

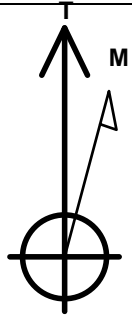
PETROLEUM DEVELOPMENT CORP Weld County CO

Well Name: Danielson 15G-432

Surface Location: Danielson Pad Sec.15-T7N-R66W
 North American Datum 1983 , US State Plane 1983 Colorado Northern Zone
 Ground Elevation: 4950.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1453014.94 3202067.02 40.574650 -104.772590
 Original Well Elev WELL @ 4965.0ft (Original Well Elev)

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
HARDLINE BHL 460'FEL (3)	1.0	-600.0	4654.4	1452453.16	3206726.05	40.573002	-104.755836	Polygon
HARDLINE SHL 460'FWL (3)	1.0	-600.0	205.0	1452416.66	3202276.93	40.573003	-104.771852	Polygon
SECTIONLINE 255'W OF SHL (3)	1.0	-600.0	-255.0	1452412.89	3201816.96	40.573003	-104.773508	Polygon
BHL 1980'FSL, 500'FEL	7475.0	-451.3	4614.4	1452601.50	3206684.79	40.573410	-104.755980	Point

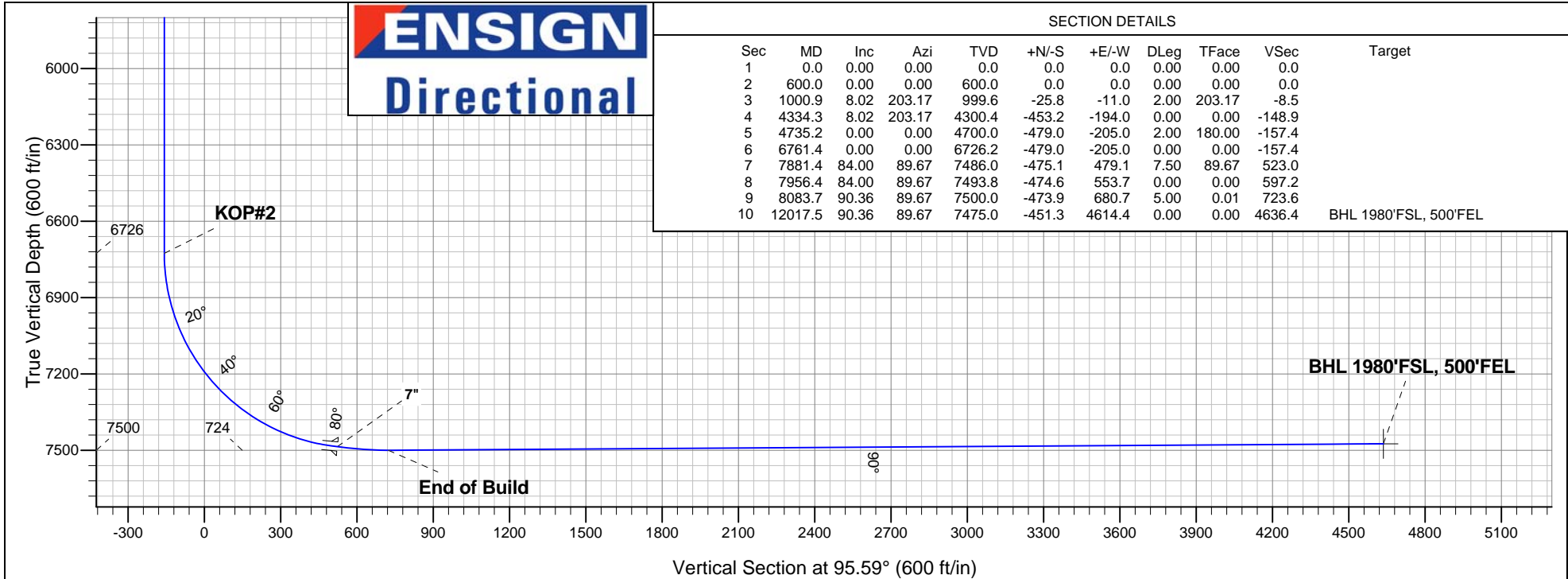
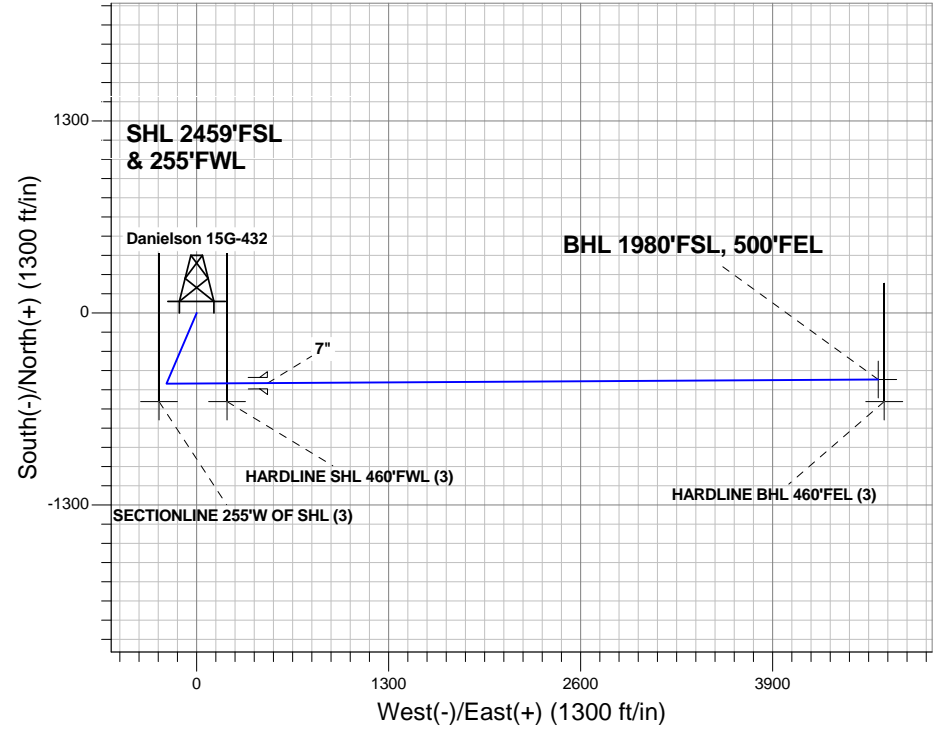


Azimuths to True North
 Magnetic North: 8.75°
 Magnetic Field
 Strength: 53119.3nT
 Dip Angle: 67.16°
 Date: 6/1/2012
 Model: IGRF2010

ANNOTATIONS

TVD	MD	Annotation
600.0	600.0	KOP #1
6726.2	6761.4	KOP #2
7500.0	8083.7	End of Build

Danielson Pad Sec.15-T7N-R66W
 Danielson 15G-432
 Plan #1 (6-01-12)
 13:33, June 14 2012





PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.15-T7N-R66W

Danielson Pad Sec.15-T7N-R66W

Danielson 15G-432

Wellbore #1

Plan: Plan #1 (6-01-12)

Standard Planning Report

14 June, 2012

Database:	Landmark	Local Co-ordinate Reference:	Well Danielson 15G-432
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4965.0ft (Original Well Elev)
Project:	SEC.15-T7N-R66W	MD Reference:	WELL @ 4965.0ft (Original Well Elev)
Site:	Danielson Pad Sec.15-T7N-R66W	North Reference:	True
Well:	Danielson 15G-432	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-01-12)		

Project	SEC.15-T7N-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						Danielson Pad Sec.15-T7N-R66W											
Site Position:						Northing:			1,453,044.10 ft			Latitude:			40.574730		
From:			Lat/Long			Easting:			3,202,066.78 ft			Longitude:			-104.772590		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.47 °		

Well	Danielson 15G-432					
Well Position	+N/-S	-29.2 ft	Northing:	1,453,014.94 ft	Latitude:	40.574650
	+E/-W	0.0 ft	Easting:	3,202,067.02 ft	Longitude:	-104.772590
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,950.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/1/2012	8.75	67.16	53,119

Design	Plan #1 (6-01-12)			
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	95.59

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	
600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,000.9	8.02	203.17	999.6	-25.8	-11.0	2.00	2.00	0.00	203.17	
4,334.3	8.02	203.17	4,300.4	-453.2	-194.0	0.00	0.00	0.00	0.00	
4,735.2	0.00	0.00	4,700.0	-479.0	-205.0	2.00	-2.00	0.00	180.00	
6,761.4	0.00	0.00	6,726.2	-479.0	-205.0	0.00	0.00	0.00	0.00	
7,881.4	84.00	89.67	7,486.0	-475.1	479.1	7.50	7.50	0.00	89.67	
7,956.4	84.00	89.67	7,493.8	-474.6	553.7	0.00	0.00	0.00	0.00	
8,083.7	90.36	89.67	7,500.0	-473.9	680.7	5.00	5.00	0.00	0.01	
12,017.5	90.36	89.67	7,475.0	-451.3	4,614.4	0.00	0.00	0.00	0.00	BHL 1980'FSL, 500

