PETROLEUM DEVELOPMENT CORP Weld County CO

Well Name: **Tarin 32X-204**

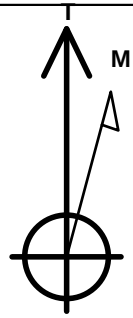
Surface Location: Tarin 32X-HZ Pad Sec.32-T4N-R66W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
Ground Elevation: 4775.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1339613.43	3197253.81	40.263480	-104.793170	

RKB - 15' WELL @ 4790.0ft (RKB - 15')

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 943'FSL & 355'FEL, Sec.32	1.0	0.0	0.0	Point
BHL 1231'FSL & 2147'FEL, Sec.31	7055.0	248.8	-7088.7	Point



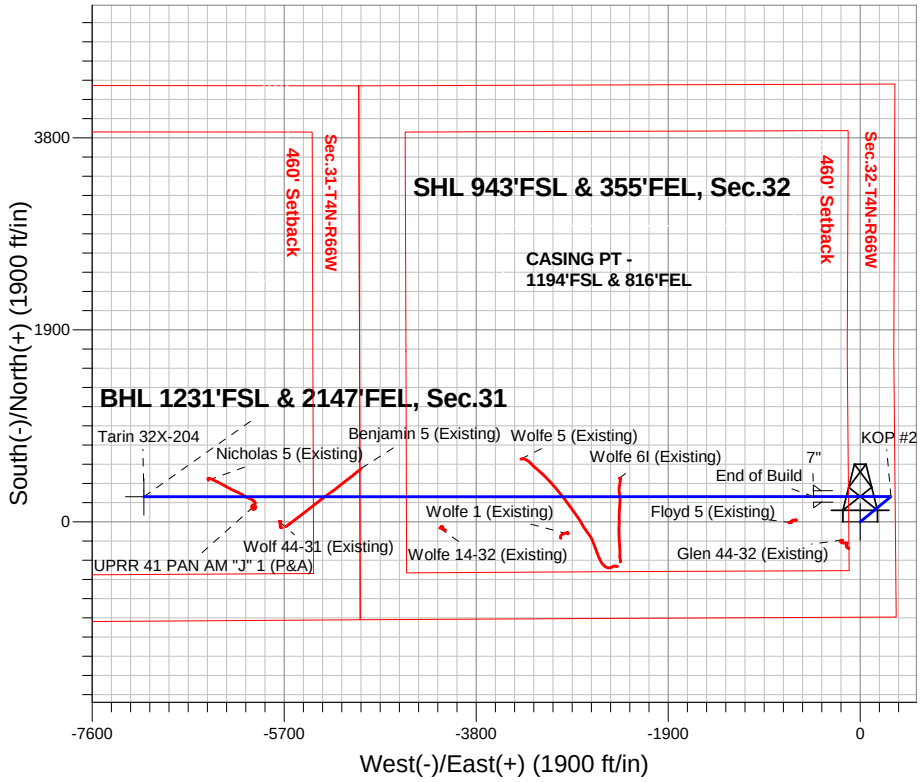
Azimuths to True North
Magnetic North: 8.48°

Magnetic Field
Strength: 52750.3snT
Dip Angle: 66.84°
Date: 5/14/2014
Model: IGRF2010

Tarin 32X-HZ Pad Sec.32-T4N-R66W
Tarin 32X-204
Plan #2 (5-14-14)
14:40, May 15 2014

ANNOTATIONS

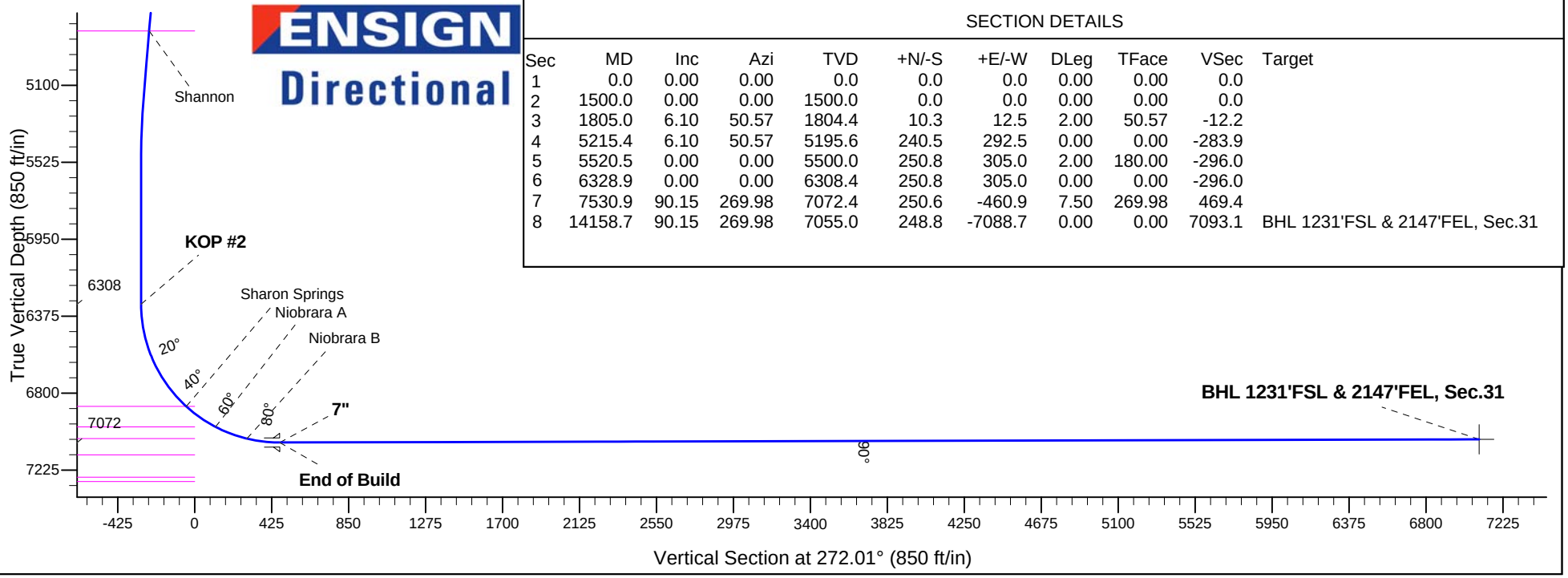
TVD	MD	Annotation
1500.0	1500.0	KOP #1
6308.4	6328.9	KOP #2
7072.4	7530.9	End of Build



ENSIGN Directional

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1500.0	0.00	0.00	1500.0	0.0	0.0	0.00	0.00	0.0	
3	1805.0	6.10	50.57	1804.4	10.3	12.5	2.00	50.57	-12.2	
4	5215.4	6.10	50.57	5195.6	240.5	292.5	0.00	0.00	-283.9	
5	5520.5	0.00	0.00	5500.0	250.8	305.0	2.00	180.00	-296.0	
6	6328.9	0.00	0.00	6308.4	250.8	305.0	0.00	0.00	-296.0	
7	7530.9	90.15	269.98	7072.4	250.6	-460.9	7.50	269.98	469.4	
8	14158.7	90.15	269.98	7055.0	248.8	-7088.7	0.00	0.00	7093.1	BHL 1231'FSL & 2147'FEL, Sec.31



PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.32-T4N-R66W
Tarin 32X-HZ Pad Sec.32-T4N-R66W
Tarin 32X-204

Wellbore #1

Plan: Plan #2 (5-14-14)

Standard Planning Report

15 May, 2014

Database:	Landmark	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Project:	SEC.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**North Reference:**	True
Well:	Tarin 32X-204	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (5-14-14)		

Project SEC.32-T4N-R66W, 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 Tarin 32X-HZ Pad Sec.32-T4N-R66W

Site Position:		**Northing:**	1,339,733.63 ft	**Latitude:**	40.263810
From:	Lat/Long	**Easting:**	3,197,250.06 ft	**Longitude:**	-104.793180
Position Uncertainty:	0.0 ft	**Slot Radius:**	"	**Grid Convergence:**	0.46 °

Well Tarin 32X-204

Well Position	**+N/-S**	-120.2 ft	**Northing:**	1,339,613.43 ft	**Latitude:**	40.263480
	+E/-W	2.8 ft	**Easting:**	3,197,253.81 ft	**Longitude:**	-104.793170
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	4,775.0 ft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	5/14/2014	8.48	66.84	52,750

Design Plan #2 (5-14-14)

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	272.01

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,805.0	6.10	50.57	1,804.4	10.3	12.5	2.00	2.00	0.00	50.57	
5,215.4	6.10	50.57	5,195.6	240.5	292.5	0.00	0.00	0.00	0.00	
5,520.5	0.00	0.00	5,500.0	250.8	305.0	2.00	-2.00	0.00	180.00	
6,328.9	0.00	0.00	6,308.4	250.8	305.0	0.00	0.00	0.00	0.00	
7,530.9	90.15	269.98	7,072.4	250.6	-460.9	7.50	7.50	0.00	269.98	
14,158.7	90.15	269.98	7,055.0	248.8	-7,088.7	0.00	0.00	0.00	0.00	BHL 1231'FSL & 21

Database:	Landmark	**Local Co-ordinate Reference:**	Well Tarin 32X-204
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Project:	SEC.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**North Reference:**	True
Well:	Tarin 32X-204	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (5-14-14)		

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 943'FSL & 355'FEL, Sec.32									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP #1									
1,600.0	2.00	50.57	1,600.0	1.1	1.3	-1.3	2.00	2.00	0.00
1,700.0	4.00	50.57	1,699.8	4.4	5.4	-5.2	2.00	2.00	0.00
1,800.0	6.00	50.57	1,799.5	10.0	12.1	-11.8	2.00	2.00	0.00
1,805.0	6.10	50.57	1,804.4	10.3	12.5	-12.2	2.00	2.00	0.00
1,900.0	6.10	50.57	1,898.9	16.7	20.3	-19.7	0.00	0.00	0.00
2,000.0	6.10	50.57	1,998.3	23.5	28.5	-27.7	0.00	0.00	0.00
2,100.0	6.10	50.57	2,097.8	30.2	36.7	-35.7	0.00	0.00	0.00
2,200.0	6.10	50.57	2,197.2	37.0	45.0	-43.6	0.00	0.00	0.00
2,300.0	6.10	50.57	2,296.6	43.7	53.2	-51.6	0.00	0.00	0.00
2,400.0	6.10	50.57	2,396.1	50.5	61.4	-59.6	0.00	0.00	0.00
2,500.0	6.10	50.57	2,495.5	57.2	69.6	-67.5	0.00	0.00	0.00
2,600.0	6.10	50.57	2,594.9	64.0	77.8	-75.5	0.00	0.00	0.00
2,700.0	6.10	50.57	2,694.4	70.7	86.0	-83.5	0.00	0.00	0.00
2,800.0	6.10	50.57	2,793.8	77.5	94.2	-91.4	0.00	0.00	0.00
2,900.0	6.10	50.57	2,893.2	84.2	102.4	-99.4	0.00	0.00	0.00
3,000.0	6.10	50.57	2,992.7	91.0	110.6	-107.4	0.00	0.00	0.00
3,100.0	6.10	50.57	3,092.1	97.7	118.8	-115.3	0.00	0.00	0.00
3,200.0	6.10	50.57	3,191.5	104.5	127.0	-123.3	0.00	0.00	0.00
3,300.0	6.10	50.57	3,291.0	111.2	135.2	-131.3	0.00	0.00	0.00
3,400.0	6.10	50.57	3,390.4	118.0	143.5	-139.2	0.00	0.00	0.00
3,500.0	6.10	50.57	3,489.8	124.7	151.7	-147.2	0.00	0.00	0.00
3,600.0	6.10	50.57	3,589.3	131.5	159.9	-155.2	0.00	0.00	0.00
3,700.0	6.10	50.57	3,688.7	138.2	168.1	-163.1	0.00	0.00	0.00
3,721.4	6.10	50.57	3,710.0	139.7	169.8	-164.8	0.00	0.00	0.00
Parkman									
3,800.0	6.10	50.57	3,788.1	145.0	176.3	-171.1	0.00	0.00	0.00
3,900.0	6.10	50.57	3,887.6	151.7	184.5	-179.1	0.00	0.00	0.00
4,000.0	6.10	50.57	3,987.0	158.5	192.7	-187.0	0.00	0.00	0.00
4,100.0	6.10	50.57	4,086.4	165.2	200.9	-195.0	0.00	0.00	0.00
4,200.0	6.10	50.57	4,185.9	172.0	209.1	-203.0	0.00	0.00	0.00
4,300.0	6.10	50.57	4,285.3	178.7	217.3	-210.9	0.00	0.00	0.00
4,400.0	6.10	50.57	4,384.7	185.5	225.5	-218.9	0.00	0.00	0.00
4,405.3	6.10	50.57	4,390.0	185.8	226.0	-219.3	0.00	0.00	0.00
Sussex									

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Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**North Reference:**	True
Well:	Tarin 32X-204	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (5-14-14)		

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)
4,500.0	6.10	50.57	4,484.2	192.2	233.7	-226.9	0.00	0.00	0.00
4,600.0	6.10	50.57	4,583.6	199.0	242.0	-234.8	0.00	0.00	0.00
4,700.0	6.10	50.57	4,683.0	205.7	250.2	-242.8	0.00	0.00	0.00
4,800.0	6.10	50.57	4,782.5	212.5	258.4	-250.8	0.00	0.00	0.00
4,817.6	6.10	50.57	4,800.0	213.6	259.8	-252.2	0.00	0.00	0.00
Shannon									
4,900.0	6.10	50.57	4,881.9	219.2	266.6	-258.7	0.00	0.00	0.00
5,000.0	6.10	50.57	4,981.3	226.0	274.8	-266.7	0.00	0.00	0.00
5,100.0	6.10	50.57	5,080.8	232.7	283.0	-274.7	0.00	0.00	0.00
5,200.0	6.10	50.57	5,180.2	239.5	291.2	-282.6	0.00	0.00	0.00
5,215.4	6.10	50.57	5,195.6	240.5	292.5	-283.9	0.00	0.00	0.00
5,300.0	4.41	50.57	5,279.8	245.4	298.5	-289.7	2.00	-2.00	0.00
5,400.0	2.41	50.57	5,379.6	249.2	303.0	-294.1	2.00	-2.00	0.00
5,500.0	0.41	50.57	5,479.5	250.8	304.9	-296.0	2.00	-2.00	0.00
5,520.5	0.00	0.00	5,500.0	250.8	305.0	-296.0	2.00	-2.00	0.00
5,600.0	0.00	0.00	5,579.5	250.8	305.0	-296.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,679.5	250.8	305.0	-296.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,779.5	250.8	305.0	-296.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,879.5	250.8	305.0	-296.0	0.00	0.00	0.00
6,000.0	0.00	0.00	5,979.5	250.8	305.0	-296.0	0.00	0.00	0.00
6,100.0	0.00	0.00	6,079.5	250.8	305.0	-296.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,179.5	250.8	305.0	-296.0	0.00	0.00	0.00
6,300.0	0.00	0.00	6,279.5	250.8	305.0	-296.0	0.00	0.00	0.00
6,328.9	0.00	0.00	6,308.4	250.8	305.0	-296.0	0.00	0.00	0.00
KOP #2									
6,400.0	5.33	269.98	6,379.4	250.8	301.7	-292.7	7.50	7.50	0.00
6,500.0	12.83	269.98	6,478.1	250.8	285.9	-276.9	7.50	7.50	0.00
6,600.0	20.33	269.98	6,573.9	250.8	257.4	-248.4	7.50	7.50	0.00
6,700.0	27.83	269.98	6,665.1	250.8	216.6	-207.7	7.50	7.50	0.00
6,800.0	35.33	269.98	6,750.2	250.8	164.3	-155.4	7.50	7.50	0.00
6,900.0	42.83	269.98	6,827.8	250.7	101.3	-92.4	7.50	7.50	0.00
6,964.2	47.65	269.98	6,873.0	250.7	55.7	-46.9	7.50	7.50	0.00
Sharon Springs									
7,000.0	50.33	269.98	6,896.5	250.7	28.7	-19.9	7.50	7.50	0.00
7,100.0	57.83	269.98	6,955.1	250.7	-52.2	61.0	7.50	7.50	0.00
7,162.1	62.49	269.98	6,986.0	250.7	-106.1	114.9	7.50	7.50	0.00
Niobrara A									
7,200.0	65.33	269.98	7,002.7	250.7	-140.1	148.8	7.50	7.50	0.00
7,300.0	72.83	269.98	7,038.3	250.7	-233.5	242.1	7.50	7.50	0.00
7,347.8	76.42	269.98	7,051.0	250.6	-279.6	288.2	7.50	7.50	0.00
Niobrara B									
7,400.0	80.33	269.98	7,061.5	250.6	-330.7	339.3	7.50	7.50	0.00
7,500.0	87.83	269.98	7,071.8	250.6	-430.1	438.6	7.50	7.50	0.00
7,530.9	90.15	269.98	7,072.4	250.6	-461.0	469.5	7.49	7.49	0.00
End of Build - 7"									
7,600.0	90.15	269.98	7,072.2	250.6	-530.1	538.5	0.00	0.00	0.00
7,700.0	90.15	269.98	7,071.9	250.5	-630.1	638.5	0.00	0.00	0.00
7,800.0	90.15	269.98	7,071.6	250.5	-730.1	738.4	0.00	0.00	0.00
7,900.0	90.15	269.98	7,071.4	250.5	-830.1	838.3	0.00	0.00	0.00
8,000.0	90.15	269.98	7,071.1	250.5	-930.1	938.3	0.00	0.00	0.00
8,100.0	90.15	269.98	7,070.9	250.4	-1,030.1	1,038.2	0.00	0.00	0.00
8,200.0	90.15	269.98	7,070.6	250.4	-1,130.1	1,138.2	0.00	0.00	0.00

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Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**North Reference:**	True
Well:	Tarin 32X-204	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (5-14-14)		

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	90.15	269.98	7,070.3	250.4	-1,230.1	1,238.1	0.00	0.00	0.00
8,400.0	90.15	269.98	7,070.1	250.3	-1,330.1	1,338.0	0.00	0.00	0.00
8,500.0	90.15	269.98	7,069.8	250.3	-1,430.1	1,438.0	0.00	0.00	0.00
8,600.0	90.15	269.98	7,069.6	250.3	-1,530.1	1,537.9	0.00	0.00	0.00
8,700.0	90.15	269.98	7,069.3	250.3	-1,630.1	1,637.8	0.00	0.00	0.00
8,800.0	90.15	269.98	7,069.0	250.2	-1,730.1	1,737.8	0.00	0.00	0.00
8,900.0	90.15	269.98	7,068.8	250.2	-1,830.1	1,837.7	0.00	0.00	0.00
9,000.0	90.15	269.98	7,068.5	250.2	-1,930.1	1,937.7	0.00	0.00	0.00
9,100.0	90.15	269.98	7,068.2	250.2	-2,030.1	2,037.6	0.00	0.00	0.00
9,200.0	90.15	269.98	7,068.0	250.1	-2,130.1	2,137.5	0.00	0.00	0.00
9,300.0	90.15	269.98	7,067.7	250.1	-2,230.1	2,237.5	0.00	0.00	0.00
9,400.0	90.15	269.98	7,067.5	250.1	-2,330.1	2,337.4	0.00	0.00	0.00
9,500.0	90.15	269.98	7,067.2	250.0	-2,430.1	2,437.3	0.00	0.00	0.00
9,600.0	90.15	269.98	7,066.9	250.0	-2,530.1	2,537.3	0.00	0.00	0.00
9,700.0	90.15	269.98	7,066.7	250.0	-2,630.1	2,637.2	0.00	0.00	0.00
9,800.0	90.15	269.98	7,066.4	250.0	-2,730.1	2,737.1	0.00	0.00	0.00
9,900.0	90.15	269.98	7,066.1	249.9	-2,830.1	2,837.1	0.00	0.00	0.00
10,000.0	90.15	269.98	7,065.9	249.9	-2,930.1	2,937.0	0.00	0.00	0.00
10,100.0	90.15	269.98	7,065.6	249.9	-3,030.1	3,037.0	0.00	0.00	0.00
10,200.0	90.15	269.98	7,065.4	249.8	-3,130.1	3,136.9	0.00	0.00	0.00
10,300.0	90.15	269.98	7,065.1	249.8	-3,230.1	3,236.8	0.00	0.00	0.00
10,400.0	90.15	269.98	7,064.8	249.8	-3,330.1	3,336.8	0.00	0.00	0.00
10,500.0	90.15	269.98	7,064.6	249.8	-3,430.1	3,436.7	0.00	0.00	0.00
10,600.0	90.15	269.98	7,064.3	249.7	-3,530.1	3,536.6	0.00	0.00	0.00
10,700.0	90.15	269.98	7,064.1	249.7	-3,630.1	3,636.6	0.00	0.00	0.00
10,800.0	90.15	269.98	7,063.8	249.7	-3,730.1	3,736.5	0.00	0.00	0.00
10,900.0	90.15	269.98	7,063.5	249.7	-3,830.1	3,836.5	0.00	0.00	0.00
11,000.0	90.15	269.98	7,063.3	249.6	-3,930.1	3,936.4	0.00	0.00	0.00
11,100.0	90.15	269.98	7,063.0	249.6	-4,030.1	4,036.3	0.00	0.00	0.00
11,200.0	90.15	269.98	7,062.7	249.6	-4,130.1	4,136.3	0.00	0.00	0.00
11,300.0	90.15	269.98	7,062.5	249.5	-4,230.1	4,236.2	0.00	0.00	0.00
11,400.0	90.15	269.98	7,062.2	249.5	-4,330.1	4,336.1	0.00	0.00	0.00
11,500.0	90.15	269.98	7,062.0	249.5	-4,430.1	4,436.1	0.00	0.00	0.00
11,600.0	90.15	269.98	7,061.7	249.5	-4,530.1	4,536.0	0.00	0.00	0.00
11,700.0	90.15	269.98	7,061.4	249.4	-4,630.1	4,636.0	0.00	0.00	0.00
11,800.0	90.15	269.98	7,061.2	249.4	-4,730.1	4,735.9	0.00	0.00	0.00
11,900.0	90.15	269.98	7,060.9	249.4	-4,830.1	4,835.8	0.00	0.00	0.00
12,000.0	90.15	269.98	7,060.7	249.4	-4,930.1	4,935.8	0.00	0.00	0.00
12,100.0	90.15	269.98	7,060.4	249.3	-5,030.1	5,035.7	0.00	0.00	0.00
12,200.0	90.15	269.98	7,060.1	249.3	-5,130.1	5,135.6	0.00	0.00	0.00
12,300.0	90.15	269.98	7,059.9	249.3	-5,230.1	5,235.6	0.00	0.00	0.00
12,400.0	90.15	269.98	7,059.6	249.2	-5,330.1	5,335.5	0.00	0.00	0.00
12,500.0	90.15	269.98	7,059.3	249.2	-5,430.1	5,435.5	0.00	0.00	0.00
12,600.0	90.15	269.98	7,059.1	249.2	-5,530.1	5,535.4	0.00	0.00	0.00
12,700.0	90.15	269.98	7,058.8	249.2	-5,630.1	5,635.3	0.00	0.00	0.00
12,800.0	90.15	269.98	7,058.6	249.1	-5,730.1	5,735.3	0.00	0.00	0.00
12,900.0	90.15	269.98	7,058.3	249.1	-5,830.1	5,835.2	0.00	0.00	0.00
13,000.0	90.15	269.98	7,058.0	249.1	-5,930.1	5,935.1	0.00	0.00	0.00
13,100.0	90.15	269.98	7,057.8	249.0	-6,030.1	6,035.1	0.00	0.00	0.00
13,200.0	90.15	269.98	7,057.5	249.0	-6,130.0	6,135.0	0.00	0.00	0.00
13,300.0	90.15	269.98	7,057.2	249.0	-6,230.0	6,234.9	0.00	0.00	0.00
13,400.0	90.15	269.98	7,057.0	249.0	-6,330.0	6,334.9	0.00	0.00	0.00
13,500.0	90.15	269.98	7,056.7	248.9	-6,430.0	6,434.8	0.00	0.00	0.00

Database:	Landmark	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Project:	SEC.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**North Reference:**	True
Well:	Tarin 32X-204	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (5-14-14)		

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)
13,600.0	90.15	269.98	7,056.5	248.9	-6,530.0	6,534.8	0.00	0.00	0.00
13,700.0	90.15	269.98	7,056.2	248.9	-6,630.0	6,634.7	0.00	0.00	0.00
13,800.0	90.15	269.98	7,055.9	248.9	-6,730.0	6,734.6	0.00	0.00	0.00
13,900.0	90.15	269.98	7,055.7	248.8	-6,830.0	6,834.6	0.00	0.00	0.00
14,000.0	90.15	269.98	7,055.4	248.8	-6,930.0	6,934.5	0.00	0.00	0.00
14,100.0	90.15	269.98	7,055.2	248.8	-7,030.0	7,034.4	0.00	0.00	0.00
14,158.7	90.15	269.98	7,055.0	248.8	-7,088.7	7,093.1	0.00	0.00	0.00
BHL 1231'FSL & 2147'FEL, Sec.31									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,530.9	7,072.4	7"	7	7-1/2

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,721.4	3,710.0	Parkman		0.00	
4,405.3	4,390.0	Sussex		0.00	
4,817.6	4,800.0	Shannon		0.00	
6,964.2	6,873.0	Sharon Springs		0.00	
7,162.1	6,986.0	Niobrara A		0.00	
7,347.8	7,051.0	Niobrara B		0.00	
	7,141.0	Niobrara C		0.00	
	7,264.0	Ft Hays		0.00	
	7,288.0	Codell		0.00	

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
1,500.0	1,500.0	0.0	0.0	KOP #1
6,328.9	6,308.4	250.8	305.0	KOP #2
7,530.9	7,072.4	250.6	-461.0	End of Build

ENSIGN Directional

PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.32-T4N-R66W
Tarin 32X-HZ Pad Sec.32-T4N-R66W
Tarin 32X-204

Wellbore #1
Plan #2 (5-14-14)

Anticollision Report

15 May, 2014

PDC ENERGY
Growing E&P Value

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Reference Plan #2 (5-14-14)

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** 5/14/2014

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	14,158.7	Plan #2 (5-14-14) (Wellbore #1)	MWD	MWD - Standard

