

# PETROLEUM DEVELOPMENT CORP Weld County CO

Well Name: **LDS 1V-204**

Surface Location: LDS 5N65W1U Pad Sec.1-T5N-R65W  
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

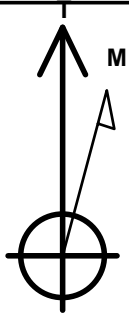
Ground Elevation: 4638.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1402085.67	3249703.84	40.433660	-104.602970	

Original Well Elev WELL @ 4653.0ft (Original Well Elev)

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 531'FNL & 347'FEL, Sec.1	1.0	0.0	0.0	Point
BHL 1106'FNL & 2145'FEL, Sec.2	6725.0	-567.3	-7107.3	Point



Azimuths to True North  
Magnetic North: 8.35°

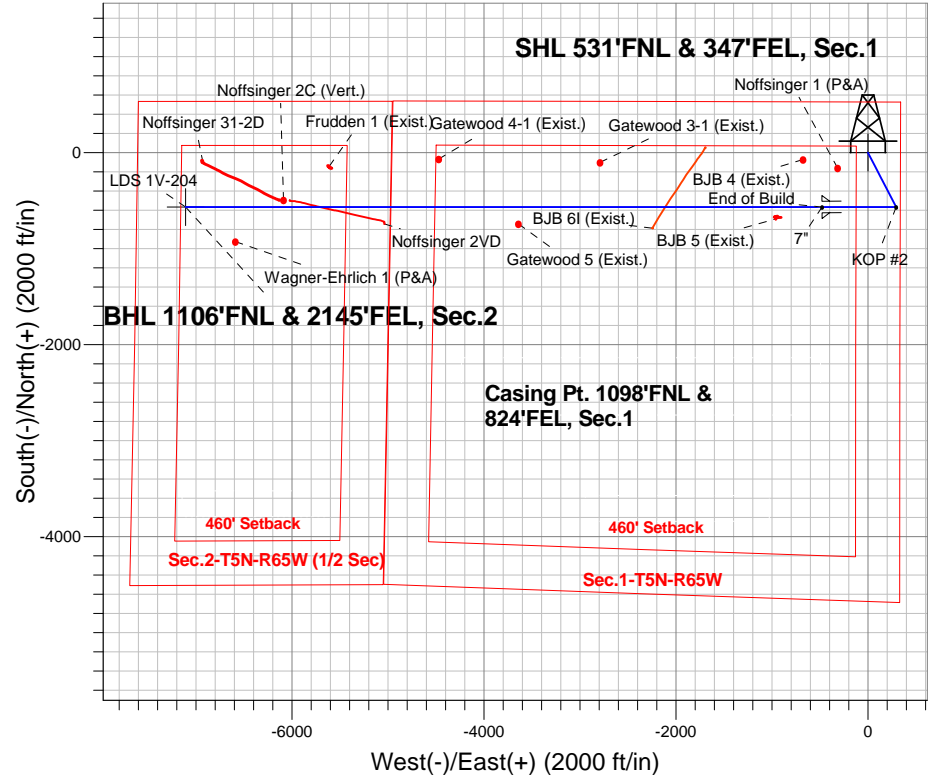
Magnetic Field  
Strength: 52827.7srT  
Dip Angle: 66.99°  
Date: 9/4/2014  
Model: IGRF2010

LDS 5N65W1U Pad Sec.1-T5N-R65W  
LDS 1V-204  
Plan #1 (9-4-14)

## ANNOTATIONS

TVD	MD	Annotation
400.0	400.0	KOP #1
6020.2	6062.1	KOP #2
6784.0	7268.9	End of Build