Database:	Landmark	Local Co-ordinate Reference:	Well Danielson 15G-432
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Project:	SEC.15-T7N-R66W	MD Reference:	WELL @ 4965.0ft (Original Well Elev)
Site:	Danielson Pad Sec.15-T7N-R66W	North Reference:	True
Well:	Danielson 15G-432	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-01-12)		

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
HARDLINE SHL 460'FWL (3) - SECTIONLINE 255'W OF SHL (3) - HARDLINE BHL 460'FEL (3)									
40.0	0.00	0.00	40.0	0.0	0.0	0.0	0.00	0.00	0.00
80.0	0.00	0.00	80.0	0.0	0.0	0.0	0.00	0.00	0.00
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00
160.0	0.00	0.00	160.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
240.0	0.00	0.00	240.0	0.0	0.0	0.0	0.00	0.00	0.00
280.0	0.00	0.00	280.0	0.0	0.0	0.0	0.00	0.00	0.00
320.0	0.00	0.00	320.0	0.0	0.0	0.0	0.00	0.00	0.00
360.0	0.00	0.00	360.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
440.0	0.00	0.00	440.0	0.0	0.0	0.0	0.00	0.00	0.00
480.0	0.00	0.00	480.0	0.0	0.0	0.0	0.00	0.00	0.00
520.0	0.00	0.00	520.0	0.0	0.0	0.0	0.00	0.00	0.00
560.0	0.00	0.00	560.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP #1									
640.0	0.80	203.17	640.0	-0.3	-0.1	-0.1	2.00	2.00	0.00
680.0	1.60	203.17	680.0	-1.0	-0.4	-0.3	2.00	2.00	0.00
720.0	2.40	203.17	720.0	-2.3	-1.0	-0.8	2.00	2.00	0.00
760.0	3.20	203.17	759.9	-4.1	-1.8	-1.3	2.00	2.00	0.00
800.0	4.00	203.17	799.8	-6.4	-2.7	-2.1	2.00	2.00	0.00
840.0	4.80	203.17	839.7	-9.2	-4.0	-3.0	2.00	2.00	0.00
880.0	5.60	203.17	879.6	-12.6	-5.4	-4.1	2.00	2.00	0.00
920.0	6.40	203.17	919.3	-16.4	-7.0	-5.4	2.00	2.00	0.00
960.0	7.20	203.17	959.1	-20.8	-8.9	-6.8	2.00	2.00	0.00
1,000.0	8.00	203.17	998.7	-25.6	-11.0	-8.4	2.00	2.00	0.00
1,000.9	8.02	203.17	999.6	-25.8	-11.0	-8.5	2.00	2.00	0.00
1,040.0	8.02	203.17	1,038.3	-30.8	-13.2	-10.1	0.00	0.00	0.00
1,080.0	8.02	203.17	1,077.9	-35.9	-15.4	-11.8	0.00	0.00	0.00
1,120.0	8.02	203.17	1,117.5	-41.0	-17.6	-13.5	0.00	0.00	0.00
1,160.0	8.02	203.17	1,157.1	-46.2	-19.8	-15.2	0.00	0.00	0.00
1,200.0	8.02	203.17	1,196.7	-51.3	-21.9	-16.9	0.00	0.00	0.00
1,240.0	8.02	203.17	1,236.4	-56.4	-24.1	-18.5	0.00	0.00	0.00
1,280.0	8.02	203.17	1,276.0	-61.5	-26.3	-20.2	0.00	0.00	0.00
1,320.0	8.02	203.17	1,315.6	-66.7	-28.5	-21.9	0.00	0.00	0.00
1,360.0	8.02	203.17	1,355.2	-71.8	-30.7	-23.6	0.00	0.00	0.00
1,400.0	8.02	203.17	1,394.8	-76.9	-32.9	-25.3	0.00	0.00	0.00
1,440.0	8.02	203.17	1,434.4	-82.1	-35.1	-27.0	0.00	0.00	0.00
1,480.0	8.02	203.17	1,474.0	-87.2	-37.3	-28.7	0.00	0.00	0.00
1,520.0	8.02	203.17	1,513.6	-92.3	-39.5	-30.3	0.00	0.00	0.00
1,560.0	8.02	203.17	1,553.2	-97.5	-41.7	-32.0	0.00	0.00	0.00
1,600.0	8.02	203.17	1,592.8	-102.6	-43.9	-33.7	0.00	0.00	0.00
1,640.0	8.02	203.17	1,632.4	-107.7	-46.1	-35.4	0.00	0.00	0.00
1,680.0	8.02	203.17	1,672.1	-112.8	-48.3	-37.1	0.00	0.00	0.00
1,720.0	8.02	203.17	1,711.7	-118.0	-50.5	-38.8	0.00	0.00	0.00
1,760.0	8.02	203.17	1,751.3	-123.1	-52.7	-40.5	0.00	0.00	0.00
1,800.0	8.02	203.17	1,790.9	-128.2	-54.9	-42.1	0.00	0.00	0.00
1,840.0	8.02	203.17	1,830.5	-133.4	-57.1	-43.8	0.00	0.00	0.00
1,880.0	8.02	203.17	1,870.1	-138.5	-59.3	-45.5	0.00	0.00	0.00
1,920.0	8.02	203.17	1,909.7	-143.6	-61.5	-47.2	0.00	0.00	0.00

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Site:	Danielson Pad Sec.15-T7N-R66W	North Reference:	True
Well:	Danielson 15G-432	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-01-12)		

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)
1,960.0	8.02	203.17	1,949.3	-148.8	-63.7	-48.9	0.00	0.00	0.00
2,000.0	8.02	203.17	1,988.9	-153.9	-65.9	-50.6	0.00	0.00	0.00
2,040.0	8.02	203.17	2,028.5	-159.0	-68.1	-52.3	0.00	0.00	0.00
2,080.0	8.02	203.17	2,068.1	-164.1	-70.2	-53.9	0.00	0.00	0.00
2,120.0	8.02	203.17	2,107.8	-169.3	-72.4	-55.6	0.00	0.00	0.00
2,160.0	8.02	203.17	2,147.4	-174.4	-74.6	-57.3	0.00	0.00	0.00
2,200.0	8.02	203.17	2,187.0	-179.5	-76.8	-59.0	0.00	0.00	0.00
2,240.0	8.02	203.17	2,226.6	-184.7	-79.0	-60.7	0.00	0.00	0.00
2,280.0	8.02	203.17	2,266.2	-189.8	-81.2	-62.4	0.00	0.00	0.00
2,320.0	8.02	203.17	2,305.8	-194.9	-83.4	-64.1	0.00	0.00	0.00
2,360.0	8.02	203.17	2,345.4	-200.0	-85.6	-65.7	0.00	0.00	0.00
2,400.0	8.02	203.17	2,385.0	-205.2	-87.8	-67.4	0.00	0.00	0.00
2,440.0	8.02	203.17	2,424.6	-210.3	-90.0	-69.1	0.00	0.00	0.00
2,480.0	8.02	203.17	2,464.2	-215.4	-92.2	-70.8	0.00	0.00	0.00
2,520.0	8.02	203.17	2,503.8	-220.6	-94.4	-72.5	0.00	0.00	0.00
2,560.0	8.02	203.17	2,543.4	-225.7	-96.6	-74.2	0.00	0.00	0.00
2,600.0	8.02	203.17	2,583.1	-230.8	-98.8	-75.9	0.00	0.00	0.00
2,640.0	8.02	203.17	2,622.7	-236.0	-101.0	-77.5	0.00	0.00	0.00
2,680.0	8.02	203.17	2,662.3	-241.1	-103.2	-79.2	0.00	0.00	0.00
2,720.0	8.02	203.17	2,701.9	-246.2	-105.4	-80.9	0.00	0.00	0.00
2,760.0	8.02	203.17	2,741.5	-251.3	-107.6	-82.6	0.00	0.00	0.00
2,800.0	8.02	203.17	2,781.1	-256.5	-109.8	-84.3	0.00	0.00	0.00
2,840.0	8.02	203.17	2,820.7	-261.6	-112.0	-86.0	0.00	0.00	0.00
2,880.0	8.02	203.17	2,860.3	-266.7	-114.2	-87.7	0.00	0.00	0.00
2,920.0	8.02	203.17	2,899.9	-271.9	-116.4	-89.3	0.00	0.00	0.00
2,960.0	8.02	203.17	2,939.5	-277.0	-118.5	-91.0	0.00	0.00	0.00
3,000.0	8.02	203.17	2,979.1	-282.1	-120.7	-92.7	0.00	0.00	0.00
3,040.0	8.02	203.17	3,018.8	-287.3	-122.9	-94.4	0.00	0.00	0.00
3,080.0	8.02	203.17	3,058.4	-292.4	-125.1	-96.1	0.00	0.00	0.00
3,120.0	8.02	203.17	3,098.0	-297.5	-127.3	-97.8	0.00	0.00	0.00
3,160.0	8.02	203.17	3,137.6	-302.6	-129.5	-99.5	0.00	0.00	0.00
3,200.0	8.02	203.17	3,177.2	-307.8	-131.7	-101.1	0.00	0.00	0.00
3,240.0	8.02	203.17	3,216.8	-312.9	-133.9	-102.8	0.00	0.00	0.00
3,280.0	8.02	203.17	3,256.4	-318.0	-136.1	-104.5	0.00	0.00	0.00
3,320.0	8.02	203.17	3,296.0	-323.2	-138.3	-106.2	0.00	0.00	0.00
3,360.0	8.02	203.17	3,335.6	-328.3	-140.5	-107.9	0.00	0.00	0.00
3,400.0	8.02	203.17	3,375.2	-333.4	-142.7	-109.6	0.00	0.00	0.00
3,440.0	8.02	203.17	3,414.8	-338.6	-144.9	-111.3	0.00	0.00	0.00
3,480.0	8.02	203.17	3,454.5	-343.7	-147.1	-112.9	0.00	0.00	0.00
3,520.0	8.02	203.17	3,494.1	-348.8	-149.3	-114.6	0.00	0.00	0.00
3,560.0	8.02	203.17	3,533.7	-353.9	-151.5	-116.3	0.00	0.00	0.00
3,600.0	8.02	203.17	3,573.3	-359.1	-153.7	-118.0	0.00	0.00	0.00
3,640.0	8.02	203.17	3,612.9	-364.2	-155.9	-119.7	0.00	0.00	0.00
3,680.0	8.02	203.17	3,652.5	-369.3	-158.1	-121.4	0.00	0.00	0.00
3,720.0	8.02	203.17	3,692.1	-374.5	-160.3	-123.1	0.00	0.00	0.00
3,760.0	8.02	203.17	3,731.7	-379.6	-162.5	-124.7	0.00	0.00	0.00
3,800.0	8.02	203.17	3,771.3	-384.7	-164.7	-126.4	0.00	0.00	0.00
3,840.0	8.02	203.17	3,810.9	-389.9	-166.8	-128.1	0.00	0.00	0.00
3,880.0	8.02	203.17	3,850.5	-395.0	-169.0	-129.8	0.00	0.00	0.00
3,920.0	8.02	203.17	3,890.1	-400.1	-171.2	-131.5	0.00	0.00	0.00
3,960.0	8.02	203.17	3,929.8	-405.2	-173.4	-133.2	0.00	0.00	0.00
4,000.0	8.02	203.17	3,969.4	-410.4	-175.6	-134.9	0.00	0.00	0.00
4,040.0	8.02	203.17	4,009.0	-415.5	-177.8	-136.5	0.00	0.00	0.00