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Tarin 32X-HZ Pad Sec.32-T4N-R66W						
Tarin 32W-234 - Wellbore #1 - Plan #1 (4-14-14)	200.0	199.0	120.2	119.6	178.922	CC, ES
Tarin 32W-234 - Wellbore #1 - Plan #1 (4-14-14)	5,300.0	5,181.4	992.3	964.5	35.673	SF
Tarin 32W-434 - Wellbore #1 - Plan #1 (5-14-14)	400.0	399.0	91.1	89.5	57.969	CC, ES
Tarin 32W-434 - Wellbore #1 - Plan #1 (5-14-14)	14,158.7	14,435.8	809.1	422.2	2.091	SF
Tarin 32X-314 - Wellbore #1 - Plan #1 (4-14-14)	600.0	600.0	61.9	59.5	25.051	CC, ES
Tarin 32X-314 - Wellbore #1 - Plan #1 (4-14-14)	14,158.7	14,299.3	503.9	105.9	1.266	Level 3, SF
Tarin 32X-404 - Wellbore #1 - Plan #1 (4-14-14)	1,000.0	1,000.0	32.8	28.5	7.678	CC, ES
Tarin 32X-404 - Wellbore #1 - Plan #1 (4-14-14)	14,158.7	14,377.2	248.8	101.2	1.685	SF
Tarin 32Y-314 - Wellbore #1 - Plan #1 (4-14-14)	966.3	967.3	58.3	54.2	14.143	CC
Tarin 32Y-314 - Wellbore #1 - Plan #1 (4-14-14)	1,000.0	1,001.0	58.3	54.0	13.643	ES
Tarin 32Y-314 - Wellbore #1 - Plan #1 (4-14-14)	14,158.7	14,273.5	827.4	424.6	2.054	SF
Tarin 32Y-404 - Wellbore #1 - Plan #1 (4-14-14)	466.3	467.3	87.4	85.6	46.661	CC
Tarin 32Y-404 - Wellbore #1 - Plan #1 (4-14-14)	500.0	500.0	87.4	85.4	43.224	ES
Tarin 32Y-404 - Wellbore #1 - Plan #1 (4-14-14)	900.0	887.5	113.3	109.6	30.486	SF
Tarin 32Y-414 - Wellbore #1 - Plan #2 (5-14-14)	1,200.0	1,200.0	29.1	24.0	5.638	CC, ES
Tarin 32Y-414 - Wellbore #1 - Plan #2 (5-14-14)	14,158.7	14,368.2	653.5	272.3	1.714	SF
Tarin Existing Wells Sec.32-T4N-R66W						
Benjamin 5 (Existing) - Wellbore #1 - Wellbore #1	12,008.5	7,136.2	278.4	117.1	1.726	CC, ES, SF
Floyd 5 (Existing) - Wellbore #1 - Wellbore #1	7,752.5	7,054.4	256.9	124.2	1.936	CC, ES, SF
Glen 44-32 (Existing) - Wellbore #1 - Wellbore #1	1,516.5	1,505.1	281.3	225.0	4.999	CC
Glen 44-32 (Existing) - Wellbore #1 - Wellbore #1	1,600.0	1,588.7	282.4	222.6	4.727	ES
Glen 44-32 (Existing) - Wellbore #1 - Wellbore #1	7,239.4	7,012.4	431.6	275.6	2.766	SF
Nicholas 5 (Existing) - Wellbore #1 - Wellbore #1	13,524.0	7,096.5	175.3	-25.5	0.873	Level 1, CC, ES, SF
UPRR 41 PAN AM "J" 1 (P&A) - Wellbore #1 - Wellbore	13,070.2	7,043.8	99.0	-213.9	0.316	Level 1, CC, ES, SF
Wolf 44-31 (Existing) - Wellbore #1 - Wellbore #1	12,815.6	7,047.0	246.3	67.3	1.376	Level 3, CC, ES, SF
Wolfe 1 (Existing) - Wellbore #1 - Wellbore #1	9,963.1	7,044.4	365.3	265.9	3.674	CC, ES
Wolfe 1 (Existing) - Wellbore #1 - Wellbore #1	10,000.0	7,044.3	367.1	266.7	3.655	SF
Wolfe 14-32 (Existing) - Wellbore #1 - Wellbore #1	11,224.5	7,042.9	305.7	170.6	2.262	CC, ES, SF
Wolfe 5 (Existing) - Wellbore #1 - Wellbore #1	10,423.6	7,310.3	372.8	254.9	3.161	CC, ES, SF
Wolfe 6I (Existing) - Wellbore #1 - Wellbore #1	9,443.4	7,116.5	183.1	94.3	2.062	CC, ES, SF

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Tarin 32X-HZ Pad Sec.32-T4N-R66W - Tarin 32W-234 - Wellbore #1 - Plan #1 (4-14-14)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-1.33	120.2	-2.8	120.2				
100.0	100.0	99.0	99.0	0.1	0.1	-1.33	120.2	-2.8	120.2	120.0	0.22	537.659	
200.0	200.0	199.0	199.0	0.3	0.3	-1.33	120.2	-2.8	120.2	119.6	0.67	178.922	CC, ES
300.0	300.0	295.1	295.1	0.6	0.6	-1.14	121.7	-2.4	121.8	120.7	1.11	109.471	
400.0	400.0	391.0	390.8	0.8	0.8	-0.60	126.4	-1.3	126.7	125.1	1.56	81.213	
500.0	500.0	486.4	485.9	1.0	1.0	0.22	134.1	0.5	134.8	132.7	2.02	66.715	
600.0	600.0	581.2	580.0	1.2	1.3	1.21	144.8	3.1	146.1	143.6	2.50	58.431	
700.0	700.0	675.1	673.0	1.5	1.6	2.28	158.5	6.3	160.7	157.7	3.01	53.442	
800.0	800.0	768.1	764.3	1.7	1.9	3.34	174.8	10.2	178.5	175.0	3.54	50.403	
900.0	900.0	859.8	854.0	1.9	2.3	4.34	193.8	14.7	199.5	195.4	4.11	48.593	
1,000.0	1,000.0	954.1	945.6	2.1	2.7	5.27	215.7	19.9	223.1	218.4	4.70	47.427	
1,100.0	1,100.0	1,051.2	1,039.8	2.4	3.1	6.06	238.5	25.3	247.1	241.8	5.33	46.389	
1,200.0	1,200.0	1,148.2	1,133.9	2.6	3.6	6.71	261.4	30.8	271.1	265.1	5.95	45.541	
1,300.0	1,300.0	1,245.2	1,228.1	2.8	4.1	7.25	284.2	36.2	295.1	288.5	6.58	44.836	
1,400.0	1,400.0	1,342.3	1,322.2	3.0	4.5	7.72	307.0	41.6	319.2	311.9	7.21	44.245	
1,500.0	1,500.0	1,439.3	1,416.4	3.3	5.0	8.11	329.8	47.0	343.2	335.4	7.85	43.743	
1,600.0	1,600.0	1,536.7	1,510.9	3.5	5.5	-41.98	352.7	52.5	366.0	358.8	7.22	50.725	
1,700.0	1,699.8	1,634.6	1,605.9	3.7	6.0	-41.92	375.7	57.9	386.3	378.6	7.70	50.150	
1,800.0	1,799.5	1,732.9	1,701.3	3.9	6.5	-42.21	398.8	63.4	404.1	395.9	8.20	49.274	
1,900.0	1,898.9	1,831.5	1,796.9	4.2	6.9	-42.87	422.0	68.9	420.5	411.8	8.71	48.280	
2,000.0	1,998.3	1,930.0	1,892.5	4.4	7.4	-43.48	445.1	74.4	436.9	427.7	9.22	47.364	
2,100.0	2,097.8	2,028.5	1,988.1	4.6	7.9	-44.05	468.3	79.9	453.4	443.7	9.75	46.519	
2,200.0	2,197.2	2,127.1	2,083.7	4.9	8.4	-44.59	491.5	85.4	470.0	459.7	10.27	45.740	
2,300.0	2,296.6	2,225.6	2,179.4	5.2	8.9	-45.08	514.6	90.9	486.5	475.7	10.81	45.019	
2,400.0	2,396.1	2,324.1	2,275.0	5.4	9.4	-45.54	537.8	96.4	503.1	491.8	11.34	44.351	
2,500.0	2,495.5	2,422.6	2,370.6	5.7	9.9	-45.98	561.0	102.0	519.8	507.9	11.89	43.730	
2,600.0	2,594.9	2,521.2	2,466.2	6.0	10.4	-46.38	584.1	107.5	536.4	524.0	12.43	43.153	
2,700.0	2,694.4	2,619.7	2,561.8	6.2	10.9	-46.77	607.3	113.0	553.1	540.1	12.98	42.615	
2,800.0	2,793.8	2,718.2	2,657.4	6.5	11.3	-47.12	630.5	118.5	569.8	556.3	13.53	42.113	
2,900.0	2,893.2	2,816.8	2,753.0	6.8	11.8	-47.46	653.6	124.0	586.6	572.5	14.09	41.643	
3,000.0	2,992.7	2,915.3	2,848.6	7.1	12.3	-47.78	676.8	129.5	603.3	588.7	14.64	41.202	
3,100.0	3,092.1	3,013.8	2,944.3	7.3	12.8	-48.09	699.9	135.0	620.1	604.9	15.20	40.789	
3,200.0	3,191.5	3,112.4	3,039.9	7.6	13.3	-48.37	723.1	140.5	636.9	621.1	15.76	40.400	
3,300.0	3,291.0	3,210.9	3,135.5	7.9	13.8	-48.65	746.3	146.0	653.7	637.3	16.33	40.034	
3,400.0	3,390.4	3,309.4	3,231.1	8.2	14.3	-48.90	769.4	151.5	670.5	653.6	16.89	39.689	
3,500.0	3,489.8	3,408.0	3,326.7	8.5	14.8	-49.15	792.6	157.0	687.3	669.8	17.46	39.363	
3,600.0	3,589.3	3,506.5	3,422.3	8.7	15.3	-49.38	815.8	162.5	704.1	686.1	18.03	39.055	
3,700.0	3,688.7	3,605.0	3,517.9	9.0	15.8	-49.61	838.9	168.0	721.0	702.4	18.60	38.763	
3,800.0	3,788.1	3,703.6	3,613.5	9.3	16.3	-49.82	862.1	173.5	737.8	718.7	19.17	38.487	
3,900.0	3,887.6	3,802.1	3,709.2	9.6	16.7	-50.02	885.3	179.0	754.7	735.0	19.74	38.224	
4,000.0	3,987.0	3,900.6	3,804.8	9.9	17.2	-50.22	908.4	184.5	771.6	751.3	20.32	37.974	
4,100.0	4,086.4	3,999.2	3,900.4	10.2	17.7	-50.41	931.6	190.0	788.5	767.6	20.89	37.736	
4,200.0	4,185.9	4,097.7	3,996.0	10.5	18.2	-50.58	954.7	195.5	805.4	783.9	21.47	37.510	
4,300.0	4,285.3	4,196.2	4,091.6	10.8	18.7	-50.76	977.9	201.0	822.3	800.2	22.05	37.294	
4,400.0	4,384.7	4,294.8	4,187.2	11.1	19.2	-50.92	1,001.1	206.5	839.2	816.5	22.63	37.088	
4,500.0	4,484.2	4,393.3	4,282.8	11.3	19.7	-51.08	1,024.2	212.1	856.1	832.9	23.21	36.891	
4,600.0	4,583.6	4,491.8	4,378.4	11.6	20.2	-51.23	1,047.4	217.6	873.0	849.2	23.79	36.703	
4,700.0	4,683.0	4,590.4	4,474.1	11.9	20.7	-51.38	1,070.6	223.1	889.9	865.6	24.37	36.523	
4,800.0	4,782.5	4,688.9	4,569.7	12.2	21.2	-51.52	1,093.7	228.6	906.9	881.9	24.95	36.350	
4,900.0	4,881.9	4,787.4	4,665.3	12.5	21.7	-51.65	1,116.9	234.1	923.8	898.3	25.53	36.184	
5,000.0	4,981.3	4,886.0	4,760.9	12.8	22.2	-51.78	1,140.1	239.6	940.7	914.6	26.11	36.025	

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Tarin 32X-HZ Pad Sec.32-T4N-R66W - Tarin 32W-234 - Wellbore #1 - Plan #1 (4-14-14)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.0	5,080.8	4,984.5	4,856.5	13.1	22.6	-51.91	1,163.2	245.1	957.7	931.0	26.70	35.872	
5,200.0	5,180.2	5,083.0	4,952.1	13.4	23.1	-52.03	1,186.4	250.6	974.6	947.3	27.28	35.726	
5,300.0	5,279.8	5,181.4	5,047.6	13.6	23.6	-52.33	1,209.5	256.1	992.3	964.5	27.82	35.673	SF

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Tarin 32X-HZ Pad Sec.32-T4N-R66W - Tarin 32W-434 - Wellbore #1 - Plan #1 (5-14-14)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	0.00	91.1	0.0	91.1				
100.0	100.0	99.0	99.0	0.1	0.1	0.00	91.1	0.0	91.1	90.9	0.22	407.236	
200.0	200.0	199.0	199.0	0.3	0.3	0.00	91.1	0.0	91.1	90.4	0.67	135.519	
300.0	300.0	299.0	299.0	0.6	0.6	0.00	91.1	0.0	91.1	90.0	1.12	81.203	
400.0	400.0	399.0	399.0	0.8	0.8	0.00	91.1	0.0	91.1	89.5	1.57	57.969	CC, ES
500.0	500.0	496.1	496.0	1.0	1.0	0.31	92.6	0.5	92.7	90.6	2.01	46.022	
600.0	600.0	592.9	592.7	1.2	1.2	1.19	97.2	2.0	97.5	95.0	2.46	39.644	
700.0	700.0	689.2	688.8	1.5	1.5	2.48	104.9	4.5	105.5	102.6	2.91	36.215	
800.0	800.0	785.0	783.8	1.7	1.7	3.98	115.6	8.0	116.9	113.5	3.39	34.507	
900.0	900.0	879.8	877.6	1.9	2.0	5.52	129.2	12.5	131.5	127.6	3.89	33.856	
1,000.0	1,000.0	977.1	973.4	2.1	2.3	6.97	145.3	17.8	148.6	144.2	4.41	33.695	
1,100.0	1,100.0	1,075.5	1,070.3	2.4	2.6	8.14	161.7	23.1	165.9	160.9	4.95	33.503	
1,200.0	1,200.0	1,174.0	1,167.2	2.6	3.0	9.09	178.2	28.5	183.2	177.7	5.50	33.320	
1,300.0	1,300.0	1,272.4	1,264.1	2.8	3.4	9.88	194.6	33.9	200.6	194.6	6.05	33.153	
1,400.0	1,400.0	1,370.9	1,361.0	3.0	3.7	10.54	211.1	39.3	218.0	211.4	6.61	33.003	
1,500.0	1,500.0	1,469.3	1,457.9	3.3	4.1	11.11	227.5	44.7	235.4	228.3	7.16	32.871	
1,600.0	1,600.0	1,568.0	1,555.1	3.5	4.5	-39.02	244.0	50.1	251.6	244.5	7.08	35.538	
1,700.0	1,699.8	1,667.1	1,652.6	3.7	4.8	-39.13	260.5	55.5	265.0	257.4	7.54	35.122	
1,800.0	1,799.5	1,766.4	1,750.4	3.9	5.2	-39.70	277.1	60.9	275.8	267.7	8.02	34.389	
1,900.0	1,898.9	1,865.9	1,848.4	4.2	5.6	-40.60	293.7	66.3	285.1	276.6	8.51	33.514	
2,000.0	1,998.3	1,965.4	1,946.3	4.4	6.0	-41.45	310.3	71.8	294.5	285.5	9.00	32.714	
2,100.0	2,097.8	2,064.8	2,044.2	4.6	6.4	-42.24	326.9	77.2	304.0	294.5	9.51	31.983	
2,200.0	2,197.2	2,164.3	2,142.1	4.9	6.8	-42.99	343.5	82.7	313.6	303.6	10.01	31.312	
2,300.0	2,296.6	2,263.8	2,240.0	5.2	7.1	-43.70	360.1	88.1	323.2	312.6	10.53	30.696	
2,400.0	2,396.1	2,363.2	2,337.9	5.4	7.5	-44.36	376.7	93.5	332.8	321.8	11.05	30.127	
2,500.0	2,495.5	2,462.7	2,435.8	5.7	7.9	-44.99	393.3	99.0	342.5	330.9	11.57	29.602	
2,600.0	2,594.9	2,562.1	2,533.8	6.0	8.3	-45.58	410.0	104.4	352.2	340.1	12.10	29.115	
2,700.0	2,694.4	2,661.6	2,631.7	6.2	8.7	-46.14	426.6	109.8	361.9	349.3	12.63	28.663	
2,800.0	2,793.8	2,761.1	2,729.6	6.5	9.1	-46.67	443.2	115.3	371.7	358.6	13.16	28.243	
2,900.0	2,893.2	2,860.5	2,827.5	6.8	9.5	-47.17	459.8	120.7	381.5	367.8	13.70	27.851	
3,000.0	2,992.7	2,960.0	2,925.4	7.1	9.9	-47.65	476.4	126.1	391.4	377.1	14.24	27.484	
3,100.0	3,092.1	3,059.5	3,023.3	7.3	10.2	-48.10	493.0	131.6	401.2	386.5	14.78	27.141	
3,200.0	3,191.5	3,158.9	3,121.3	7.6	10.6	-48.54	509.6	137.0	411.1	395.8	15.33	26.820	
3,300.0	3,291.0	3,258.4	3,219.2	7.9	11.0	-48.95	526.2	142.5	421.1	405.2	15.88	26.518	
3,400.0	3,390.4	3,357.9	3,317.1	8.2	11.4	-49.34	542.8	147.9	431.0	414.6	16.43	26.234	
3,500.0	3,489.8	3,457.3	3,415.0	8.5	11.8	-49.72	559.4	153.3	440.9	424.0	16.98	25.966	
3,600.0	3,589.3	3,556.8	3,512.9	8.7	12.2	-50.08	576.0	158.8	450.9	433.4	17.54	25.713	
3,700.0	3,688.7	3,656.2	3,610.8	9.0	12.6	-50.42	592.6	164.2	460.9	442.8	18.09	25.474	
3,800.0	3,788.1	3,755.7	3,708.8	9.3	13.0	-50.75	609.2	169.6	470.9	452.2	18.65	25.248	
3,900.0	3,887.6	3,855.2	3,806.7	9.6	13.4	-51.07	625.8	175.1	480.9	461.7	19.21	25.034	
4,000.0	3,987.0	3,954.6	3,904.6	9.9	13.8	-51.37	642.5	180.5	490.9	471.2	19.77	24.831	
4,100.0	4,086.4	4,054.1	4,002.5	10.2	14.1	-51.66	659.1	186.0	501.0	480.7	20.33	24.638	
4,200.0	4,185.9	4,153.6	4,100.4	10.5	14.5	-51.94	675.7	191.4	511.1	490.2	20.90	24.454	
4,300.0	4,285.3	4,253.0	4,198.3	10.8	14.9	-52.21	692.3	196.8	521.1	499.7	21.46	24.280	
4,400.0	4,384.7	4,352.5	4,296.2	11.1	15.3	-52.46	708.9	202.3	531.2	509.2	22.03	24.113	
4,500.0	4,484.2	4,451.9	4,394.2	11.3	15.7	-52.71	725.5	207.7	541.3	518.7	22.60	23.954	
4,600.0	4,583.6	4,551.4	4,492.1	11.6	16.1	-52.95	742.1	213.1	551.4	528.2	23.17	23.802	
4,700.0	4,683.0	4,650.9	4,590.0	11.9	16.5	-53.18	758.7	218.6	561.5	537.8	23.73	23.657	
4,800.0	4,782.5	4,750.3	4,687.9	12.2	16.9	-53.40	775.3	224.0	571.6	547.3	24.30	23.519	
4,900.0	4,881.9	4,849.8	4,785.8	12.5	17.3	-53.62	791.9	229.5	581.7	556.9	24.88	23.386	
5,000.0	4,981.3	4,949.3	4,883.7	12.8	17.6	-53.83	808.5	234.9	591.9	566.4	25.45	23.258	

