	71.0	22.3	86.38	4,211.2	1,331.1	797.3	707.9	89.42	8.916			
10,000.0	6,358.7	6,696.4	6,298.0	72.8	22.3	87.08	4,211.3	1,331.0	705.6	614.2	91.34	7.724			
10,100.0	6,358.6	6,700.0	6,301.6	74.6	22.3	87.76	4,211.4	1,330.9	616.3	523.1	93.25	6.609			
10,200.0	6,358.5	6,703.4	6,305.0	76.5	22.3	88.43	4,211.5	1,330.8	530.9	435.8	95.15	5.580			
10,300.0	6,358.4	6,706.8	6,308.5	78.3	22.3	89.09	4,211.7	1,330.7	451.5	354.5	97.05	4.653			
10,400.0	6,358.4	6,710.2	6,311.8	80.2	22.3	89.74	4,211.8	1,330.7	381.9	283.0	98.94	3.861			
10,500.0	6,358.3	6,713.5	6,315.1	82.0	22.3	90.38	4,211.9	1,330.6	328.4	227.6	100.81	3.257			
10,600.0	6,358.2	6,716.8	6,318.4	83.9	22.3	91.01	4,212.0	1,330.5	299.6	196.9	102.68	2.918			
10,640.4	6,358.2	6,718.1	6,319.7	84.6	22.3	91.26	4,212.0	1,330.5	296.9	193.5	103.44	2.870 CC, ES, SF			
10,700.0	6,358.1	6,720.0	6,321.6	85.7	22.3	91.63	4,212.1	1,330.5	302.8	198.3	104.54	2.896			
10,800.0	6,358.0	6,723.2	6,324.8	87.6	22.3	92.24	4,212.2	1,330.4	337.0	230.6	106.40	3.168			
10,865.7	6,358.0	6,725.2	6,326.8	88.6	22.3	92.64	4,212.3	1,330.3	372.6	265.2	107.37	3.470			

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Trimar Farms 29T-221
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 29T-221	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	61.9	0.0	61.9					
100.0	100.0	99.0	99.0	0.1	0.1	0.00	61.9	0.0	61.9	61.7	0.22	276.907		
200.0	200.0	199.0	199.0	0.3	0.3	0.00	61.9	0.0	61.9	61.3	0.67	92.149		
300.0	300.0	299.0	299.0	0.6	0.6	0.00	61.9	0.0	61.9	60.8	1.12	55.215		
400.0	400.0	399.0	399.0	0.8	0.8	0.00	61.9	0.0	61.9	60.4	1.57	39.417		
500.0	500.0	499.0	499.0	1.0	1.0	0.00	61.9	0.0	61.9	59.9	2.02	30.648		
600.0	600.0	599.0	599.0	1.2	1.2	0.00	61.9	0.0	61.9	59.5	2.47	25.070		
700.0	700.0	699.0	699.0	1.5	1.5	0.00	61.9	0.0	61.9	59.0	2.92	21.211		
800.0	800.0	799.0	799.0	1.7	1.7	0.00	61.9	0.0	61.9	58.6	3.37	18.381	CC	
900.0	900.0	899.0	899.0	1.9	1.9	-109.19	61.9	0.0	62.3	58.5	3.80	16.401	ES	
1,000.0	999.9	998.9	998.9	2.1	2.1	-112.51	61.9	0.0	63.7	59.5	4.22	15.095		
1,100.0	1,099.7	1,098.7	1,098.7	2.3	2.4	-117.67	61.9	0.0	66.5	61.9	4.65	14.292		
1,200.0	1,199.3	1,198.3	1,198.3	2.5	2.6	-124.12	61.9	0.0	71.2	66.2	5.10	13.984		
1,300.0	1,298.6	1,298.7	1,298.7	2.8	2.8	-130.88	61.5	0.7	77.8	72.2	5.52	14.084		
1,400.0	1,397.5	1,399.2	1,399.2	3.1	3.0	-137.19	60.0	2.9	85.5	79.6	5.93	14.421		
1,500.0	1,496.1	1,499.8	1,499.7	3.4	3.2	-142.97	57.5	6.5	94.6	88.3	6.35	14.910		
1,600.0	1,594.2	1,600.6	1,600.2	3.7	3.4	-148.20	54.1	11.6	105.0	98.3	6.77	15.528		
1,700.0	1,692.0	1,701.6	1,700.9	4.1	3.6	-152.61	49.7	18.2	115.5	108.3	7.20	16.034		
1,800.0	1,789.9	1,803.0	1,801.8	4.5	3.8	-156.18	44.2	26.3	124.7	117.0	7.64	16.316		
1,900.0	1,887.7	1,904.7	1,902.9	4.9	4.1	-159.18	37.7	35.9	132.5	124.4	8.09	16.389		
2,000.0	1,985.6	2,006.7	2,004.1	5.3	4.3	-161.81	30.2	47.0	138.9	130.4	8.54	16.273		
2,100.0	2,083.4	2,108.1	2,104.3	5.7	4.6	-164.18	21.8	59.5	143.9	134.9	8.99	16.002		
2,200.0	2,181.3	2,207.8	2,202.9	6.2	4.9	-166.37	13.3	72.0	148.7	139.2	9.45	15.737		
2,300.0	2,279.1	2,307.6	2,301.5	6.6	5.2	-168.41	4.8	84.6	153.7	143.8	9.91	15.508		
2,400.0	2,377.0	2,407.3	2,400.0	7.0	5.5	-170.32	-3.6	97.2	158.8	148.5	10.38	15.308		
2,500.0	2,474.9	2,507.0	2,498.6	7.5	5.8	-172.11	-12.1	109.8	164.2	153.3	10.85	15.130		
2,600.0	2,572.7	2,606.8	2,597.2	7.9	6.2	-173.79	-20.6	122.4	169.7	158.3	11.33	14.971		
2,700.0	2,670.6	2,706.5	2,695.7	8.3	6.5	-175.36	-29.1	134.9	175.3	163.5	11.83	14.825		
2,800.0	2,768.4	2,806.2	2,794.3	8.8	6.8	-176.83	-37.6	147.5	181.1	168.7	12.32	14.692		
2,900.0	2,866.3	2,906.0	2,892.9	9.2	7.2	-178.21	-46.1	160.1	186.9	174.1	12.83	14.567		
3,000.0	2,964.1	3,005.7	2,991.4	9.7	7.5	-179.51	-54.6	172.7	192.9	179.5	13.35	14.451		
3,100.0	3,062.0	3,105.4	3,090.0	10.1	7.9	179.27	-63.1	185.3	199.0	185.1	13.87	14.341		
3,200.0	3,159.8	3,205.1	3,188.6	10.6	8.2	178.13	-71.5	197.9	205.1	190.7	14.41	14.238		
3,300.0	3,257.7	3,304.9	3,287.2	11.0	8.6	177.05	-80.0	210.4	211.3	196.4	14.95	14.139		
3,400.0	3,355.5	3,404.6	3,385.7	11.5	8.9	176.03	-88.5	223.0	217.6	202.1	15.49	14.045		
3,500.0	3,453.4	3,504.3	3,484.3	11.9	9.3	175.07	-97.0	235.6	224.0	207.9	16.05	13.955		
3,600.0	3,551.3	3,604.1	3,582.9	12.4	9.6	174.17	-105.5	248.2	230.4	213.8	16.61	13.869		
3,700.0	3,649.1	3,703.8	3,681.4	12.9	10.0	173.31	-114.0	260.8	236.8	219.7	17.18	13.787		
3,800.0	3,747.0	3,803.5	3,780.0	13.3	10.3	172.50	-122.5	273.3	243.4	225.6	17.75	13.708		
3,900.0	3,844.8	3,903.3	3,878.6	13.8	10.7	171.73	-131.0	285.9	249.9	231.6	18.33	13.633		
4,000.0	3,942.7	4,003.0	3,977.1	14.2	11.0	171.00	-139.4	298.5	256.5	237.6	18.92	13.560		
4,100.0	4,040.5	4,102.7	4,075.7	14.7	11.4	170.31	-147.9	311.1	263.2	243.7	19.51	13.490		
4,200.0	4,138.4	4,202.4	4,174.3	15.1	11.7	169.65	-156.4	323.7	269.9	249.8	20.10	13.424		
4,300.0	4,236.2	4,302.2	4,272.8	15.6	12.1	169.02	-164.9	336.3	276.6	255.9	20.70	13.359		
4,400.0	4,334.1	4,401.9	4,371.4	16.0	12.5	168.42	-173.4	348.8	283.3	262.0	21.31	13.298		
4,500.0	4,431.9	4,501.6	4,470.0	16.5	12.8	167.85	-181.9	361.4	290.1	268.2	21.91	13.238		
4,600.0	4,529.8	4,601.4	4,568.5	17.0	13.2	167.31	-190.4	374.0	296.9	274.4	22.53	13.181		
4,700.0	4,627.7	4,701.1	4,667.1	17.4	13.6	166.79	-198.9	386.6	303.7	280.6	23.14	13.127		
4,800.0	4,725.5	4,800.8	4,765.7	17.9	13.9	166.30	-207.3	399.2	310.6	286.8	23.76	13.074		
4,900.0	4,823.4	4,900.5	4,864.2	18.3	14.3	165.82	-215.8	411.7	317.5	293.1	24.38	13.023		
5,000.0	4,921.2	5,000.3	4,962.8	18.8	14.6	165.37	-224.3	424.3	324.4	299.4	25.00	12.974		