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Project:	SEC.15-T7N-R66W	MD Reference:	WELL @ 4965.0ft (Original Well Elev)
Site:	Danielson Pad Sec.15-T7N-R66W	North Reference:	True
Well:	Danielson 15G-432	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-01-12)		

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)
4,080.0	8.02	203.17	4,048.6	-420.6	-180.0	-138.2	0.00	0.00	0.00
4,120.0	8.02	203.17	4,088.2	-425.8	-182.2	-139.9	0.00	0.00	0.00
4,160.0	8.02	203.17	4,127.8	-430.9	-184.4	-141.6	0.00	0.00	0.00
4,200.0	8.02	203.17	4,167.4	-436.0	-186.6	-143.3	0.00	0.00	0.00
4,240.0	8.02	203.17	4,207.0	-441.2	-188.8	-145.0	0.00	0.00	0.00
4,280.0	8.02	203.17	4,246.6	-446.3	-191.0	-146.6	0.00	0.00	0.00
4,320.0	8.02	203.17	4,286.2	-451.4	-193.2	-148.3	0.00	0.00	0.00
4,334.3	8.02	203.17	4,300.4	-453.2	-194.0	-148.9	0.00	0.00	0.00
4,360.0	7.50	203.17	4,325.9	-456.4	-195.3	-150.0	2.00	-2.00	0.00
4,400.0	6.70	203.17	4,365.6	-461.0	-197.3	-151.5	2.00	-2.00	0.00
4,440.0	5.90	203.17	4,405.3	-465.0	-199.0	-152.8	2.00	-2.00	0.00
4,480.0	5.10	203.17	4,445.1	-468.6	-200.5	-154.0	2.00	-2.00	0.00
4,520.0	4.30	203.17	4,485.0	-471.6	-201.8	-155.0	2.00	-2.00	0.00
4,560.0	3.50	203.17	4,524.9	-474.1	-202.9	-155.8	2.00	-2.00	0.00
4,600.0	2.70	203.17	4,564.8	-476.1	-203.7	-156.4	2.00	-2.00	0.00
4,640.0	1.90	203.17	4,604.8	-477.5	-204.4	-156.9	2.00	-2.00	0.00
4,680.0	1.10	203.17	4,644.8	-478.5	-204.8	-157.2	2.00	-2.00	0.00
4,720.0	0.30	203.17	4,684.8	-479.0	-205.0	-157.4	2.00	-2.00	0.00
4,735.2	0.00	0.00	4,700.0	-479.0	-205.0	-157.4	2.00	-2.00	0.00
4,760.0	0.00	0.00	4,724.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
4,800.0	0.00	0.00	4,764.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
4,840.0	0.00	0.00	4,804.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
4,880.0	0.00	0.00	4,844.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
4,920.0	0.00	0.00	4,884.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
4,960.0	0.00	0.00	4,924.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
5,000.0	0.00	0.00	4,964.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
5,040.0	0.00	0.00	5,004.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
5,080.0	0.00	0.00	5,044.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
5,120.0	0.00	0.00	5,084.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
5,160.0	0.00	0.00	5,124.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
5,200.0	0.00	0.00	5,164.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
5,240.0	0.00	0.00	5,204.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
5,280.0	0.00	0.00	5,244.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
5,320.0	0.00	0.00	5,284.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
5,360.0	0.00	0.00	5,324.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
5,400.0	0.00	0.00	5,364.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
5,440.0	0.00	0.00	5,404.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
5,480.0	0.00	0.00	5,444.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
5,520.0	0.00	0.00	5,484.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
5,560.0	0.00	0.00	5,524.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
5,600.0	0.00	0.00	5,564.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
5,640.0	0.00	0.00	5,604.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
5,680.0	0.00	0.00	5,644.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
5,720.0	0.00	0.00	5,684.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
5,760.0	0.00	0.00	5,724.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
5,800.0	0.00	0.00	5,764.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
5,840.0	0.00	0.00	5,804.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
5,880.0	0.00	0.00	5,844.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
5,920.0	0.00	0.00	5,884.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
5,960.0	0.00	0.00	5,924.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
6,000.0	0.00	0.00	5,964.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
6,040.0	0.00	0.00	6,004.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
6,080.0	0.00	0.00	6,044.8	-479.0	-205.0	-157.4	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Danielson 15G-432
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4965.0ft (Original Well Elev)
Project:	SEC.15-T7N-R66W	MD Reference:	WELL @ 4965.0ft (Original Well Elev)
Site:	Danielson Pad Sec.15-T7N-R66W	North Reference:	True
Well:	Danielson 15G-432	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-01-12)		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
6,120.0	0.00	0.00	6,084.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
6,160.0	0.00	0.00	6,124.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
6,200.0	0.00	0.00	6,164.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
6,240.0	0.00	0.00	6,204.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
6,280.0	0.00	0.00	6,244.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
6,320.0	0.00	0.00	6,284.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
6,360.0	0.00	0.00	6,324.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
6,400.0	0.00	0.00	6,364.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
6,440.0	0.00	0.00	6,404.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
6,480.0	0.00	0.00	6,444.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
6,520.0	0.00	0.00	6,484.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
6,560.0	0.00	0.00	6,524.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
6,600.0	0.00	0.00	6,564.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
6,640.0	0.00	0.00	6,604.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
6,680.0	0.00	0.00	6,644.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
6,720.0	0.00	0.00	6,684.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
6,760.0	0.00	0.00	6,724.8	-479.0	-205.0	-157.4	0.00	0.00	0.00
6,761.4	0.00	0.00	6,726.2	-479.0	-205.0	-157.4	0.00	0.00	0.00
KOP#2									
6,800.0	2.89	89.67	6,764.8	-479.0	-204.0	-156.4	7.50	7.50	0.00
6,840.0	5.89	89.67	6,804.7	-479.0	-201.0	-153.4	7.50	7.50	0.00
6,880.0	8.89	89.67	6,844.3	-478.9	-195.8	-148.3	7.50	7.50	0.00
6,920.0	11.89	89.67	6,883.7	-478.9	-188.6	-141.1	7.50	7.50	0.00
6,960.0	14.89	89.67	6,922.6	-478.9	-179.3	-131.9	7.50	7.50	0.00
7,000.0	17.89	89.67	6,960.9	-478.8	-168.0	-120.6	7.50	7.50	0.00
7,040.0	20.89	89.67	6,998.7	-478.7	-154.8	-107.4	7.50	7.50	0.00
7,080.0	23.89	89.67	7,035.6	-478.6	-139.5	-92.3	7.50	7.50	0.00
7,120.0	26.89	89.67	7,071.8	-478.5	-122.4	-75.2	7.50	7.50	0.00
7,160.0	29.89	89.67	7,107.0	-478.4	-103.4	-56.3	7.50	7.50	0.00
7,200.0	32.89	89.67	7,141.1	-478.3	-82.5	-35.6	7.50	7.50	0.00
7,240.0	35.89	89.67	7,174.1	-478.2	-59.9	-13.1	7.50	7.50	0.00
7,280.0	38.89	89.67	7,205.9	-478.0	-35.6	11.1	7.50	7.50	0.00
7,320.0	41.89	89.67	7,236.3	-477.9	-9.7	36.8	7.50	7.50	0.00
7,360.0	44.89	89.67	7,265.4	-477.7	17.8	64.2	7.50	7.50	0.00
7,400.0	47.89	89.67	7,293.0	-477.6	46.7	93.0	7.50	7.50	0.00
7,440.0	50.89	89.67	7,319.0	-477.4	77.1	123.2	7.50	7.50	0.00
7,480.0	53.89	89.67	7,343.4	-477.2	108.8	154.7	7.50	7.50	0.00
7,520.0	56.89	89.67	7,366.1	-477.0	141.7	187.5	7.50	7.50	0.00
7,560.0	59.89	89.67	7,387.1	-476.8	175.8	221.3	7.50	7.50	0.00
7,600.0	62.89	89.67	7,406.2	-476.6	210.9	256.3	7.50	7.50	0.00
7,640.0	65.89	89.67	7,423.5	-476.4	246.9	292.1	7.50	7.50	0.00
7,680.0	68.89	89.67	7,438.9	-476.2	283.9	328.9	7.50	7.50	0.00
7,720.0	71.89	89.67	7,452.3	-476.0	321.5	366.3	7.50	7.50	0.00
7,760.0	74.89	89.67	7,463.7	-475.7	359.9	404.5	7.50	7.50	0.00
7,800.0	77.89	89.67	7,473.1	-475.5	398.7	443.1	7.50	7.50	0.00
7,840.0	80.89	89.67	7,480.5	-475.3	438.0	482.2	7.50	7.50	0.00
7,880.0	83.89	89.67	7,485.8	-475.1	477.7	521.7	7.50	7.50	0.00
7,881.4	84.00	89.67	7,486.0	-475.1	479.1	523.0	7.50	7.50	0.00
7"									
7,920.0	84.00	89.67	7,490.0	-474.8	517.5	561.2	0.00	0.00	0.00
7,956.4	84.00	89.67	7,493.8	-474.6	553.7	597.2	0.00	0.00	0.00
7,960.0	84.18	89.67	7,494.2	-474.6	557.2	600.8	5.00	5.00	0.00
8,000.0	86.18	89.67	7,497.5	-474.4	597.1	640.4	5.00	5.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Danielson 15G-432
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4965.0ft (Original Well Elev)
Project:	SEC.15-T7N-R66W	MD Reference:	WELL @ 4965.0ft (Original Well Elev)
Site:	Danielson Pad Sec.15-T7N-R66W	North Reference:	True
Well:	Danielson 15G-432	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-01-12)		