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Tarin 32X-HZ Pad Sec.32-T4N-R66W - Tarin 32W-434 - Wellbore #1 - Plan #1 (5-14-14)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.0	5,080.8	5,048.7	4,981.7	13.1	18.0	-54.03	825.1	240.3	602.0	576.0	26.02	23.136	
5,200.0	5,180.2	5,148.2	5,079.6	13.4	18.4	-54.22	841.7	245.8	612.2	585.6	26.59	23.019	
5,300.0	5,279.8	5,247.6	5,177.4	13.6	18.8	-54.47	858.3	251.2	623.0	595.9	27.12	22.973	
5,400.0	5,379.6	5,346.7	5,275.0	13.8	19.2	-54.51	874.9	256.6	635.9	608.3	27.56	23.074	
5,500.0	5,479.5	5,445.5	5,372.3	14.0	19.6	-54.35	891.4	262.0	650.8	622.9	27.95	23.286	
5,600.0	5,579.5	5,544.0	5,469.2	14.2	20.0	-3.28	907.8	267.4	667.1	634.9	32.24	20.694	
5,700.0	5,679.5	5,642.4	5,566.1	14.4	20.4	-2.74	924.3	272.8	683.5	650.7	32.86	20.800	
5,800.0	5,779.5	5,740.8	5,663.0	14.6	20.8	-2.23	940.7	278.2	700.0	666.5	33.49	20.905	
5,900.0	5,879.5	5,839.3	5,759.9	14.7	21.1	-1.74	957.1	283.5	716.5	682.4	34.11	21.008	
6,000.0	5,979.5	5,937.7	5,856.8	14.9	21.5	-1.27	973.6	288.9	733.1	698.4	34.73	21.110	
6,100.0	6,079.5	6,055.3	5,972.7	15.1	21.9	-0.77	992.2	295.0	749.0	713.6	35.36	21.182	
6,200.0	6,179.5	6,187.5	6,103.9	15.3	22.3	-0.36	1,008.1	300.2	761.0	725.0	35.94	21.175	
6,300.0	6,279.5	6,321.1	6,237.0	15.5	22.5	-0.11	1,018.3	303.6	768.6	732.2	36.43	21.095	
6,400.0	6,379.4	6,455.1	6,371.0	15.7	22.7	90.21	1,022.5	305.0	771.8	740.2	31.57	24.446	
6,500.0	6,478.1	6,561.3	6,477.1	15.8	22.9	91.40	1,022.7	305.0	772.1	740.4	31.72	24.343	
6,600.0	6,573.9	6,660.4	6,576.2	15.8	23.0	93.27	1,022.7	303.0	773.2	741.5	31.73	24.366	
6,700.0	6,665.1	6,764.6	6,679.3	15.8	23.1	95.24	1,022.7	288.5	775.4	743.7	31.69	24.469	
6,800.0	6,750.2	6,873.4	6,783.8	15.8	23.1	97.16	1,022.7	258.5	778.4	746.7	31.67	24.580	
6,900.0	6,827.8	6,986.9	6,887.1	15.9	23.1	98.99	1,022.7	211.7	782.1	750.3	31.77	24.620	
7,000.0	6,896.5	7,105.6	6,986.5	16.1	23.0	100.69	1,022.6	147.0	786.2	754.1	32.12	24.479	
7,100.0	6,955.1	7,229.3	7,078.1	16.6	23.0	102.21	1,022.6	64.0	790.4	757.5	32.90	24.028	
7,200.0	7,002.7	7,358.0	7,157.9	17.6	23.0	103.49	1,022.6	-36.7	794.3	760.1	34.28	23.174	
7,300.0	7,038.3	7,490.9	7,221.4	18.9	23.1	104.50	1,022.6	-153.3	797.6	761.2	36.41	21.908	
7,400.0	7,061.5	7,627.2	7,264.5	20.5	23.7	105.17	1,022.5	-282.4	799.9	760.5	39.36	20.323	
7,500.0	7,071.8	7,754.3	7,284.0	22.3	24.9	105.49	1,022.5	-407.8	801.1	758.3	42.85	18.698	
7,600.0	7,072.2	7,866.9	7,293.8	24.3	26.6	106.09	1,022.5	-520.0	803.5	756.9	46.55	17.259	
7,700.0	7,071.9	7,977.1	7,295.0	26.4	28.6	106.19	1,022.5	-630.2	803.8	753.1	50.70	15.853	
7,800.0	7,071.6	8,077.1	7,295.0	28.6	30.6	106.21	1,022.5	-730.2	803.9	748.9	54.93	14.634	
7,900.0	7,071.4	8,177.1	7,295.0	30.9	32.8	106.22	1,022.4	-830.2	804.0	744.6	59.35	13.547	
8,000.0	7,071.1	8,277.1	7,295.0	33.3	35.1	106.24	1,022.4	-930.2	804.0	740.1	63.91	12.580	
8,100.0	7,070.9	8,377.1	7,295.0	35.8	37.4	106.26	1,022.4	-1,030.2	804.1	735.5	68.60	11.722	
8,200.0	7,070.6	8,477.1	7,295.0	38.3	39.8	106.28	1,022.4	-1,130.2	804.2	730.8	73.38	10.959	
8,300.0	7,070.3	8,577.1	7,295.0	40.9	42.3	106.29	1,022.3	-1,230.2	804.3	726.0	78.24	10.279	
8,400.0	7,070.1	8,677.1	7,295.0	43.4	44.7	106.31	1,022.3	-1,330.2	804.4	721.2	83.17	9.671	
8,500.0	7,069.8	8,777.1	7,295.0	46.0	47.3	106.33	1,022.3	-1,430.2	804.4	716.3	88.15	9.126	
8,600.0	7,069.6	8,877.1	7,295.0	48.7	49.8	106.35	1,022.3	-1,530.2	804.5	711.3	93.18	8.634	
8,700.0	7,069.3	8,977.1	7,295.0	51.3	52.4	106.37	1,022.3	-1,630.2	804.6	706.4	98.24	8.190	
8,800.0	7,069.0	9,077.1	7,295.0	54.0	55.0	106.38	1,022.2	-1,730.2	804.7	701.3	103.34	7.787	
8,900.0	7,068.8	9,177.1	7,295.0	56.7	57.6	106.40	1,022.2	-1,830.2	804.8	696.3	108.46	7.420	
9,000.0	7,068.5	9,277.1	7,295.0	59.4	60.3	106.42	1,022.2	-1,930.2	804.8	691.2	113.61	7.084	
9,100.0	7,068.2	9,377.1	7,295.0	62.0	62.9	106.44	1,022.2	-2,030.2	804.9	686.1	118.77	6.777	
9,200.0	7,068.0	9,477.1	7,295.0	64.8	65.6	106.45	1,022.2	-2,130.2	805.0	681.0	123.96	6.494	
9,300.0	7,067.7	9,577.1	7,295.0	67.5	68.3	106.47	1,022.1	-2,230.2	805.1	675.9	129.16	6.233	
9,400.0	7,067.5	9,677.1	7,295.0	70.2	71.0	106.49	1,022.1	-2,330.2	805.2	670.8	134.38	5.992	
9,500.0	7,067.2	9,777.1	7,295.0	72.9	73.7	106.51	1,022.1	-2,430.2	805.2	665.6	139.60	5.768	
9,600.0	7,066.9	9,877.1	7,295.0	75.7	76.4	106.53	1,022.1	-2,530.2	805.3	660.5	144.84	5.560	
9,700.0	7,066.7	9,977.1	7,295.0	78.4	79.1	106.54	1,022.0	-2,630.2	805.4	655.3	150.09	5.366	
9,800.0	7,066.4	10,077.1	7,295.0	81.1	81.8	106.56	1,022.0	-2,730.2	805.5	650.1	155.34	5.185	
9,900.0	7,066.1	10,177.1	7,295.0	83.9	84.5	106.58	1,022.0	-2,830.2	805.6	645.0	160.60	5.016	
10,000.0	7,065.9	10,277.1	7,295.0	86.6	87.3	106.60	1,022.0	-2,930.2	805.6	639.8	165.87	4.857	
10,100.0	7,065.6	10,377.1	7,295.0	89.4	90.0	106.61	1,022.0	-3,030.2	805.7	634.6	171.15	4.708	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Tarin 32X-HZ Pad Sec.32-T4N-R66W - Tarin 32W-434 - Wellbore #1 - Plan #1 (5-14-14)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,200.0	7,065.4	10,477.1	7,295.0	92.2	92.7	106.63	1,021.9	-3,130.2	805.8	629.4	176.43	4.567	
10,300.0	7,065.1	10,577.1	7,295.0	94.9	95.5	106.65	1,021.9	-3,230.2	805.9	624.2	181.71	4.435	
10,400.0	7,064.8	10,677.1	7,295.0	97.7	98.2	106.67	1,021.9	-3,330.2	806.0	619.0	187.00	4.310	
10,500.0	7,064.6	10,777.1	7,295.0	100.5	101.0	106.68	1,021.9	-3,430.2	806.0	613.7	192.30	4.192	
10,600.0	7,064.3	10,877.1	7,295.0	103.2	103.7	106.70	1,021.8	-3,530.2	806.1	608.5	197.59	4.080	
10,700.0	7,064.1	10,977.1	7,295.0	106.0	106.5	106.72	1,021.8	-3,630.2	806.2	603.3	202.89	3.974	
10,800.0	7,063.8	11,077.1	7,295.0	108.8	109.2	106.74	1,021.8	-3,730.2	806.3	598.1	208.20	3.873	
10,900.0	7,063.5	11,177.1	7,295.0	111.5	112.0	106.76	1,021.8	-3,830.2	806.4	592.9	213.50	3.777	
11,000.0	7,063.3	11,277.1	7,295.0	114.3	114.8	106.77	1,021.8	-3,930.2	806.4	587.6	218.81	3.686	
11,100.0	7,063.0	11,377.1	7,295.0	117.1	117.5	106.79	1,021.7	-4,030.2	806.5	582.4	224.12	3.599	
11,200.0	7,062.7	11,477.1	7,295.0	119.9	120.3	106.81	1,021.7	-4,130.2	806.6	577.2	229.43	3.516	
11,300.0	7,062.5	11,577.1	7,295.0	122.7	123.1	106.83	1,021.7	-4,230.2	806.7	571.9	234.74	3.437	
11,400.0	7,062.2	11,677.1	7,295.0	125.4	125.8	106.84	1,021.7	-4,330.2	806.8	566.7	240.06	3.361	
11,500.0	7,062.0	11,777.1	7,295.0	128.2	128.6	106.86	1,021.7	-4,430.2	806.9	561.5	245.37	3.288	
11,600.0	7,061.7	11,877.1	7,295.0	131.0	131.4	106.88	1,021.6	-4,530.2	806.9	556.2	250.69	3.219	
11,700.0	7,061.4	11,977.1	7,295.0	133.8	134.1	106.90	1,021.6	-4,630.2	807.0	551.0	256.00	3.152	
11,800.0	7,061.2	12,077.1	7,295.0	136.6	136.9	106.91	1,021.6	-4,730.2	807.1	545.8	261.32	3.089	
11,900.0	7,060.9	12,177.1	7,295.0	139.4	139.7	106.93	1,021.6	-4,830.2	807.2	540.5	266.64	3.027	
12,000.0	7,060.7	12,277.1	7,295.0	142.1	142.5	106.95	1,021.5	-4,930.2	807.3	535.3	271.96	2.968	
12,100.0	7,060.4	12,377.1	7,295.0	144.9	145.3	106.97	1,021.5	-5,030.2	807.3	530.1	277.28	2.912	
12,200.0	7,060.1	12,477.1	7,295.0	147.7	148.0	106.99	1,021.5	-5,130.2	807.4	524.8	282.60	2.857	
12,300.0	7,059.9	12,577.1	7,295.0	150.5	150.8	107.00	1,021.5	-5,230.2	807.5	519.6	287.93	2.805	
12,400.0	7,059.6	12,677.1	7,295.0	153.3	153.6	107.02	1,021.5	-5,330.2	807.6	514.3	293.25	2.754	
12,500.0	7,059.3	12,777.1	7,295.0	156.1	156.4	107.04	1,021.4	-5,430.2	807.7	509.1	298.57	2.705	
12,600.0	7,059.1	12,877.1	7,295.0	158.9	159.2	107.06	1,021.4	-5,530.2	807.8	503.9	303.89	2.658	
12,700.0	7,058.8	12,977.1	7,295.0	161.7	161.9	107.07	1,021.4	-5,630.2	807.8	498.6	309.21	2.613	
12,800.0	7,058.6	13,077.1	7,295.0	164.5	164.7	107.09	1,021.4	-5,730.2	807.9	493.4	314.54	2.569	
12,900.0	7,058.3	13,177.1	7,295.0	167.3	167.5	107.11	1,021.4	-5,830.2	808.0	488.1	319.86	2.526	
13,000.0	7,058.0	13,277.1	7,295.0	170.1	170.3	107.13	1,021.3	-5,930.2	808.1	482.9	325.18	2.485	
13,100.0	7,057.8	13,377.1	7,295.0	172.8	173.1	107.14	1,021.3	-6,030.2	808.2	477.7	330.50	2.445	
13,200.0	7,057.5	13,477.1	7,295.0	175.6	175.9	107.16	1,021.3	-6,130.2	808.3	472.4	335.83	2.407	
13,300.0	7,057.2	13,577.1	7,295.0	178.4	178.7	107.18	1,021.3	-6,230.2	808.3	467.2	341.15	2.369	
13,400.0	7,057.0	13,677.1	7,295.0	181.2	181.5	107.20	1,021.2	-6,330.2	808.4	462.0	346.47	2.333	
13,500.0	7,056.7	13,777.1	7,295.0	184.0	184.2	107.21	1,021.2	-6,430.2	808.5	456.7	351.79	2.298	
13,600.0	7,056.5	13,877.1	7,295.0	186.8	187.0	107.23	1,021.2	-6,530.2	808.6	451.5	357.11	2.264	
13,700.0	7,056.2	13,977.1	7,295.0	189.6	189.8	107.25	1,021.2	-6,630.2	808.7	446.2	362.44	2.231	
13,800.0	7,055.9	14,077.1	7,295.0	192.4	192.6	107.27	1,021.2	-6,730.2	808.8	441.0	367.76	2.199	
13,900.0	7,055.7	14,177.1	7,295.0	195.2	195.4	107.28	1,021.1	-6,830.2	808.8	435.8	373.08	2.168	
14,000.0	7,055.4	14,277.1	7,295.0	198.0	198.2	107.30	1,021.1	-6,930.2	808.9	430.5	378.40	2.138	
14,100.0	7,055.2	14,377.1	7,295.0	200.8	201.0	107.32	1,021.1	-7,030.2	809.0	425.3	383.72	2.108	
14,158.7	7,055.0	14,435.8	7,295.0	202.4	202.6	107.33	1,021.1	-7,088.9	809.1	422.2	386.84	2.091	SF

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Tarin 32X-HZ Pad Sec.32-T4N-R66W - Tarin 32X-314 - Wellbore #1 - Plan #1 (4-14-14)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Centres (ft)	Distance 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	100.0	100.0	0.1	0.1	0.00	61.9	0.0	61.9	61.7	0.22	275.556	
200.0	200.0	200.0	200.0	0.3	0.3	0.00	61.9	0.0	61.9	61.3	0.67	91.852	
300.0	300.0	300.0	300.0	0.6	0.6	0.00	61.9	0.0	61.9	60.8	1.12	55.111	
400.0	400.0	400.0	400.0	0.8	0.8	0.00	61.9	0.0	61.9	60.4	1.57	39.365	
500.0	500.0	500.0	500.0	1.0	1.0	0.00	61.9	0.0	61.9	59.9	2.02	30.617	
600.0	600.0	600.0	600.0	1.2	1.2	0.00	61.9	0.0	61.9	59.5	2.47	25.051	CC, ES
700.0	700.0	698.0	698.0	1.5	1.5	0.62	63.5	0.7	63.5	60.6	2.92	21.777	
800.0	800.0	795.8	795.7	1.7	1.7	2.30	68.0	2.7	68.2	64.9	3.36	20.301	
900.0	900.0	893.2	892.7	1.9	1.9	4.62	75.6	6.1	76.2	72.4	3.82	19.978	
1,000.0	1,000.0	989.8	988.6	2.1	2.2	7.15	86.1	10.8	87.5	83.2	4.29	20.426	
1,100.0	1,100.0	1,088.5	1,086.3	2.4	2.4	9.45	98.7	16.4	101.0	96.2	4.78	21.134	
1,200.0	1,200.0	1,187.5	1,184.4	2.6	2.7	11.21	111.3	22.1	114.5	109.3	5.28	21.695	
1,300.0	1,300.0	1,286.6	1,282.4	2.8	3.0	12.61	123.9	27.7	128.2	122.4	5.79	22.150	
1,400.0	1,400.0	1,385.6	1,380.5	3.0	3.3	13.73	136.6	33.4	141.9	135.6	6.30	22.526	
1,500.0	1,500.0	1,484.6	1,478.5	3.3	3.6	14.65	149.2	39.0	155.7	148.9	6.82	22.841	
1,600.0	1,600.0	1,583.8	1,576.8	3.5	3.9	-35.34	161.8	44.7	168.1	161.1	7.01	23.962	
1,700.0	1,699.8	1,683.3	1,675.3	3.7	4.3	-35.51	174.5	50.3	177.6	170.2	7.47	23.784	
1,800.0	1,799.5	1,783.1	1,774.1	3.9	4.6	-36.32	187.2	56.0	184.4	176.5	7.93	23.253	
1,900.0	1,898.9	1,882.9	1,872.9	4.2	4.9	-37.49	200.0	61.7	189.7	181.2	8.41	22.559	
2,000.0	1,998.3	1,982.6	1,971.7	4.4	5.2	-38.60	212.7	67.4	195.0	186.1	8.89	21.929	
2,100.0	2,097.8	2,082.4	2,070.5	4.6	5.6	-39.65	225.4	73.1	200.4	191.0	9.38	21.357	
2,200.0	2,197.2	2,182.2	2,169.3	4.9	5.9	-40.65	238.1	78.8	205.9	196.0	9.88	20.835	
2,300.0	2,296.6	2,282.0	2,268.1	5.2	6.2	-41.59	250.9	84.5	211.4	201.0	10.39	20.358	
2,400.0	2,396.1	2,381.8	2,367.0	5.4	6.6	-42.48	263.6	90.1	217.0	206.1	10.89	19.920	
2,500.0	2,495.5	2,481.6	2,465.8	5.7	6.9	-43.33	276.3	95.8	222.7	211.3	11.41	19.518	
2,600.0	2,594.9	2,581.4	2,564.6	6.0	7.2	-44.14	289.0	101.5	228.4	216.4	11.93	19.146	
2,700.0	2,694.4	2,681.2	2,663.4	6.2	7.6	-44.91	301.8	107.2	234.1	221.6	12.45	18.803	
2,800.0	2,793.8	2,780.9	2,762.2	6.5	7.9	-45.64	314.5	112.9	239.9	226.9	12.98	18.484	
2,900.0	2,893.2	2,880.7	2,861.0	6.8	8.2	-46.34	327.2	118.6	245.7	232.2	13.51	18.189	
3,000.0	2,992.7	2,980.5	2,959.8	7.1	8.6	-47.00	339.9	124.3	251.5	237.5	14.04	17.913	
3,100.0	3,092.1	3,080.3	3,058.6	7.3	8.9	-47.64	352.7	130.0	257.4	242.8	14.58	17.656	
3,200.0	3,191.5	3,180.1	3,157.4	7.6	9.2	-48.24	365.4	135.7	263.3	248.2	15.12	17.416	
3,300.0	3,291.0	3,279.9	3,256.2	7.9	9.6	-48.82	378.1	141.3	269.2	253.6	15.66	17.191	
3,400.0	3,390.4	3,379.7	3,355.0	8.2	9.9	-49.38	390.8	147.0	275.2	259.0	16.21	16.980	
3,500.0	3,489.8	3,479.5	3,453.9	8.5	10.3	-49.91	403.6	152.7	281.2	264.4	16.75	16.782	
3,600.0	3,589.3	3,579.2	3,552.7	8.7	10.6	-50.42	416.3	158.4	287.2	269.9	17.30	16.595	
3,700.0	3,688.7	3,679.0	3,651.5	9.0	10.9	-50.91	429.0	164.1	293.2	275.4	17.86	16.420	
3,800.0	3,788.1	3,778.8	3,750.3	9.3	11.3	-51.37	441.7	169.8	299.3	280.8	18.41	16.254	
3,900.0	3,887.6	3,878.6	3,849.1	9.6	11.6	-51.82	454.5	175.5	305.3	286.4	18.97	16.097	
4,000.0	3,987.0	3,978.4	3,947.9	9.9	11.9	-52.26	467.2	181.2	311.4	291.9	19.53	15.948	
4,100.0	4,086.4	4,078.2	4,046.7	10.2	12.3	-52.67	479.9	186.9	317.5	297.4	20.09	15.808	
4,200.0	4,185.9	4,178.0	4,145.5	10.5	12.6	-53.07	492.6	192.5	323.6	303.0	20.65	15.674	
4,300.0	4,285.3	4,277.8	4,244.3	10.8	12.9	-53.46	505.4	198.2	329.8	308.6	21.21	15.548	
4,400.0	4,384.7	4,377.5	4,343.1	11.1	13.3	-53.83	518.1	203.9	335.9	314.1	21.77	15.427	
4,500.0	4,484.2	4,477.3	4,441.9	11.3	13.6	-54.19	530.8	209.6	342.1	319.7	22.34	15.313	
4,600.0	4,583.6	4,577.1	4,540.8	11.6	14.0	-54.53	543.5	215.3	348.3	325.4	22.91	15.204	
4,700.0	4,683.0	4,676.9	4,639.6	11.9	14.3	-54.86	556.3	221.0	354.4	331.0	23.47	15.099	
4,800.0	4,782.5	4,776.7	4,738.4	12.2	14.6	-55.18	569.0	226.7	360.6	336.6	24.04	15.000	
4,900.0	4,881.9	4,876.5	4,837.2	12.5	15.0	-55.50	581.7	232.4	366.9	342.2	24.61	14.905	
5,000.0	4,981.3	4,976.3	4,936.0	12.8	15.3	-55.80	594.4	238.0	373.1	347.9	25.18	14.814	

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Tarin 32X-HZ Pad Sec.32-T4N-R66W - Tarin 32X-314 - Wellbore #1 - Plan #1 (4-14-14)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.0	5,080.8	5,076.1	5,034.8	13.1	15.7	-56.09	607.2	243.7	379.3	353.6	25.76	14.727	
5,200.0	5,180.2	5,175.8	5,133.6	13.4	16.0	-56.37	619.9	249.4	385.5	359.2	26.33	14.644	
5,300.0	5,279.8	5,275.6	5,232.4	13.6	16.3	-56.59	632.6	255.1	392.5	365.6	26.85	14.616	
5,400.0	5,379.6	5,375.2	5,331.0	13.8	16.7	-56.44	645.3	260.8	401.3	374.0	27.28	14.711	
5,500.0	5,479.5	5,474.5	5,429.3	14.0	17.0	-55.93	658.0	266.4	412.1	384.5	27.65	14.906	
5,600.0	5,579.5	5,573.5	5,527.4	14.2	17.3	-4.48	670.6	272.1	424.3	394.9	29.40	14.430	
5,700.0	5,679.5	5,672.5	5,625.4	14.4	17.7	-3.61	683.2	277.7	436.7	406.7	30.00	14.555	
5,800.0	5,779.5	5,771.5	5,723.5	14.6	18.0	-2.78	695.9	283.4	449.1	418.5	30.59	14.681	
5,900.0	5,879.5	5,870.6	5,821.5	14.7	18.3	-2.00	708.5	289.0	461.6	430.4	31.18	14.805	
6,000.0	5,979.5	5,973.1	5,923.1	14.9	18.7	-1.24	721.5	294.8	474.2	442.4	31.77	14.925	
6,100.0	6,079.5	6,090.3	6,039.5	15.1	19.0	-0.58	733.4	300.2	484.3	451.9	32.31	14.987	
6,200.0	6,179.5	6,208.3	6,157.2	15.3	19.2	-0.17	741.0	303.5	490.7	457.9	32.78	14.967	
6,300.0	6,279.5	6,326.9	6,275.7	15.5	19.4	0.00	744.1	305.0	493.3	460.1	33.19	14.863	
6,400.0	6,379.4	6,430.6	6,379.4	15.7	19.5	90.40	744.2	305.0	493.4	462.4	30.99	15.921	
6,500.0	6,478.1	6,530.7	6,479.5	15.8	19.7	91.93	744.2	302.5	493.7	462.6	31.12	15.866	
6,600.0	6,573.9	6,632.8	6,580.4	15.8	19.8	93.55	744.2	287.5	494.4	463.2	31.13	15.879	
6,700.0	6,665.1	6,737.0	6,680.4	15.8	19.8	95.13	744.2	258.4	495.4	464.3	31.12	15.922	
6,800.0	6,750.2	6,843.3	6,777.3	15.8	19.8	96.62	744.2	215.1	496.8	465.6	31.15	15.949	
6,900.0	6,827.8	6,951.6	6,869.0	15.9	19.7	98.00	744.2	157.5	498.4	467.0	31.35	15.897	
7,000.0	6,896.5	7,061.9	6,953.0	16.1	19.7	99.24	744.2	86.2	500.0	468.2	31.88	15.687	
7,100.0	6,955.1	7,174.0	7,026.9	16.6	19.7	100.31	744.2	2.1	501.7	468.8	32.89	15.254	
7,200.0	7,002.7	7,287.7	7,088.5	17.6	19.7	101.19	744.2	-93.3	503.1	468.6	34.51	14.578	
7,300.0	7,038.3	7,402.7	7,135.8	18.9	20.1	101.86	744.2	-198.1	504.3	467.5	36.84	13.690	
7,400.0	7,061.5	7,518.7	7,167.0	20.5	21.4	102.29	744.2	-309.7	505.2	465.3	39.85	12.678	
7,500.0	7,071.8	7,635.2	7,181.0	22.3	23.3	102.48	744.2	-425.3	505.6	462.2	43.41	11.647	
7,600.0	7,072.2	7,740.6	7,181.4	24.3	25.3	102.47	744.2	-530.6	505.6	458.3	47.28	10.694	
7,700.0	7,071.9	7,840.6	7,180.8	26.4	27.3	102.44	744.2	-630.6	505.5	454.2	51.37	9.841	
7,800.0	7,071.6	7,940.6	7,180.3	28.6	29.5	102.41	744.2	-730.6	505.5	449.8	55.71	9.073	
7,900.0	7,071.4	8,040.6	7,179.8	30.9	31.8	102.38	744.2	-830.6	505.5	445.2	60.24	8.391	
8,000.0	7,071.1	8,140.6	7,179.3	33.3	34.1	102.35	744.2	-930.6	505.5	440.5	64.92	7.785	
8,100.0	7,070.9	8,240.6	7,178.7	35.8	36.5	102.33	744.2	-1,030.6	505.4	435.7	69.73	7.249	
8,200.0	7,070.6	8,340.6	7,178.2	38.3	39.0	102.30	744.2	-1,130.6	505.4	430.8	74.62	6.773	
8,300.0	7,070.3	8,440.6	7,177.7	40.9	41.5	102.27	744.2	-1,230.6	505.4	425.8	79.60	6.349	
8,400.0	7,070.1	8,540.6	7,177.2	43.4	44.0	102.24	744.2	-1,330.6	505.3	420.7	84.65	5.970	
8,500.0	7,069.8	8,640.6	7,176.7	46.0	46.6	102.21	744.2	-1,430.6	505.3	415.6	89.74	5.631	
8,600.0	7,069.6	8,740.6	7,176.1	48.7	49.2	102.18	744.2	-1,530.6	505.3	410.4	94.89	5.325	
8,700.0	7,069.3	8,840.6	7,175.6	51.3	51.8	102.15	744.2	-1,630.6	505.3	405.2	100.07	5.049	
8,800.0	7,069.0	8,940.6	7,175.1	54.0	54.5	102.12	744.2	-1,730.6	505.2	399.9	105.29	4.798	
8,900.0	7,068.8	9,040.6	7,174.6	56.7	57.1	102.09	744.2	-1,830.6	505.2	394.7	110.54	4.570	
9,000.0	7,068.5	9,140.6	7,174.0	59.4	59.8	102.06	744.2	-1,930.6	505.2	389.4	115.81	4.362	
9,100.0	7,068.2	9,240.6	7,173.5	62.0	62.5	102.03	744.2	-2,030.6	505.1	384.0	121.10	4.171	
9,200.0	7,068.0	9,340.6	7,173.0	64.8	65.1	102.00	744.2	-2,130.6	505.1	378.7	126.42	3.996	
9,300.0	7,067.7	9,440.6	7,172.5	67.5	67.8	101.97	744.2	-2,230.6	505.1	373.3	131.75	3.834	
9,400.0	7,067.5	9,540.6	7,171.9	70.2	70.5	101.94	744.2	-2,330.6	505.1	368.0	137.10	3.684	
9,500.0	7,067.2	9,640.6	7,171.4	72.9	73.3	101.91	744.2	-2,430.6	505.0	362.6	142.46	3.545	
9,600.0	7,066.9	9,740.6	7,170.9	75.7	76.0	101.88	744.2	-2,530.6	505.0	357.2	147.83	3.416	
9,700.0	7,066.7	9,840.6	7,170.4	78.4	78.7	101.85	744.2	-2,630.6	505.0	351.8	153.21	3.296	
9,800.0	7,066.4	9,940.6	7,169.8	81.1	81.4	101.82	744.2	-2,730.6	505.0	346.4	158.61	3.184	
9,900.0	7,066.1	10,040.6	7,169.3	83.9	84.2	101.79	744.2	-2,830.6	504.9	340.9	164.01	3.079	
10,000.0	7,065.9	10,140.6	7,168.8	86.6	86.9	101.76	744.2	-2,930.6	504.9	335.5	169.42	2.980	
10,100.0	7,065.6	10,240.6	7,168.3	89.4	89.7	101.73	744.2	-3,030.6	504.9	330.0	174.84	2.888	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Tarin 32X-HZ Pad Sec.32-T4N-R66W - Tarin 32X-314 - Wellbore #1 - Plan #1 (4-14-14)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,200.0	7,065.4	10,340.6	7,167.8	92.2	92.4	101.70	744.2	-3,130.6	504.9	324.6	180.27	2.801	
10,300.0	7,065.1	10,440.6	7,167.2	94.9	95.2	101.67	744.2	-3,230.6	504.8	319.1	185.70	2.719	
10,400.0	7,064.8	10,540.6	7,166.7	97.7	97.9	101.64	744.2	-3,330.6	504.8	313.7	191.14	2.641	
10,500.0	7,064.6	10,640.6	7,166.2	100.5	100.7	101.61	744.2	-3,430.6	504.8	308.2	196.58	2.568	
10,600.0	7,064.3	10,740.6	7,165.7	103.2	103.4	101.58	744.2	-3,530.6	504.7	302.7	202.03	2.498	
10,700.0	7,064.1	10,840.6	7,165.1	106.0	106.2	101.55	744.2	-3,630.6	504.7	297.2	207.49	2.433	
10,800.0	7,063.8	10,940.6	7,164.6	108.8	109.0	101.52	744.2	-3,730.6	504.7	291.7	212.95	2.370	
10,900.0	7,063.5	11,040.6	7,164.1	111.5	111.7	101.49	744.2	-3,830.6	504.7	286.3	218.41	2.311	
11,000.0	7,063.3	11,140.6	7,163.6	114.3	114.5	101.46	744.2	-3,930.6	504.6	280.8	223.88	2.254	
11,100.0	7,063.0	11,240.6	7,163.0	117.1	117.3	101.43	744.2	-4,030.6	504.6	275.3	229.35	2.200	
11,200.0	7,062.7	11,340.6	7,162.5	119.9	120.0	101.40	744.2	-4,130.6	504.6	269.8	234.83	2.149	
11,300.0	7,062.5	11,440.6	7,162.0	122.7	122.8	101.37	744.2	-4,230.6	504.6	264.3	240.31	2.100	
11,400.0	7,062.2	11,540.6	7,161.5	125.4	125.6	101.34	744.2	-4,330.6	504.5	258.8	245.79	2.053	
11,500.0	7,062.0	11,640.6	7,160.9	128.2	128.4	101.31	744.2	-4,430.6	504.5	253.2	251.28	2.008	
11,600.0	7,061.7	11,740.6	7,160.4	131.0	131.2	101.28	744.2	-4,530.6	504.5	247.7	256.77	1.965	
11,700.0	7,061.4	11,840.6	7,159.9	133.8	133.9	101.26	744.2	-4,630.6	504.5	242.2	262.26	1.924	
11,800.0	7,061.2	11,940.6	7,159.4	136.6	136.7	101.23	744.2	-4,730.6	504.5	236.7	267.76	1.884	
11,900.0	7,060.9	12,040.6	7,158.9	139.4	139.5	101.20	744.2	-4,830.6	504.4	231.2	273.26	1.846	
12,000.0	7,060.7	12,140.6	7,158.3	142.1	142.3	101.17	744.2	-4,930.6	504.4	225.6	278.76	1.809	
12,100.0	7,060.4	12,240.6	7,157.8	144.9	145.1	101.14	744.2	-5,030.6	504.4	220.1	284.26	1.774	
12,200.0	7,060.1	12,340.6	7,157.3	147.7	147.8	101.11	744.2	-5,130.6	504.4	214.6	289.77	1.741	
12,300.0	7,059.9	12,440.6	7,156.8	150.5	150.6	101.08	744.2	-5,230.6	504.3	209.1	295.27	1.708	
12,400.0	7,059.6	12,540.6	7,156.2	153.3	153.4	101.05	744.2	-5,330.6	504.3	203.5	300.78	1.677	
12,500.0	7,059.3	12,640.6	7,155.7	156.1	156.2	101.02	744.2	-5,430.6	504.3	198.0	306.30	1.646	
12,600.0	7,059.1	12,740.6	7,155.2	158.9	159.0	100.99	744.2	-5,530.6	504.3	192.5	311.81	1.617	
12,700.0	7,058.8	12,840.6	7,154.7	161.7	161.8	100.96	744.2	-5,630.6	504.2	186.9	317.33	1.589	
12,800.0	7,058.6	12,940.6	7,154.1	164.5	164.6	100.93	744.2	-5,730.6	504.2	181.4	322.85	1.562	
12,900.0	7,058.3	13,040.6	7,153.6	167.3	167.4	100.90	744.2	-5,830.6	504.2	175.8	328.37	1.535	
13,000.0	7,058.0	13,140.6	7,153.1	170.1	170.1	100.87	744.2	-5,930.5	504.2	170.3	333.89	1.510	
13,100.0	7,057.8	13,240.6	7,152.6	172.8	172.9	100.84	744.2	-6,030.5	504.2	164.7	339.41	1.485	Level 3
13,200.0	7,057.5	13,340.6	7,152.0	175.6	175.7	100.81	744.2	-6,130.5	504.1	159.2	344.94	1.462	Level 3
13,300.0	7,057.2	13,440.6	7,151.5	178.4	178.5	100.78	744.2	-6,230.5	504.1	153.6	350.47	1.438	Level 3
13,400.0	7,057.0	13,540.6	7,151.0	181.2	181.3	100.75	744.2	-6,330.5	504.1	148.1	356.00	1.416	Level 3
13,500.0	7,056.7	13,640.6	7,150.5	184.0	184.1	100.72	744.2	-6,430.5	504.1	142.5	361.53	1.394	Level 3
13,600.0	7,056.5	13,740.6	7,150.0	186.8	186.9	100.69	744.2	-6,530.5	504.0	137.0	367.06	1.373	Level 3
13,700.0	7,056.2	13,840.6	7,149.4	189.6	189.7	100.66	744.2	-6,630.5	504.0	131.4	372.59	1.353	Level 3
13,800.0	7,055.9	13,940.6	7,148.9	192.4	192.5	100.63	744.2	-6,730.5	504.0	125.9	378.13	1.333	Level 3
13,900.0	7,055.7	14,040.6	7,148.4	195.2	195.3	100.60	744.2	-6,830.5	504.0	120.3	383.67	1.314	Level 3
14,000.0	7,055.4	14,140.6	7,147.9	198.0	198.1	100.57	744.2	-6,930.5	504.0	114.8	389.21	1.295	Level 3
14,100.0	7,055.2	14,240.6	7,147.3	200.8	200.9	100.54	744.2	-7,030.5	503.9	109.2	394.75	1.277	Level 3
14,158.7	7,055.0	14,299.3	7,147.0	202.4	202.5	100.52	744.2	-7,089.2	503.9	105.9	398.00	1.266	Level 3, SF