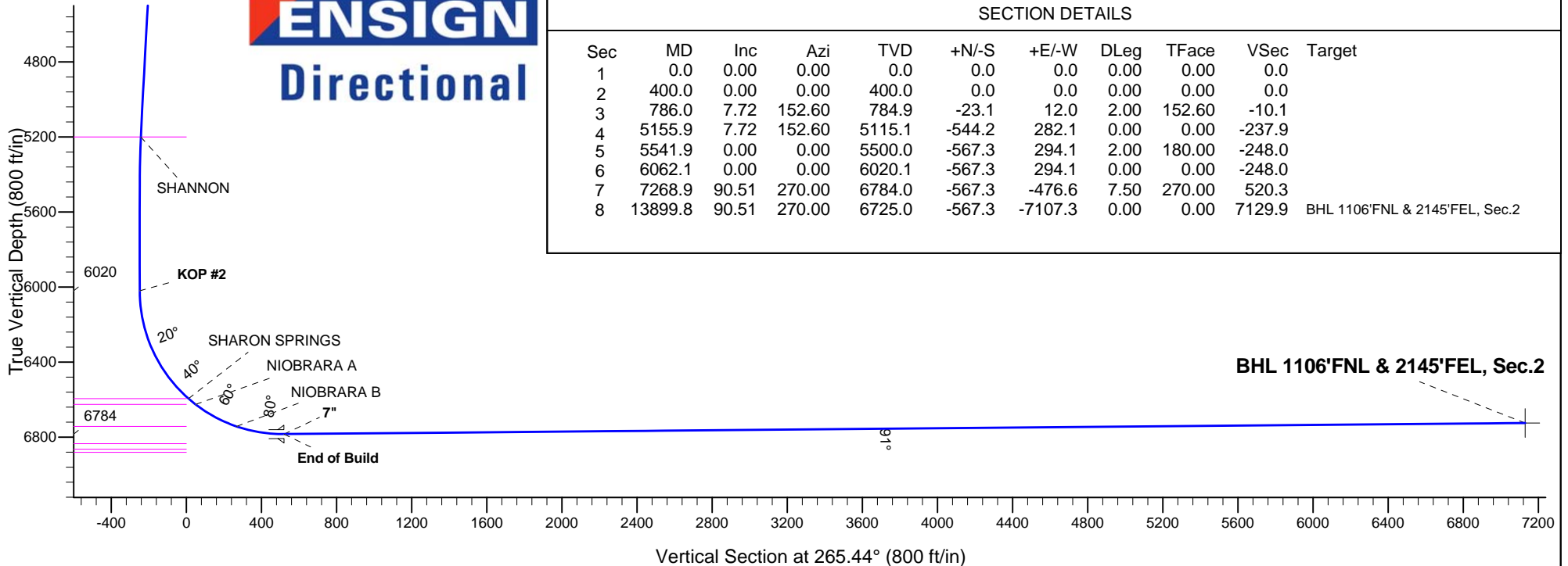
South(-)/North(+) (2000 ft/in)



**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	400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.0	
3	786.0	7.72	152.60	784.9	-23.1	12.0	2.00	152.60	-10.1	
4	5155.9	7.72	152.60	5115.1	-544.2	282.1	0.00	0.00	-237.9	
5	5541.9	0.00	0.00	5500.0	-567.3	294.1	2.00	180.00	-248.0	
6	6062.1	0.00	0.00	6020.1	-567.3	294.1	0.00	0.00	-248.0	
7	7268.9	90.51	270.00	6784.0	-567.3	-476.6	7.50	270.00	520.3	
8	13899.8	90.51	270.00	6725.0	-567.3	-7107.3	0.00	0.00	7129.9	BHL 1106'FNL & 2145'FEL, Sec.2



**BHL 1106'FNL & 2145'FEL, Sec.2**



# **PETROLEUM DEVELOPMENT CORP Weld County CO**

**SEC.1-T5N-R65W**

**LDS 5N65W1U Pad Sec.1-T5N-R65W**

**LDS 1V-204**

**Wellbore #1**

**Plan: Plan #1 (9-4-14)**

## **Standard Planning Report**

**18 September, 2014**

<b>Database:</b>	landmark	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Project:</b>	SEC.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (9-4-14)		

<b>Project</b>	SEC.1-T5N-R65W, Weld County, CO		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

<b>Site</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W		
<b>Site Position:</b>		<b>Northing:</b>	1,402,064.02 ft
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,249,723.55 ft
<b>Position Uncertainty:</b>	0.0 ft	<b>Slot Radius:</b>	"
		<b>Latitude:</b>	40.433600
		<b>Longitude:</b>	-104.602900
		<b>Grid Convergence:</b>	0.58 °