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)
8,040.0	88.18	89.67	7,499.5	-474.2	637.1	680.2	5.00	5.00	0.00
8,080.0	90.18	89.67	7,500.1	-473.9	677.0	720.0	5.00	5.00	0.00
8,083.7	90.36	89.67	7,500.0	-473.9	680.7	723.6	5.00	5.00	0.00
End of Build									
8,120.0	90.36	89.67	7,499.8	-473.7	717.0	759.7	0.00	0.00	0.00
8,160.0	90.36	89.67	7,499.6	-473.5	757.0	799.5	0.00	0.00	0.00
8,200.0	90.36	89.67	7,499.3	-473.2	797.0	839.3	0.00	0.00	0.00
8,240.0	90.36	89.67	7,499.1	-473.0	837.0	879.1	0.00	0.00	0.00
8,280.0	90.36	89.67	7,498.8	-472.8	877.0	918.9	0.00	0.00	0.00
8,320.0	90.36	89.67	7,498.5	-472.5	917.0	958.7	0.00	0.00	0.00
8,360.0	90.36	89.67	7,498.3	-472.3	957.0	998.5	0.00	0.00	0.00
8,400.0	90.36	89.67	7,498.0	-472.1	997.0	1,038.3	0.00	0.00	0.00
8,440.0	90.36	89.67	7,497.8	-471.9	1,037.0	1,078.0	0.00	0.00	0.00
8,480.0	90.36	89.67	7,497.5	-471.6	1,077.0	1,117.8	0.00	0.00	0.00
8,520.0	90.36	89.67	7,497.3	-471.4	1,117.0	1,157.6	0.00	0.00	0.00
8,560.0	90.36	89.67	7,497.0	-471.2	1,157.0	1,197.4	0.00	0.00	0.00
8,600.0	90.36	89.67	7,496.8	-470.9	1,197.0	1,237.2	0.00	0.00	0.00
8,640.0	90.36	89.67	7,496.5	-470.7	1,237.0	1,277.0	0.00	0.00	0.00
8,680.0	90.36	89.67	7,496.2	-470.5	1,277.0	1,316.8	0.00	0.00	0.00
8,720.0	90.36	89.67	7,496.0	-470.2	1,317.0	1,356.5	0.00	0.00	0.00
8,760.0	90.36	89.67	7,495.7	-470.0	1,357.0	1,396.3	0.00	0.00	0.00
8,800.0	90.36	89.67	7,495.5	-469.8	1,397.0	1,436.1	0.00	0.00	0.00
8,840.0	90.36	89.67	7,495.2	-469.6	1,437.0	1,475.9	0.00	0.00	0.00
8,880.0	90.36	89.67	7,495.0	-469.3	1,477.0	1,515.7	0.00	0.00	0.00
8,920.0	90.36	89.67	7,494.7	-469.1	1,517.0	1,555.5	0.00	0.00	0.00
8,960.0	90.36	89.67	7,494.5	-468.9	1,557.0	1,595.3	0.00	0.00	0.00
9,000.0	90.36	89.67	7,494.2	-468.6	1,597.0	1,635.0	0.00	0.00	0.00
9,040.0	90.36	89.67	7,494.0	-468.4	1,637.0	1,674.8	0.00	0.00	0.00
9,080.0	90.36	89.67	7,493.7	-468.2	1,677.0	1,714.6	0.00	0.00	0.00
9,120.0	90.36	89.67	7,493.4	-468.0	1,717.0	1,754.4	0.00	0.00	0.00
9,160.0	90.36	89.67	7,493.2	-467.7	1,757.0	1,794.2	0.00	0.00	0.00
9,200.0	90.36	89.67	7,492.9	-467.5	1,797.0	1,834.0	0.00	0.00	0.00
9,240.0	90.36	89.67	7,492.7	-467.3	1,837.0	1,873.8	0.00	0.00	0.00
9,280.0	90.36	89.67	7,492.4	-467.0	1,877.0	1,913.5	0.00	0.00	0.00
9,320.0	90.36	89.67	7,492.2	-466.8	1,917.0	1,953.3	0.00	0.00	0.00
9,360.0	90.36	89.67	7,491.9	-466.6	1,957.0	1,993.1	0.00	0.00	0.00
9,400.0	90.36	89.67	7,491.7	-466.3	1,997.0	2,032.9	0.00	0.00	0.00
9,440.0	90.36	89.67	7,491.4	-466.1	2,037.0	2,072.7	0.00	0.00	0.00
9,480.0	90.36	89.67	7,491.2	-465.9	2,077.0	2,112.5	0.00	0.00	0.00
9,520.0	90.36	89.67	7,490.9	-465.7	2,117.0	2,152.3	0.00	0.00	0.00
9,560.0	90.36	89.67	7,490.6	-465.4	2,157.0	2,192.1	0.00	0.00	0.00
9,600.0	90.36	89.67	7,490.4	-465.2	2,197.0	2,231.8	0.00	0.00	0.00
9,640.0	90.36	89.67	7,490.1	-465.0	2,237.0	2,271.6	0.00	0.00	0.00
9,680.0	90.36	89.67	7,489.9	-464.7	2,277.0	2,311.4	0.00	0.00	0.00
9,720.0	90.36	89.67	7,489.6	-464.5	2,317.0	2,351.2	0.00	0.00	0.00
9,760.0	90.36	89.67	7,489.4	-464.3	2,357.0	2,391.0	0.00	0.00	0.00
9,800.0	90.36	89.67	7,489.1	-464.0	2,397.0	2,430.8	0.00	0.00	0.00
9,840.0	90.36	89.67	7,488.9	-463.8	2,437.0	2,470.6	0.00	0.00	0.00
9,880.0	90.36	89.67	7,488.6	-463.6	2,477.0	2,510.3	0.00	0.00	0.00
9,920.0	90.36	89.67	7,488.4	-463.4	2,517.0	2,550.1	0.00	0.00	0.00
9,960.0	90.36	89.67	7,488.1	-463.1	2,557.0	2,589.9	0.00	0.00	0.00
10,000.0	90.36	89.67	7,487.8	-462.9	2,597.0	2,629.7	0.00	0.00	0.00
10,040.0	90.36	89.67	7,487.6	-462.7	2,637.0	2,669.5	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Danielson 15G-432
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4965.0ft (Original Well Elev)
Project:	SEC.15-T7N-R66W	MD Reference:	WELL @ 4965.0ft (Original Well Elev)
Site:	Danielson Pad Sec.15-T7N-R66W	North Reference:	True
Well:	Danielson 15G-432	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-01-12)		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
10,080.0	90.36	89.67	7,487.3	-462.4	2,677.0	2,709.3	0.00	0.00	0.00
10,120.0	90.36	89.67	7,487.1	-462.2	2,717.0	2,749.1	0.00	0.00	0.00
10,160.0	90.36	89.67	7,486.8	-462.0	2,757.0	2,788.8	0.00	0.00	0.00
10,200.0	90.36	89.67	7,486.6	-461.8	2,797.0	2,828.6	0.00	0.00	0.00
10,240.0	90.36	89.67	7,486.3	-461.5	2,837.0	2,868.4	0.00	0.00	0.00
10,280.0	90.36	89.67	7,486.1	-461.3	2,877.0	2,908.2	0.00	0.00	0.00
10,320.0	90.36	89.67	7,485.8	-461.1	2,917.0	2,948.0	0.00	0.00	0.00
10,360.0	90.36	89.67	7,485.6	-460.8	2,957.0	2,987.8	0.00	0.00	0.00
10,400.0	90.36	89.67	7,485.3	-460.6	2,997.0	3,027.6	0.00	0.00	0.00
10,440.0	90.36	89.67	7,485.0	-460.4	3,037.0	3,067.3	0.00	0.00	0.00
10,480.0	90.36	89.67	7,484.8	-460.1	3,077.0	3,107.1	0.00	0.00	0.00
10,520.0	90.36	89.67	7,484.5	-459.9	3,117.0	3,146.9	0.00	0.00	0.00
10,560.0	90.36	89.67	7,484.3	-459.7	3,157.0	3,186.7	0.00	0.00	0.00
10,600.0	90.36	89.67	7,484.0	-459.5	3,197.0	3,226.5	0.00	0.00	0.00
10,640.0	90.36	89.67	7,483.8	-459.2	3,237.0	3,266.3	0.00	0.00	0.00
10,680.0	90.36	89.67	7,483.5	-459.0	3,276.9	3,306.1	0.00	0.00	0.00
10,720.0	90.36	89.67	7,483.3	-458.8	3,316.9	3,345.9	0.00	0.00	0.00
10,760.0	90.36	89.67	7,483.0	-458.5	3,356.9	3,385.6	0.00	0.00	0.00
10,800.0	90.36	89.67	7,482.8	-458.3	3,396.9	3,425.4	0.00	0.00	0.00
10,840.0	90.36	89.67	7,482.5	-458.1	3,436.9	3,465.2	0.00	0.00	0.00
10,880.0	90.36	89.67	7,482.2	-457.8	3,476.9	3,505.0	0.00	0.00	0.00
10,920.0	90.36	89.67	7,482.0	-457.6	3,516.9	3,544.8	0.00	0.00	0.00
10,960.0	90.36	89.67	7,481.7	-457.4	3,556.9	3,584.6	0.00	0.00	0.00
11,000.0	90.36	89.67	7,481.5	-457.2	3,596.9	3,624.4	0.00	0.00	0.00
11,040.0	90.36	89.67	7,481.2	-456.9	3,636.9	3,664.1	0.00	0.00	0.00
11,080.0	90.36	89.67	7,481.0	-456.7	3,676.9	3,703.9	0.00	0.00	0.00
11,120.0	90.36	89.67	7,480.7	-456.5	3,716.9	3,743.7	0.00	0.00	0.00
11,160.0	90.36	89.67	7,480.5	-456.2	3,756.9	3,783.5	0.00	0.00	0.00
11,200.0	90.36	89.67	7,480.2	-456.0	3,796.9	3,823.3	0.00	0.00	0.00
11,240.0	90.36	89.67	7,479.9	-455.8	3,836.9	3,863.1	0.00	0.00	0.00
11,280.0	90.36	89.67	7,479.7	-455.6	3,876.9	3,902.9	0.00	0.00	0.00
11,320.0	90.36	89.67	7,479.4	-455.3	3,916.9	3,942.6	0.00	0.00	0.00
11,360.0	90.36	89.67	7,479.2	-455.1	3,956.9	3,982.4	0.00	0.00	0.00
11,400.0	90.36	89.67	7,478.9	-454.9	3,996.9	4,022.2	0.00	0.00	0.00
11,440.0	90.36	89.67	7,478.7	-454.6	4,036.9	4,062.0	0.00	0.00	0.00
11,480.0	90.36	89.67	7,478.4	-454.4	4,076.9	4,101.8	0.00	0.00	0.00
11,520.0	90.36	89.67	7,478.2	-454.2	4,116.9	4,141.6	0.00	0.00	0.00
11,560.0	90.36	89.67	7,477.9	-453.9	4,156.9	4,181.4	0.00	0.00	0.00
11,600.0	90.36	89.67	7,477.7	-453.7	4,196.9	4,221.1	0.00	0.00	0.00
11,640.0	90.36	89.67	7,477.4	-453.5	4,236.9	4,260.9	0.00	0.00	0.00
11,680.0	90.36	89.67	7,477.1	-453.3	4,276.9	4,300.7	0.00	0.00	0.00
11,720.0	90.36	89.67	7,476.9	-453.0	4,316.9	4,340.5	0.00	0.00	0.00
11,760.0	90.36	89.67	7,476.6	-452.8	4,356.9	4,380.3	0.00	0.00	0.00
11,800.0	90.36	89.67	7,476.4	-452.6	4,396.9	4,420.1	0.00	0.00	0.00
11,840.0	90.36	89.67	7,476.1	-452.3	4,436.9	4,459.9	0.00	0.00	0.00
11,880.0	90.36	89.67	7,475.9	-452.1	4,476.9	4,499.7	0.00	0.00	0.00
11,920.0	90.36	89.67	7,475.6	-451.9	4,516.9	4,539.4	0.00	0.00	0.00
11,960.0	90.36	89.67	7,475.4	-451.7	4,556.9	4,579.2	0.00	0.00	0.00
12,000.0	90.36	89.67	7,475.1	-451.4	4,596.9	4,619.0	0.00	0.00	0.00
12,017.5	90.36	89.67	7,475.0	-451.3	4,614.4	4,636.4	0.00	0.00	0.00