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Tarin 32X-HZ Pad Sec.32-T4N-R66W - Tarin 32X-404 - Wellbore #1 - Plan #1 (4-14-14)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	0.00	32.8	0.0	32.8				
100.0	100.0	100.0	100.0	0.1	0.1	0.00	32.8	0.0	32.8	32.6	0.22	145.891	
200.0	200.0	200.0	200.0	0.3	0.3	0.00	32.8	0.0	32.8	32.1	0.67	48.630	
300.0	300.0	300.0	300.0	0.6	0.6	0.00	32.8	0.0	32.8	31.7	1.12	29.178	
400.0	400.0	400.0	400.0	0.8	0.8	0.00	32.8	0.0	32.8	31.2	1.57	20.842	
500.0	500.0	500.0	500.0	1.0	1.0	0.00	32.8	0.0	32.8	30.8	2.02	16.210	
600.0	600.0	600.0	600.0	1.2	1.2	0.00	32.8	0.0	32.8	30.3	2.47	13.263	
700.0	700.0	700.0	700.0	1.5	1.5	0.00	32.8	0.0	32.8	29.9	2.92	11.222	
800.0	800.0	800.0	800.0	1.7	1.7	0.00	32.8	0.0	32.8	29.4	3.37	9.726	
900.0	900.0	900.0	900.0	1.9	1.9	0.00	32.8	0.0	32.8	29.0	3.82	8.582	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	0.00	32.8	0.0	32.8	28.5	4.27	7.678	CC, ES
1,100.0	1,100.0	1,099.1	1,099.1	2.4	2.4	2.00	34.0	1.2	34.1	29.3	4.71	7.226	
1,200.0	1,200.0	1,198.0	1,197.9	2.6	2.6	7.14	37.7	4.7	38.1	32.9	5.16	7.387	
1,300.0	1,300.0	1,296.5	1,295.9	2.8	2.8	13.58	43.9	10.6	45.3	39.7	5.61	8.081	
1,400.0	1,400.0	1,395.1	1,393.9	3.0	3.0	19.53	52.1	18.5	55.6	49.6	6.07	9.162	
1,500.0	1,500.0	1,494.4	1,492.5	3.3	3.3	23.75	60.7	26.7	66.8	60.2	6.55	10.192	
1,600.0	1,600.0	1,593.9	1,591.2	3.5	3.6	-24.27	69.3	35.0	76.6	69.6	6.95	11.008	
1,700.0	1,699.8	1,693.6	1,690.3	3.7	3.8	-23.22	78.0	43.2	83.3	75.9	7.39	11.260	
1,800.0	1,799.5	1,793.5	1,789.5	3.9	4.1	-23.23	86.6	51.5	86.8	78.9	7.84	11.073	
1,900.0	1,898.9	1,893.5	1,888.7	4.2	4.4	-23.75	95.3	59.8	88.5	80.2	8.30	10.667	
2,000.0	1,998.3	1,993.5	1,988.0	4.4	4.7	-24.25	104.0	68.1	90.3	81.5	8.77	10.298	
2,100.0	2,097.8	2,093.5	2,087.3	4.6	5.0	-24.73	112.6	76.3	92.0	82.8	9.24	9.961	
2,200.0	2,197.2	2,193.5	2,186.5	4.9	5.3	-25.20	121.3	84.6	93.8	84.1	9.71	9.655	
2,300.0	2,296.6	2,293.5	2,285.8	5.2	5.6	-25.65	129.9	92.9	95.6	85.4	10.19	9.374	
2,400.0	2,396.1	2,393.4	2,385.0	5.4	5.9	-26.08	138.6	101.2	97.3	86.7	10.68	9.116	
2,500.0	2,495.5	2,493.4	2,484.3	5.7	6.2	-26.49	147.3	109.5	99.1	88.0	11.16	8.878	
2,600.0	2,594.9	2,593.4	2,583.6	6.0	6.5	-26.89	155.9	117.8	100.9	89.2	11.65	8.658	
2,700.0	2,694.4	2,693.4	2,682.8	6.2	6.8	-27.28	164.6	126.0	102.7	90.5	12.15	8.455	
2,800.0	2,793.8	2,793.4	2,782.1	6.5	7.1	-27.66	173.2	134.3	104.5	91.8	12.64	8.266	
2,900.0	2,893.2	2,893.3	2,881.3	6.8	7.4	-28.02	181.9	142.6	106.3	93.2	13.14	8.091	
3,000.0	2,992.7	2,993.3	2,980.6	7.1	7.7	-28.37	190.5	150.9	108.1	94.5	13.64	7.927	
3,100.0	3,092.1	3,093.3	3,079.9	7.3	8.0	-28.71	199.2	159.2	109.9	95.8	14.14	7.774	
3,200.0	3,191.5	3,193.3	3,179.1	7.6	8.3	-29.03	207.9	167.4	111.7	97.1	14.64	7.631	
3,300.0	3,291.0	3,293.3	3,278.4	7.9	8.6	-29.35	216.5	175.7	113.5	98.4	15.15	7.496	
3,400.0	3,390.4	3,393.2	3,377.7	8.2	8.9	-29.66	225.2	184.0	115.3	99.7	15.65	7.370	
3,500.0	3,489.8	3,493.2	3,476.9	8.5	9.2	-29.95	233.8	192.3	117.2	101.0	16.16	7.251	
3,600.0	3,589.3	3,593.2	3,576.2	8.7	9.5	-30.24	242.5	200.6	119.0	102.3	16.67	7.139	
3,700.0	3,688.7	3,693.2	3,675.4	9.0	9.8	-30.52	251.2	208.9	120.8	103.6	17.18	7.033	
3,800.0	3,788.1	3,793.2	3,774.7	9.3	10.1	-30.79	259.8	217.1	122.7	105.0	17.69	6.932	
3,900.0	3,887.6	3,893.2	3,874.0	9.6	10.4	-31.05	268.5	225.4	124.5	106.3	18.21	6.838	
4,000.0	3,987.0	3,993.1	3,973.2	9.9	10.8	-31.31	277.1	233.7	126.3	107.6	18.72	6.748	
4,100.0	4,086.4	4,093.1	4,072.5	10.2	11.1	-31.56	285.8	242.0	128.2	108.9	19.24	6.662	
4,200.0	4,185.9	4,193.1	4,171.7	10.5	11.4	-31.80	294.5	250.3	130.0	110.2	19.75	6.581	
4,300.0	4,285.3	4,293.1	4,271.0	10.8	11.7	-32.03	303.1	258.5	131.8	111.6	20.27	6.504	
4,400.0	4,384.7	4,393.1	4,370.3	11.1	12.0	-32.26	311.8	266.8	133.7	112.9	20.79	6.430	
4,500.0	4,484.2	4,493.0	4,469.5	11.3	12.3	-32.48	320.4	275.1	135.5	114.2	21.31	6.360	
4,600.0	4,583.6	4,593.0	4,568.8	11.6	12.6	-32.70	329.1	283.4	137.4	115.6	21.83	6.292	
4,700.0	4,683.0	4,693.5	4,668.6	11.9	12.9	-32.91	337.8	291.7	139.2	116.9	22.35	6.228	
4,800.0	4,782.5	4,798.1	4,772.6	12.2	13.2	-33.55	345.2	298.8	139.1	116.2	22.84	6.087	
4,900.0	4,881.9	4,902.4	4,876.7	12.5	13.4	-34.94	349.8	303.2	135.7	112.3	23.37	5.807	
5,000.0	4,981.3	5,006.3	4,980.6	12.8	13.5	-37.21	351.6	305.0	129.3	105.3	23.94	5.399	

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Tarin 32X-HZ Pad Sec.32-T4N-R66W - Tarin 32X-404 - Wellbore #1 - Plan #1 (4-14-14)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.0	5,080.8	5,106.5	5,080.8	13.1	13.7	-40.25	351.7	305.0	121.0	96.4	24.57	4.924	
5,200.0	5,180.2	5,205.9	5,180.2	13.4	13.9	-43.72	351.7	305.0	113.1	87.8	25.26	4.476	
5,300.0	5,279.8	5,305.5	5,279.8	13.6	14.1	-47.13	351.7	305.0	106.5	80.6	25.92	4.108	
5,400.0	5,379.6	5,405.3	5,379.6	13.8	14.2	-49.50	351.7	305.0	102.5	76.1	26.45	3.877	
5,500.0	5,479.5	5,505.2	5,479.5	14.0	14.4	-50.54	351.7	305.0	100.9	74.1	26.86	3.758	
5,546.9	5,526.4	5,552.2	5,526.4	14.1	14.5	-50.65	351.7	305.0	100.8	73.7	27.04	3.727	
5,600.0	5,579.5	5,605.2	5,579.5	14.2	14.6	0.00	351.7	305.0	100.9	74.2	26.67	3.783	
5,700.0	5,679.5	5,705.2	5,679.5	14.4	14.8	0.00	351.7	305.0	100.9	73.8	27.07	3.727	
5,800.0	5,779.5	5,805.2	5,779.5	14.6	15.0	0.00	351.7	305.0	100.9	73.4	27.47	3.673	
5,900.0	5,879.5	5,905.2	5,879.5	14.7	15.2	0.00	351.7	305.0	100.9	73.0	27.87	3.620	
6,000.0	5,979.5	6,005.2	5,979.5	14.9	15.3	0.00	351.7	305.0	100.9	72.6	28.27	3.569	
6,100.0	6,079.5	6,105.2	6,079.5	15.1	15.5	0.00	351.7	305.0	100.9	72.2	28.67	3.519	
6,200.0	6,179.5	6,205.2	6,179.5	15.3	15.7	0.00	351.7	305.0	100.9	71.8	29.08	3.470	
6,300.0	6,279.5	6,305.2	6,279.5	15.5	15.9	0.00	351.7	305.0	100.9	71.4	29.48	3.422	
6,342.5	6,322.0	6,347.7	6,322.0	15.6	16.0	90.49	351.7	305.0	100.9	70.7	30.17	3.344	
6,400.0	6,379.4	6,405.1	6,379.4	15.7	16.1	91.89	351.7	305.0	100.9	70.6	30.30	3.331	
6,500.0	6,478.1	6,503.8	6,478.1	15.8	16.3	100.47	351.7	305.0	102.7	72.6	30.07	3.415	
6,600.0	6,573.9	6,603.0	6,577.3	15.8	16.5	113.52	351.7	302.9	110.8	81.4	29.37	3.771	
6,700.0	6,665.1	6,707.4	6,680.5	15.8	16.6	124.97	351.6	288.2	124.6	96.1	28.48	4.375	
6,800.0	6,750.2	6,816.2	6,784.9	15.8	16.6	133.81	351.5	258.1	141.9	114.5	27.42	5.175	
6,900.0	6,827.8	6,929.8	6,888.2	15.9	16.6	140.45	351.2	211.1	160.6	134.4	26.19	6.134	
7,000.0	6,896.5	7,048.4	6,987.4	16.1	16.6	145.39	350.9	146.3	179.2	154.4	24.86	7.209	
7,100.0	6,955.1	7,172.1	7,078.9	16.6	16.6	149.04	350.5	63.2	196.5	172.9	23.61	8.322	
7,200.0	7,002.7	7,300.6	7,158.5	17.6	17.0	151.71	350.0	-37.6	211.3	188.7	22.62	9.342	
7,300.0	7,038.3	7,433.5	7,221.7	18.9	18.2	153.58	349.4	-154.2	222.9	200.7	22.14	10.066	
7,400.0	7,061.5	7,569.5	7,264.7	20.5	20.1	154.78	348.7	-283.1	230.6	208.2	22.38	10.302	
7,500.0	7,071.8	7,696.3	7,284.1	22.3	22.2	155.40	348.1	-408.3	234.6	211.2	23.33	10.053	
7,600.0	7,072.2	7,809.0	7,293.8	24.3	24.4	156.37	347.5	-520.5	242.1	217.5	24.57	9.854	
7,700.0	7,071.9	7,919.0	7,295.0	26.4	26.7	156.63	347.0	-630.6	243.0	216.7	26.31	9.238	
7,800.0	7,071.6	8,019.0	7,295.0	28.6	28.9	156.75	346.5	-730.6	243.1	215.0	28.13	8.642	
7,900.0	7,071.4	8,119.0	7,295.0	30.9	31.3	156.88	346.0	-830.6	243.1	213.1	30.04	8.095	
8,000.0	7,071.1	8,219.0	7,295.0	33.3	33.6	157.01	345.4	-930.5	243.2	211.2	32.01	7.597	
8,100.0	7,070.9	8,319.0	7,295.0	35.8	36.1	157.14	344.9	-1,030.5	243.3	209.2	34.04	7.146	
8,200.0	7,070.6	8,419.0	7,295.0	38.3	38.6	157.26	344.4	-1,130.5	243.3	207.2	36.11	6.739	
8,300.0	7,070.3	8,519.0	7,295.0	40.9	41.1	157.39	343.9	-1,230.5	243.4	205.2	38.20	6.371	
8,400.0	7,070.1	8,619.0	7,295.0	43.4	43.7	157.52	343.4	-1,330.5	243.4	203.1	40.32	6.037	
8,500.0	7,069.8	8,719.0	7,295.0	46.0	46.2	157.65	342.9	-1,430.5	243.5	201.0	42.45	5.735	
8,600.0	7,069.6	8,819.0	7,295.0	48.7	48.9	157.77	342.4	-1,530.5	243.5	198.9	44.60	5.461	
8,700.0	7,069.3	8,919.0	7,295.0	51.3	51.5	157.90	341.9	-1,630.5	243.6	196.9	46.75	5.211	
8,800.0	7,069.0	9,019.0	7,295.0	54.0	54.1	158.03	341.4	-1,730.5	243.7	194.8	48.90	4.983	
8,900.0	7,068.8	9,119.0	7,295.0	56.7	56.8	158.16	340.9	-1,830.5	243.7	192.7	51.05	4.774	
9,000.0	7,068.5	9,219.0	7,295.0	59.4	59.5	158.28	340.4	-1,930.5	243.8	190.6	53.20	4.583	
9,100.0	7,068.2	9,319.0	7,295.0	62.0	62.2	158.41	339.9	-2,030.5	243.9	188.5	55.35	4.406	
9,200.0	7,068.0	9,419.0	7,295.0	64.8	64.9	158.54	339.4	-2,130.5	243.9	186.4	57.49	4.243	
9,300.0	7,067.7	9,519.0	7,295.0	67.5	67.6	158.66	338.9	-2,230.5	244.0	184.4	59.62	4.092	
9,400.0	7,067.5	9,619.0	7,295.0	70.2	70.3	158.79	338.4	-2,330.5	244.1	182.3	61.75	3.953	
9,500.0	7,067.2	9,719.0	7,295.0	72.9	73.0	158.92	337.9	-2,430.5	244.1	180.3	63.87	3.823	
9,600.0	7,066.9	9,819.0	7,295.0	75.7	75.8	159.04	337.4	-2,530.5	244.2	178.2	65.97	3.702	
9,700.0	7,066.7	9,919.0	7,295.0	78.4	78.5	159.17	336.9	-2,630.5	244.3	176.2	68.07	3.589	
9,800.0	7,066.4	10,019.0	7,295.0	81.1	81.2	159.30	336.4	-2,730.5	244.4	174.2	70.15	3.483	
9,900.0	7,066.1	10,119.0	7,295.0	83.9	84.0	159.42	335.8	-2,830.5	244.4	172.2	72.23	3.385	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Tarin 32X-HZ Pad Sec.32-T4N-R66W - Tarin 32X-404 - Wellbore #1 - Plan #1 (4-14-14)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,000.0	7,065.9	10,219.0	7,295.0	86.6	86.7	159.55	335.3	-2,930.5	244.5	170.2	74.29	3.292	
10,100.0	7,065.6	10,319.0	7,295.0	89.4	89.5	159.68	334.8	-3,030.5	244.6	168.3	76.33	3.204	
10,200.0	7,065.4	10,419.0	7,295.0	92.2	92.2	159.80	334.3	-3,130.5	244.7	166.3	78.37	3.122	
10,300.0	7,065.1	10,519.0	7,295.0	94.9	95.0	159.93	333.8	-3,230.5	244.8	164.4	80.39	3.045	
10,400.0	7,064.8	10,619.0	7,295.0	97.7	97.8	160.05	333.3	-3,330.5	244.8	162.4	82.40	2.971	
10,500.0	7,064.6	10,719.0	7,295.0	100.5	100.5	160.18	332.8	-3,430.5	244.9	160.5	84.39	2.902	
10,600.0	7,064.3	10,819.0	7,295.0	103.2	103.3	160.31	332.3	-3,530.5	245.0	158.6	86.37	2.837	
10,700.0	7,064.1	10,919.0	7,295.0	106.0	106.0	160.43	331.8	-3,630.5	245.1	156.8	88.34	2.775	
10,800.0	7,063.8	11,019.0	7,295.0	108.8	108.8	160.56	331.3	-3,730.5	245.2	154.9	90.29	2.715	
10,900.0	7,063.5	11,119.0	7,295.0	111.5	111.6	160.68	330.8	-3,830.5	245.3	153.0	92.23	2.659	
11,000.0	7,063.3	11,219.0	7,295.0	114.3	114.4	160.81	330.3	-3,930.5	245.4	151.2	94.16	2.606	
11,100.0	7,063.0	11,319.0	7,295.0	117.1	117.1	160.93	329.8	-4,030.5	245.5	149.4	96.07	2.555	
11,200.0	7,062.7	11,419.0	7,295.0	119.9	119.9	161.06	329.3	-4,130.5	245.6	147.6	97.96	2.507	
11,300.0	7,062.5	11,519.0	7,295.0	122.7	122.7	161.18	328.8	-4,230.5	245.6	145.8	99.84	2.460	
11,400.0	7,062.2	11,619.0	7,295.0	125.4	125.5	161.31	328.3	-4,330.5	245.7	144.0	101.71	2.416	
11,500.0	7,062.0	11,719.0	7,295.0	128.2	128.2	161.43	327.8	-4,430.5	245.8	142.3	103.56	2.374	
11,600.0	7,061.7	11,819.0	7,295.0	131.0	131.0	161.56	327.3	-4,530.4	245.9	140.5	105.40	2.333	
11,700.0	7,061.4	11,919.0	7,295.0	133.8	133.8	161.68	326.8	-4,630.4	246.0	138.8	107.22	2.295	
11,800.0	7,061.2	12,019.0	7,295.0	136.6	136.6	161.81	326.2	-4,730.4	246.1	137.1	109.03	2.257	
11,900.0	7,060.9	12,119.0	7,295.0	139.4	139.4	161.93	325.7	-4,830.4	246.2	135.4	110.82	2.222	
12,000.0	7,060.7	12,219.0	7,295.0	142.1	142.2	162.06	325.2	-4,930.4	246.3	133.7	112.60	2.188	
12,100.0	7,060.4	12,319.0	7,295.0	144.9	144.9	162.18	324.7	-5,030.4	246.4	132.1	114.37	2.155	
12,200.0	7,060.1	12,419.0	7,295.0	147.7	147.7	162.31	324.2	-5,130.4	246.5	130.4	116.12	2.123	
12,300.0	7,059.9	12,519.0	7,295.0	150.5	150.5	162.43	323.7	-5,230.4	246.6	128.8	117.86	2.093	
12,400.0	7,059.6	12,619.0	7,295.0	153.3	153.3	162.55	323.2	-5,330.4	246.7	127.2	119.58	2.063	
12,500.0	7,059.3	12,719.0	7,295.0	156.1	156.1	162.68	322.7	-5,430.4	246.9	125.6	121.29	2.035	
12,600.0	7,059.1	12,819.0	7,295.0	158.9	158.9	162.80	322.2	-5,530.4	247.0	124.0	122.98	2.008	
12,700.0	7,058.8	12,919.0	7,295.0	161.7	161.7	162.93	321.7	-5,630.4	247.1	122.4	124.66	1.982	
12,800.0	7,058.6	13,019.0	7,295.0	164.5	164.5	163.05	321.2	-5,730.4	247.2	120.9	126.32	1.957	
12,900.0	7,058.3	13,119.0	7,295.0	167.3	167.2	163.17	320.7	-5,830.4	247.3	119.3	127.98	1.932	
13,000.0	7,058.0	13,219.0	7,295.0	170.1	170.0	163.30	320.2	-5,930.4	247.4	117.8	129.61	1.909	
13,100.0	7,057.8	13,319.0	7,295.0	172.8	172.8	163.42	319.7	-6,030.4	247.5	116.3	131.24	1.886	
13,200.0	7,057.5	13,419.0	7,295.0	175.6	175.6	163.54	319.2	-6,130.4	247.6	114.8	132.85	1.864	
13,300.0	7,057.2	13,519.0	7,295.0	178.4	178.4	163.67	318.7	-6,230.4	247.8	113.3	134.45	1.843	
13,400.0	7,057.0	13,619.0	7,295.0	181.2	181.2	163.79	318.2	-6,330.4	247.9	111.8	136.03	1.822	
13,500.0	7,056.7	13,719.0	7,295.0	184.0	184.0	163.91	317.7	-6,430.4	248.0	110.4	137.60	1.802	
13,600.0	7,056.5	13,819.0	7,295.0	186.8	186.8	164.04	317.1	-6,530.4	248.1	109.0	139.16	1.783	
13,700.0	7,056.2	13,919.0	7,295.0	189.6	189.6	164.16	316.6	-6,630.4	248.2	107.5	140.70	1.764	
13,800.0	7,055.9	14,018.9	7,295.0	192.4	192.4	164.28	316.1	-6,730.4	248.3	106.1	142.23	1.746	
13,900.0	7,055.7	14,118.9	7,295.0	195.2	195.2	164.40	315.6	-6,830.4	248.5	104.7	143.75	1.729	
14,000.0	7,055.4	14,218.9	7,295.0	198.0	198.0	164.52	315.1	-6,930.4	248.6	103.3	145.25	1.711	
14,100.0	7,055.2	14,318.9	7,295.0	200.8	200.8	164.65	314.6	-7,030.4	248.7	102.0	146.74	1.695	
14,158.7	7,055.0	14,377.2	7,295.0	202.4	202.4	164.72	314.3	-7,088.6	248.8	101.2	147.61	1.685 SF	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Tarin 32X-HZ Pad Sec.32-T4N-R66W - Tarin 32Y-314 - Wellbore #1 - Plan #1 (4-14-14)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	1.0	1.0	0.0	0.0	-180.00	-58.3	0.0	58.3	58.3	0.00	N/A	
100.0	100.0	101.0	101.0	0.1	0.1	-180.00	-58.3	0.0	58.3	58.1	0.23	256.762	
200.0	200.0	201.0	201.0	0.3	0.3	-180.00	-58.3	0.0	58.3	57.6	0.68	86.156	
300.0	300.0	301.0	301.0	0.6	0.6	-180.00	-58.3	0.0	58.3	57.2	1.13	51.762	
400.0	400.0	401.0	401.0	0.8	0.8	-180.00	-58.3	0.0	58.3	56.7	1.58	36.994	
500.0	500.0	501.0	501.0	1.0	1.0	-180.00	-58.3	0.0	58.3	56.3	2.03	28.782	
600.0	600.0	601.0	601.0	1.2	1.2	-180.00	-58.3	0.0	58.3	55.8	2.47	23.554	
700.0	700.0	701.0	701.0	1.5	1.5	-180.00	-58.3	0.0	58.3	55.4	2.92	19.933	
800.0	800.0	801.0	801.0	1.7	1.7	-180.00	-58.3	0.0	58.3	54.9	3.37	17.277	
900.0	900.0	901.0	901.0	1.9	1.9	-180.00	-58.3	0.0	58.3	54.5	3.82	15.246	
966.3	966.3	967.3	967.3	2.1	2.1	-180.00	-58.3	0.0	58.3	54.2	4.12	14.143	CC
1,000.0	1,000.0	1,001.0	1,001.0	2.1	2.1	180.00	-58.3	0.0	58.3	54.0	4.27	13.643	ES
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.3	179.15	-59.8	0.9	59.8	55.1	4.69	12.741	
1,200.0	1,200.0	1,197.2	1,197.1	2.6	2.5	176.92	-64.1	3.5	64.3	59.2	5.09	12.630	
1,300.0	1,300.0	1,294.8	1,294.3	2.8	2.7	173.83	-71.3	7.7	72.1	66.6	5.51	13.090	
1,400.0	1,400.0	1,391.6	1,390.4	3.0	2.9	170.51	-81.3	13.6	83.1	77.2	5.93	14.023	
1,500.0	1,500.0	1,490.5	1,488.4	3.3	3.2	167.55	-93.1	20.5	96.1	89.8	6.36	15.105	
1,600.0	1,600.0	1,589.5	1,586.4	3.5	3.4	115.31	-104.8	27.5	110.1	103.3	6.79	16.216	
1,700.0	1,699.8	1,688.3	1,684.3	3.7	3.7	115.40	-116.6	34.4	125.5	118.3	7.22	17.393	
1,800.0	1,799.5	1,786.8	1,781.8	3.9	4.0	116.66	-128.3	41.3	142.5	134.9	7.66	18.611	
1,900.0	1,898.9	1,885.1	1,879.1	4.2	4.3	118.49	-139.9	48.2	160.5	152.4	8.11	19.775	
2,000.0	1,998.3	1,983.3	1,976.4	4.4	4.6	119.97	-151.6	55.1	178.6	170.0	8.58	20.802	
2,100.0	2,097.8	2,081.6	2,073.7	4.6	4.9	121.17	-163.3	62.0	196.7	187.7	9.06	21.712	
2,200.0	2,197.2	2,179.8	2,171.1	4.9	5.2	122.17	-175.0	68.9	215.0	205.5	9.55	22.519	
2,300.0	2,296.6	2,278.1	2,268.4	5.2	5.5	123.01	-186.6	75.8	233.3	223.3	10.04	23.239	
2,400.0	2,396.1	2,376.3	2,365.7	5.4	5.8	123.73	-198.3	82.7	251.7	241.1	10.54	23.883	
2,500.0	2,495.5	2,474.6	2,463.0	5.7	6.1	124.36	-210.0	89.6	270.0	259.0	11.04	24.462	
2,600.0	2,594.9	2,572.8	2,560.3	6.0	6.5	124.90	-221.7	96.5	288.5	276.9	11.55	24.983	
2,700.0	2,694.4	2,671.1	2,657.6	6.2	6.8	125.38	-233.4	103.4	306.9	294.8	12.06	25.456	
2,800.0	2,793.8	2,769.4	2,755.0	6.5	7.1	125.80	-245.0	110.3	325.3	312.8	12.57	25.885	
2,900.0	2,893.2	2,867.6	2,852.3	6.8	7.5	126.18	-256.7	117.2	343.8	330.7	13.08	26.276	
3,000.0	2,992.7	2,965.9	2,949.6	7.1	7.8	126.52	-268.4	124.1	362.3	348.7	13.60	26.634	
3,100.0	3,092.1	3,064.1	3,046.9	7.3	8.1	126.83	-280.1	131.0	380.8	366.7	14.12	26.962	
3,200.0	3,191.5	3,162.4	3,144.2	7.6	8.4	127.11	-291.7	137.9	399.3	384.6	14.64	27.264	
3,300.0	3,291.0	3,260.6	3,241.5	7.9	8.8	127.36	-303.4	144.8	417.8	402.6	15.17	27.543	
3,400.0	3,390.4	3,358.9	3,338.8	8.2	9.1	127.59	-315.1	151.7	436.3	420.6	15.69	27.801	
3,500.0	3,489.8	3,457.1	3,436.2	8.5	9.5	127.81	-326.8	158.6	454.8	438.6	16.22	28.040	
3,600.0	3,589.3	3,555.4	3,533.5	8.7	9.8	128.00	-338.4	165.5	473.4	456.6	16.75	28.263	
3,700.0	3,688.7	3,653.7	3,630.8	9.0	10.1	128.19	-350.1	172.4	491.9	474.6	17.28	28.470	
3,800.0	3,788.1	3,751.9	3,728.1	9.3	10.5	128.35	-361.8	179.3	510.4	492.6	17.81	28.664	
3,900.0	3,887.6	3,850.2	3,825.4	9.6	10.8	128.51	-373.5	186.2	529.0	510.6	18.34	28.845	
4,000.0	3,987.0	3,948.4	3,922.7	9.9	11.1	128.66	-385.2	193.1	547.5	528.6	18.87	29.014	
4,100.0	4,086.4	4,046.7	4,020.1	10.2	11.5	128.79	-396.8	200.0	566.1	546.7	19.40	29.174	
4,200.0	4,185.9	4,144.9	4,117.4	10.5	11.8	128.92	-408.5	206.9	584.6	564.7	19.94	29.324	
4,300.0	4,285.3	4,243.2	4,214.7	10.8	12.2	129.04	-420.2	213.8	603.2	582.7	20.47	29.465	
4,400.0	4,384.7	4,341.5	4,312.0	11.1	12.5	129.15	-431.9	220.7	621.7	600.7	21.01	29.599	
4,500.0	4,484.2	4,439.7	4,409.3	11.3	12.8	129.26	-443.5	227.6	640.3	618.7	21.54	29.725	
4,600.0	4,583.6	4,538.0	4,506.6	11.6	13.2	129.36	-455.2	234.5	658.8	636.8	22.08	29.844	
4,700.0	4,683.0	4,636.2	4,603.9	11.9	13.5	129.46	-466.9	241.4	677.4	654.8	22.61	29.957	
4,800.0	4,782.5	4,734.5	4,701.3	12.2	13.9	129.55	-478.6	248.3	696.0	672.8	23.15	30.064	
4,900.0	4,881.9	4,832.7	4,798.6	12.5	14.2	129.63	-490.3	255.2	714.5	690.9	23.69	30.166	