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 29T-221
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 29T-221	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-301 - 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	5,019.1	5,100.0	5,061.4	19.2	15.0	164.93	-232.8	436.9	331.3	305.7	25.63	12.927			
5,200.0	5,116.9	5,199.7	5,159.9	19.7	15.4	164.51	-241.3	449.5	338.2	312.0	26.25	12.882			
5,300.0	5,214.8	5,299.5	5,258.5	20.2	15.7	164.11	-249.8	462.1	345.2	318.3	26.89	12.839			
5,400.0	5,312.6	5,399.2	5,357.1	20.6	16.1	163.73	-258.3	474.7	352.1	324.6	27.52	12.797			
5,500.0	5,410.5	5,498.9	5,455.6	21.1	16.5	163.36	-266.8	487.2	359.1	331.0	28.15	12.756			
5,600.0	5,508.4	5,598.7	5,554.2	21.5	16.8	163.00	-275.2	499.8	366.1	337.3	28.79	12.717			
5,700.0	5,606.3	5,698.3	5,652.7	22.0	17.2	178.25	-283.5	512.4	373.1	343.7	29.40	12.693			
5,800.0	5,704.1	5,797.9	5,751.4	22.3	17.4	-148.33	-283.3	525.0	380.2	350.3	29.82	12.747			
5,900.0	5,800.3	5,898.2	5,850.0	22.6	17.6	-128.72	-270.0	537.6	387.1	357.1	30.10	12.864			
6,000.0	5,893.3	5,999.3	5,946.7	22.8	17.7	-118.54	-243.5	550.0	394.0	363.7	30.24	13.026			
6,100.0	5,981.5	6,101.2	6,039.8	23.0	17.8	-112.83	-204.1	561.9	400.5	370.2	30.32	13.212			
6,200.0	6,063.4	6,203.9	6,127.5	23.1	17.8	-109.35	-152.1	573.1	406.6	376.3	30.38	13.386			
6,300.0	6,137.6	6,307.2	6,208.0	23.3	17.7	-107.11	-88.2	583.4	412.2	381.7	30.52	13.506			
6,400.0	6,202.7	6,411.3	6,279.7	23.4	17.7	-105.62	-13.4	592.6	417.2	386.3	30.84	13.527			
6,500.0	6,257.8	6,516.0	6,341.0	23.6	17.7	-104.60	71.0	600.5	421.4	390.0	31.42	13.410			
6,600.0	6,301.8	6,621.2	6,390.5	23.7	17.7	-103.92	163.5	606.9	424.8	392.4	32.34	13.134			
6,700.0	6,334.0	6,726.8	6,427.0	24.0	17.9	-103.49	262.5	611.6	427.2	393.6	33.63	12.702			
6,800.0	6,353.8	6,832.8	6,449.7	24.3	18.3	-103.26	365.8	614.6	428.7	393.4	35.30	12.146			
6,900.0	6,361.0	6,938.9	6,458.0	24.8	19.2	-103.20	471.5	615.7	429.3	392.0	37.30	11.507			
7,000.0	6,360.9	7,039.5	6,457.5	25.4	20.2	-103.14	572.2	615.7	429.2	389.7	39.47	10.873			
7,100.0	6,360.9	7,139.5	6,457.0	26.2	21.4	-103.09	672.2	615.7	429.1	387.3	41.81	10.261			
7,200.0	6,360.8	7,239.5	6,456.5	27.1	22.7	-103.03	772.1	615.7	429.0	384.6	44.35	9.672			
7,300.0	6,360.7	7,339.5	6,455.9	28.2	24.0	-102.97	872.1	615.7	428.9	381.8	47.06	9.114			
7,400.0	6,360.6	7,439.5	6,455.4	29.4	25.4	-102.91	972.1	615.7	428.8	378.9	49.90	8.593			
7,500.0	6,360.6	7,539.5	6,454.9	30.7	26.9	-102.85	1,072.1	615.7	428.7	375.8	52.86	8.110			
7,600.0	6,360.5	7,639.5	6,454.3	32.0	28.4	-102.79	1,172.1	615.7	428.6	372.6	55.91	7.665			
7,700.0	6,360.4	7,739.5	6,453.8	33.4	30.0	-102.73	1,272.1	615.7	428.5	369.4	59.05	7.256			
7,800.0	6,360.3	7,839.5	6,453.3	34.9	31.6	-102.67	1,372.1	615.7	428.4	366.1	62.26	6.880			
7,900.0	6,360.2	7,939.5	6,452.7	36.4	33.3	-102.61	1,472.1	615.7	428.3	362.7	65.53	6.535			
8,000.0	6,360.2	8,039.5	6,452.2	37.9	34.9	-102.55	1,572.1	615.7	428.2	359.3	68.85	6.218			
8,100.0	6,360.1	8,139.5	6,451.7	39.5	36.6	-102.49	1,672.1	615.7	428.1	355.8	72.22	5.927			
8,200.0	6,360.0	8,239.5	6,451.2	41.1	38.3	-102.43	1,772.1	615.7	428.0	352.3	75.63	5.659			
8,300.0	6,359.9	8,339.5	6,450.6	42.8	40.1	-102.37	1,872.1	615.7	427.9	348.8	79.07	5.411			
8,400.0	6,359.9	8,439.5	6,450.1	44.4	41.8	-102.31	1,972.1	615.7	427.8	345.2	82.54	5.182			
8,500.0	6,359.8	8,539.5	6,449.6	46.1	43.6	-102.25	2,072.1	615.7	427.7	341.6	86.04	4.971			
8,600.0	6,359.7	8,639.5	6,449.0	47.8	45.4	-102.19	2,172.1	615.7	427.6	338.0	89.56	4.774			
8,700.0	6,359.6	8,739.5	6,448.5	49.5	47.1	-102.13	2,272.1	615.7	427.5	334.4	93.11	4.591			
8,800.0	6,359.6	8,839.5	6,448.0	51.3	48.9	-102.07	2,372.1	615.7	427.4	330.7	96.67	4.421			
8,900.0	6,359.5	8,939.5	6,447.4	53.0	50.7	-102.01	2,472.1	615.7	427.3	327.0	100.25	4.262			
9,000.0	6,359.4	9,039.5	6,446.9	54.8	52.6	-101.95	2,572.1	615.7	427.2	323.3	103.84	4.114			
9,100.0	6,359.3	9,139.5	6,446.4	56.5	54.4	-101.89	2,672.1	615.7	427.1	319.6	107.45	3.975			
9,200.0	6,359.3	9,239.5	6,445.8	58.3	56.2	-101.83	2,772.1	615.7	427.0	315.9	111.08	3.844			
9,300.0	6,359.2	9,339.5	6,445.3	60.1	58.0	-101.78	2,872.1	615.7	426.9	312.2	114.71	3.722			
9,400.0	6,359.1	9,439.5	6,444.8	61.9	59.9	-101.72	2,972.1	615.7	426.8	308.5	118.36	3.606			
9,500.0	6,359.0	9,539.5	6,444.2	63.7	61.7	-101.66	3,072.1	615.7	426.7	304.7	122.01	3.497			
9,600.0	6,359.0	9,639.5	6,443.7	65.5	63.6	-101.60	3,172.1	615.7	426.6	301.0	125.67	3.395			
9,700.0	6,358.9	9,739.5	6,443.2	67.3	65.4	-101.54	3,272.1	615.7	426.5	297.2	129.35	3.298			
9,800.0	6,358.8	9,839.5	6,442.6	69.1	67.3	-101.48	3,372.1	615.7	426.5	293.4	133.03	3.206			
9,900.0	6,358.7	9,939.5	6,442.1	71.0	69.1	-101.42	3,472.1	615.7	426.4	289.6	136.72	3.119			
10,000.0	6,358.7	10,039.5	6,441.6	72.8	71.0	-101.36	3,572.1	615.7	426.3	285.9	140.41	3.036			