BHL 1980'FSL, 500'FEL

Database:	Landmark	Local Co-ordinate Reference:	Well Danielson 15G-432
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4965.0ft (Original Well Elev)
Project:	SEC.15-T7N-R66W	MD Reference:	WELL @ 4965.0ft (Original Well Elev)
Site:	Danielson Pad Sec.15-T7N-R66W	North Reference:	True
Well:	Danielson 15G-432	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-01-12)		

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
BHL 1980'FSL, 500'FI	0.00	0.00	7,475.0	-451.3	4,614.4	1,452,601.50	3,206,684.79	40.573410	-104.755980
- plan hits target center									
- Point									
HARDLINE SHL 460'F	0.00	0.00	1.0	-600.0	205.0	1,452,416.66	3,202,276.93	40.573003	-104.771852
- plan misses target center by 634.1ft at 1.0ft MD (1.0 TVD, 0.0 N, 0.0 E)									
- Polygon									
Point 1			1.0	0.0	0.0	1,452,416.66	3,202,276.93		
Point 2			1.0	1,000.0	0.0	1,453,416.60	3,202,268.73		
SECTIONLINE 255'W	0.00	0.00	1.0	-600.0	-255.0	1,452,412.89	3,201,816.96	40.573003	-104.773508
- plan misses target center by 651.9ft at 1.0ft MD (1.0 TVD, 0.0 N, 0.0 E)									
- Polygon									
Point 1			1.0	0.0	0.0	1,452,412.89	3,201,816.96		
Point 2			1.0	1,000.0	0.0	1,453,412.83	3,201,808.76		
HARDLINE BHL 460'F	0.00	0.00	1.0	-600.0	4,654.4	1,452,453.16	3,206,726.05	40.573002	-104.755836
- plan misses target center by 4692.9ft at 1.0ft MD (1.0 TVD, 0.0 N, 0.0 E)									
- Polygon									
Point 1			1.0	0.0	0.0	1,452,453.16	3,206,726.05		
Point 2			1.0	800.0	0.0	1,453,253.11	3,206,719.49		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
7,881.4	7,486.0	7"	7	8-3/4	