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Tarin 32X-HZ Pad Sec.32-T4N-R66W - Tarin 32Y-314 - Wellbore #1 - Plan #1 (4-14-14)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.0	4,981.3	4,931.0	4,895.9	12.8	14.5	129.71	-501.9	262.1	733.1	708.9	24.22	30.263	
5,100.0	5,080.8	5,029.2	4,993.2	13.1	14.9	129.79	-513.6	269.0	751.7	726.9	24.76	30.355	
5,200.0	5,180.2	5,127.5	5,090.5	13.4	15.2	129.86	-525.3	275.9	770.2	744.9	25.30	30.443	
5,300.0	5,279.8	5,225.9	5,188.0	13.6	15.6	130.09	-537.0	282.8	788.0	762.2	25.85	30.489	
5,400.0	5,379.6	5,324.6	5,285.8	13.8	15.9	130.14	-548.7	289.7	803.6	777.3	26.33	30.522	
5,500.0	5,479.5	5,449.5	5,409.6	14.0	16.2	129.93	-561.9	297.5	815.7	789.0	26.80	30.442	
5,600.0	5,579.5	5,581.6	5,541.4	14.2	16.5	-179.84	-570.8	302.8	822.5	793.8	28.72	28.639	
5,700.0	5,679.5	5,714.4	5,674.1	14.4	16.7	-180.00	-574.5	304.9	825.3	796.2	29.15	28.317	
5,800.0	5,779.5	5,820.9	5,780.5	14.6	16.9	-180.00	-574.6	305.0	825.4	795.9	29.51	27.968	
5,900.0	5,879.5	5,920.9	5,880.5	14.7	17.0	-180.00	-574.6	305.0	825.4	795.5	29.86	27.642	
6,000.0	5,979.5	6,020.9	5,980.5	14.9	17.2	-180.00	-574.6	305.0	825.4	795.2	30.21	27.322	
6,100.0	6,079.5	6,120.9	6,080.5	15.1	17.3	-180.00	-574.6	305.0	825.4	794.8	30.56	27.007	
6,200.0	6,179.5	6,220.9	6,180.5	15.3	17.5	-180.00	-574.6	305.0	825.4	794.5	30.92	26.698	
6,300.0	6,279.5	6,320.9	6,280.5	15.5	17.6	-180.00	-574.6	305.0	825.4	794.1	31.27	26.393	
6,344.7	6,324.3	6,365.6	6,325.3	15.6	17.7	-90.05	-574.6	305.0	825.4	795.3	30.06	27.457	
6,400.0	6,379.4	6,420.7	6,380.4	15.7	17.7	-90.21	-574.6	305.0	825.4	795.1	30.25	27.289	
6,500.0	6,478.1	6,521.0	6,480.6	15.8	17.9	-91.07	-574.6	301.6	825.5	795.1	30.47	27.095	
6,600.0	6,573.9	6,623.2	6,581.3	15.8	18.0	-91.95	-574.6	285.2	825.9	795.3	30.58	27.007	
6,700.0	6,665.1	6,727.1	6,680.7	15.8	18.0	-92.81	-574.6	254.9	826.4	795.7	30.63	26.978	
6,800.0	6,750.2	6,832.9	6,776.7	15.8	18.0	-93.62	-574.6	210.6	827.0	796.3	30.71	26.931	
6,900.0	6,827.8	6,940.6	6,867.0	15.9	18.0	-94.38	-574.6	152.3	827.8	796.8	30.95	26.748	
7,000.0	6,896.5	7,049.9	6,949.5	16.1	17.9	-95.06	-574.6	80.6	828.6	797.1	31.52	26.289	
7,100.0	6,955.1	7,160.9	7,021.9	16.6	17.9	-95.65	-574.6	-3.3	829.3	796.7	32.62	25.424	
7,200.0	7,002.7	7,273.2	7,082.1	17.6	17.8	-96.14	-574.6	-98.1	830.0	795.6	34.40	24.130	
7,300.0	7,038.3	7,386.7	7,128.1	18.9	18.4	-96.51	-574.6	-201.7	830.6	793.7	36.91	22.500	
7,400.0	7,061.5	7,501.0	7,158.4	20.5	20.1	-96.75	-574.6	-311.9	831.0	790.8	40.13	20.705	
7,500.0	7,071.8	7,615.9	7,172.0	22.3	22.2	-96.86	-574.6	-425.8	831.1	787.2	43.93	18.919	
7,600.0	7,072.2	7,720.7	7,172.3	24.3	24.3	-96.85	-574.6	-530.6	831.1	783.1	47.94	17.337	
7,700.0	7,071.9	7,820.7	7,171.8	26.4	26.4	-96.83	-574.6	-630.6	831.0	778.9	52.15	15.935	
7,800.0	7,071.6	7,920.7	7,171.3	28.6	28.7	-96.82	-574.6	-730.6	831.0	774.4	56.60	14.682	
7,900.0	7,071.4	8,020.7	7,170.7	30.9	31.0	-96.80	-574.6	-830.6	830.9	769.7	61.23	13.569	
8,000.0	7,071.1	8,120.7	7,170.2	33.3	33.4	-96.78	-574.6	-930.6	830.8	764.8	66.02	12.585	
8,100.0	7,070.9	8,220.7	7,169.7	35.8	35.9	-96.76	-574.6	-1,030.6	830.8	759.9	70.92	11.715	
8,200.0	7,070.6	8,320.7	7,169.2	38.3	38.4	-96.75	-574.6	-1,130.6	830.7	754.8	75.91	10.943	
8,300.0	7,070.3	8,420.7	7,168.6	40.9	40.9	-96.73	-574.6	-1,230.6	830.7	749.7	80.98	10.257	
8,400.0	7,070.1	8,520.7	7,168.1	43.4	43.5	-96.71	-574.6	-1,330.6	830.6	744.5	86.12	9.645	
8,500.0	7,069.8	8,620.7	7,167.6	46.0	46.1	-96.69	-574.6	-1,430.6	830.6	739.3	91.30	9.097	
8,600.0	7,069.6	8,720.7	7,167.1	48.7	48.7	-96.67	-574.6	-1,530.6	830.5	734.0	96.54	8.603	
8,700.0	7,069.3	8,820.7	7,166.6	51.3	51.4	-96.66	-574.6	-1,630.6	830.4	728.6	101.81	8.157	
8,800.0	7,069.0	8,920.7	7,166.0	54.0	54.0	-96.64	-574.6	-1,730.6	830.4	723.3	107.11	7.753	
8,900.0	7,068.8	9,020.7	7,165.5	56.7	56.7	-96.62	-574.6	-1,830.6	830.3	717.9	112.44	7.385	
9,000.0	7,068.5	9,120.7	7,165.0	59.4	59.4	-96.60	-574.6	-1,930.6	830.3	712.5	117.79	7.049	
9,100.0	7,068.2	9,220.7	7,164.5	62.0	62.1	-96.59	-574.6	-2,030.6	830.2	707.0	123.16	6.741	
9,200.0	7,068.0	9,320.7	7,163.9	64.8	64.8	-96.57	-574.6	-2,130.6	830.2	701.6	128.56	6.457	
9,300.0	7,067.7	9,420.7	7,163.4	67.5	67.5	-96.55	-574.6	-2,230.6	830.1	696.1	133.97	6.196	
9,400.0	7,067.5	9,520.7	7,162.9	70.2	70.2	-96.53	-574.6	-2,330.6	830.0	690.6	139.39	5.955	
9,500.0	7,067.2	9,620.7	7,162.4	72.9	73.0	-96.51	-574.6	-2,430.6	830.0	685.2	144.82	5.731	
9,600.0	7,066.9	9,720.7	7,161.8	75.7	75.7	-96.50	-574.6	-2,530.6	829.9	679.7	150.27	5.523	
9,700.0	7,066.7	9,820.7	7,161.3	78.4	78.4	-96.48	-574.6	-2,630.6	829.9	674.1	155.73	5.329	
9,800.0	7,066.4	9,920.7	7,160.8	81.1	81.2	-96.46	-574.6	-2,730.6	829.8	668.6	161.19	5.148	
9,900.0	7,066.1	10,020.7	7,160.3	83.9	83.9	-96.44	-574.6	-2,830.5	829.7	663.1	166.67	4.978	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Tarin 32X-HZ Pad Sec.32-T4N-R66W - Tarin 32Y-314 - Wellbore #1 - Plan #1 (4-14-14)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,000.0	7,065.9	10,120.7	7,159.7	86.6	86.7	-96.43	-574.6	-2,930.5	829.7	657.5	172.15	4.820	
10,100.0	7,065.6	10,220.7	7,159.2	89.4	89.4	-96.41	-574.6	-3,030.5	829.6	652.0	177.64	4.670	
10,200.0	7,065.4	10,320.7	7,158.7	92.2	92.2	-96.39	-574.6	-3,130.5	829.6	646.4	183.14	4.530	
10,300.0	7,065.1	10,420.7	7,158.2	94.9	95.0	-96.37	-574.6	-3,230.5	829.5	640.9	188.64	4.397	
10,400.0	7,064.8	10,520.7	7,157.6	97.7	97.7	-96.35	-574.6	-3,330.5	829.5	635.3	194.14	4.272	
10,500.0	7,064.6	10,620.7	7,157.1	100.5	100.5	-96.34	-574.6	-3,430.5	829.4	629.8	199.65	4.154	
10,600.0	7,064.3	10,720.7	7,156.6	103.2	103.2	-96.32	-574.6	-3,530.5	829.4	624.2	205.17	4.042	
10,700.0	7,064.1	10,820.7	7,156.1	106.0	106.0	-96.30	-574.6	-3,630.5	829.3	618.6	210.69	3.936	
10,800.0	7,063.8	10,920.7	7,155.6	108.8	108.8	-96.28	-574.6	-3,730.5	829.2	613.0	216.22	3.835	
10,900.0	7,063.5	11,020.7	7,155.0	111.5	111.6	-96.27	-574.6	-3,830.5	829.2	607.4	221.74	3.739	
11,000.0	7,063.3	11,120.7	7,154.5	114.3	114.3	-96.25	-574.6	-3,930.5	829.1	601.9	227.27	3.648	
11,100.0	7,063.0	11,220.7	7,154.0	117.1	117.1	-96.23	-574.6	-4,030.5	829.1	596.3	232.81	3.561	
11,200.0	7,062.7	11,320.7	7,153.5	119.9	119.9	-96.21	-574.6	-4,130.5	829.0	590.7	238.35	3.478	
11,300.0	7,062.5	11,420.7	7,152.9	122.7	122.7	-96.19	-574.6	-4,230.5	829.0	585.1	243.89	3.399	
11,400.0	7,062.2	11,520.7	7,152.4	125.4	125.5	-96.18	-574.6	-4,330.5	828.9	579.5	249.43	3.323	
11,500.0	7,062.0	11,620.7	7,151.9	128.2	128.2	-96.16	-574.6	-4,430.5	828.8	573.9	254.97	3.251	
11,600.0	7,061.7	11,720.7	7,151.4	131.0	131.0	-96.14	-574.6	-4,530.5	828.8	568.3	260.52	3.181	
11,700.0	7,061.4	11,820.7	7,150.8	133.8	133.8	-96.12	-574.6	-4,630.5	828.7	562.7	266.07	3.115	
11,800.0	7,061.2	11,920.7	7,150.3	136.6	136.6	-96.11	-574.6	-4,730.5	828.7	557.1	271.62	3.051	
11,900.0	7,060.9	12,020.7	7,149.8	139.4	139.4	-96.09	-574.6	-4,830.5	828.6	551.5	277.18	2.990	
12,000.0	7,060.7	12,120.7	7,149.3	142.1	142.2	-96.07	-574.6	-4,930.5	828.6	545.8	282.73	2.931	
12,100.0	7,060.4	12,220.7	7,148.7	144.9	144.9	-96.05	-574.6	-5,030.5	828.5	540.2	288.29	2.874	
12,200.0	7,060.1	12,320.7	7,148.2	147.7	147.7	-96.03	-574.6	-5,130.5	828.5	534.6	293.85	2.819	
12,300.0	7,059.9	12,420.7	7,147.7	150.5	150.5	-96.02	-574.6	-5,230.5	828.4	529.0	299.41	2.767	
12,400.0	7,059.6	12,520.7	7,147.2	153.3	153.3	-96.00	-574.6	-5,330.5	828.4	523.4	304.97	2.716	
12,500.0	7,059.3	12,620.7	7,146.7	156.1	156.1	-95.98	-574.6	-5,430.5	828.3	517.8	310.54	2.667	
12,600.0	7,059.1	12,720.7	7,146.1	158.9	158.9	-95.96	-574.6	-5,530.5	828.2	512.1	316.10	2.620	
12,700.0	7,058.8	12,820.7	7,145.6	161.7	161.7	-95.95	-574.6	-5,630.5	828.2	506.5	321.67	2.575	
12,800.0	7,058.6	12,920.7	7,145.1	164.5	164.5	-95.93	-574.6	-5,730.5	828.1	500.9	327.24	2.531	
12,900.0	7,058.3	13,020.7	7,144.6	167.3	167.3	-95.91	-574.6	-5,830.5	828.1	495.3	332.81	2.488	
13,000.0	7,058.0	13,120.7	7,144.0	170.1	170.1	-95.89	-574.6	-5,930.5	828.0	489.6	338.38	2.447	
13,100.0	7,057.8	13,220.7	7,143.5	172.8	172.8	-95.87	-574.6	-6,030.5	828.0	484.0	343.95	2.407	
13,200.0	7,057.5	13,320.7	7,143.0	175.6	175.6	-95.86	-574.6	-6,130.5	827.9	478.4	349.52	2.369	
13,300.0	7,057.2	13,420.7	7,142.5	178.4	178.4	-95.84	-574.6	-6,230.5	827.9	472.8	355.09	2.331	
13,400.0	7,057.0	13,520.7	7,141.9	181.2	181.2	-95.82	-574.6	-6,330.5	827.8	467.1	360.67	2.295	
13,500.0	7,056.7	13,620.7	7,141.4	184.0	184.0	-95.80	-574.6	-6,430.5	827.8	461.5	366.25	2.260	
13,600.0	7,056.5	13,720.7	7,140.9	186.8	186.8	-95.79	-574.6	-6,530.5	827.7	455.9	371.82	2.226	
13,700.0	7,056.2	13,820.7	7,140.4	189.6	189.6	-95.77	-574.6	-6,630.5	827.6	450.2	377.40	2.193	
13,800.0	7,055.9	13,920.7	7,139.8	192.4	192.4	-95.75	-574.6	-6,730.5	827.6	444.6	382.98	2.161	
13,900.0	7,055.7	14,020.7	7,139.3	195.2	195.2	-95.73	-574.6	-6,830.5	827.5	439.0	388.56	2.130	
14,000.0	7,055.4	14,120.7	7,138.8	198.0	198.0	-95.71	-574.6	-6,930.5	827.5	433.3	394.14	2.099	
14,100.0	7,055.2	14,220.7	7,138.3	200.8	200.8	-95.70	-574.6	-7,030.5	827.4	427.7	399.72	2.070	
14,144.4	7,055.0	14,265.1	7,138.0	202.0	202.0	-95.69	-574.6	-7,074.9	827.4	425.2	402.20	2.057	
14,158.7	7,055.0	14,273.5	7,138.0	202.4	202.3	-95.69	-574.6	-7,083.3	827.4	424.6	402.83	2.054	SF

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Tarin 32X-HZ Pad Sec.32-T4N-R66W - Tarin 32Y-404 - Wellbore #1 - Plan #1 (4-14-14)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	1.0	1.0	0.0	0.0	180.00	-87.4	0.0	87.4	87.4	0.00	N/A	
100.0	100.0	101.0	101.0	0.1	0.1	180.00	-87.4	0.0	87.4	87.2	0.23	385.143	
200.0	200.0	201.0	201.0	0.3	0.3	180.00	-87.4	0.0	87.4	86.8	0.68	129.234	
300.0	300.0	301.0	301.0	0.6	0.6	180.00	-87.4	0.0	87.4	86.3	1.13	77.644	
400.0	400.0	401.0	401.0	0.8	0.8	180.00	-87.4	0.0	87.4	85.9	1.58	55.491	
466.3	466.3	467.3	467.3	0.9	0.9	180.00	-87.4	0.0	87.4	85.6	1.87	46.661	CC
500.0	500.0	500.0	500.0	1.0	1.0	180.00	-87.4	0.0	87.4	85.4	2.02	43.224	ES
600.0	600.0	598.2	598.1	1.2	1.2	179.62	-89.0	0.6	89.1	86.6	2.44	36.454	
700.0	700.0	695.1	695.0	1.5	1.4	178.58	-93.7	2.3	93.9	91.0	2.85	32.927	
800.0	800.0	791.6	791.1	1.7	1.6	177.08	-101.3	5.2	101.9	98.7	3.28	31.126	
900.0	900.0	887.5	886.3	1.9	1.8	175.34	-111.9	9.1	113.3	109.6	3.72	30.486	SF
1,000.0	1,000.0	983.6	981.3	2.1	2.1	173.56	-125.5	14.2	127.8	123.6	4.18	30.577	
1,100.0	1,100.0	1,082.3	1,078.8	2.4	2.4	172.02	-140.1	19.6	143.2	138.6	4.66	30.727	
1,200.0	1,200.0	1,181.1	1,176.3	2.6	2.7	170.79	-154.8	25.1	158.7	153.6	5.16	30.787	
1,300.0	1,300.0	1,279.8	1,273.8	2.8	3.1	169.78	-169.5	30.6	174.3	168.7	5.66	30.783	
1,400.0	1,400.0	1,378.6	1,371.3	3.0	3.4	168.93	-184.1	36.0	189.9	183.8	6.18	30.744	
1,500.0	1,500.0	1,477.3	1,468.8	3.3	3.8	168.21	-198.8	41.5	205.6	198.9	6.70	30.685	
1,600.0	1,600.0	1,575.9	1,566.2	3.5	4.1	117.14	-213.4	46.9	222.1	215.2	6.86	32.381	
1,700.0	1,699.8	1,674.2	1,663.2	3.7	4.5	117.38	-228.0	52.4	240.1	232.8	7.31	32.855	
1,800.0	1,799.5	1,772.1	1,759.9	3.9	4.9	118.21	-242.6	57.8	259.8	252.1	7.77	33.455	
1,900.0	1,898.9	1,869.8	1,856.3	4.2	5.2	119.55	-257.1	63.2	280.5	272.3	8.24	34.036	
2,000.0	1,998.3	1,967.4	1,952.7	4.4	5.6	120.73	-271.6	68.6	301.4	292.6	8.73	34.532	
2,100.0	2,097.8	2,065.0	2,049.1	4.6	5.9	121.76	-286.1	74.0	322.3	313.1	9.22	34.960	
2,200.0	2,197.2	2,162.7	2,145.5	4.9	6.3	122.65	-300.6	79.4	343.3	333.6	9.72	35.333	
2,300.0	2,296.6	2,260.3	2,241.9	5.2	6.7	123.45	-315.1	84.8	364.5	354.2	10.22	35.659	
2,400.0	2,396.1	2,357.9	2,338.3	5.4	7.0	124.16	-329.6	90.2	385.6	374.9	10.73	35.946	
2,500.0	2,495.5	2,455.6	2,434.7	5.7	7.4	124.79	-344.1	95.6	406.8	395.6	11.24	36.201	
2,600.0	2,594.9	2,553.2	2,531.1	6.0	7.8	125.37	-358.6	101.0	428.1	416.3	11.75	36.427	
2,700.0	2,694.4	2,650.8	2,627.5	6.2	8.1	125.88	-373.1	106.4	449.4	437.1	12.27	36.631	
2,800.0	2,793.8	2,748.4	2,723.9	6.5	8.5	126.36	-387.6	111.8	470.7	457.9	12.79	36.813	
2,900.0	2,893.2	2,846.1	2,820.3	6.8	8.9	126.79	-402.0	117.2	492.1	478.8	13.31	36.979	
3,000.0	2,992.7	2,943.7	2,916.7	7.1	9.3	127.18	-416.5	122.6	513.5	499.6	13.83	37.129	
3,100.0	3,092.1	3,041.3	3,013.0	7.3	9.6	127.54	-431.0	128.0	534.9	520.5	14.35	37.266	
3,200.0	3,191.5	3,139.0	3,109.4	7.6	10.0	127.88	-445.5	133.4	556.3	541.4	14.88	37.391	
3,300.0	3,291.0	3,236.6	3,205.8	7.9	10.4	128.19	-460.0	138.8	577.7	562.3	15.40	37.505	
3,400.0	3,390.4	3,334.2	3,302.2	8.2	10.7	128.48	-474.5	144.2	599.2	583.2	15.93	37.611	
3,500.0	3,489.8	3,431.8	3,398.6	8.5	11.1	128.75	-489.0	149.6	620.6	604.2	16.46	37.708	
3,600.0	3,589.3	3,529.5	3,495.0	8.7	11.5	129.00	-503.5	155.0	642.1	625.1	16.99	37.799	
3,700.0	3,688.7	3,627.1	3,591.4	9.0	11.8	129.23	-518.0	160.4	663.6	646.1	17.52	37.882	
3,800.0	3,788.1	3,724.7	3,687.8	9.3	12.2	129.45	-532.5	165.8	685.1	667.1	18.05	37.960	
3,900.0	3,887.6	3,822.4	3,784.2	9.6	12.6	129.66	-547.0	171.2	706.6	688.0	18.58	38.033	
4,000.0	3,987.0	3,920.0	3,880.6	9.9	13.0	129.85	-561.5	176.6	728.1	709.0	19.11	38.100	
4,100.0	4,086.4	4,017.6	3,977.0	10.2	13.3	130.03	-576.0	182.0	749.7	730.0	19.64	38.164	
4,200.0	4,185.9	4,115.2	4,073.4	10.5	13.7	130.20	-590.5	187.4	771.2	751.0	20.18	38.223	
4,300.0	4,285.3	4,212.9	4,169.8	10.8	14.1	130.37	-605.0	192.8	792.7	772.0	20.71	38.279	
4,400.0	4,384.7	4,310.5	4,266.2	11.1	14.4	130.52	-619.5	198.2	814.3	793.0	21.24	38.331	
4,500.0	4,484.2	4,408.1	4,362.6	11.3	14.8	130.67	-634.0	203.6	835.8	814.0	21.78	38.381	
4,600.0	4,583.6	4,505.8	4,459.0	11.6	15.2	130.81	-648.5	209.0	857.4	835.1	22.31	38.428	
4,700.0	4,683.0	4,603.4	4,555.4	11.9	15.5	130.94	-663.0	214.4	878.9	856.1	22.85	38.472	
4,800.0	4,782.5	4,701.0	4,651.8	12.2	15.9	131.07	-677.5	219.8	900.5	877.1	23.38	38.513	
4,900.0	4,881.9	4,798.6	4,748.2	12.5	16.3	131.19	-692.0	225.2	922.1	898.1	23.92	38.553	