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 29T-221
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 29T-221	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-301 - 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)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor					
10,100.0	6,358.6	10,139.5	6,441.1	74.6	72.8	-101.30	3,672.1	615.7	426.2	282.1	144.11	2.957					
10,200.0	6,358.5	10,239.5	6,440.5	76.5	74.7	-101.24	3,772.1	615.7	426.1	278.3	147.82	2.883					
10,300.0	6,358.4	10,339.5	6,440.0	78.3	76.6	-101.18	3,872.1	615.7	426.0	274.5	151.53	2.811					
10,400.0	6,358.4	10,439.5	6,439.5	80.2	78.4	-101.12	3,972.1	615.7	425.9	270.7	155.25	2.743					
10,500.0	6,358.3	10,539.5	6,438.9	82.0	80.3	-101.06	4,072.1	615.7	425.8	266.9	158.97	2.679					
10,600.0	6,358.2	10,639.5	6,438.4	83.9	82.2	-100.99	4,172.1	615.7	425.7	263.0	162.70	2.617					
10,700.0	6,358.1	10,739.5	6,437.9	85.7	84.1	-100.93	4,272.1	615.7	425.7	259.2	166.43	2.558					
10,800.0	6,358.0	10,839.5	6,437.3	87.6	85.9	-100.87	4,372.1	615.7	425.6	255.4	170.17	2.501					
10,862.8	6,358.0	10,902.3	6,437.0	88.6	87.1	-100.84	4,434.9	615.7	425.5	253.2	172.29	2.470					
10,865.7	6,358.0	10,904.8	6,437.0	88.6	87.2	-100.84	4,437.3	615.7	425.5	253.1	172.38	2.468 SF					

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Trimar Farms 29T-221
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 29T-221	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			
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	129.631			
200.0	200.0	200.0	200.0	0.3	0.3	0.00	29.1	0.0	29.1	28.5	0.67	43.210			
300.0	300.0	300.0	300.0	0.6	0.6	0.00	29.1	0.0	29.1	28.0	1.12	25.926			
400.0	400.0	400.0	400.0	0.8	0.8	0.00	29.1	0.0	29.1	27.6	1.57	18.519			
500.0	500.0	500.0	500.0	1.0	1.0	0.00	29.1	0.0	29.1	27.1	2.02	14.403			
600.0	600.0	600.0	600.0	1.2	1.2	0.00	29.1	0.0	29.1	26.7	2.47	11.785			
700.0	700.0	700.0	700.0	1.5	1.5	0.00	29.1	0.0	29.1	26.2	2.92	9.972			
800.0	800.0	800.0	800.0	1.7	1.7	0.00	29.1	0.0	29.1	25.8	3.37	8.642 CC			
900.0	900.0	900.0	900.0	1.9	1.9	-110.46	29.1	0.0	29.6	25.8	3.80	7.774 ES			
1,000.0	999.9	999.9	999.9	2.1	2.1	-117.22	29.1	0.0	31.2	26.9	4.23	7.375			
1,100.0	1,099.7	1,100.1	1,100.1	2.3	2.3	-125.79	28.8	0.8	34.1	29.4	4.64	7.348			
1,200.0	1,199.3	1,200.3	1,200.3	2.5	2.5	-134.03	27.7	3.2	38.1	33.0	5.04	7.559			
1,300.0	1,298.6	1,300.6	1,300.5	2.8	2.7	-141.50	25.9	7.2	43.3	37.8	5.45	7.950			
1,400.0	1,397.5	1,401.0	1,400.7	3.1	2.9	-148.01	23.5	12.8	49.7	43.9	5.86	8.488			
1,500.0	1,496.1	1,501.4	1,500.8	3.4	3.2	-153.53	20.3	20.1	57.4	51.1	6.27	9.143			
1,600.0	1,594.2	1,601.9	1,600.8	3.7	3.4	-158.16	16.4	28.9	66.1	59.4	6.69	9.881			
1,700.0	1,692.0	1,702.7	1,700.9	4.1	3.7	-161.71	11.7	39.4	74.6	67.5	7.14	10.451			
1,800.0	1,789.9	1,803.7	1,801.1	4.5	3.9	-164.32	6.4	51.5	81.5	73.9	7.59	10.743			
1,900.0	1,887.7	1,905.0	1,901.3	4.9	4.2	-166.36	0.3	65.2	86.9	78.8	8.05	10.790			
2,000.0	1,985.6	2,006.5	2,001.3	5.3	4.5	-168.04	-6.5	80.6	90.6	82.0	8.52	10.627			
2,100.0	2,083.4	2,107.1	2,100.3	5.7	4.9	-169.49	-13.9	97.2	92.8	83.8	9.00	10.319			
2,200.0	2,181.3	2,207.1	2,198.6	6.2	5.2	-170.87	-21.3	113.9	95.0	85.5	9.47	10.028			
2,300.0	2,279.1	2,307.0	2,296.8	6.6	5.6	-172.18	-28.6	130.5	97.2	87.3	9.96	9.766			
2,400.0	2,377.0	2,407.0	2,395.1	7.0	6.0	-173.43	-36.0	147.2	99.5	89.1	10.44	9.529			
2,500.0	2,474.9	2,506.9	2,493.4	7.5	6.3	-174.62	-43.4	163.8	101.8	90.9	10.93	9.313			
2,600.0	2,572.7	2,606.9	2,591.7	7.9	6.7	-175.76	-50.8	180.5	104.2	92.8	11.43	9.116			
2,700.0	2,670.6	2,706.8	2,690.0	8.3	7.1	-176.85	-58.1	197.2	106.6	94.7	11.93	8.934			
2,800.0	2,768.4	2,806.8	2,788.2	8.8	7.5	-177.89	-65.5	213.8	109.0	96.6	12.44	8.766			
2,900.0	2,866.3	2,906.7	2,886.5	9.2	7.9	-178.89	-72.9	230.5	111.5	98.5	12.95	8.611			
3,000.0	2,964.1	3,006.7	2,984.8	9.7	8.3	-179.84	-80.2	247.1	114.0	100.5	13.47	8.466			
3,100.0	3,062.0	3,106.6	3,083.1	10.1	8.7	179.25	-87.6	263.8	116.5	102.5	13.99	8.330			
3,200.0	3,159.8	3,206.6	3,181.4	10.6	9.1	178.37	-95.0	280.4	119.1	104.6	14.52	8.203			
3,300.0	3,257.7	3,306.5	3,279.6	11.0	9.5	177.54	-102.3	297.1	121.7	106.6	15.05	8.084			
3,400.0	3,355.5	3,406.5	3,377.9	11.5	9.9	176.74	-109.7	313.7	124.3	108.7	15.59	7.972			
3,500.0	3,453.4	3,506.4	3,476.2	11.9	10.3	175.97	-117.1	330.4	126.9	110.8	16.14	7.865			
3,600.0	3,551.3	3,606.4	3,574.5	12.4	10.7	175.24	-124.4	347.0	129.6	112.9	16.69	7.765			
3,700.0	3,649.1	3,706.3	3,672.7	12.9	11.1	174.53	-131.8	363.7	132.3	115.0	17.24	7.670			
3,800.0	3,747.0	3,806.3	3,771.0	13.3	11.5	173.85	-139.2	380.3	135.0	117.2	17.81	7.580			
3,900.0	3,844.8	3,906.2	3,869.3	13.8	11.9	173.20	-146.6	397.0	137.7	119.3	18.37	7.494			
4,000.0	3,942.7	4,006.2	3,967.6	14.2	12.3	172.57	-153.9	413.6	140.4	121.5	18.94	7.412			
4,100.0	4,040.5	4,106.1	4,065.9	14.7	12.7	171.97	-161.3	430.3	143.2	123.6	19.52	7.334			
4,200.0	4,138.4	4,206.1	4,164.1	15.1	13.1	171.39	-168.7	446.9	145.9	125.8	20.10	7.260			
4,300.0	4,236.2	4,306.0	4,262.4	15.6	13.5	170.83	-176.0	463.6	148.7	128.0	20.68	7.189			
4,400.0	4,334.1	4,406.0	4,360.7	16.0	14.0	170.30	-183.4	480.2	151.5	130.2	21.27	7.121			
4,500.0	4,431.9	4,505.9	4,459.0	16.5	14.4	169.78	-190.8	496.9	154.3	132.4	21.87	7.056			
4,600.0	4,529.8	4,605.9	4,557.3	17.0	14.8	169.28	-198.1	513.5	157.1	134.6	22.46	6.994			
4,700.0	4,627.7	4,705.8	4,655.5	17.4	15.2	168.80	-205.5	530.2	159.9	136.9	23.06	6.934			
4,800.0	4,725.5	4,805.8	4,753.8	17.9	15.6	168.33	-212.9	546.8	162.8	139.1	23.67	6.877			
4,900.0	4,823.4	4,905.7	4,852.1	18.3	16.0	167.88	-220.2	563.5	165.6	141.4	24.28	6.823			
5,000.0	4,921.2	5,005.7	4,950.4	18.8	16.4	167.45	-227.6	580.1	168.5	143.6	24.89	6.770			