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
600.0	600.0	0.0	0.0	KOP #1
6,761.4	6,726.2	-479.0	-205.0	KOP#2
8,083.7	7,500.0	-473.9	680.7	End of Build



PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.15-T7N-R66W

Danielson Pad Sec.15-T7N-R66W

Danielson 15G-432

Wellbore #1

Plan #1 (6-01-12)

Anticollision Report

14 June, 2012



Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Danielson 15G-432
Project:	SEC.15-T7N-R66W	TVD Reference:	WELL @ 4965.0ft (Original Well Elev)
Reference Site:	Danielson Pad Sec.15-T7N-R66W	MD Reference:	WELL @ 4965.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Danielson 15G-432	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (6-01-12)	Offset TVD Reference:	Offset Datum

Reference	Plan #1 (6-01-12)		
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	6/7/2012		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	12,017.5	Plan #1 (6-01-12) (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Danielson Pad Sec.15-T7N-R66W						
Danielson 15G-232 - Wellbore #1 - Plan #1 (6-01-12)	600.0	600.0	29.1	26.7	11.790	CC, ES
Danielson 15G-232 - Wellbore #1 - Plan #1 (6-01-12)	12,017.5	11,815.1	460.0	219.0	1.909	SF

Offset Design												Offset Site Error:		0.0 ft
Survey Program: 0-MWD												Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	0.00	29.1	0.0	29.1					
100.0	100.0	100.0	100.0	0.1	0.1	0.00	29.1	0.0	29.1	28.9	0.22	129.690		
200.0	200.0	200.0	200.0	0.3	0.3	0.00	29.1	0.0	29.1	28.5	0.67	43.230		
300.0	300.0	300.0	300.0	0.6	0.6	0.00	29.1	0.0	29.1	28.0	1.12	25.938		
400.0	400.0	400.0	400.0	0.8	0.8	0.00	29.1	0.0	29.1	27.6	1.57	18.527		
500.0	500.0	500.0	500.0	1.0	1.0	0.00	29.1	0.0	29.1	27.1	2.02	14.410		
600.0	600.0	600.0	600.0	1.2	1.2	0.00	29.1	0.0	29.1	26.7	2.47	11.790 CC, ES		
700.0	700.0	700.0	700.0	1.4	1.5	158.10	29.1	0.0	30.8	27.9	2.90	10.618		
800.0	799.8	799.8	799.8	1.6	1.7	161.20	29.1	0.0	35.7	32.4	3.31	10.790		
900.0	899.5	899.5	899.5	1.8	1.9	164.82	29.1	0.0	44.0	40.3	3.72	11.820		
1,000.0	998.7	998.7	998.7	2.1	2.1	168.04	29.1	0.0	55.9	51.7	4.15	13.474		
1,100.0	1,097.7	1,097.7	1,097.7	2.3	2.4	170.42	29.1	0.0	69.6	65.0	4.58	15.200		
1,200.0	1,196.7	1,196.7	1,196.7	2.6	2.6	172.02	29.1	0.0	83.4	78.4	5.02	16.624		
1,300.0	1,295.8	1,295.8	1,295.8	2.9	2.8	173.16	29.1	0.0	97.2	91.8	5.46	17.812		
1,400.0	1,394.8	1,394.8	1,394.8	3.3	3.0	174.02	29.1	0.0	111.1	105.2	5.90	18.815		
1,500.0	1,493.8	1,493.8	1,493.8	3.6	3.2	174.68	29.1	0.0	125.0	118.6	6.35	19.671		
1,600.0	1,592.8	1,592.8	1,592.8	3.9	3.5	175.22	29.1	0.0	138.9	132.0	6.80	20.409		
1,700.0	1,691.9	1,691.9	1,691.9	4.2	3.7	175.65	29.1	0.0	152.8	145.5	7.26	21.050		
1,800.0	1,790.9	1,790.9	1,790.9	4.6	3.9	176.02	29.1	0.0	166.7	159.0	7.71	21.613		
1,900.0	1,889.9	1,889.9	1,889.9	4.9	4.1	176.32	29.1	0.0	180.6	172.4	8.17	22.110		
2,000.0	1,988.9	1,988.9	1,988.9	5.2	4.4	176.59	29.1	0.0	194.5	185.9	8.63	22.552		
2,100.0	2,087.9	2,087.9	2,087.9	5.6	4.6	176.81	29.1	0.0	208.4	199.4	9.08	22.948		
2,200.0	2,187.0	2,187.0	2,187.0	5.9	4.8	177.01	29.1	0.0	222.4	212.8	9.54	23.303		
2,300.0	2,286.0	2,286.0	2,286.0	6.3	5.0	177.19	29.1	0.0	236.3	226.3	10.00	23.625		

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Danielson 15G-432
Project:	SEC.15-T7N-R66W	TVD Reference:	WELL @ 4965.0ft (Original Well Elev)
Reference Site:	Danielson Pad Sec.15-T7N-R66W	MD Reference:	WELL @ 4965.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Danielson 15G-432	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (6-01-12)	Offset TVD Reference:	Offset Datum