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Tarin 32X-HZ Pad Sec.32-T4N-R66W - Tarin 32Y-404 - Wellbore #1 - Plan #1 (4-14-14)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.0	4,981.3	4,896.3	4,844.6	12.8	16.7	131.30	-706.5	230.6	943.6	919.2	24.45	38.590	
5,100.0	5,080.8	4,993.9	4,941.0	13.1	17.0	131.41	-721.0	236.0	965.2	940.2	24.99	38.626	
5,200.0	5,180.2	5,091.5	5,037.4	13.4	17.4	131.52	-735.5	241.4	986.8	961.2	25.52	38.660	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Tarin 32X-HZ Pad Sec.32-T4N-R66W - Tarin 32Y-414 - Wellbore #1 - Plan #2 (5-14-14)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
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	129.683	
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	
500.0	500.0	500.0	500.0	1.0	1.0	-180.00	-29.1	0.0	29.1	27.1	2.02	14.409	
600.0	600.0	600.0	600.0	1.2	1.2	-180.00	-29.1	0.0	29.1	26.7	2.47	11.789	
700.0	700.0	700.0	700.0	1.5	1.5	-180.00	-29.1	0.0	29.1	26.2	2.92	9.976	
800.0	800.0	800.0	800.0	1.7	1.7	-180.00	-29.1	0.0	29.1	25.8	3.37	8.646	
900.0	900.0	900.0	900.0	1.9	1.9	-180.00	-29.1	0.0	29.1	25.3	3.82	7.628	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-180.00	-29.1	0.0	29.1	24.9	4.27	6.825	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-180.00	-29.1	0.0	29.1	24.4	4.72	6.175	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-180.00	-29.1	0.0	29.1	24.0	5.17	5.638	CC, ES
1,300.0	1,300.0	1,299.2	1,299.2	2.8	2.8	177.82	-30.4	1.2	30.4	24.9	5.59	5.444	
1,400.0	1,400.0	1,398.2	1,398.0	3.0	3.0	172.30	-34.2	4.6	34.6	28.6	6.00	5.764	
1,500.0	1,500.0	1,496.7	1,496.2	3.3	3.2	165.65	-40.5	10.4	42.0	35.5	6.41	6.545	
1,600.0	1,600.0	1,594.8	1,593.6	3.5	3.4	110.57	-49.2	18.3	53.4	46.6	6.84	7.813	
1,700.0	1,699.8	1,693.8	1,691.8	3.7	3.6	110.01	-58.7	27.0	67.2	60.0	7.26	9.265	
1,800.0	1,799.5	1,792.7	1,789.7	3.9	3.9	111.84	-68.3	35.8	82.3	74.6	7.69	10.699	
1,900.0	1,898.9	1,891.3	1,887.5	4.2	4.1	114.32	-77.8	44.5	98.2	90.1	8.14	12.058	
2,000.0	1,998.3	1,990.0	1,985.3	4.4	4.4	116.13	-87.3	53.2	114.2	105.6	8.61	13.268	
2,100.0	2,097.8	2,088.6	2,083.1	4.6	4.7	117.48	-96.9	61.9	130.4	121.3	9.09	14.347	
2,200.0	2,197.2	2,187.3	2,180.9	4.9	5.0	118.54	-106.4	70.6	146.5	137.0	9.57	15.309	
2,300.0	2,296.6	2,285.9	2,278.7	5.2	5.3	119.39	-115.9	79.3	162.7	152.7	10.06	16.170	
2,400.0	2,396.1	2,384.6	2,376.5	5.4	5.6	120.09	-125.4	88.0	179.0	168.4	10.56	16.943	
2,500.0	2,495.5	2,483.2	2,474.3	5.7	5.9	120.66	-135.0	96.8	195.3	184.2	11.07	17.639	
2,600.0	2,594.9	2,581.9	2,572.1	6.0	6.2	121.15	-144.5	105.5	211.5	200.0	11.58	18.268	
2,700.0	2,694.4	2,680.5	2,669.9	6.2	6.5	121.57	-154.0	114.2	227.8	215.7	12.09	18.838	
2,800.0	2,793.8	2,779.2	2,767.7	6.5	6.8	121.94	-163.6	122.9	244.1	231.5	12.61	19.357	
2,900.0	2,893.2	2,877.8	2,865.5	6.8	7.1	122.26	-173.1	131.6	260.4	247.3	13.13	19.831	
3,000.0	2,992.7	2,976.5	2,963.3	7.1	7.4	122.54	-182.6	140.3	276.8	263.1	13.66	20.265	
3,100.0	3,092.1	3,075.1	3,061.2	7.3	7.7	122.79	-192.2	149.0	293.1	278.9	14.18	20.663	
3,200.0	3,191.5	3,173.8	3,159.0	7.6	8.0	123.01	-201.7	157.8	309.4	294.7	14.71	21.030	
3,300.0	3,291.0	3,272.4	3,256.8	7.9	8.4	123.21	-211.2	166.5	325.7	310.5	15.24	21.369	
3,400.0	3,390.4	3,371.1	3,354.6	8.2	8.7	123.39	-220.8	175.2	342.1	326.3	15.78	21.682	
3,500.0	3,489.8	3,469.7	3,452.4	8.5	9.0	123.56	-230.3	183.9	358.4	342.1	16.31	21.974	
3,600.0	3,589.3	3,568.4	3,550.2	8.7	9.3	123.71	-239.8	192.6	374.8	357.9	16.85	22.244	
3,700.0	3,688.7	3,667.0	3,648.0	9.0	9.7	123.85	-249.3	201.3	391.1	373.7	17.38	22.497	
3,800.0	3,788.1	3,765.7	3,745.8	9.3	10.0	123.97	-258.9	210.0	407.5	389.5	17.92	22.733	
3,900.0	3,887.6	3,864.3	3,843.6	9.6	10.3	124.09	-268.4	218.7	423.8	405.3	18.46	22.953	
4,000.0	3,987.0	3,963.0	3,941.4	9.9	10.6	124.20	-277.9	227.5	440.1	421.1	19.00	23.161	
4,100.0	4,086.4	4,061.6	4,039.2	10.2	11.0	124.30	-287.5	236.2	456.5	437.0	19.55	23.355	
4,200.0	4,185.9	4,160.3	4,137.0	10.5	11.3	124.39	-297.0	244.9	472.9	452.8	20.09	23.538	
4,300.0	4,285.3	4,258.9	4,234.8	10.8	11.6	124.48	-306.5	253.6	489.2	468.6	20.63	23.711	
4,400.0	4,384.7	4,357.6	4,332.6	11.1	11.9	124.56	-316.1	262.3	505.6	484.4	21.18	23.874	
4,500.0	4,484.2	4,456.2	4,430.4	11.3	12.3	124.64	-325.6	271.0	521.9	500.2	21.72	24.028	
4,600.0	4,583.6	4,554.9	4,528.2	11.6	12.6	124.71	-335.1	279.7	538.3	516.0	22.27	24.173	
4,700.0	4,683.0	4,653.7	4,626.2	11.9	12.9	124.78	-344.7	288.5	554.6	531.8	22.81	24.311	
4,800.0	4,782.5	4,770.6	4,742.3	12.2	13.2	125.01	-354.2	297.2	569.4	546.0	23.36	24.377	
4,900.0	4,881.9	4,888.3	4,859.7	12.5	13.5	125.52	-360.2	302.7	581.0	557.1	23.88	24.329	
5,000.0	4,981.3	5,006.4	4,977.8	12.8	13.7	126.31	-362.7	304.9	589.4	565.0	24.39	24.170	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Tarin 32X-HZ Pad Sec.32-T4N-R66W - Tarin 32Y-414 - Wellbore #1 - Plan #2 (5-14-14)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.0	5,080.8	5,109.4	5,080.8	13.1	13.8	127.16	-362.7	305.0	595.9	571.0	24.86	23.967	
5,200.0	5,180.2	5,208.8	5,180.2	13.4	14.0	127.96	-362.7	305.0	602.4	577.0	25.33	23.784	
5,300.0	5,279.8	5,308.4	5,279.8	13.6	14.1	128.73	-362.7	305.0	608.2	582.4	25.78	23.589	
5,400.0	5,379.6	5,408.2	5,379.6	13.8	14.3	129.22	-362.7	305.0	611.9	585.8	26.18	23.378	
5,500.0	5,479.5	5,508.2	5,479.5	14.0	14.5	129.42	-362.7	305.0	613.5	587.0	26.54	23.118	
5,600.0	5,579.5	5,608.2	5,579.5	14.2	14.6	-180.00	-362.7	305.0	613.5	586.9	26.66	23.013	
5,700.0	5,679.5	5,708.2	5,679.5	14.4	14.8	-180.00	-362.7	305.0	613.5	586.5	27.04	22.693	
5,800.0	5,779.5	5,808.2	5,779.5	14.6	14.9	-180.00	-362.7	305.0	613.5	586.1	27.41	22.380	
5,900.0	5,879.5	5,908.2	5,879.5	14.7	15.1	-180.00	-362.7	305.0	613.5	585.8	27.80	22.074	
6,000.0	5,979.5	6,008.2	5,979.5	14.9	15.3	-180.00	-362.7	305.0	613.5	585.4	28.18	21.775	
6,100.0	6,079.5	6,108.2	6,079.5	15.1	15.5	-180.00	-362.7	305.0	613.5	585.0	28.56	21.482	
6,200.0	6,179.5	6,208.2	6,179.5	15.3	15.6	-180.00	-362.7	305.0	613.5	584.6	28.95	21.195	
6,300.0	6,279.5	6,308.2	6,279.5	15.5	15.8	-180.00	-362.7	305.0	613.5	584.2	29.34	20.915	
6,344.2	6,323.7	6,352.4	6,323.7	15.6	15.9	-90.07	-362.7	305.0	613.5	583.8	29.76	20.618	
6,400.0	6,379.4	6,408.1	6,379.4	15.7	16.0	-90.29	-362.7	305.0	613.6	583.6	29.95	20.483	
6,500.0	6,478.1	6,506.7	6,478.1	15.8	16.1	-91.72	-362.7	305.0	613.8	583.6	30.22	20.314	
6,600.0	6,573.9	6,606.3	6,577.6	15.8	16.3	-94.04	-362.7	302.4	615.2	584.8	30.39	20.242	
6,700.0	6,665.1	6,710.7	6,680.7	15.8	16.4	-96.43	-362.7	286.8	617.7	587.2	30.47	20.272	
6,800.0	6,750.2	6,819.4	6,784.8	15.8	16.4	-98.75	-362.8	255.7	621.2	590.7	30.51	20.360	
6,900.0	6,827.8	6,932.6	6,887.4	15.9	16.5	-100.94	-362.8	208.0	625.6	594.9	30.62	20.431	
7,000.0	6,896.5	7,050.7	6,985.6	16.1	16.5	-102.97	-362.8	142.6	630.3	599.4	30.94	20.374	
7,100.0	6,955.1	7,173.7	7,075.9	16.6	16.5	-104.76	-362.8	59.4	635.1	603.5	31.69	20.040	
7,200.0	7,002.7	7,301.2	7,154.3	17.6	16.7	-106.27	-362.8	-41.0	639.6	606.5	33.09	19.329	
7,300.0	7,038.3	7,432.7	7,216.4	18.9	17.8	-107.44	-362.8	-156.7	643.4	608.0	35.34	18.204	
7,400.0	7,061.5	7,567.3	7,258.5	20.5	19.7	-108.22	-362.8	-284.4	645.9	607.5	38.46	16.797	
7,500.0	7,071.8	7,692.9	7,277.6	22.3	21.9	-108.60	-362.8	-408.4	647.4	605.2	42.14	15.362	
7,600.0	7,072.2	7,805.1	7,287.4	24.3	24.1	-109.33	-362.8	-520.2	650.1	604.2	45.93	14.154	
7,700.0	7,071.9	7,915.1	7,288.5	26.4	26.4	-109.45	-362.8	-630.2	650.5	600.4	50.10	12.983	
7,800.0	7,071.6	8,015.1	7,288.4	28.6	28.7	-109.47	-362.8	-730.2	650.5	596.2	54.32	11.975	
7,900.0	7,071.4	8,115.1	7,288.4	30.9	31.0	-109.48	-362.8	-830.2	650.6	591.8	58.72	11.079	
8,000.0	7,071.1	8,215.1	7,288.3	33.3	33.4	-109.50	-362.8	-930.2	650.6	587.4	63.26	10.285	
8,100.0	7,070.9	8,315.1	7,288.2	35.8	35.9	-109.52	-362.8	-1,030.2	650.7	582.7	67.91	9.582	
8,200.0	7,070.6	8,415.1	7,288.2	38.3	38.4	-109.53	-362.9	-1,130.2	650.7	578.1	72.65	8.957	
8,300.0	7,070.3	8,515.1	7,288.1	40.9	40.9	-109.55	-362.9	-1,230.2	650.7	573.3	77.46	8.401	
8,400.0	7,070.1	8,615.1	7,288.0	43.4	43.5	-109.57	-362.9	-1,330.2	650.8	568.5	82.33	7.904	
8,500.0	7,069.8	8,715.1	7,287.9	46.0	46.1	-109.58	-362.9	-1,430.2	650.8	563.6	87.26	7.459	
8,600.0	7,069.6	8,815.1	7,287.9	48.7	48.7	-109.60	-362.9	-1,530.2	650.9	558.7	92.22	7.058	
8,700.0	7,069.3	8,915.1	7,287.8	51.3	51.4	-109.62	-362.9	-1,630.2	650.9	553.7	97.22	6.695	
8,800.0	7,069.0	9,015.1	7,287.7	54.0	54.0	-109.63	-362.9	-1,730.2	651.0	548.7	102.25	6.366	
8,900.0	7,068.8	9,115.1	7,287.7	56.7	56.7	-109.65	-362.9	-1,830.2	651.0	543.7	107.31	6.067	
9,000.0	7,068.5	9,215.1	7,287.6	59.4	59.4	-109.66	-362.9	-1,930.2	651.1	538.7	112.38	5.793	
9,100.0	7,068.2	9,315.1	7,287.5	62.0	62.1	-109.68	-362.9	-2,030.2	651.1	533.6	117.48	5.542	
9,200.0	7,068.0	9,415.1	7,287.5	64.8	64.8	-109.70	-362.9	-2,130.2	651.2	528.6	122.59	5.311	
9,300.0	7,067.7	9,515.1	7,287.4	67.5	67.5	-109.71	-362.9	-2,230.2	651.2	523.5	127.72	5.099	
9,400.0	7,067.5	9,615.1	7,287.3	70.2	70.3	-109.73	-362.9	-2,330.2	651.2	518.4	132.86	4.902	
9,500.0	7,067.2	9,715.1	7,287.2	72.9	73.0	-109.75	-362.9	-2,430.2	651.3	513.3	138.01	4.719	
9,600.0	7,066.9	9,815.1	7,287.2	75.7	75.7	-109.76	-363.0	-2,530.2	651.3	508.2	143.17	4.549	
9,700.0	7,066.7	9,915.1	7,287.1	78.4	78.5	-109.78	-363.0	-2,630.2	651.4	503.0	148.34	4.391	
9,800.0	7,066.4	10,015.1	7,287.0	81.1	81.2	-109.80	-363.0	-2,730.2	651.4	497.9	153.52	4.243	
9,900.0	7,066.1	10,115.1	7,287.0	83.9	84.0	-109.81	-363.0	-2,830.2	651.5	492.8	158.71	4.105	
10,000.0	7,065.9	10,215.1	7,286.9	86.6	86.7	-109.83	-363.0	-2,930.2	651.5	487.6	163.90	3.975	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Tarin 32X-HZ Pad Sec.32-T4N-R66W - Tarin 32Y-414 - Wellbore #1 - Plan #2 (5-14-14)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,100.0	7,065.6	10,315.1	7,286.8	89.4	89.5	-109.85	-363.0	-3,030.2	651.6	482.5	169.09	3.853	
10,200.0	7,065.4	10,415.1	7,286.8	92.2	92.2	-109.86	-363.0	-3,130.2	651.6	477.3	174.29	3.739	
10,300.0	7,065.1	10,515.1	7,286.7	94.9	95.0	-109.88	-363.0	-3,230.2	651.7	472.2	179.50	3.630	
10,400.0	7,064.8	10,615.1	7,286.6	97.7	97.7	-109.90	-363.0	-3,330.2	651.7	467.0	184.70	3.528	
10,500.0	7,064.6	10,715.1	7,286.6	100.5	100.5	-109.91	-363.0	-3,430.2	651.7	461.8	189.92	3.432	
10,600.0	7,064.3	10,815.1	7,286.5	103.2	103.3	-109.93	-363.0	-3,530.2	651.8	456.7	195.13	3.340	
10,700.0	7,064.1	10,915.1	7,286.4	106.0	106.1	-109.95	-363.0	-3,630.2	651.8	451.5	200.35	3.254	
10,800.0	7,063.8	11,015.1	7,286.3	108.8	108.8	-109.96	-363.0	-3,730.2	651.9	446.3	205.57	3.171	
10,900.0	7,063.5	11,115.1	7,286.3	111.5	111.6	-109.98	-363.0	-3,830.2	651.9	441.1	210.79	3.093	
11,000.0	7,063.3	11,215.1	7,286.2	114.3	114.4	-109.99	-363.1	-3,930.2	652.0	436.0	216.02	3.018	
11,100.0	7,063.0	11,315.1	7,286.1	117.1	117.2	-110.01	-363.1	-4,030.2	652.0	430.8	221.24	2.947	
11,200.0	7,062.7	11,415.1	7,286.1	119.9	119.9	-110.03	-363.1	-4,130.2	652.1	425.6	226.47	2.879	
11,300.0	7,062.5	11,515.1	7,286.0	122.7	122.7	-110.04	-363.1	-4,230.2	652.1	420.4	231.70	2.814	
11,400.0	7,062.2	11,615.1	7,285.9	125.4	125.5	-110.06	-363.1	-4,330.2	652.2	415.2	236.93	2.753	
11,500.0	7,062.0	11,715.1	7,285.9	128.2	128.3	-110.08	-363.1	-4,430.2	652.2	410.0	242.16	2.693	
11,600.0	7,061.7	11,815.1	7,285.8	131.0	131.1	-110.09	-363.1	-4,530.2	652.3	404.9	247.39	2.637	
11,700.0	7,061.4	11,915.1	7,285.7	133.8	133.8	-110.11	-363.1	-4,630.2	652.3	399.7	252.63	2.582	
11,800.0	7,061.2	12,015.1	7,285.6	136.6	136.6	-110.13	-363.1	-4,730.2	652.4	394.5	257.86	2.530	
11,900.0	7,060.9	12,115.1	7,285.6	139.4	139.4	-110.14	-363.1	-4,830.2	652.4	389.3	263.10	2.480	
12,000.0	7,060.7	12,215.1	7,285.5	142.1	142.2	-110.16	-363.1	-4,930.2	652.4	384.1	268.33	2.431	
12,100.0	7,060.4	12,315.1	7,285.4	144.9	145.0	-110.18	-363.1	-5,030.2	652.5	378.9	273.57	2.385	
12,200.0	7,060.1	12,415.1	7,285.4	147.7	147.8	-110.19	-363.1	-5,130.2	652.5	373.7	278.80	2.341	
12,300.0	7,059.9	12,515.1	7,285.3	150.5	150.6	-110.21	-363.1	-5,230.2	652.6	368.5	284.04	2.298	
12,400.0	7,059.6	12,615.1	7,285.2	153.3	153.4	-110.22	-363.2	-5,330.2	652.6	363.4	289.28	2.256	
12,500.0	7,059.3	12,715.1	7,285.2	156.1	156.1	-110.24	-363.2	-5,430.2	652.7	358.2	294.51	2.216	
12,600.0	7,059.1	12,815.1	7,285.1	158.9	158.9	-110.26	-363.2	-5,530.2	652.7	353.0	299.75	2.178	
12,700.0	7,058.8	12,915.1	7,285.0	161.7	161.7	-110.27	-363.2	-5,630.2	652.8	347.8	304.98	2.140	
12,800.0	7,058.6	13,015.1	7,284.9	164.5	164.5	-110.29	-363.2	-5,730.2	652.8	342.6	310.22	2.104	
12,900.0	7,058.3	13,115.1	7,284.9	167.3	167.3	-110.31	-363.2	-5,830.2	652.9	337.4	315.46	2.070	
13,000.0	7,058.0	13,215.1	7,284.8	170.1	170.1	-110.32	-363.2	-5,930.2	652.9	332.2	320.69	2.036	
13,100.0	7,057.8	13,315.1	7,284.7	172.8	172.9	-110.34	-363.2	-6,030.2	653.0	327.0	325.93	2.003	
13,200.0	7,057.5	13,415.1	7,284.7	175.6	175.7	-110.36	-363.2	-6,130.2	653.0	321.8	331.16	1.972	
13,300.0	7,057.2	13,515.1	7,284.6	178.4	178.5	-110.37	-363.2	-6,230.2	653.1	316.7	336.40	1.941	
13,400.0	7,057.0	13,615.1	7,284.5	181.2	181.3	-110.39	-363.2	-6,330.2	653.1	311.5	341.63	1.912	
13,500.0	7,056.7	13,715.1	7,284.5	184.0	184.1	-110.41	-363.2	-6,430.2	653.2	306.3	346.87	1.883	
13,600.0	7,056.5	13,815.1	7,284.4	186.8	186.9	-110.42	-363.2	-6,530.2	653.2	301.1	352.10	1.855	
13,700.0	7,056.2	13,915.1	7,284.3	189.6	189.7	-110.44	-363.2	-6,630.2	653.2	295.9	357.34	1.828	
13,800.0	7,055.9	14,015.1	7,284.2	192.4	192.5	-110.45	-363.3	-6,730.2	653.3	290.7	362.57	1.802	
13,900.0	7,055.7	14,115.1	7,284.2	195.2	195.3	-110.47	-363.3	-6,830.2	653.3	285.5	367.80	1.776	
14,000.0	7,055.4	14,215.1	7,284.1	198.0	198.1	-110.49	-363.3	-6,930.2	653.4	280.4	373.04	1.752	
14,100.0	7,055.2	14,315.1	7,284.0	200.8	200.9	-110.50	-363.3	-7,030.2	653.4	275.2	378.27	1.727	
14,129.5	7,055.1	14,344.6	7,284.0	201.6	201.7	-110.51	-363.3	-7,059.6	653.5	273.6	379.81	1.720	
14,158.7	7,055.0	14,368.2	7,284.0	202.4	202.3	-110.51	-363.3	-7,083.3	653.5	272.3	381.19	1.714	SF

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Tarin Existing Wells Sec.32-T4N-R66W - Benjamin 5 (Existing) - Wellbore #1 - Wellbore #1

Offset Site Error: 0.0 ft

Survey Program: 464-NS-GYRO-MS

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
11,100.0	7,063.0	7,136.3	7,046.7	117.1	19.5	90.02	527.7	-4,938.6	950.2	814.2	135.94	6.990	
11,200.0	7,062.7	7,136.2	7,046.7	119.9	19.5	90.02	527.7	-4,938.6	855.0	716.3	138.72	6.164	
11,300.0	7,062.5	7,136.2	7,046.7	122.7	19.5	90.02	527.7	-4,938.6	761.2	619.7	141.50	5.379	
11,400.0	7,062.2	7,136.2	7,046.7	125.4	19.5	90.01	527.7	-4,938.6	669.1	524.8	144.28	4.638	
11,500.0	7,062.0	7,136.2	7,046.7	128.2	19.5	90.01	527.7	-4,938.6	579.7	432.6	147.06	3.942	
11,600.0	7,061.7	7,136.2	7,046.7	131.0	19.5	90.01	527.7	-4,938.6	494.3	344.4	149.85	3.299	
11,700.0	7,061.4	7,136.2	7,046.7	133.8	19.5	90.01	527.7	-4,938.6	415.5	262.9	152.63	2.722	
11,800.0	7,061.2	7,136.2	7,046.7	136.6	19.5	90.01	527.7	-4,938.6	347.8	192.3	155.42	2.238	
11,900.0	7,060.9	7,136.2	7,046.7	139.4	19.5	90.01	527.7	-4,938.6	298.7	140.5	158.21	1.888	
12,000.0	7,060.7	7,136.2	7,046.7	142.1	19.5	90.01	527.7	-4,938.6	278.5	117.5	160.99	1.730	
12,008.5	7,060.6	7,136.2	7,046.7	142.4	19.5	90.01	527.7	-4,938.6	278.4	117.1	161.23	1.726	CC, ES, SF
12,100.0	7,060.4	7,136.2	7,046.7	144.9	19.5	90.01	527.7	-4,938.6	293.0	129.2	163.78	1.789	
12,200.0	7,060.1	7,136.2	7,046.7	147.7	19.5	90.01	527.7	-4,938.6	337.9	171.3	166.57	2.028	
12,300.0	7,059.9	7,136.2	7,046.7	150.5	19.5	90.01	527.7	-4,938.6	403.1	233.7	169.36	2.380	
12,400.0	7,059.6	7,136.2	7,046.7	153.3	19.5	90.00	527.7	-4,938.6	480.4	308.2	172.15	2.791	
12,500.0	7,059.3	7,136.2	7,046.6	156.1	19.5	90.00	527.7	-4,938.6	564.9	389.9	174.94	3.229	
12,600.0	7,059.1	7,136.2	7,046.6	158.9	19.5	90.00	527.7	-4,938.6	653.8	476.0	177.73	3.678	
12,700.0	7,058.8	7,136.2	7,046.6	161.7	19.5	90.00	527.7	-4,938.6	745.5	564.9	180.52	4.129	
12,800.0	7,058.6	7,136.2	7,046.6	164.5	19.5	90.00	527.7	-4,938.6	839.0	655.7	183.32	4.577	
12,900.0	7,058.3	7,136.2	7,046.6	167.3	19.5	90.00	527.7	-4,938.6	934.0	747.9	186.11	5.018	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Tarin Existing Wells Sec.32-T4N-R66W - Floyd 5 (Existing) - Wellbore #1 - Wellbore #1