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 29T-221
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 29T-221	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	5,019.1	5,105.6	5,048.6	19.2	16.8	167.03	-235.0	596.8	171.4	145.9	25.50	6.720		
5,200.0	5,116.9	5,205.6	5,146.9	19.7	17.3	166.63	-242.4	613.4	174.2	148.1	26.12	6.671		
5,300.0	5,214.8	5,305.6	5,245.2	20.2	17.7	166.23	-249.7	630.1	177.1	150.4	26.74	6.624		
5,400.0	5,312.6	5,405.5	5,343.5	20.6	18.1	165.85	-257.1	646.7	180.0	152.7	27.36	6.579		
5,500.0	5,410.5	5,505.5	5,441.8	21.1	18.5	165.49	-264.5	663.4	182.9	154.9	27.99	6.536		
5,600.0	5,508.4	5,605.4	5,540.0	21.5	18.9	165.13	-271.8	680.0	185.8	157.2	28.61	6.494		
5,700.0	5,606.3	5,705.3	5,638.3	22.0	19.3	-179.97	-279.2	696.7	188.7	159.4	29.28	6.444		
5,800.0	5,704.1	5,804.6	5,735.9	22.3	19.7	-149.75	-285.9	713.2	191.6	161.2	30.40	6.303		
5,900.0	5,800.3	5,905.0	5,834.8	22.6	20.0	-134.11	-282.6	729.9	195.6	164.1	31.49	6.211		
6,000.0	5,893.3	6,007.5	5,934.5	22.8	20.3	-127.67	-265.7	746.8	200.6	168.3	32.27	6.216		
6,100.0	5,981.5	6,112.3	6,033.1	23.0	20.4	-125.41	-234.6	763.5	206.4	173.8	32.65	6.323		
6,200.0	6,063.4	6,219.4	6,128.5	23.1	20.5	-125.03	-189.0	779.6	212.8	180.2	32.60	6.526		
6,300.0	6,137.6	6,328.8	6,218.5	23.3	20.6	-125.48	-129.0	794.8	219.3	187.1	32.22	6.806		
6,400.0	6,202.7	6,440.3	6,300.7	23.4	20.7	-126.26	-54.9	808.6	225.6	194.0	31.65	7.128		
6,500.0	6,257.8	6,553.9	6,372.5	23.6	20.8	-127.09	32.1	820.7	231.4	200.2	31.15	7.430		
6,600.0	6,301.8	6,669.3	6,431.7	23.7	20.9	-127.85	130.5	830.6	236.3	205.3	30.98	7.628		
6,700.0	6,334.0	6,786.1	6,476.0	24.0	21.1	-128.43	238.2	838.0	240.1	208.7	31.42	7.641		
6,800.0	6,353.8	6,903.9	6,503.8	24.3	21.4	-128.79	352.5	842.6	242.6	209.9	32.65	7.429		
6,900.0	6,361.0	7,022.3	6,514.0	24.8	22.1	-128.92	470.3	844.2	243.5	208.8	34.71	7.017		
7,000.0	6,360.9	7,122.7	6,514.6	25.4	22.8	-129.04	570.7	844.2	244.0	207.4	36.59	6.667		
7,100.0	6,360.9	7,222.7	6,515.2	26.2	23.8	-129.16	670.7	844.2	244.4	205.8	38.57	6.337		
7,200.0	6,360.8	7,322.7	6,515.8	27.1	24.9	-129.29	770.7	844.2	244.8	204.1	40.67	6.019		
7,300.0	6,360.7	7,422.7	6,516.4	28.2	26.1	-129.41	870.7	844.2	245.2	202.3	42.90	5.717		
7,400.0	6,360.6	7,522.7	6,517.0	29.4	27.4	-129.53	970.7	844.2	245.7	200.4	45.22	5.433		
7,500.0	6,360.6	7,622.7	6,517.6	30.7	28.8	-129.65	1,070.7	844.2	246.1	198.5	47.62	5.168		
7,600.0	6,360.5	7,722.7	6,518.2	32.0	30.2	-129.77	1,170.7	844.2	246.5	196.4	50.08	4.922		
7,700.0	6,360.4	7,822.7	6,518.8	33.4	31.7	-129.89	1,270.7	844.2	247.0	194.4	52.60	4.695		
7,800.0	6,360.3	7,922.7	6,519.4	34.9	33.2	-130.01	1,370.7	844.2	247.4	192.2	55.17	4.484		
7,900.0	6,360.2	8,022.7	6,520.0	36.4	34.8	-130.13	1,470.7	844.2	247.8	190.0	57.78	4.289		
8,000.0	6,360.2	8,122.7	6,520.6	37.9	36.4	-130.25	1,570.7	844.2	248.3	187.8	60.42	4.109		
8,100.0	6,360.1	8,222.7	6,521.2	39.5	38.1	-130.37	1,670.7	844.2	248.7	185.6	63.09	3.942		
8,200.0	6,360.0	8,322.7	6,521.8	41.1	39.7	-130.49	1,770.7	844.2	249.1	183.3	65.78	3.787		
8,300.0	6,359.9	8,422.7	6,522.4	42.8	41.4	-130.61	1,870.7	844.2	249.6	181.1	68.49	3.644		
8,400.0	6,359.9	8,522.7	6,523.0	44.4	43.1	-130.72	1,970.7	844.2	250.0	178.8	71.22	3.510		
8,500.0	6,359.8	8,622.7	6,523.6	46.1	44.8	-130.84	2,070.7	844.2	250.4	176.5	73.96	3.386		
8,600.0	6,359.7	8,722.7	6,524.2	47.8	46.6	-130.96	2,170.7	844.2	250.9	174.2	76.71	3.271		
8,700.0	6,359.6	8,822.7	6,524.8	49.5	48.3	-131.07	2,270.6	844.2	251.3	171.9	79.47	3.163		
8,800.0	6,359.6	8,922.7	6,525.4	51.3	50.1	-131.19	2,370.6	844.2	251.8	169.5	82.24	3.062		
8,900.0	6,359.5	9,022.7	6,526.0	53.0	51.9	-131.30	2,470.6	844.2	252.2	167.2	85.01	2.967		
9,000.0	6,359.4	9,122.7	6,526.6	54.8	53.7	-131.42	2,570.6	844.2	252.7	164.9	87.79	2.878		
9,100.0	6,359.3	9,222.7	6,527.2	56.5	55.4	-131.53	2,670.6	844.2	253.1	162.5	90.57	2.795		
9,200.0	6,359.3	9,322.7	6,527.8	58.3	57.2	-131.65	2,770.6	844.2	253.6	160.2	93.35	2.716		
9,300.0	6,359.2	9,422.7	6,528.4	60.1	59.1	-131.76	2,870.6	844.2	254.0	157.9	96.13	2.642		
9,400.0	6,359.1	9,522.7	6,529.0	61.9	60.9	-131.88	2,970.6	844.2	254.5	155.5	98.92	2.572		
9,500.0	6,359.0	9,622.7	6,529.6	63.7	62.7	-131.99	3,070.6	844.2	254.9	153.2	101.70	2.506		
9,600.0	6,359.0	9,722.7	6,530.2	65.5	64.5	-132.10	3,170.6	844.2	255.4	150.9	104.49	2.444		
9,700.0	6,358.9	9,822.7	6,530.8	67.3	66.4	-132.21	3,270.6	844.2	255.8	148.6	107.27	2.385		
9,800.0	6,358.8	9,922.7	6,531.4	69.1	68.2	-132.33	3,370.6	844.2	256.3	146.2	110.05	2.329		
9,900.0	6,358.7	10,022.7	6,532.0	71.0	70.0	-132.44	3,470.6	844.2	256.7	143.9	112.82	2.275		
10,000.0	6,358.7	10,122.7	6,532.6	72.8	71.9	-132.55	3,570.6	844.2	257.2	141.6	115.60	2.225		

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 29T-221
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 29T-221	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	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)						
10,100.0	6,358.6	10,222.7	6,533.2	74.6	73.7	-132.66	3,670.6	844.2	257.6	139.3	118.37	2.177					
10,200.0	6,358.5	10,322.7	6,533.8	76.5	75.6	-132.77	3,770.6	844.2	258.1	137.0	121.14	2.131					
10,300.0	6,358.4	10,422.7	6,534.4	78.3	77.4	-132.88	3,870.6	844.2	258.6	134.7	123.90	2.087					
10,400.0	6,358.4	10,522.7	6,535.0	80.2	79.3	-132.99	3,970.6	844.2	259.0	132.4	126.66	2.045					
10,500.0	6,358.3	10,622.7	6,535.6	82.0	81.1	-133.10	4,070.6	844.2	259.5	130.1	129.41	2.005					
10,600.0	6,358.2	10,722.7	6,536.2	83.9	83.0	-133.21	4,170.6	844.2	259.9	127.8	132.17	1.967					
10,700.0	6,358.1	10,822.7	6,536.8	85.7	84.9	-133.32	4,270.6	844.2	260.4	125.5	134.91	1.930					
10,800.0	6,358.0	10,922.7	6,537.4	87.6	86.7	-133.42	4,370.6	844.2	260.9	123.2	137.65	1.895					
10,865.7	6,358.0	10,988.4	6,537.8	88.6	88.0	-133.49	4,436.3	844.2	261.2	121.9	139.23	1.876 SF					