Offset Design Danielson Pad Sec.15-T7N-R66W - Danielson 15G-232 - Wellbore #1 - Plan #1 (6-01-12)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
2,400.0	2,385.0	2,385.0	2,385.0	6.6	5.2	177.35	177.35	29.1	0.0	250.2	239.8	10.46	23.918	
2,500.0	2,484.0	2,484.0	2,484.0	7.0	5.5	177.49	177.49	29.1	0.0	264.2	253.3	10.92	24.184	
2,600.0	2,583.1	2,583.1	2,583.1	7.3	5.7	177.61	177.61	29.1	0.0	278.1	266.7	11.39	24.428	
2,700.0	2,682.1	2,682.1	2,682.1	7.7	5.9	177.73	177.73	29.1	0.0	292.1	280.2	11.85	24.653	
2,800.0	2,781.1	2,781.1	2,781.1	8.0	6.1	177.83	177.83	29.1	0.0	306.0	293.7	12.31	24.859	
2,900.0	2,880.1	2,880.1	2,880.1	8.3	6.4	177.93	177.93	29.1	0.0	319.9	307.2	12.77	25.051	
3,000.0	2,979.1	2,979.1	2,979.1	8.7	6.6	178.01	178.01	29.1	0.0	333.9	320.6	13.23	25.228	
3,100.0	3,078.2	3,085.4	3,085.4	9.0	6.8	177.95	177.95	28.6	-1.2	347.0	333.3	13.70	25.335	
3,200.0	3,177.2	3,194.2	3,194.1	9.4	7.0	177.43	177.43	26.5	-6.0	357.6	343.4	14.15	25.277	
3,300.0	3,276.2	3,303.2	3,302.7	9.7	7.2	176.47	176.47	22.8	-14.7	365.5	350.9	14.60	25.032	
3,400.0	3,375.2	3,406.3	3,405.0	10.1	7.4	175.25	175.25	18.0	-25.7	371.5	356.5	15.06	24.669	
3,500.0	3,474.3	3,505.8	3,503.8	10.4	7.7	174.07	174.07	13.2	-36.7	377.5	362.0	15.52	24.323	
3,600.0	3,573.3	3,605.3	3,602.6	10.8	7.9	172.94	172.94	8.5	-47.6	383.7	367.7	15.99	23.992	
3,700.0	3,672.3	3,704.8	3,701.4	11.1	8.1	171.84	171.84	3.8	-58.5	390.0	373.5	16.47	23.677	
3,800.0	3,771.3	3,804.4	3,800.2	11.5	8.3	170.78	170.78	-1.0	-69.4	396.5	379.5	16.96	23.376	
3,900.0	3,870.3	3,903.9	3,899.1	11.8	8.6	169.75	169.75	-5.7	-80.3	403.0	385.6	17.46	23.089	
4,000.0	3,969.4	4,003.4	3,997.9	12.2	8.8	168.75	168.75	-10.5	-91.2	409.7	391.8	17.96	22.814	
4,100.0	4,068.4	4,102.9	4,096.7	12.5	9.1	167.79	167.79	-15.2	-102.1	416.5	398.1	18.47	22.552	
4,200.0	4,167.4	4,202.5	4,195.5	12.9	9.3	166.85	166.85	-19.9	-113.0	423.5	404.5	18.99	22.301	
4,300.0	4,266.4	4,302.0	4,294.3	13.2	9.6	165.95	165.95	-24.7	-124.0	430.5	411.0	19.52	22.061	
4,400.0	4,365.6	4,401.5	4,393.1	13.5	9.8	165.07	165.07	-29.4	-134.9	436.9	416.9	20.05	21.790	
4,500.0	4,465.1	4,501.2	4,492.1	13.8	10.1	164.10	164.10	-34.1	-145.8	440.3	419.8	20.56	21.418	
4,600.0	4,564.8	4,600.8	4,591.0	13.9	10.4	163.00	163.00	-38.9	-156.7	440.5	419.4	21.05	20.928	
4,700.0	4,664.8	4,700.3	4,689.8	14.1	10.7	161.74	161.74	-43.6	-167.6	437.5	416.0	21.52	20.328	
4,800.0	4,764.8	4,799.6	4,788.4	14.2	10.9	3.52	3.52	-48.4	-178.5	432.1	407.8	24.32	17.771	
4,900.0	4,864.8	4,897.1	4,885.2	14.4	11.2	2.14	2.14	-52.9	-189.1	426.8	402.2	24.61	17.345	
5,000.0	4,964.8	4,990.8	4,978.4	14.5	11.4	1.07	1.07	-56.4	-197.1	422.9	398.0	24.89	16.987	
5,100.0	5,064.8	5,084.9	5,072.4	14.6	11.6	0.36	0.36	-58.7	-202.4	420.4	395.2	25.19	16.686	
5,200.0	5,164.8	5,179.3	5,166.7	14.8	11.8	0.02	0.02	-59.8	-204.8	419.2	393.7	25.51	16.435	
5,251.4	5,216.2	5,228.8	5,216.2	14.9	11.9	0.00	0.00	-59.9	-205.0	419.1	393.5	25.68	16.323	
5,300.0	5,264.8	5,277.4	5,264.8	14.9	12.0	0.00	0.00	-59.9	-205.0	419.1	393.3	25.85	16.217	
5,400.0	5,364.8	5,377.4	5,364.8	15.1	12.2	0.00	0.00	-59.9	-205.0	419.1	392.9	26.20	15.997	
5,500.0	5,464.8	5,477.4	5,464.8	15.2	12.4	0.00	0.00	-59.9	-205.0	419.1	392.6	26.56	15.779	
5,600.0	5,564.8	5,577.4	5,564.8	15.3	12.6	0.00	0.00	-59.9	-205.0	419.1	392.2	26.93	15.565	
5,700.0	5,664.8	5,677.4	5,664.8	15.5	12.8	0.00	0.00	-59.9	-205.0	419.1	391.9	27.29	15.356	
5,800.0	5,764.8	5,777.4	5,764.8	15.6	13.0	0.00	0.00	-59.9	-205.0	419.1	391.5	27.66	15.152	
5,900.0	5,864.8	5,877.4	5,864.8	15.8	13.2	0.00	0.00	-59.9	-205.0	419.1	391.1	28.03	14.951	
6,000.0	5,964.8	5,977.4	5,964.8	15.9	13.4	0.00	0.00	-59.9	-205.0	419.1	390.7	28.41	14.755	
6,100.0	6,064.8	6,077.4	6,064.8	16.1	13.6	0.00	0.00	-59.9	-205.0	419.1	390.4	28.78	14.563	
6,200.0	6,164.8	6,177.4	6,164.8	16.3	13.9	0.00	0.00	-59.9	-205.0	419.1	390.0	29.16	14.375	
6,300.0	6,264.8	6,277.4	6,264.8	16.4	14.1	0.00	0.00	-59.9	-205.0	419.1	389.6	29.54	14.191	
6,400.0	6,364.8	6,377.4	6,364.8	16.6	14.3	0.00	0.00	-59.9	-205.0	419.1	389.2	29.92	14.011	
6,500.0	6,464.8	6,477.4	6,464.8	16.7	14.5	0.00	0.00	-59.9	-205.0	419.1	388.9	30.30	13.834	
6,561.4	6,526.2	6,538.8	6,526.2	16.8	14.6	0.00	0.00	-59.9	-205.0	419.1	388.6	30.53	13.727	
6,600.0	6,564.8	6,577.3	6,564.7	16.9	14.7	0.02	0.02	-59.8	-204.9	419.2	388.5	30.68	13.662	
6,700.0	6,664.8	6,676.2	6,663.2	17.1	14.9	1.14	1.14	-59.8	-196.7	419.3	388.2	31.08	13.490	
6,800.0	6,764.8	6,771.6	6,756.5	17.2	15.0	-85.90	-85.90	-59.7	-176.8	420.3	390.5	29.76	14.121	
6,900.0	6,864.0	6,864.2	6,843.9	17.4	15.1	-83.03	-83.03	-59.5	-146.5	422.4	392.5	29.90	14.125	
7,000.0	6,960.9	6,954.7	6,925.2	17.4	15.2	-80.33	-80.33	-59.3	-106.9	425.4	395.4	30.04	14.162	
7,100.0	7,053.8	7,043.3	6,999.7	17.5	15.4	-77.82	-77.82	-59.0	-59.1	429.1	398.9	30.22	14.200	
7,200.0	7,141.1	7,130.2	7,067.0	17.5	15.6	-75.54	-75.54	-58.7	-4.1	433.2	402.7	30.51	14.202	

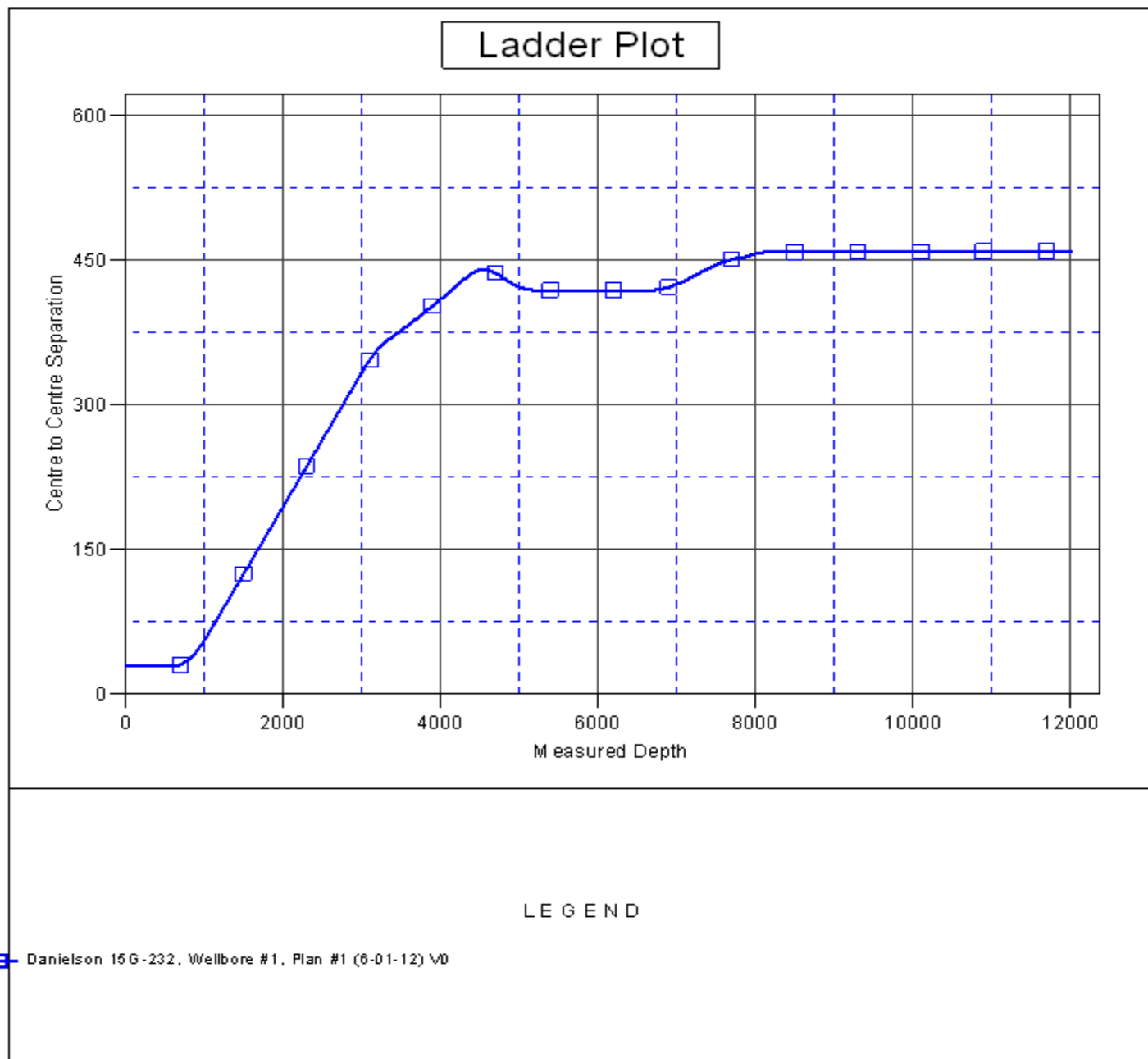
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Danielson 15G-432
Project:	SEC.15-T7N-R66W	TVD Reference:	WELL @ 4965.0ft (Original Well Elev)
Reference Site:	Danielson Pad Sec.15-T7N-R66W	MD Reference:	WELL @ 4965.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Danielson 15G-432	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (6-01-12)	Offset TVD Reference:	Offset Datum