Offset Site Error: 0.0 ft

Survey Program: 100-UNKNOWN

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-88.02	21.9	-633.5	634.2				
100.0	100.0	85.3	85.3	0.1	1.7	-88.03	21.7	-633.2	633.6	631.8	1.82	348.187	
200.0	200.0	181.0	181.0	0.3	3.8	-88.06	21.4	-632.8	633.2	629.0	4.13	153.158	
300.0	300.0	284.1	284.1	0.6	5.4	-88.07	21.3	-632.7	633.1	627.1	6.01	105.404	
378.9	378.9	359.9	359.9	0.7	6.5	-88.07	21.3	-632.4	632.8	625.5	7.24	87.387	
400.0	400.0	379.7	379.7	0.8	6.8	-88.08	21.2	-632.5	632.8	625.2	7.56	83.696	
500.0	500.0	481.1	481.1	1.0	9.3	-88.15	20.4	-632.7	633.0	622.7	10.29	61.493	
600.0	600.0	581.3	581.3	1.2	13.0	-88.22	19.7	-632.7	633.0	618.8	14.19	44.596	
619.0	619.0	600.0	600.0	1.3	13.7	-88.23	19.6	-632.6	632.9	618.0	14.96	42.307	
700.0	700.0	678.0	678.0	1.5	16.4	-88.27	19.1	-632.8	633.1	615.3	17.82	35.524	
800.0	800.0	780.1	780.1	1.7	20.0	-88.38	17.9	-633.3	633.5	611.9	21.65	29.267	
900.0	900.0	881.4	881.4	1.9	23.9	-88.49	16.7	-633.3	633.5	607.7	25.82	24.537	
938.9	938.9	919.9	919.9	2.0	25.4	-88.53	16.3	-633.3	633.5	606.1	27.42	23.105	
1,000.0	1,000.0	979.5	979.4	2.1	27.7	-88.59	15.6	-633.4	633.6	603.7	29.86	21.216	
1,100.0	1,100.0	1,080.6	1,080.5	2.4	31.7	-88.69	14.5	-633.7	633.8	599.8	34.02	18.632	
1,200.0	1,200.0	1,181.2	1,181.1	2.6	35.7	-88.77	13.6	-633.7	633.8	595.6	38.24	16.574	
1,214.4	1,214.4	1,195.6	1,195.6	2.6	36.2	-88.77	13.6	-633.7	633.8	595.0	38.85	16.313	
1,300.0	1,300.0	1,278.2	1,278.2	2.8	38.0	-88.80	13.3	-633.8	634.0	593.1	40.84	15.522	
1,400.0	1,400.0	1,376.1	1,376.0	3.0	39.7	-88.82	13.1	-634.5	634.6	591.9	42.69	14.865	
1,500.0	1,500.0	1,477.0	1,476.9	3.3	40.7	-88.85	12.7	-635.3	635.4	591.5	43.92	14.468	
1,600.0	1,600.0	1,576.3	1,576.2	3.5	41.7	-139.50	12.8	-635.9	637.4	592.2	45.12	14.126	
1,700.0	1,699.8	1,672.4	1,672.4	3.7	43.9	-139.77	12.3	-636.9	642.3	594.8	47.52	13.518	
1,800.0	1,799.5	1,770.4	1,770.3	3.9	45.8	-140.18	12.0	-638.3	650.5	601.0	49.51	13.139	
1,900.0	1,898.9	1,868.7	1,868.6	4.2	46.6	-140.72	12.4	-639.9	660.4	609.8	50.51	13.074	
2,000.0	1,998.3	1,965.6	1,965.5	4.4	47.0	-141.20	13.3	-641.7	670.5	619.4	51.10	13.120	
2,100.0	2,097.8	2,062.8	2,062.6	4.6	47.5	-141.65	14.4	-643.9	681.1	629.2	51.82	13.144	
2,200.0	2,197.2	2,156.2	2,156.0	4.9	48.3	-142.05	15.8	-646.5	692.1	639.3	52.83	13.100	
2,300.0	2,296.6	2,253.0	2,252.7	5.2	49.8	-142.45	17.1	-650.0	704.1	649.5	54.55	12.906	
2,400.0	2,396.1	2,352.0	2,351.7	5.4	52.2	-142.91	17.6	-653.4	716.0	658.9	57.12	12.535	
2,500.0	2,495.5	2,449.6	2,449.2	5.7	55.1	-143.38	17.8	-657.0	728.2	668.0	60.22	12.092	
2,600.0	2,594.9	2,552.0	2,551.5	6.0	58.5	-143.90	17.4	-660.7	740.4	676.5	63.88	11.589	
2,700.0	2,694.4	2,650.5	2,650.0	6.2	62.1	-144.40	16.9	-663.8	752.1	684.5	67.65	11.118	
2,800.0	2,793.8	2,747.2	2,746.6	6.5	65.8	-144.90	16.0	-667.3	764.5	693.0	71.48	10.694	
2,900.0	2,893.2	2,851.3	2,850.7	6.8	69.8	-145.44	14.8	-670.8	776.6	700.9	75.72	10.257	
3,000.0	2,992.7	2,955.4	2,954.7	7.1	73.9	-145.98	13.5	-673.4	788.1	708.0	80.02	9.849	
3,100.0	3,092.1	3,054.9	3,054.1	7.3	77.8	-146.52	11.7	-675.5	799.2	715.1	84.15	9.498	
3,200.0	3,191.5	3,161.4	3,160.6	7.6	82.0	-147.07	10.0	-677.6	810.3	721.8	88.50	9.156	
3,300.0	3,291.0	3,267.5	3,266.8	7.9	85.6	-147.59	8.6	-678.4	820.1	727.8	92.37	8.879	
3,400.0	3,390.4	3,370.7	3,369.9	8.2	88.4	-148.12	6.8	-678.6	829.6	734.2	95.32	8.703	
3,500.0	3,489.8	3,460.9	3,460.1	8.5	90.9	-148.53	5.8	-678.9	839.1	741.1	98.04	8.559	
3,600.0	3,589.3	3,554.7	3,553.9	8.7	94.2	-148.93	4.9	-680.6	850.1	748.5	101.54	8.371	
3,700.0	3,688.7	3,652.7	3,651.9	9.0	98.0	-149.36	3.5	-682.2	861.1	755.5	105.59	8.155	
3,800.0	3,788.1	3,749.4	3,748.5	9.3	101.8	-149.76	2.4	-684.3	872.5	762.9	109.60	7.961	
3,900.0	3,887.6	3,850.9	3,850.0	9.6	105.8	-150.21	0.7	-686.4	884.1	770.2	113.83	7.766	
4,000.0	3,987.0	3,950.3	3,949.4	9.9	109.8	-150.62	-0.9	-688.1	895.2	777.2	118.00	7.587	
4,100.0	4,086.4	4,052.3	4,051.3	10.2	113.7	-151.07	-2.9	-689.9	906.7	784.5	122.15	7.423	
4,200.0	4,185.9	4,159.7	4,158.8	10.5	117.7	-151.52	-4.8	-690.9	917.3	790.9	126.34	7.261	
4,300.0	4,285.3	4,256.2	4,255.2	10.8	121.4	-151.87	-5.7	-691.6	927.5	797.3	130.18	7.125	
4,400.0	4,384.7	4,355.7	4,354.7	11.1	125.3	-152.23	-6.8	-692.8	938.3	804.0	134.31	6.986	
4,500.0	4,484.2	4,454.0	4,453.0	11.3	129.2	-152.55	-7.4	-693.7	948.7	810.3	138.44	6.853	
4,600.0	4,583.6	4,551.2	4,550.1	11.6	133.0	-152.86	-8.2	-695.0	959.7	817.3	142.44	6.738	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Tarin Existing Wells Sec.32-T4N-R66W - Floyd 5 (Existing) - Wellbore #1 - Wellbore #1

Offset Site Error: 0.0 ft

Survey Program: 100-UNKNOWN

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4,700.0	4,683.0	4,644.6	4,643.6	11.9	136.3	-153.13	-8.5	-696.5	970.8	824.8	145.94	6.652	
4,800.0	4,782.5	4,735.8	4,734.7	12.2	139.1	-153.34	-8.3	-699.1	983.0	834.0	149.00	6.597	
4,900.0	4,881.9	4,836.2	4,835.1	12.5	142.1	-153.57	-8.1	-702.0	995.3	843.1	152.19	6.540	
6,600.0	6,573.9	6,571.5	6,570.1	15.8	117.4	-16.08	-4.3	-690.9	982.2	856.3	125.83	7.805	
6,700.0	6,665.1	6,661.8	6,660.3	15.8	114.7	-17.78	-4.2	-689.4	941.4	823.4	117.94	7.982	
6,800.0	6,750.2	6,744.8	6,743.3	15.8	112.7	-20.36	-4.9	-688.0	889.9	780.1	109.84	8.102	
6,900.0	6,827.8	6,821.4	6,820.0	15.9	111.0	-24.16	-5.3	-686.8	828.7	726.5	102.22	8.107	
7,000.0	6,896.5	6,889.7	6,888.2	16.1	109.6	-29.80	-5.8	-685.7	759.1	662.3	96.82	7.840	
7,100.0	6,955.1	6,948.7	6,947.2	16.6	108.2	-38.13	-6.3	-684.5	682.6	586.2	96.46	7.076	
7,200.0	7,002.7	6,996.3	6,994.8	17.6	107.1	-49.85	-6.4	-683.6	601.3	497.7	103.62	5.803	
7,300.0	7,038.3	7,029.6	7,028.1	18.9	106.1	-64.18	-6.4	-682.9	517.8	402.7	115.10	4.499	
7,400.0	7,061.5	7,050.6	7,049.1	20.5	105.4	-78.42	-6.4	-682.5	435.8	311.9	123.89	3.517	
7,500.0	7,071.8	7,058.9	7,057.4	22.3	105.1	-88.90	-6.4	-682.4	360.1	232.8	127.34	2.828	
7,600.0	7,072.2	7,057.5	7,056.0	24.3	105.2	-90.72	-6.4	-682.4	298.7	169.4	129.29	2.310	
7,700.0	7,071.9	7,055.4	7,053.9	26.4	105.2	-90.26	-6.4	-682.5	262.2	130.7	131.50	1.994	
7,752.5	7,071.8	7,054.4	7,052.8	27.5	105.3	-90.02	-6.4	-682.5	256.9	124.2	132.72	1.936	CC, ES, SF
7,800.0	7,071.6	7,053.4	7,051.9	28.6	105.3	-89.80	-6.4	-682.5	261.2	127.4	133.82	1.952	
7,900.0	7,071.4	7,051.3	7,049.8	30.9	105.4	-89.33	-6.4	-682.5	296.2	160.0	136.23	2.174	
8,000.0	7,071.1	7,049.2	7,047.7	33.3	105.4	-88.86	-6.4	-682.6	356.7	218.0	138.70	2.572	
8,100.0	7,070.9	7,047.1	7,045.5	35.8	105.5	-88.39	-6.4	-682.6	432.1	290.9	141.23	3.060	
8,200.0	7,070.6	7,044.9	7,043.4	38.3	105.6	-87.92	-6.4	-682.6	515.9	372.1	143.78	3.588	
8,300.0	7,070.3	7,042.8	7,041.3	40.9	105.6	-87.44	-6.4	-682.7	604.7	458.3	146.37	4.131	
8,400.0	7,070.1	7,040.6	7,039.1	43.4	105.7	-86.96	-6.4	-682.7	696.5	547.5	148.98	4.675	
8,500.0	7,069.8	7,038.5	7,036.9	46.0	105.8	-86.47	-6.4	-682.8	790.3	638.7	151.60	5.213	
8,600.0	7,069.6	7,036.3	7,034.8	48.7	105.8	-85.99	-6.4	-682.8	885.4	731.2	154.23	5.741	
8,700.0	7,069.3	7,034.1	7,032.6	51.3	105.9	-85.50	-6.4	-682.9	981.5	824.7	156.87	6.257	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Tarin Existing Wells Sec.32-T4N-R66W - Glen 44-32 (Existing) - Wellbore #1 - Wellbore #1

Offset Site Error: 0.0 ft

Survey Program: 100-UNKNOWN

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-156.95	-262.3	-111.6	285.4				
100.0	100.0	85.8	85.8	0.1	1.7	-156.86	-262.3	-112.1	285.3	283.4	1.83	155.962	
200.0	200.0	184.7	184.7	0.3	5.4	-156.62	-262.4	-113.4	285.9	280.2	5.69	50.198	
300.0	300.0	287.5	287.5	0.6	9.0	-156.39	-262.3	-114.7	286.3	276.7	9.57	29.914	
400.0	400.0	388.0	388.0	0.8	12.5	-156.13	-261.5	-115.7	286.0	272.7	13.27	21.543	
451.0	451.0	438.0	438.0	0.9	14.3	-155.98	-261.1	-116.3	285.8	270.6	15.23	18.768	
500.0	500.0	485.8	485.8	1.0	16.1	-155.87	-261.0	-116.9	286.0	268.8	17.14	16.688	
600.0	600.0	587.4	587.4	1.2	20.0	-155.59	-260.6	-118.3	286.2	265.0	21.23	13.482	
700.0	700.0	689.9	689.9	1.5	23.0	-155.32	-259.5	-119.3	285.6	261.2	24.44	11.689	
800.0	800.0	787.7	787.6	1.7	25.9	-155.15	-258.6	-119.8	285.0	257.4	27.57	10.335	
900.0	900.0	888.9	888.8	1.9	29.7	-154.88	-257.7	-120.8	284.6	253.0	31.59	9.010	
1,000.0	1,000.0	988.0	987.9	2.1	33.5	-154.61	-256.7	-121.8	284.1	248.5	35.58	7.985	
1,100.0	1,100.0	1,088.9	1,088.8	2.4	37.1	-154.46	-255.9	-122.3	283.7	244.3	39.41	7.199	
1,200.0	1,200.0	1,188.5	1,188.4	2.6	40.6	-154.28	-255.0	-122.9	283.1	239.9	43.19	6.555	
1,300.0	1,300.0	1,288.2	1,288.1	2.8	44.5	-154.05	-254.1	-123.7	282.6	235.4	47.27	5.980	
1,400.0	1,400.0	1,389.5	1,389.4	3.0	48.4	-153.75	-253.0	-124.7	282.1	230.6	51.44	5.483	
1,500.0	1,500.0	1,488.7	1,488.6	3.3	52.3	-153.39	-251.5	-126.0	281.3	225.7	55.55	5.064	
1,516.5	1,516.5	1,505.1	1,505.0	3.3	53.0	156.11	-251.3	-126.2	281.3	225.0	56.26	4.999	CC
1,600.0	1,600.0	1,588.7	1,588.6	3.5	56.3	156.52	-250.2	-127.3	282.4	222.6	59.73	4.727	ES
1,700.0	1,699.8	1,687.8	1,687.6	3.7	60.2	157.25	-249.0	-128.6	286.7	222.9	63.79	4.495	
1,800.0	1,799.5	1,787.2	1,787.0	3.9	64.2	158.25	-247.9	-130.3	294.6	226.8	67.80	4.345	
1,900.0	1,898.9	1,887.5	1,887.3	4.2	68.2	159.39	-246.6	-132.0	304.2	232.2	71.99	4.225	
2,000.0	1,998.3	1,986.6	1,986.4	4.4	72.2	160.50	-245.0	-133.8	313.7	237.6	76.15	4.120	
2,100.0	2,097.8	2,088.0	2,087.8	4.6	76.2	161.62	-243.1	-135.8	323.2	242.9	80.36	4.022	
2,200.0	2,197.2	2,189.2	2,188.8	4.9	79.9	162.63	-240.8	-137.2	332.2	247.9	84.26	3.942	
2,300.0	2,296.6	2,293.6	2,293.3	5.2	82.6	163.44	-238.1	-137.3	340.3	253.0	87.23	3.901	
2,400.0	2,396.1	2,393.0	2,392.6	5.4	85.1	164.21	-234.8	-137.1	347.6	257.8	89.89	3.867	
2,500.0	2,495.5	2,495.4	2,494.9	5.7	87.7	165.03	-231.0	-137.0	354.8	262.0	92.79	3.824	
2,600.0	2,594.9	2,593.6	2,593.1	6.0	90.0	165.69	-227.5	-136.3	361.8	266.5	95.30	3.797	
2,700.0	2,694.4	2,691.9	2,691.3	6.2	92.5	166.32	-224.3	-135.8	369.3	271.2	98.00	3.768	
2,800.0	2,793.8	2,792.5	2,791.9	6.5	95.3	166.96	-221.1	-135.4	376.8	275.8	101.00	3.731	
2,900.0	2,893.2	2,892.0	2,891.3	6.8	97.9	167.55	-217.8	-134.9	384.3	280.5	103.79	3.702	
3,000.0	2,992.7	2,993.8	2,993.0	7.1	100.1	168.04	-214.7	-133.7	391.5	285.3	106.25	3.685	
3,100.0	3,092.1	3,093.9	3,093.1	7.3	101.5	168.40	-211.8	-131.7	398.5	290.6	107.88	3.694	
3,200.0	3,191.5	3,189.9	3,189.1	7.6	101.5	168.55	-210.1	-129.1	405.8	297.7	108.11	3.754	
3,300.0	3,291.0	3,285.1	3,284.2	7.9	101.6	168.70	-209.2	-127.2	414.2	305.8	108.40	3.821	
3,400.0	3,390.4	3,379.5	3,378.6	8.2	103.4	168.98	-208.5	-126.7	423.7	313.3	110.47	3.836	
3,500.0	3,489.8	3,474.0	3,473.1	8.5	106.2	169.38	-208.0	-127.7	434.5	321.0	113.48	3.829	
3,600.0	3,589.3	3,567.3	3,566.3	8.7	108.5	169.89	-207.7	-130.2	446.4	330.4	116.00	3.848	
3,700.0	3,688.7	3,663.6	3,662.5	9.0	110.4	170.45	-208.0	-133.9	459.6	341.5	118.09	3.891	
3,800.0	3,788.1	3,760.2	3,759.1	9.3	112.2	171.00	-208.3	-138.0	473.1	352.9	120.19	3.936	
3,900.0	3,887.6	3,856.3	3,855.1	9.6	114.3	171.65	-208.4	-143.2	487.3	364.8	122.49	3.978	
4,000.0	3,987.0	3,954.6	3,953.2	9.9	116.5	172.30	-208.6	-149.0	501.9	377.1	124.84	4.021	
4,100.0	4,086.4	4,052.9	4,051.3	10.2	118.6	172.83	-209.3	-154.2	516.6	389.4	127.17	4.062	
4,200.0	4,185.9	4,152.8	4,151.0	10.5	121.1	173.46	-209.4	-160.3	531.4	401.6	129.85	4.093	
4,300.0	4,285.3	4,253.6	4,251.7	10.8	123.9	174.08	-208.9	-166.4	545.8	412.9	132.91	4.107	
4,400.0	4,384.7	4,354.9	4,352.8	11.1	127.0	174.67	-208.3	-172.2	560.0	423.8	136.19	4.112	
4,500.0	4,484.2	4,457.8	4,455.6	11.3	130.4	175.25	-207.1	-177.8	573.6	433.8	139.79	4.103	
4,600.0	4,583.6	4,563.6	4,561.2	11.6	134.3	175.85	-205.1	-183.1	586.5	442.6	143.85	4.077	
4,700.0	4,683.0	4,668.1	4,665.6	11.9	138.4	176.42	-202.1	-187.4	598.2	450.0	148.13	4.038	
4,800.0	4,782.5	4,773.6	4,771.0	12.2	142.6	176.92	-199.0	-190.7	609.1	456.5	152.53	3.993	

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Tarin Existing Wells Sec.32-T4N-R66W - Glen 44-32 (Existing) - Wellbore #1 - Wellbore #1

Offset Site Error: 0.0 ft

Survey Program: 100-UNKNOWN

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4,900.0	4,881.9	4,874.7	4,871.9	12.5	146.6	177.42	-195.1	-193.6	619.2	462.4	156.76	3.950	
5,000.0	4,981.3	4,974.0	4,971.2	12.8	150.5	177.82	-191.9	-195.8	629.3	468.5	160.90	3.912	
5,100.0	5,080.8	5,073.6	5,070.7	13.1	154.3	178.06	-189.9	-197.0	639.5	474.6	164.90	3.878	
5,200.0	5,180.2	5,180.3	5,177.4	13.4	156.9	178.18	-188.5	-197.0	649.3	481.5	167.77	3.870	
5,300.0	5,279.8	5,276.1	5,273.2	13.6	158.9	178.27	-187.1	-196.3	657.2	486.8	170.40	3.857	
5,400.0	5,379.6	5,380.4	5,377.5	13.8	161.6	178.41	-185.3	-196.4	662.0	488.5	173.55	3.815	
5,500.0	5,479.5	5,481.1	5,478.2	14.0	163.2	178.48	-183.5	-195.5	662.7	487.2	175.45	3.777	
5,600.0	5,579.5	5,585.0	5,582.1	14.2	163.7	-130.93	-182.0	-194.1	660.8	483.4	177.35	3.726	
5,700.0	5,679.5	5,678.3	5,675.3	14.4	162.6	-130.98	-181.2	-192.3	658.8	482.4	176.38	3.735	
5,800.0	5,779.5	5,780.6	5,777.6	14.6	159.9	-131.12	-181.5	-190.2	657.5	483.6	173.89	3.781	
5,900.0	5,879.5	5,874.4	5,871.4	14.7	156.8	-131.31	-182.3	-187.8	656.1	485.1	170.98	3.837	
5,977.5	5,957.1	5,947.1	5,944.1	14.9	154.1	-131.43	-183.2	-186.8	655.9	487.5	168.43	3.894	
6,000.0	5,979.5	5,968.5	5,965.5	14.9	153.2	-131.46	-183.5	-186.5	655.9	488.3	167.64	3.913	
6,100.0	6,079.5	6,072.8	6,069.8	15.1	149.7	-131.57	-184.5	-185.7	656.0	491.7	164.30	3.993	
6,182.9	6,162.4	6,152.4	6,149.4	15.3	147.2	-131.63	-184.7	-185.0	655.6	493.6	162.00	4.047	
6,200.0	6,179.5	6,168.0	6,164.9	15.3	146.8	-131.65	-184.9	-184.9	655.6	494.0	161.57	4.058	
6,300.0	6,279.5	6,262.7	6,259.7	15.5	143.6	-131.75	-186.2	-184.6	656.3	497.7	158.64	4.137	
6,400.0	6,379.4	6,363.2	6,360.1	15.7	140.2	-42.13	-188.0	-184.6	655.0	501.1	153.92	4.255	
6,500.0	6,478.1	6,468.5	6,465.4	15.8	136.4	-43.86	-189.5	-183.9	643.9	495.3	148.59	4.334	
6,600.0	6,573.9	6,572.7	6,569.6	15.8	133.5	-47.12	-190.2	-182.3	622.8	479.4	143.35	4.344	
6,700.0	6,665.1	6,672.6	6,669.5	15.8	132.5	-52.06	-189.2	-180.2	592.7	452.5	140.20	4.228	
6,800.0	6,750.2	6,761.8	6,758.7	15.8	132.9	-58.64	-187.2	-177.8	556.1	416.3	139.86	3.976	
6,900.0	6,827.8	6,836.9	6,833.6	15.9	134.1	-66.34	-184.7	-176.2	516.7	374.3	142.32	3.630	
7,000.0	6,896.5	6,900.0	6,896.7	16.1	135.5	-74.51	-182.9	-175.3	479.4	332.7	146.71	3.267	
7,100.0	6,955.1	6,953.7	6,950.4	16.6	136.8	-82.32	-181.7	-174.9	449.5	298.1	151.46	2.968	
7,200.0	7,002.7	7,000.0	6,996.7	17.6	138.0	-88.93	-181.0	-174.7	433.2	278.0	155.18	2.791	
7,239.4	7,018.2	7,012.4	7,009.1	18.1	138.2	-90.57	-180.9	-174.6	431.6	275.6	156.03	2.766 SF	
7,300.0	7,038.3	7,031.8	7,028.5	18.9	138.4	-92.71	-180.8	-174.5	435.4	278.3	157.14	2.771	
7,400.0	7,061.5	7,053.8	7,050.5	20.5	138.7	-93.73	-180.6	-174.4	458.7	299.7	158.95	2.886	
7,500.0	7,071.8	7,063.0	7,059.7	22.3	138.8	-91.40	-180.5	-174.3	501.3	340.4	160.84	3.117	
7,600.0	7,072.2	7,062.6	7,059.3	24.3	138.8	-89.90	-180.5	-174.3	558.9	396.3	162.65	3.436	
7,700.0	7,071.9	7,061.7	7,058.4	26.4	138.8	-89.77	-180.5	-174.3	627.3	462.6	164.74	3.808	
7,800.0	7,071.6	7,060.7	7,057.4	28.6	138.8	-89.64	-180.5	-174.3	703.3	536.4	166.95	4.213	
7,900.0	7,071.4	7,059.7	7,056.4	30.9	138.7	-89.51	-180.6	-174.3	784.7	615.5	169.25	4.636	
8,000.0	7,071.1	7,058.8	7,055.5	33.3	138.7	-89.39	-180.6	-174.3	870.0	698.4	171.62	5.069	
8,100.0	7,070.9	7,057.9	7,054.6	35.8	138.7	-89.26	-180.6	-174.4	958.1	784.1	174.06	5.505	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Tarin Existing Wells Sec.32-T4N-R66W - Nicholas 5 (Existing) - Wellbore #1 - Wellbore #1