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Trimar Farms 29T-221
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 29T-221	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	180.00	-58.3	0.0	58.3				
100.0	100.0	100.0	100.0	0.1	0.1	180.00	-58.3	0.0	58.3	58.1	0.22	259.353	
200.0	200.0	200.0	200.0	0.3	0.3	180.00	-58.3	0.0	58.3	57.6	0.67	86.451	CC
300.0	300.0	299.7	299.7	0.6	0.5	178.74	-58.5	1.3	58.5	57.4	1.11	52.694	ES
400.0	400.0	399.3	399.2	0.8	0.8	175.05	-59.2	5.1	59.4	57.9	1.55	38.308	
500.0	500.0	498.6	498.3	1.0	1.0	169.21	-60.3	11.5	61.4	59.4	2.00	30.629	
600.0	600.0	597.5	596.8	1.2	1.3	161.77	-61.8	20.4	65.2	62.7	2.48	26.325	
700.0	700.0	695.9	694.5	1.5	1.5	153.59	-63.8	31.7	71.4	68.5	2.97	24.020	
800.0	800.0	793.6	791.2	1.7	1.8	145.57	-66.2	45.4	80.7	77.2	3.51	23.004	
900.0	900.0	890.8	887.0	1.9	2.2	30.58	-68.9	61.4	92.1	88.2	3.91	23.575	
1,000.0	999.9	987.6	982.0	2.1	2.6	25.08	-72.1	79.7	104.3	99.9	4.36	23.945	
1,100.0	1,099.7	1,084.0	1,076.1	2.3	3.0	20.62	-75.7	100.3	117.0	112.2	4.81	24.320	
1,200.0	1,199.3	1,180.0	1,169.3	2.5	3.5	16.93	-79.7	123.2	130.1	124.8	5.27	24.667	
1,300.0	1,298.6	1,275.7	1,261.5	2.8	4.0	13.81	-84.0	148.3	143.4	137.7	5.74	24.971	
1,400.0	1,397.5	1,371.0	1,352.7	3.1	4.5	11.12	-88.7	175.5	156.9	150.6	6.22	25.219	
1,500.0	1,496.1	1,467.5	1,444.4	3.4	5.1	8.74	-93.9	205.1	170.2	163.5	6.70	25.402	
1,600.0	1,594.2	1,566.6	1,538.4	3.7	5.8	6.73	-99.2	236.1	181.8	174.6	7.20	25.247	
1,700.0	1,692.0	1,665.9	1,632.6	4.1	6.4	5.00	-104.6	267.0	192.4	184.7	7.72	24.919	
1,800.0	1,789.9	1,765.2	1,726.8	4.5	7.1	3.46	-110.0	298.0	203.2	194.9	8.25	24.640	
1,900.0	1,887.7	1,864.5	1,821.0	4.9	7.7	2.07	-115.3	329.0	214.1	205.3	8.77	24.397	
2,000.0	1,985.6	1,963.7	1,915.1	5.3	8.4	0.82	-120.7	359.9	225.1	215.8	9.31	24.181	
2,100.0	2,083.4	2,063.0	2,009.3	5.7	9.0	-0.31	-126.1	390.9	236.2	226.4	9.85	23.985	
2,200.0	2,181.3	2,162.3	2,103.5	6.2	9.7	-1.35	-131.5	421.9	247.4	237.0	10.39	23.806	
2,300.0	2,279.1	2,261.6	2,197.6	6.6	10.4	-2.29	-136.8	452.8	258.7	247.7	10.94	23.639	
2,400.0	2,377.0	2,360.8	2,291.8	7.0	11.0	-3.16	-142.2	483.8	270.0	258.5	11.50	23.483	
2,500.0	2,474.9	2,460.1	2,386.0	7.5	11.7	-3.95	-147.6	514.8	281.4	269.3	12.06	23.335	
2,600.0	2,572.7	2,559.4	2,480.1	7.9	12.4	-4.68	-152.9	545.7	292.8	280.2	12.62	23.196	
2,700.0	2,670.6	2,658.7	2,574.3	8.3	13.0	-5.36	-158.3	576.7	304.3	291.1	13.19	23.063	
2,800.0	2,768.4	2,757.9	2,668.5	8.8	13.7	-5.99	-163.7	607.7	315.8	302.1	13.77	22.937	
2,900.0	2,866.3	2,857.2	2,762.7	9.2	14.4	-6.57	-169.1	638.7	327.4	313.0	14.35	22.816	
3,000.0	2,964.1	2,956.5	2,856.8	9.7	15.1	-7.12	-174.4	669.6	339.0	324.0	14.93	22.701	
3,100.0	3,062.0	3,055.8	2,951.0	10.1	15.7	-7.63	-179.8	700.6	350.6	335.1	15.52	22.590	
3,200.0	3,159.8	3,155.0	3,045.2	10.6	16.4	-8.10	-185.2	731.6	362.2	346.1	16.11	22.485	
3,300.0	3,257.7	3,254.3	3,139.3	11.0	17.1	-8.55	-190.5	762.5	373.9	357.2	16.70	22.383	
3,400.0	3,355.5	3,353.6	3,233.5	11.5	17.7	-8.97	-195.9	793.5	385.6	368.3	17.30	22.286	
3,500.0	3,453.4	3,452.9	3,327.7	11.9	18.4	-9.36	-201.3	824.5	397.3	379.4	17.90	22.192	
3,600.0	3,551.3	3,552.2	3,421.8	12.4	19.1	-9.74	-206.7	855.4	409.0	390.5	18.50	22.102	
3,700.0	3,649.1	3,651.4	3,516.0	12.9	19.7	-10.09	-212.0	886.4	420.7	401.6	19.11	22.016	
3,800.0	3,747.0	3,750.7	3,610.2	13.3	20.4	-10.42	-217.4	917.4	432.5	412.8	19.72	21.933	
3,900.0	3,844.8	3,850.0	3,704.4	13.8	21.1	-10.73	-222.8	948.3	444.2	423.9	20.33	21.853	
4,000.0	3,942.7	3,949.3	3,798.5	14.2	21.8	-11.03	-228.1	979.3	456.0	435.1	20.94	21.776	
4,100.0	4,040.5	4,048.5	3,892.7	14.7	22.4	-11.31	-233.5	1,010.3	467.8	446.2	21.56	21.702	
4,200.0	4,138.4	4,147.8	3,986.9	15.1	23.1	-11.58	-238.9	1,041.2	479.6	457.4	22.17	21.631	
4,300.0	4,236.2	4,247.1	4,081.0	15.6	23.8	-11.84	-244.3	1,072.2	491.4	468.6	22.79	21.562	
4,400.0	4,334.1	4,346.4	4,175.2	16.0	24.5	-12.09	-249.6	1,103.2	503.2	479.8	23.41	21.496	
4,500.0	4,431.9	4,445.6	4,269.4	16.5	25.1	-12.32	-255.0	1,134.2	515.1	491.0	24.03	21.432	
4,600.0	4,529.8	4,544.9	4,363.5	17.0	25.8	-12.54	-260.4	1,165.1	526.9	502.2	24.65	21.371	
4,700.0	4,627.7	4,644.2	4,457.7	17.4	26.5	-12.75	-265.7	1,196.1	538.7	513.5	25.28	21.311	
4,800.0	4,725.5	4,743.5	4,551.9	17.9	27.1	-12.96	-271.1	1,227.1	550.6	524.7	25.90	21.254	
4,900.0	4,823.4	4,842.8	4,646.1	18.3	27.8	-13.15	-276.5	1,258.0	562.4	535.9	26.53	21.199	
5,000.0	4,921.2	4,942.0	4,740.2	18.8	28.5	-13.34	-281.8	1,289.0	574.3	547.1	27.16	21.145	