Offset Design Danielson Pad Sec.15-T7N-R66W - Danielson 15G-232 - Wellbore #1 - Plan #1 (6-01-12)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
7,300.0	7,221.3	7,215.8	7,126.7	17.6	16.0	-73.52	-58.4	57.1	437.5	406.5	30.97	14.126		
7,400.0	7,293.0	7,300.0	7,178.4	17.7	16.6	-71.77	-58.0	123.5	441.7	410.0	31.69	13.936		
7,500.0	7,355.0	7,383.6	7,222.3	17.8	17.4	-70.29	-57.6	194.7	445.5	412.7	32.78	13.590		
7,600.0	7,406.2	7,466.3	7,257.7	18.2	18.4	-69.11	-57.1	269.3	448.8	414.5	34.28	13.092		
7,700.0	7,445.8	7,550.0	7,285.1	19.2	19.6	-68.20	-56.7	348.4	451.5	415.2	36.25	12.453		
7,800.0	7,473.1	7,630.0	7,303.1	20.7	21.0	-67.62	-56.2	426.3	453.3	414.7	38.64	11.731		
7,900.0	7,487.9	7,711.4	7,312.9	22.5	22.5	-67.31	-55.8	507.1	454.3	412.8	41.48	10.953		
8,000.0	7,497.5	7,797.8	7,314.5	24.5	24.2	-66.46	-55.3	593.4	457.3	412.7	44.60	10.254		
8,100.0	7,499.9	7,897.7	7,313.7	26.6	26.4	-66.04	-54.7	693.3	458.6	410.4	48.25	9.504		
8,200.0	7,499.3	7,997.7	7,313.0	28.8	28.6	-66.03	-54.2	793.3	458.6	406.3	52.35	8.762		
8,300.0	7,498.7	8,097.7	7,312.3	31.1	30.9	-66.02	-53.6	893.3	458.7	402.1	56.62	8.101		
8,400.0	7,498.0	8,197.7	7,311.5	33.5	33.3	-66.01	-53.0	993.3	458.7	397.7	61.03	7.517		
8,500.0	7,497.4	8,297.7	7,310.8	36.0	35.8	-66.00	-52.4	1,093.3	458.8	393.2	65.54	6.999		
8,600.0	7,496.8	8,397.7	7,310.1	38.5	38.3	-65.99	-51.9	1,193.3	458.8	388.6	70.15	6.540		
8,700.0	7,496.1	8,497.7	7,309.3	41.0	40.9	-65.98	-51.3	1,293.3	458.8	384.0	74.83	6.132		
8,800.0	7,495.5	8,597.7	7,308.6	43.6	43.5	-65.96	-50.7	1,393.3	458.9	379.3	79.57	5.767		
8,900.0	7,494.8	8,697.7	7,307.9	46.2	46.1	-65.95	-50.2	1,493.3	458.9	374.5	84.35	5.440		
9,000.0	7,494.2	8,797.7	7,307.1	48.8	48.7	-65.94	-49.6	1,593.2	458.9	369.8	89.18	5.146		
9,100.0	7,493.6	8,897.7	7,306.4	51.4	51.3	-65.93	-49.0	1,693.2	459.0	364.9	94.04	4.881		
9,200.0	7,492.9	8,997.7	7,305.7	54.1	54.0	-65.92	-48.4	1,793.2	459.0	360.1	98.93	4.640		
9,300.0	7,492.3	9,097.7	7,304.9	56.8	56.7	-65.91	-47.9	1,893.2	459.0	355.2	103.85	4.420		
9,400.0	7,491.7	9,197.7	7,304.2	59.4	59.4	-65.90	-47.3	1,993.2	459.1	350.3	108.79	4.220		
9,500.0	7,491.0	9,297.7	7,303.5	62.1	62.1	-65.89	-46.7	2,093.2	459.1	345.4	113.74	4.036		
9,600.0	7,490.4	9,397.7	7,302.7	64.8	64.8	-65.88	-46.2	2,193.2	459.2	340.4	118.72	3.868		
9,700.0	7,489.8	9,497.7	7,302.0	67.6	67.5	-65.86	-45.6	2,293.2	459.2	335.5	123.70	3.712		
9,800.0	7,489.1	9,597.7	7,301.3	70.3	70.2	-65.85	-45.0	2,393.2	459.2	330.5	128.70	3.568		
9,900.0	7,488.5	9,697.7	7,300.5	73.0	73.0	-65.84	-44.4	2,493.2	459.3	325.6	133.71	3.435		
10,000.0	7,487.8	9,797.7	7,299.8	75.7	75.7	-65.83	-43.9	2,593.2	459.3	320.6	138.73	3.311		
10,100.0	7,487.2	9,897.7	7,299.1	78.5	78.5	-65.82	-43.3	2,693.2	459.3	315.6	143.76	3.195		
10,200.0	7,486.6	9,997.7	7,298.3	81.2	81.2	-65.81	-42.7	2,793.2	459.4	310.6	148.79	3.087		
10,300.0	7,485.9	10,097.7	7,297.6	84.0	83.9	-65.80	-42.2	2,893.2	459.4	305.6	153.84	2.986		
10,400.0	7,485.3	10,197.7	7,296.9	86.7	86.7	-65.79	-41.6	2,993.2	459.5	300.6	158.88	2.892		
10,500.0	7,484.7	10,297.7	7,296.1	89.5	89.5	-65.78	-41.0	3,093.2	459.5	295.5	163.94	2.803		
10,600.0	7,484.0	10,397.7	7,295.4	92.2	92.2	-65.76	-40.4	3,193.2	459.5	290.5	169.00	2.719		
10,700.0	7,483.4	10,497.7	7,294.7	95.0	95.0	-65.75	-39.9	3,293.2	459.6	285.5	174.06	2.640		
10,800.0	7,482.8	10,597.7	7,293.9	97.7	97.7	-65.74	-39.3	3,393.2	459.6	280.5	179.13	2.566		
10,900.0	7,482.1	10,697.7	7,293.2	100.5	100.5	-65.73	-38.7	3,493.2	459.6	275.4	184.20	2.495		
11,000.0	7,481.5	10,797.7	7,292.5	103.3	103.3	-65.72	-38.2	3,593.2	459.7	270.4	189.27	2.429		
11,100.0	7,480.8	10,897.7	7,291.7	106.0	106.1	-65.71	-37.6	3,693.2	459.7	265.4	194.35	2.365		
11,200.0	7,480.2	10,997.7	7,291.0	108.8	108.8	-65.70	-37.0	3,793.2	459.7	260.3	199.43	2.305		
11,300.0	7,479.6	11,097.7	7,290.3	111.6	111.6	-65.69	-36.5	3,893.1	459.8	255.3	204.51	2.248		
11,400.0	7,478.9	11,197.7	7,289.5	114.4	114.4	-65.68	-35.9	3,993.1	459.8	250.2	209.59	2.194		
11,500.0	7,478.3	11,297.7	7,288.8	117.1	117.2	-65.66	-35.3	4,093.1	459.9	245.2	214.68	2.142		
11,600.0	7,477.7	11,397.7	7,288.1	119.9	119.9	-65.65	-34.7	4,193.1	459.9	240.1	219.76	2.093		
11,700.0	7,477.0	11,497.7	7,287.3	122.7	122.7	-65.64	-34.2	4,293.1	459.9	235.1	224.85	2.045		
11,800.0	7,476.4	11,597.7	7,286.6	125.5	125.5	-65.63	-33.6	4,393.1	460.0	230.0	229.94	2.000		
11,900.0	7,475.7	11,697.7	7,285.9	128.3	128.3	-65.62	-33.0	4,493.1	460.0	225.0	235.03	1.957		
12,000.0	7,475.1	11,797.7	7,285.1	131.0	131.1	-65.61	-32.5	4,593.1	460.0	219.9	240.12	1.916		
12,017.5	7,475.0	11,815.1	7,285.0	131.5	131.6	-65.61	-32.4	4,610.6	460.0	219.0	241.01	1.909 SF		

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Danielson 15G-432
Project:	SEC.15-T7N-R66W	TVD Reference:	WELL @ 4965.0ft (Original Well Elev)
Reference Site:	Danielson Pad Sec.15-T7N-R66W	MD Reference:	WELL @ 4965.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Danielson 15G-432	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (6-01-12)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4965.0ft (Original Well Elev) Coordinates are relative to: Danielson 15G-432
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: 0.47°



Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well Danielson 15G-432
Project:	SEC.15-T7N-R66W	TVD Reference:	WELL @ 4965.0ft (Original Well Elev)
Reference Site:	Danielson Pad Sec.15-T7N-R66W	MD Reference:	WELL @ 4965.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Danielson 15G-432	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
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