Offset Site Error: 0.0 ft

Survey Program: 100-NS-GYRO-MS

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
12,600.0	7,059.1	7,096.1	7,046.1	158.9	16.4	91.79	424.2	-6,454.1	940.5	765.5	175.05	5.373	
12,700.0	7,058.8	7,096.2	7,046.2	161.7	16.4	91.80	424.2	-6,454.1	842.5	664.6	177.84	4.737	
12,800.0	7,058.6	7,096.2	7,046.2	164.5	16.4	91.81	424.2	-6,454.1	744.9	564.3	180.63	4.124	
12,900.0	7,058.3	7,096.2	7,046.2	167.3	16.4	91.82	424.2	-6,454.1	648.2	464.8	183.42	3.534	
13,000.0	7,058.0	7,096.3	7,046.3	170.1	16.4	91.84	424.2	-6,454.1	552.6	366.4	186.21	2.968	
13,100.0	7,057.8	7,096.3	7,046.3	172.8	16.4	91.85	424.2	-6,454.1	458.8	269.8	189.00	2.428	
13,200.0	7,057.5	7,096.4	7,046.4	175.6	16.4	91.86	424.2	-6,454.1	368.4	176.6	191.79	1.921	
13,300.0	7,057.2	7,096.4	7,046.4	178.4	16.4	91.87	424.1	-6,454.1	284.5	89.9	194.58	1.462	Level 3
13,400.0	7,057.0	7,096.4	7,046.4	181.2	16.4	91.89	424.1	-6,454.1	214.8	17.4	197.37	1.088	Level 2
13,500.0	7,056.7	7,096.5	7,046.5	184.0	16.4	91.90	424.1	-6,454.1	177.0	-23.2	200.16	0.884	Level 1
13,524.0	7,056.7	7,096.5	7,046.5	184.7	16.4	91.90	424.1	-6,454.1	175.3	-25.5	200.83	0.873	Level 1, CC, ES, SF
13,600.0	7,056.5	7,096.5	7,046.5	186.8	16.4	91.91	424.1	-6,454.1	191.1	-11.9	202.96	0.941	Level 1
13,700.0	7,056.2	7,096.6	7,046.6	189.6	16.4	91.93	424.1	-6,454.1	248.4	42.6	205.75	1.207	Level 2
13,800.0	7,055.9	7,096.6	7,046.6	192.4	16.4	91.94	424.1	-6,454.1	326.9	118.4	208.54	1.568	
13,900.0	7,055.7	7,096.6	7,046.6	195.2	16.4	91.96	424.1	-6,454.1	414.8	203.5	211.33	1.963	
14,000.0	7,055.4	7,096.7	7,046.7	198.0	16.4	91.97	424.1	-6,454.1	507.2	293.1	214.13	2.369	
14,100.0	7,055.2	7,096.7	7,046.7	200.8	16.4	91.99	424.1	-6,454.1	602.1	385.1	216.92	2.775	
14,158.7	7,055.0	7,096.8	7,046.8	202.4	16.4	91.99	424.1	-6,454.1	658.4	439.8	218.56	3.012	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Tarin Existing Wells Sec.32-T4N-R66W - UPRR 41 PAN AM "J" 1 (P&A) - Wellbore #1 - Wellbore #1

Offset Site Error: 0.0 ft

Survey Program: 7970-UNKNOWN

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
12,100.0	7,060.4	7,046.4	7,046.4	144.9	140.9	-91.47	150.1	-6,000.3	975.3	689.5	285.78	3.413	
12,200.0	7,060.1	7,046.1	7,046.1	147.7	140.9	-91.32	150.1	-6,000.3	875.8	587.3	288.58	3.035	
12,300.0	7,059.9	7,045.9	7,045.9	150.5	140.9	-91.17	150.1	-6,000.3	776.6	485.2	291.37	2.665	
12,400.0	7,059.6	7,045.6	7,045.6	153.3	140.9	-91.02	150.1	-6,000.3	677.5	383.3	294.17	2.303	
12,500.0	7,059.3	7,045.3	7,045.3	156.1	140.9	-90.86	150.1	-6,000.3	578.8	281.8	296.96	1.949	
12,600.0	7,059.1	7,045.1	7,045.1	158.9	140.9	-90.71	150.1	-6,000.3	480.5	180.8	299.76	1.603	
12,700.0	7,058.8	7,044.8	7,044.8	161.7	140.9	-90.56	150.1	-6,000.3	383.2	80.7	302.55	1.267	Level 3
12,800.0	7,058.6	7,044.6	7,044.6	164.5	140.9	-90.41	150.1	-6,000.3	287.8	-17.6	305.34	0.943	Level 1
12,900.0	7,058.3	7,044.3	7,044.3	167.3	140.9	-90.26	150.1	-6,000.3	196.9	-111.2	308.13	0.639	Level 1
13,000.0	7,058.0	7,044.0	7,044.0	170.1	140.9	-90.11	150.1	-6,000.3	121.4	-189.6	310.92	0.390	Level 1
13,070.2	7,057.8	7,043.8	7,043.8	172.0	140.9	-90.00	150.1	-6,000.3	99.0	-213.9	312.88	0.316	Level 1, CC, ES, SF
13,100.0	7,057.8	7,043.8	7,043.8	172.8	140.9	-89.95	150.1	-6,000.3	103.3	-210.4	313.71	0.329	Level 1
13,200.0	7,057.5	7,043.5	7,043.5	175.6	140.9	-89.80	150.1	-6,000.3	163.2	-153.3	316.49	0.516	Level 1
13,300.0	7,057.2	7,043.2	7,043.2	178.4	140.9	-89.65	150.1	-6,000.3	250.2	-69.1	319.28	0.784	Level 1
13,400.0	7,057.0	7,043.0	7,043.0	181.2	140.9	-89.50	150.1	-6,000.3	344.3	22.2	322.06	1.069	Level 2
13,500.0	7,056.7	7,042.7	7,042.7	184.0	140.9	-89.35	150.1	-6,000.3	441.0	116.2	324.84	1.358	Level 3
13,600.0	7,056.5	7,042.5	7,042.5	186.8	140.8	-89.20	150.1	-6,000.3	538.9	211.3	327.61	1.645	
13,700.0	7,056.2	7,042.2	7,042.2	189.6	140.8	-89.05	150.1	-6,000.3	637.5	307.1	330.39	1.929	
13,800.0	7,055.9	7,041.9	7,041.9	192.4	140.8	-88.89	150.1	-6,000.3	736.4	403.3	333.16	2.210	
13,900.0	7,055.7	7,041.7	7,041.7	195.2	140.8	-88.74	150.1	-6,000.3	835.6	499.7	335.93	2.488	
14,000.0	7,055.4	7,041.4	7,041.4	198.0	140.8	-88.59	150.1	-6,000.3	935.0	596.3	338.70	2.761	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Tarin Existing Wells Sec.32-T4N-R66W - Wolf 44-31 (Existing) - Wellbore #1 - Wellbore #1

Offset Site Error: 0.0 ft

Survey Program: 100-NS-GYRO-MS

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
11,900.0	7,060.9	7,042.1	7,040.9	139.4	14.1	-89.40	2.8	-5,745.5	948.1	794.6	153.45	6.178	
12,000.0	7,060.7	7,042.7	7,041.5	142.1	14.1	-89.52	2.8	-5,745.5	851.9	695.7	156.25	5.452	
12,100.0	7,060.4	7,043.2	7,042.0	144.9	14.1	-89.65	2.8	-5,745.5	756.8	597.7	159.04	4.758	
12,200.0	7,060.1	7,043.8	7,042.6	147.7	14.1	-89.78	2.8	-5,745.5	663.0	501.2	161.84	4.097	
12,300.0	7,059.9	7,044.3	7,043.1	150.5	14.1	-89.90	2.8	-5,745.5	571.4	406.7	164.63	3.471	
12,400.0	7,059.6	7,044.8	7,043.6	153.3	14.1	-90.03	2.8	-5,745.5	483.1	315.6	167.42	2.885	
12,500.0	7,059.3	7,045.4	7,044.2	156.1	14.1	-90.15	2.8	-5,745.5	400.3	230.1	170.22	2.352	
12,600.0	7,059.1	7,045.9	7,044.7	158.9	14.1	-90.27	2.8	-5,745.5	327.3	154.3	173.01	1.892	
12,700.0	7,058.8	7,046.4	7,045.2	161.7	14.1	-90.39	2.8	-5,745.5	272.1	96.3	175.80	1.548	
12,800.0	7,058.6	7,046.9	7,045.7	164.5	14.2	-90.51	2.8	-5,745.5	246.8	68.2	178.60	1.382	Level 3
12,815.6	7,058.5	7,047.0	7,045.8	164.9	14.2	-90.53	2.8	-5,745.5	246.3	67.3	179.03	1.376	Level 3, CC, ES, SF
12,900.0	7,058.3	7,047.4	7,046.2	167.3	14.2	-90.62	2.8	-5,745.5	260.4	79.0	181.39	1.435	Level 3
13,000.0	7,058.0	7,047.9	7,046.7	170.1	14.2	-90.74	2.8	-5,745.6	307.7	123.5	184.18	1.671	
13,100.0	7,057.8	7,048.4	7,047.2	172.8	14.2	-90.86	2.8	-5,745.6	376.3	189.3	186.98	2.012	
13,200.0	7,057.5	7,048.9	7,047.7	175.6	14.2	-90.97	2.9	-5,745.6	456.6	266.8	189.77	2.406	
13,300.0	7,057.2	7,049.4	7,048.2	178.4	14.2	-91.08	2.9	-5,745.6	543.5	350.9	192.56	2.822	
13,400.0	7,057.0	7,049.9	7,048.7	181.2	14.2	-91.20	2.9	-5,745.6	634.2	438.9	195.35	3.247	
13,500.0	7,056.7	7,050.3	7,049.1	184.0	14.2	-91.31	2.9	-5,745.6	727.4	529.3	198.14	3.671	
13,600.0	7,056.5	7,050.8	7,049.6	186.8	14.2	-91.42	2.9	-5,745.6	822.2	621.3	200.93	4.092	
13,700.0	7,056.2	7,051.3	7,050.1	189.6	14.2	-91.53	2.9	-5,745.6	918.1	714.4	203.72	4.507	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Tarin Existing Wells Sec.32-T4N-R66W - Wolfe 1 (Existing) - Wellbore #1 - Wellbore #1

Offset Site Error: 0.0 ft

Survey Program: 100-NS-GYRO-MS

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
9,100.0	7,068.2	7,047.4	7,046.2	62.0	13.8	-89.87	-115.4	-2,893.0	937.2	861.4	75.85	12.357	
9,200.0	7,068.0	7,047.1	7,045.8	64.8	13.8	-89.82	-115.4	-2,893.0	846.0	767.5	78.55	10.770	
9,300.0	7,067.7	7,046.7	7,045.5	67.5	13.8	-89.77	-115.4	-2,893.0	757.0	675.8	81.27	9.315	
9,400.0	7,067.5	7,046.4	7,045.2	70.2	13.8	-89.72	-115.4	-2,893.0	671.2	587.2	83.99	7.991	
9,500.0	7,067.2	7,046.1	7,044.8	72.9	13.8	-89.66	-115.4	-2,893.0	589.8	503.1	86.72	6.801	
9,600.0	7,066.9	7,045.7	7,044.5	75.7	13.8	-89.61	-115.4	-2,893.0	515.0	425.6	89.46	5.757	
9,700.0	7,066.7	7,045.4	7,044.1	78.4	13.8	-89.55	-115.4	-2,893.0	450.2	358.0	92.20	4.883	
9,800.0	7,066.4	7,045.0	7,043.8	81.1	13.8	-89.50	-115.4	-2,893.0	400.0	305.1	94.94	4.214	
9,900.0	7,066.1	7,044.7	7,043.4	83.9	13.8	-89.44	-115.4	-2,893.0	370.7	273.0	97.69	3.795	
9,963.1	7,066.0	7,044.4	7,043.2	85.6	13.8	-89.41	-115.3	-2,893.0	365.3	265.9	99.42	3.674	CC, ES
10,000.0	7,065.9	7,044.3	7,043.1	86.6	13.8	-89.39	-115.3	-2,893.0	367.1	266.7	100.44	3.655	SF
10,100.0	7,065.6	7,043.9	7,042.7	89.4	13.8	-89.33	-115.3	-2,893.0	390.1	286.9	103.19	3.780	
10,200.0	7,065.4	7,043.6	7,042.3	92.2	13.8	-89.27	-115.3	-2,893.0	435.4	329.4	105.95	4.109	
10,300.0	7,065.1	7,043.2	7,042.0	94.9	13.8	-89.21	-115.3	-2,893.0	496.9	388.2	108.71	4.571	
10,400.0	7,064.8	7,042.8	7,041.6	97.7	13.8	-89.15	-115.3	-2,893.0	569.5	458.0	111.47	5.109	
10,500.0	7,064.6	7,042.5	7,041.2	100.5	13.8	-89.10	-115.3	-2,893.0	649.4	535.1	114.24	5.685	
10,600.0	7,064.3	7,042.1	7,040.8	103.2	13.8	-89.03	-115.3	-2,893.0	734.2	617.2	117.00	6.275	
10,700.0	7,064.1	7,041.7	7,040.4	106.0	13.8	-88.97	-115.3	-2,893.0	822.5	702.7	119.77	6.867	
10,800.0	7,063.8	7,041.3	7,040.1	108.8	13.8	-88.91	-115.3	-2,893.0	913.1	790.6	122.54	7.452	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Tarin Existing Wells Sec.32-T4N-R66W - Wolfe 14-32 (Existing) - Wellbore #1 - Wellbore #1

Offset Site Error: 0.0 ft

Survey Program: 100-NS-GYRO-MS

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,300.0	7,065.1	7,032.9	7,032.1	94.9	14.6	-87.64	-56.1	-4,154.3	973.7	864.3	109.39	8.901	
10,400.0	7,064.8	7,034.0	7,033.2	97.7	14.6	-87.85	-56.1	-4,154.4	879.3	767.1	112.18	7.839	
10,500.0	7,064.6	7,035.0	7,034.3	100.5	14.6	-88.05	-56.1	-4,154.4	786.3	671.4	114.96	6.840	
10,600.0	7,064.3	7,036.1	7,035.3	103.2	14.6	-88.25	-56.1	-4,154.4	695.3	577.5	117.75	5.905	
10,700.0	7,064.1	7,037.2	7,036.4	106.0	14.6	-88.45	-56.1	-4,154.4	607.1	486.5	120.53	5.037	
10,800.0	7,063.8	7,038.3	7,037.5	108.8	14.6	-88.65	-56.1	-4,154.4	523.1	399.8	123.32	4.242	
10,900.0	7,063.5	7,039.4	7,038.6	111.5	14.6	-88.86	-56.1	-4,154.4	445.8	319.7	126.11	3.535	
11,000.0	7,063.3	7,040.4	7,039.7	114.3	14.6	-89.06	-56.1	-4,154.4	379.3	250.4	128.90	2.943	
11,100.0	7,063.0	7,041.5	7,040.7	117.1	14.6	-89.26	-56.1	-4,154.5	330.1	198.4	131.69	2.507	
11,200.0	7,062.7	7,042.6	7,041.8	119.9	14.6	-89.46	-56.1	-4,154.5	306.7	172.2	134.48	2.281	
11,224.5	7,062.7	7,042.9	7,042.1	120.6	14.6	-89.51	-56.1	-4,154.5	305.7	170.6	135.16	2.262	CC, ES, SF
11,300.0	7,062.5	7,043.7	7,042.9	122.7	14.6	-89.66	-56.2	-4,154.5	314.9	177.6	137.27	2.294	
11,400.0	7,062.2	7,044.7	7,044.0	125.4	14.6	-89.87	-56.2	-4,154.5	352.5	212.5	140.06	2.517	
11,500.0	7,062.0	7,045.8	7,045.0	128.2	14.6	-90.07	-56.2	-4,154.5	411.5	268.7	142.85	2.881	
11,600.0	7,061.7	7,046.9	7,046.1	131.0	14.6	-90.27	-56.2	-4,154.5	484.2	338.6	145.63	3.325	
11,700.0	7,061.4	7,048.0	7,047.2	133.8	14.6	-90.47	-56.2	-4,154.5	565.3	416.9	148.42	3.809	
11,800.0	7,061.2	7,049.1	7,048.3	136.6	14.7	-90.67	-56.2	-4,154.6	651.6	500.4	151.21	4.310	
11,900.0	7,060.9	7,050.1	7,049.4	139.4	14.7	-90.88	-56.2	-4,154.6	741.4	587.4	153.99	4.815	
12,000.0	7,060.7	7,051.2	7,050.4	142.1	14.7	-91.08	-56.2	-4,154.6	833.5	676.8	156.78	5.317	
12,100.0	7,060.4	7,052.3	7,051.5	144.9	14.7	-91.28	-56.2	-4,154.6	927.3	767.7	159.56	5.812	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Tarin Existing Wells Sec.32-T4N-R66W - Wolfe 5 (Existing) - Wellbore #1 - Wellbore #1

Offset Site Error: 0.0 ft

Survey Program: 100-NS-GYRO-MS

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
9,500.0	7,067.2	7,298.3	7,036.6	72.9	21.5	88.44	622.7	-3,353.6	995.9	903.4	92.55	10.760	
9,600.0	7,066.9	7,299.6	7,037.9	75.7	21.5	88.64	622.7	-3,353.6	904.0	808.7	95.29	9.487	
9,700.0	7,066.7	7,300.9	7,039.3	78.4	21.5	88.85	622.6	-3,353.6	813.9	715.9	98.03	8.303	
9,800.0	7,066.4	7,302.3	7,040.6	81.1	21.5	89.05	622.6	-3,353.6	726.5	625.7	100.77	7.209	
9,900.0	7,066.1	7,303.6	7,041.9	83.9	21.5	89.25	622.6	-3,353.6	642.7	539.2	103.52	6.209	
10,000.0	7,065.9	7,304.9	7,043.2	86.6	21.5	89.45	622.6	-3,353.7	564.2	458.0	106.27	5.310	
10,100.0	7,065.6	7,306.2	7,044.5	89.4	21.5	89.65	622.6	-3,353.7	493.6	384.6	109.02	4.528	
10,200.0	7,065.4	7,307.5	7,045.8	92.2	21.5	89.85	622.6	-3,353.7	434.7	322.9	111.77	3.889	
10,300.0	7,065.1	7,308.8	7,047.1	94.9	21.5	90.05	622.6	-3,353.7	392.8	278.2	114.53	3.429	
10,400.0	7,064.8	7,310.0	7,048.3	97.7	21.5	90.24	622.6	-3,353.7	373.6	256.3	117.29	3.185	
10,423.6	7,064.8	7,310.3	7,048.6	98.3	21.5	90.29	622.6	-3,353.7	372.8	254.9	117.94	3.161	CC, ES, SF
10,500.0	7,064.6	7,311.3	7,049.6	100.5	21.5	90.44	622.6	-3,353.8	380.6	260.5	120.04	3.170	
10,600.0	7,064.3	7,312.6	7,050.9	103.2	21.5	90.63	622.6	-3,353.8	412.4	289.6	122.80	3.359	
10,700.0	7,064.1	7,313.8	7,052.1	106.0	21.5	90.82	622.6	-3,353.8	464.1	338.5	125.56	3.696	
10,800.0	7,063.8	7,315.1	7,053.4	108.8	21.5	91.01	622.6	-3,353.8	529.8	401.5	128.32	4.129	
10,900.0	7,063.5	7,316.3	7,054.6	111.5	21.5	91.20	622.6	-3,353.8	604.9	473.8	131.08	4.615	
11,000.0	7,063.3	7,317.5	7,055.8	114.3	21.5	91.39	622.6	-3,353.8	686.4	552.6	133.84	5.129	
11,100.0	7,063.0	7,318.7	7,057.1	117.1	21.5	91.58	622.6	-3,353.9	772.3	635.7	136.60	5.654	
11,200.0	7,062.7	7,320.0	7,058.3	119.9	21.6	91.77	622.5	-3,353.9	861.2	721.9	139.36	6.180	
11,300.0	7,062.5	7,321.2	7,059.5	122.7	21.6	91.95	622.5	-3,353.9	952.4	810.3	142.11	6.701	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Offset Design Tarin Existing Wells Sec.32-T4N-R66W - Wolfe 6I (Existing) - Wellbore #1 - Wellbore #1

Offset Site Error: 0.0 ft

Survey Program: 668-NS-GYRO-MS

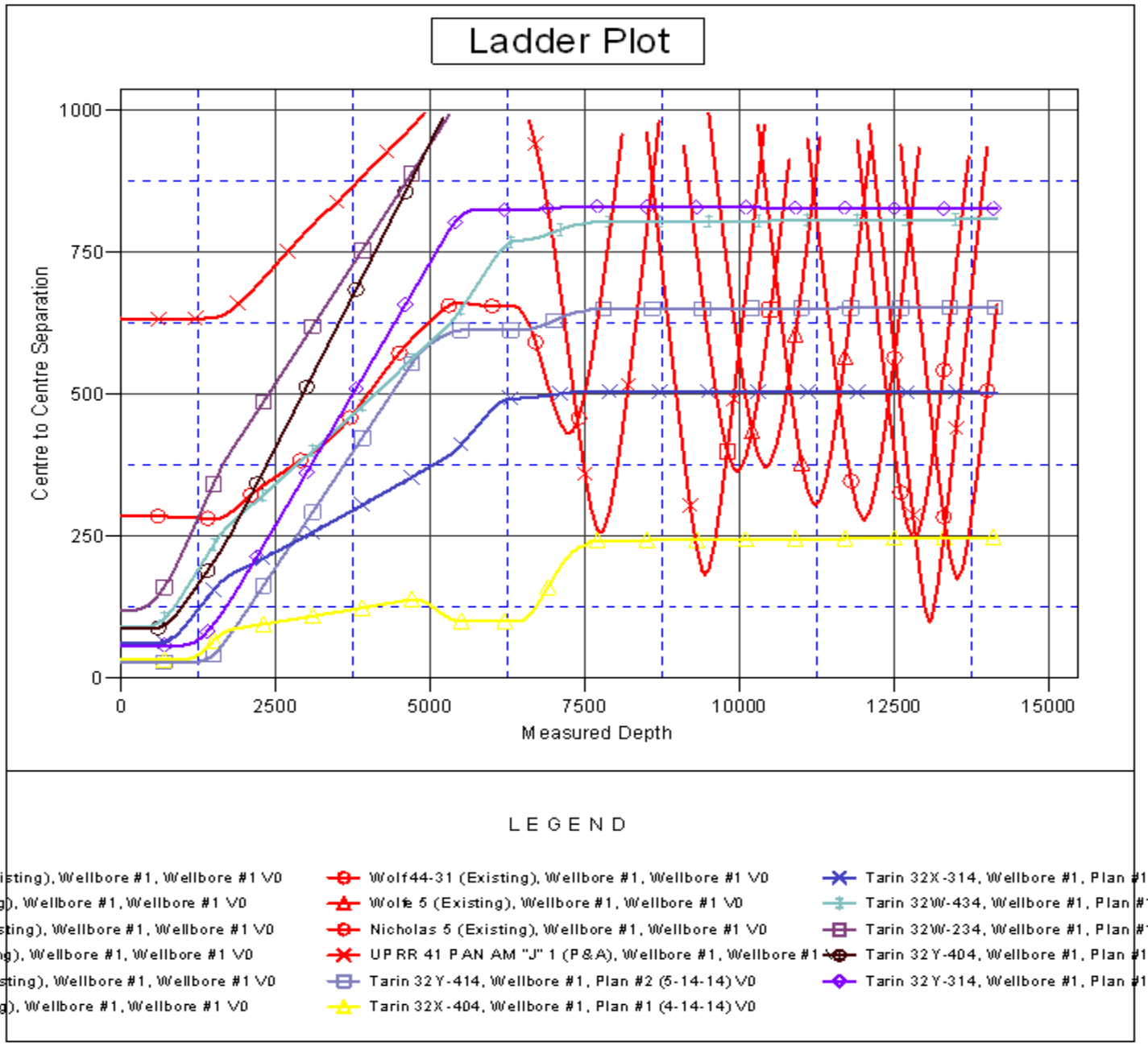
Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset 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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
8,500.0	7,069.8	7,099.9	7,031.7	46.0	18.7	84.48	433.0	-2,373.2	960.9	897.5	63.39	15.159	
8,600.0	7,069.6	7,101.6	7,033.4	48.7	18.7	85.02	433.0	-2,373.2	862.9	796.9	66.03	13.068	
8,700.0	7,069.3	7,103.3	7,035.1	51.3	18.7	85.55	433.0	-2,373.3	765.5	696.8	68.69	11.144	
8,800.0	7,069.0	7,105.1	7,036.9	54.0	18.7	86.09	433.0	-2,373.3	668.9	597.5	71.37	9.371	
8,900.0	7,068.8	7,106.8	7,038.6	56.7	18.7	86.64	433.1	-2,373.3	573.3	499.3	74.06	7.742	
9,000.0	7,068.5	7,108.6	7,040.4	59.4	18.7	87.19	433.1	-2,373.4	479.6	402.9	76.76	6.249	
9,100.0	7,068.2	7,110.4	7,042.1	62.0	18.7	87.74	433.1	-2,373.4	389.1	309.6	79.46	4.897	
9,200.0	7,068.0	7,112.1	7,043.9	64.8	18.7	88.30	433.1	-2,373.4	304.5	222.4	82.17	3.706	
9,300.0	7,067.7	7,113.9	7,045.7	67.5	18.7	88.86	433.1	-2,373.5	232.5	147.7	84.88	2.740	
9,400.0	7,067.5	7,115.7	7,047.5	70.2	18.7	89.43	433.1	-2,373.5	188.1	100.5	87.59	2.148	
9,443.4	7,067.3	7,116.5	7,048.3	71.4	18.7	89.68	433.1	-2,373.5	183.1	94.3	88.76	2.062	CC, ES, SF
9,500.0	7,067.2	7,117.6	7,049.3	72.9	18.7	90.00	433.1	-2,373.5	191.6	101.3	90.30	2.122	
9,600.0	7,066.9	7,119.4	7,051.2	75.7	18.7	90.57	433.1	-2,373.6	240.9	147.9	93.00	2.590	
9,700.0	7,066.7	7,121.2	7,053.0	78.4	18.7	91.15	433.1	-2,373.6	315.2	219.5	95.70	3.293	
9,800.0	7,066.4	7,123.1	7,054.9	81.1	18.7	91.73	433.1	-2,373.7	400.8	302.4	98.40	4.073	
9,900.0	7,066.1	7,124.9	7,056.7	83.9	18.7	92.31	433.2	-2,373.7	491.8	390.8	101.09	4.866	
10,000.0	7,065.9	7,126.8	7,058.6	86.6	18.7	92.90	433.2	-2,373.7	585.8	482.1	103.76	5.646	
10,100.0	7,065.6	7,128.7	7,060.5	89.4	18.7	93.49	433.2	-2,373.8	681.5	575.1	106.43	6.403	
10,200.0	7,065.4	7,130.6	7,062.4	92.2	18.7	94.08	433.2	-2,373.8	778.3	669.2	109.09	7.134	
10,300.0	7,065.1	7,132.5	7,064.3	94.9	18.7	94.67	433.2	-2,373.9	875.8	764.0	111.74	7.838	
10,400.0	7,064.8	7,134.5	7,066.2	97.7	18.7	95.27	433.2	-2,373.9	973.8	859.4	114.37	8.514	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 4790.0ft (RKB - 15')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Tarin 32X-204
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.46°



Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	**Local Co-ordinate Reference:**	Well Tarin 32X-204
Project:	SEC.32-T4N-R66W	**TVD Reference:**	WELL @ 4790.0ft (RKB - 15')
Reference Site:	Tarin 32X-HZ Pad Sec.32-T4N-R66W	**MD Reference:**	WELL @ 4790.0ft (RKB - 15')
Site Error:	0.0ft	**North Reference:**	True
Reference Well:	Tarin 32X-204	**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 (5-14-14)	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to WELL @ 4790.0ft (RKB - 15')	Coordinates are relative to: Tarin 32X-204
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: 0.46°