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 29T-221
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 29T-221	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-201 - 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	5,019.1	5,041.3	4,834.4	19.2	29.2	-13.52	-287.2	1,320.0	586.2	558.4	27.79	21.093				
5,200.0	5,116.9	5,140.6	4,928.6	19.7	29.8	-13.69	-292.6	1,350.9	598.0	569.6	28.42	21.043				
5,300.0	5,214.8	5,239.9	5,022.7	20.2	30.5	-13.86	-298.0	1,381.9	609.9	580.9	29.05	20.995				
5,400.0	5,312.6	5,339.1	5,116.9	20.6	31.2	-14.02	-303.3	1,412.9	621.8	592.1	29.68	20.948				
5,500.0	5,410.5	5,438.4	5,211.1	21.1	31.9	-14.17	-308.7	1,443.8	633.7	603.4	30.32	20.903				
5,600.0	5,508.4	5,537.7	5,305.2	21.5	32.5	-14.32	-314.1	1,474.8	645.6	614.6	30.95	20.859				
5,700.0	5,606.3	5,637.0	5,399.4	22.0	33.2	0.78	-319.4	1,505.8	657.6	625.9	31.63	20.790				
5,800.0	5,704.1	5,735.5	5,492.9	22.3	33.9	34.46	-324.8	1,536.5	670.1	638.0	32.15	20.844				
5,900.0	5,800.3	5,831.8	5,584.2	22.6	34.5	55.24	-330.0	1,566.6	683.8	651.4	32.44	21.084				
6,000.0	5,893.3	5,936.4	5,683.5	22.8	35.1	67.22	-330.1	1,599.2	699.0	666.4	32.59	21.449				
6,100.0	5,981.5	6,047.7	5,788.1	23.0	35.7	74.66	-314.7	1,633.6	714.6	681.8	32.78	21.800				
6,200.0	6,063.4	6,165.2	5,895.0	23.1	36.3	79.72	-281.2	1,668.8	730.3	697.2	33.06	22.089				
6,300.0	6,137.6	6,289.3	6,001.2	23.3	36.8	83.37	-227.6	1,703.7	745.3	711.8	33.46	22.271				
6,400.0	6,202.7	6,420.2	6,102.7	23.4	37.2	86.07	-152.3	1,737.1	759.0	725.0	34.04	22.300				
6,500.0	6,257.8	6,557.5	6,194.4	23.6	37.6	88.04	-54.9	1,767.3	770.8	736.0	34.83	22.133				
6,600.0	6,301.8	6,700.4	6,270.7	23.7	38.0	89.36	63.0	1,792.4	780.0	744.1	35.89	21.734				
6,700.0	6,334.0	6,847.2	6,325.9	24.0	38.4	90.08	197.5	1,810.6	786.2	748.9	37.29	21.084				
6,800.0	6,353.8	6,995.7	6,356.0	24.3	38.7	90.23	342.4	1,820.5	788.9	749.8	39.05	20.203				
6,900.0	6,361.0	7,125.1	6,361.0	24.8	39.1	90.00	471.6	1,822.2	788.5	747.6	40.93	19.266				
6,940.8	6,361.2	7,166.0	6,360.9	25.0	39.2	89.98	512.5	1,822.2	788.5	746.7	41.76	18.880				
7,000.0	6,360.9	7,225.1	6,360.9	25.4	39.4	90.00	571.6	1,822.2	788.5	745.5	42.99	18.343				
7,100.0	6,360.9	7,325.1	6,360.8	26.2	39.8	90.00	671.6	1,822.2	788.5	743.2	45.28	17.414				
7,200.0	6,360.8	7,425.1	6,360.7	27.1	40.3	90.00	771.6	1,822.2	788.5	740.7	47.77	16.506				
7,300.0	6,360.7	7,525.1	6,360.7	28.2	40.9	90.00	871.6	1,822.2	788.5	738.1	50.43	15.634				
7,400.0	6,360.6	7,625.1	6,360.6	29.4	41.5	90.00	971.6	1,822.2	788.5	735.3	53.24	14.811				
7,500.0	6,360.6	7,725.1	6,360.5	30.7	42.3	90.00	1,071.6	1,822.2	788.5	732.3	56.17	14.038				
7,600.0	6,360.5	7,825.1	6,360.4	32.0	43.1	90.00	1,171.6	1,822.2	788.5	729.3	59.20	13.319				
7,700.0	6,360.4	7,925.1	6,360.4	33.4	44.0	90.00	1,271.6	1,822.2	788.5	726.2	62.32	12.652				
7,800.0	6,360.3	8,025.1	6,360.3	34.9	45.0	90.00	1,371.6	1,822.2	788.5	723.0	65.52	12.035				
7,900.0	6,360.2	8,125.1	6,360.2	36.4	46.1	90.00	1,471.6	1,822.2	788.5	719.7	68.78	11.464				
8,000.0	6,360.2	8,225.1	6,360.1	37.9	47.2	90.00	1,571.6	1,822.2	788.5	716.4	72.10	10.936				
8,100.0	6,360.1	8,325.1	6,360.1	39.5	48.4	90.00	1,671.6	1,822.2	788.5	713.0	75.47	10.448				
8,200.0	6,360.0	8,425.1	6,360.0	41.1	49.7	90.00	1,771.6	1,822.2	788.5	709.6	78.89	9.996				
8,300.0	6,359.9	8,525.1	6,359.9	42.8	51.0	90.00	1,871.6	1,822.2	788.5	706.2	82.34	9.577				
8,400.0	6,359.9	8,625.1	6,359.8	44.4	52.3	90.00	1,971.6	1,822.2	788.5	702.7	85.82	9.188				
8,500.0	6,359.8	8,725.1	6,359.8	46.1	53.7	90.00	2,071.6	1,822.2	788.5	699.2	89.33	8.827				
8,600.0	6,359.7	8,825.1	6,359.7	47.8	55.1	90.00	2,171.6	1,822.2	788.5	695.6	92.87	8.491				
8,700.0	6,359.6	8,925.1	6,359.6	49.5	56.6	90.00	2,271.6	1,822.2	788.5	692.1	96.43	8.177				
8,800.0	6,359.6	9,025.1	6,359.5	51.3	58.1	90.00	2,371.6	1,822.2	788.5	688.5	100.01	7.884				
8,900.0	6,359.5	9,125.1	6,359.5	53.0	59.6	90.00	2,471.6	1,822.2	788.5	684.9	103.61	7.610				
9,000.0	6,359.4	9,225.1	6,359.4	54.8	61.2	90.00	2,571.6	1,822.2	788.5	681.3	107.23	7.353				
9,100.0	6,359.3	9,325.1	6,359.3	56.5	62.8	90.00	2,671.6	1,822.2	788.5	677.6	110.86	7.112				
9,200.0	6,359.3	9,425.1	6,359.2	58.3	64.4	90.00	2,771.6	1,822.2	788.5	674.0	114.51	6.886				
9,300.0	6,359.2	9,525.1	6,359.2	60.1	66.0	90.00	2,871.6	1,822.2	788.5	670.3	118.17	6.673				
9,400.0	6,359.1	9,625.1	6,359.1	61.9	67.6	90.00	2,971.6	1,822.2	788.5	666.7	121.84	6.472				
9,500.0	6,359.0	9,725.1	6,359.0	63.7	69.3	90.00	3,071.6	1,822.2	788.5	663.0	125.51	6.282				
9,600.0	6,359.0	9,825.1	6,359.0	65.5	71.0	90.00	3,171.6	1,822.2	788.5	659.3	129.20	6.103				
9,700.0	6,358.9	9,925.1	6,358.9	67.3	72.6	90.00	3,271.6	1,822.2	788.5	655.6	132.90	5.933				
9,800.0	6,358.8	10,025.1	6,358.8	69.1	74.3	90.00	3,371.6	1,822.2	788.5	651.9	136.61	5.772				
9,900.0	6,358.7	10,125.1	6,358.7	71.0	76.1	90.00	3,471.6	1,822.2	788.5	648.2	140.32	5.619				

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 29T-221
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 29T-221	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-201 - 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)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
10,000.0	6,358.7	10,225.1	6,358.7	72.8	77.8	90.00	3,571.6	1,822.2	788.5	644.5	144.04	5.474			
10,100.0	6,358.6	10,325.1	6,358.6	74.6	79.5	90.00	3,671.6	1,822.2	788.5	640.7	147.76	5.336			
10,200.0	6,358.5	10,425.1	6,358.5	76.5	81.2	90.00	3,771.6	1,822.2	788.5	637.0	151.50	5.205			
10,300.0	6,358.4	10,525.1	6,358.4	78.3	83.0	90.00	3,871.6	1,822.2	788.5	633.3	155.23	5.079			
10,400.0	6,358.4	10,625.1	6,358.4	80.2	84.7	90.00	3,971.6	1,822.2	788.5	629.5	158.97	4.960			
10,500.0	6,358.3	10,725.1	6,358.3	82.0	86.5	90.00	4,071.6	1,822.2	788.5	625.8	162.72	4.846			
10,600.0	6,358.2	10,825.1	6,358.2	83.9	88.3	90.00	4,171.6	1,822.2	788.5	622.0	166.47	4.737			
10,700.0	6,358.1	10,925.1	6,358.1	85.7	90.1	90.00	4,271.6	1,822.2	788.5	618.3	170.23	4.632			
10,800.0	6,358.0	11,025.1	6,358.1	87.6	91.8	90.00	4,371.6	1,822.2	788.5	614.5	173.98	4.532			
10,865.7	6,358.0	11,090.8	6,358.0	88.6	93.0	90.00	4,437.3	1,822.2	788.5	612.3	176.22	4.475 SF			

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Trimar Farms 29T-221
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 29T-221	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-MWDD												Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	180.00	-29.1	0.0	29.1					
100.0	100.0	100.0	100.0	0.1	0.1	180.00	-29.1	0.0	29.1	28.9	0.22	129.685		
200.0	200.0	200.0	200.0	0.3	0.3	180.00	-29.1	0.0	29.1	28.5	0.67	43.228		
300.0	300.0	300.0	300.0	0.6	0.6	180.00	-29.1	0.0	29.1	28.0	1.12	25.937		
400.0	400.0	400.0	400.0	0.8	0.8	180.00	-29.1	0.0	29.1	27.6	1.57	18.526 CC		
500.0	500.0	499.8	499.8	1.0	1.0	177.51	-29.4	1.3	29.4	27.4	2.01	14.665 ES		
600.0	600.0	599.5	599.4	1.2	1.2	170.41	-30.2	5.1	30.6	28.2	2.44	12.564		
700.0	700.0	698.9	698.6	1.5	1.4	160.02	-31.5	11.5	33.5	30.7	2.88	11.638		
800.0	800.0	797.9	797.2	1.7	1.7	148.67	-33.3	20.3	39.1	35.8	3.35	11.682		
900.0	900.0	896.6	895.2	1.9	1.9	31.15	-35.6	31.6	46.7	43.0	3.77	12.392		
1,000.0	999.9	994.9	992.5	2.1	2.2	24.23	-38.5	45.3	55.1	50.9	4.20	13.130		
1,100.0	1,099.7	1,093.1	1,089.3	2.3	2.6	18.96	-41.8	61.4	63.9	59.3	4.63	13.805		
1,200.0	1,199.3	1,190.9	1,185.3	2.5	2.9	14.80	-45.6	79.9	73.0	67.9	5.07	14.397		
1,300.0	1,298.6	1,288.5	1,280.5	2.8	3.4	11.40	-49.9	100.8	82.2	76.7	5.52	14.907		
1,400.0	1,397.5	1,385.8	1,374.9	3.1	3.8	8.53	-54.6	123.9	91.6	85.6	5.97	15.340		
1,500.0	1,496.1	1,483.2	1,468.7	3.4	4.3	6.05	-59.9	149.4	101.0	94.6	6.43	15.700		
1,600.0	1,594.2	1,582.8	1,564.4	3.7	4.9	3.96	-65.4	176.5	109.0	102.1	6.91	15.779		
1,700.0	1,692.0	1,682.5	1,660.2	4.1	5.4	2.18	-71.0	203.6	116.0	108.6	7.42	15.646		
1,800.0	1,789.9	1,782.1	1,756.0	4.5	6.0	0.61	-76.6	230.6	123.1	115.2	7.93	15.532		
1,900.0	1,887.7	1,881.8	1,851.7	4.9	6.5	-0.79	-82.1	257.7	130.3	121.9	8.45	15.427		
2,000.0	1,985.6	1,981.5	1,947.5	5.3	7.1	-2.05	-87.7	284.8	137.6	128.6	8.97	15.330		
2,100.0	2,083.4	2,081.2	2,043.3	5.7	7.7	-3.17	-93.3	311.9	144.9	135.4	9.51	15.238		
2,200.0	2,181.3	2,180.9	2,139.1	6.2	8.3	-4.19	-98.8	339.0	152.3	142.2	10.05	15.150		
2,300.0	2,279.1	2,280.6	2,234.9	6.6	8.8	-5.12	-104.4	366.1	159.7	149.1	10.60	15.066		
2,400.0	2,377.0	2,380.3	2,330.6	7.0	9.4	-5.96	-110.0	393.2	167.1	156.0	11.15	14.985		
2,500.0	2,474.9	2,480.0	2,426.4	7.5	10.0	-6.73	-115.6	420.3	174.6	162.9	11.71	14.907		
2,600.0	2,572.7	2,579.7	2,522.2	7.9	10.6	-7.44	-121.1	447.3	182.1	169.8	12.28	14.832		
2,700.0	2,670.6	2,679.4	2,618.0	8.3	11.2	-8.09	-126.7	474.4	189.6	176.8	12.85	14.759		
2,800.0	2,768.4	2,779.1	2,713.8	8.8	11.8	-8.69	-132.3	501.5	197.2	183.8	13.42	14.689		
2,900.0	2,866.3	2,878.8	2,809.6	9.2	12.4	-9.25	-137.8	528.6	204.8	190.8	14.00	14.622		
3,000.0	2,964.1	2,978.5	2,905.3	9.7	13.0	-9.76	-143.4	555.7	212.4	197.8	14.59	14.557		
3,100.0	3,062.0	3,078.2	3,001.1	10.1	13.5	-10.25	-149.0	582.8	220.0	204.8	15.18	14.494		
3,200.0	3,159.8	3,177.9	3,096.9	10.6	14.1	-10.69	-154.5	609.9	227.6	211.8	15.77	14.434		
3,300.0	3,257.7	3,277.6	3,192.7	11.0	14.7	-11.11	-160.1	637.0	235.2	218.9	16.36	14.376		
3,400.0	3,355.5	3,377.2	3,288.5	11.5	15.3	-11.51	-165.7	664.0	242.9	225.9	16.96	14.321		
3,500.0	3,453.4	3,476.9	3,384.2	11.9	15.9	-11.88	-171.2	691.1	250.5	233.0	17.56	14.267		
3,600.0	3,551.3	3,576.6	3,480.0	12.4	16.5	-12.22	-176.8	718.2	258.2	240.1	18.16	14.216		
3,700.0	3,649.1	3,676.3	3,575.8	12.9	17.1	-12.55	-182.4	745.3	265.9	247.1	18.77	14.166		
3,800.0	3,747.0	3,776.0	3,671.6	13.3	17.7	-12.86	-188.0	772.4	273.6	254.2	19.38	14.119		
3,900.0	3,844.8	3,875.7	3,767.4	13.8	18.3	-13.15	-193.5	799.5	281.3	261.3	19.99	14.073		
4,000.0	3,942.7	3,975.4	3,863.1	14.2	18.9	-13.43	-199.1	826.6	289.0	268.4	20.60	14.029		
4,100.0	4,040.5	4,075.1	3,958.9	14.7	19.5	-13.69	-204.7	853.7	296.7	275.5	21.21	13.986		
4,200.0	4,138.4	4,174.8	4,054.7	15.1	20.1	-13.94	-210.2	880.7	304.4	282.6	21.83	13.945		
4,300.0	4,236.2	4,274.5	4,150.5	15.6	20.6	-14.18	-215.8	907.8	312.1	289.7	22.45	13.906		
4,400.0	4,334.1	4,374.2	4,246.3	16.0	21.2	-14.40	-221.4	934.9	319.8	296.8	23.06	13.868		
4,500.0	4,431.9	4,473.9	4,342.1	16.5	21.8	-14.62	-226.9	962.0	327.6	303.9	23.68	13.831		
4,600.0	4,529.8	4,573.6	4,437.8	17.0	22.4	-14.82	-232.5	989.1	335.3	311.0	24.30	13.796		
4,700.0	4,627.7	4,673.3	4,533.6	17.4	23.0	-15.02	-238.1	1,016.2	343.0	318.1	24.93	13.762		
4,800.0	4,725.5	4,773.0	4,629.4	17.9	23.6	-15.21	-243.6	1,043.3	350.8	325.2	25.55	13.729		
4,900.0	4,823.4	4,872.6	4,725.2	18.3	24.2	-15.38	-249.2	1,070.4	358.5	332.4	26.18	13.697		
5,000.0	4,921.2	4,972.3	4,821.0	18.8	24.8	-15.56	-254.8	1,097.4	366.3	339.5	26.80	13.667		

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 29T-221
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 29T-221	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		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
							+N/-S (ft)	+E/-W (ft)							
5,100.0	5,019.1	5,072.0	4,916.7	19.2	25.4	-15.72	-260.4	1,124.5	374.0	346.6	27.43	13.637			
5,200.0	5,116.9	5,171.7	5,012.5	19.7	26.0	-15.88	-265.9	1,151.6	381.8	353.7	28.05	13.609			
5,300.0	5,214.8	5,271.4	5,108.3	20.2	26.6	-16.03	-271.5	1,178.7	389.5	360.9	28.68	13.581			
5,400.0	5,312.6	5,371.1	5,204.1	20.6	27.2	-16.17	-277.1	1,205.8	397.3	368.0	29.31	13.554			
5,500.0	5,410.5	5,470.8	5,299.9	21.1	27.8	-16.31	-282.6	1,232.9	405.1	375.1	29.94	13.528			
5,600.0	5,508.4	5,570.5	5,395.7	21.5	28.4	-16.45	-288.2	1,260.0	412.8	382.3	30.57	13.503			
5,700.0	5,606.3	5,670.2	5,491.4	22.0	29.0	-1.14	-293.8	1,287.1	420.6	389.4	31.21	13.478			
5,800.0	5,704.1	5,769.2	5,586.5	22.3	29.6	33.47	-299.3	1,313.9	428.7	397.2	31.52	13.603			
5,900.0	5,800.3	5,867.0	5,680.5	22.6	30.1	55.72	-304.5	1,340.5	438.1	406.5	31.51	13.903			
6,000.0	5,893.3	5,970.4	5,779.9	22.8	30.6	68.96	-300.3	1,368.6	448.9	417.4	31.48	14.260			
6,100.0	5,981.5	6,078.2	5,881.9	23.0	31.1	77.52	-281.3	1,397.5	460.8	429.2	31.59	14.587			
6,200.0	6,063.4	6,190.9	5,984.6	23.1	31.5	83.61	-245.6	1,426.6	473.2	441.3	31.84	14.863			
6,300.0	6,137.6	6,308.6	6,085.3	23.3	31.9	88.18	-192.0	1,455.1	485.6	453.4	32.21	15.074			
6,400.0	6,202.7	6,431.5	6,180.7	23.4	32.2	91.69	-119.6	1,482.1	497.3	464.6	32.72	15.201			
6,500.0	6,257.8	6,559.4	6,266.8	23.6	32.5	94.36	-28.5	1,506.5	507.8	474.4	33.36	15.223			
6,600.0	6,301.8	6,691.8	6,339.3	23.7	32.8	96.30	80.3	1,527.1	516.4	482.2	34.16	15.117			
6,700.0	6,334.0	6,827.9	6,393.7	24.0	33.1	97.57	203.8	1,542.6	522.6	487.3	35.22	14.835			
6,800.0	6,353.8	6,966.2	6,426.6	24.3	33.5	98.19	337.6	1,552.0	526.0	489.4	36.57	14.381			
6,900.0	6,361.0	7,100.9	6,436.0	24.8	33.9	98.19	471.8	1,554.7	526.4	488.2	38.19	13.783			
6,945.2	6,361.2	7,146.1	6,435.9	25.1	34.1	98.15	517.0	1,554.7	526.3	487.2	39.11	13.456			
7,000.0	6,360.9	7,200.9	6,435.7	25.4	34.3	98.17	571.8	1,554.7	526.4	486.2	40.21	13.091			
7,100.0	6,360.9	7,300.9	6,435.5	26.2	34.8	98.16	671.8	1,554.7	526.3	483.9	42.49	12.388			
7,200.0	6,360.8	7,400.9	6,435.3	27.1	35.4	98.14	771.8	1,554.7	526.3	481.4	44.97	11.703			
7,300.0	6,360.7	7,500.9	6,435.1	28.2	36.1	98.12	871.8	1,554.7	526.3	478.7	47.63	11.049			
7,400.0	6,360.6	7,600.9	6,434.8	29.4	36.8	98.11	971.8	1,554.7	526.3	475.8	50.44	10.434			
7,500.0	6,360.6	7,700.9	6,434.6	30.7	37.7	98.09	1,071.8	1,554.7	526.3	472.9	53.37	9.860			
7,600.0	6,360.5	7,800.9	6,434.4	32.0	38.7	98.07	1,171.8	1,554.7	526.2	469.8	56.41	9.329			
7,700.0	6,360.4	7,900.9	6,434.2	33.4	39.8	98.06	1,271.8	1,554.7	526.2	466.7	59.54	8.838			
7,800.0	6,360.3	8,000.9	6,433.9	34.9	40.9	98.04	1,371.8	1,554.7	526.2	463.5	62.74	8.387			
7,900.0	6,360.2	8,100.9	6,433.7	36.4	42.2	98.03	1,471.8	1,554.7	526.2	460.2	66.01	7.971			
8,000.0	6,360.2	8,200.9	6,433.5	37.9	43.4	98.01	1,571.8	1,554.7	526.2	456.8	69.33	7.589			
8,100.0	6,360.1	8,300.9	6,433.3	39.5	44.8	97.99	1,671.8	1,554.7	526.1	453.4	72.70	7.237			
8,200.0	6,360.0	8,400.9	6,433.0	41.1	46.2	97.98	1,771.8	1,554.7	526.1	450.0	76.12	6.912			
8,300.0	6,359.9	8,500.9	6,432.8	42.8	47.6	97.96	1,871.8	1,554.7	526.1	446.5	79.57	6.612			
8,400.0	6,359.9	8,600.9	6,432.6	44.4	49.1	97.94	1,971.8	1,554.7	526.1	443.0	83.05	6.334			
8,500.0	6,359.8	8,700.9	6,432.4	46.1	50.6	97.93	2,071.8	1,554.7	526.0	439.5	86.56	6.077			
8,600.0	6,359.7	8,800.9	6,432.1	47.8	52.1	97.91	2,171.8	1,554.7	526.0	435.9	90.09	5.839			
8,700.0	6,359.6	8,900.9	6,431.9	49.5	53.7	97.90	2,271.8	1,554.7	526.0	432.4	93.65	5.617			
8,800.0	6,359.6	9,000.9	6,431.7	51.3	55.3	97.88	2,371.8	1,554.7	526.0	428.8	97.23	5.410			
8,900.0	6,359.5	9,100.9	6,431.4	53.0	56.9	97.86	2,471.8	1,554.7	526.0	425.1	100.82	5.217			
9,000.0	6,359.4	9,200.9	6,431.2	54.8	58.5	97.85	2,571.8	1,554.7	525.9	421.5	104.43	5.036			
9,100.0	6,359.3	9,300.9	6,431.0	56.5	60.2	97.83	2,671.8	1,554.7	525.9	417.9	108.06	4.867			
9,200.0	6,359.3	9,400.9	6,430.8	58.3	61.9	97.81	2,771.8	1,554.7	525.9	414.2	111.69	4.708			
9,300.0	6,359.2	9,500.9	6,430.5	60.1	63.5	97.80	2,871.8	1,554.7	525.9	410.5	115.34	4.559			
9,400.0	6,359.1	9,600.9	6,430.3	61.9	65.2	97.78	2,971.8	1,554.7	525.9	406.9	119.00	4.419			
9,500.0	6,359.0	9,700.9	6,430.1	63.7	67.0	97.77	3,071.8	1,554.7	525.8	403.2	122.67	4.287			
9,600.0	6,359.0	9,800.9	6,429.9	65.5	68.7	97.75	3,171.8	1,554.7	525.8	399.5	126.35	4.162			
9,700.0	6,358.9	9,900.9	6,429.6	67.3	70.4	97.73	3,271.8	1,554.7	525.8	395.8	130.04	4.043			
9,800.0	6,358.8	10,000.9	6,429.4	69.1	72.2	97.72	3,371.8	1,554.7	525.8	392.0	133.73	3.932			
9,900.0	6,358.7	10,100.9	6,429.2	71.0	73.9	97.70	3,471.8	1,554.7	525.8	388.3	137.43	3.826			

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 29T-221
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 29T-221	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)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
10,000.0	6,358.7	10,200.9	6,429.0	72.8	75.7	97.68	3,571.8	1,554.7	525.7	384.6	141.14	3.725		
10,100.0	6,358.6	10,300.9	6,428.7	74.6	77.5	97.67	3,671.8	1,554.7	525.7	380.9	144.85	3.629		
10,200.0	6,358.5	10,400.9	6,428.5	76.5	79.2	97.65	3,771.8	1,554.7	525.7	377.1	148.57	3.538		
10,300.0	6,358.4	10,500.9	6,428.3	78.3	81.0	97.64	3,871.8	1,554.7	525.7	373.4	152.30	3.452		
10,400.0	6,358.4	10,600.9	6,428.1	80.2	82.8	97.62	3,971.8	1,554.7	525.7	369.6	156.03	3.369		
10,500.0	6,358.3	10,700.9	6,427.8	82.0	84.6	97.60	4,071.8	1,554.7	525.6	365.9	159.76	3.290		
10,600.0	6,358.2	10,800.9	6,427.6	83.9	86.4	97.59	4,171.8	1,554.7	525.6	362.1	163.50	3.215		
10,700.0	6,358.1	10,900.9	6,427.4	85.7	88.2	97.57	4,271.8	1,554.7	525.6	358.4	167.24	3.143		
10,800.0	6,358.0	11,000.9	6,427.1	87.6	90.0	97.55	4,371.8	1,554.7	525.6	354.6	170.98	3.074		
10,862.4	6,358.0	11,063.3	6,427.0	88.6	91.2	97.54	4,434.2	1,554.7	525.6	352.5	173.10	3.036		
10,865.7	6,358.0	11,066.5	6,427.0	88.6	91.2	97.54	4,437.4	1,554.7	525.6	352.4	173.21	3.034 SF		

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Trimar Farms 29T-221
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 29T-221	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 29T-221

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.67°



Reference Depths are relative to WELL @ 4586.0ft (RKB - 13')	Coordinates are relative to: Trimar Farms 29T-221
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°