<b>Well</b>	LDS 1V-204		
<b>Well Position</b>	<b>+N/-S</b>	21.9 ft	<b>Northing:</b>
	<b>+E/-W</b>	-19.5 ft	<b>Easting:</b>
<b>Position Uncertainty</b>		0.0 ft	<b>Wellhead Elevation:</b>
			ft
			<b>Latitude:</b>
			40.433660
			<b>Longitude:</b>
			-104.602970
			<b>Ground Level:</b>
			4,638.0 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	9/4/2014	8.35	66.99	52,828

<b>Design</b>	Plan #1 (9-4-14)			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	265.44

<b>Plan Sections</b>										
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	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
786.0	7.72	152.60	784.9	-23.1	12.0	2.00	2.00	0.00	152.60	
5,155.9	7.72	152.60	5,115.1	-544.2	282.1	0.00	0.00	0.00	0.00	
5,541.9	0.00	0.00	5,500.0	-567.3	294.1	2.00	-2.00	0.00	180.00	
6,062.1	0.00	0.00	6,020.1	-567.3	294.1	0.00	0.00	0.00	0.00	
7,268.9	90.51	270.00	6,784.0	-567.3	-476.6	7.50	7.50	0.00	270.00	
13,899.8	90.51	270.00	6,725.0	-567.3	-7,107.3	0.00	0.00	0.00	0.00	BHL 1106°FNL & 21

<b>Database:</b>	landmark	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Project:</b>	SEC.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (9-4-14)		

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
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
<b>KOP #1</b>									
500.0	2.00	152.60	500.0	-1.5	0.8	-0.7	2.00	2.00	0.00
600.0	4.00	152.60	599.8	-6.2	3.2	-2.7	2.00	2.00	0.00
700.0	6.00	152.60	699.5	-13.9	7.2	-6.1	2.00	2.00	0.00
786.0	7.72	152.60	784.9	-23.1	12.0	-10.1	2.00	2.00	0.00
800.0	7.72	152.60	798.7	-24.7	12.8	-10.8	0.00	0.00	0.00
900.0	7.72	152.60	897.8	-36.6	19.0	-16.0	0.00	0.00	0.00
1,000.0	7.72	152.60	996.9	-48.6	25.2	-21.2	0.00	0.00	0.00
1,100.0	7.72	152.60	1,096.0	-60.5	31.4	-26.5	0.00	0.00	0.00
1,200.0	7.72	152.60	1,195.1	-72.4	37.5	-31.7	0.00	0.00	0.00
1,300.0	7.72	152.60	1,294.2	-84.4	43.7	-36.9	0.00	0.00	0.00
1,400.0	7.72	152.60	1,393.3	-96.3	49.9	-42.1	0.00	0.00	0.00
1,500.0	7.72	152.60	1,492.4	-108.2	56.1	-47.3	0.00	0.00	0.00
1,600.0	7.72	152.60	1,591.5	-120.1	62.3	-52.5	0.00	0.00	0.00
1,700.0	7.72	152.60	1,690.5	-132.1	68.5	-57.7	0.00	0.00	0.00
1,800.0	7.72	152.60	1,789.6	-144.0	74.6	-63.0	0.00	0.00	0.00
1,900.0	7.72	152.60	1,888.7	-155.9	80.8	-68.2	0.00	0.00	0.00
2,000.0	7.72	152.60	1,987.8	-167.8	87.0	-73.4	0.00	0.00	0.00
2,100.0	7.72	152.60	2,086.9	-179.8	93.2	-78.6	0.00	0.00	0.00
2,200.0	7.72	152.60	2,186.0	-191.7	99.4	-83.8	0.00	0.00	0.00
2,300.0	7.72	152.60	2,285.1	-203.6	105.6	-89.0	0.00	0.00	0.00
2,400.0	7.72	152.60	2,384.2	-215.6	111.7	-94.2	0.00	0.00	0.00
2,500.0	7.72	152.60	2,483.3	-227.5	117.9	-99.5	0.00	0.00	0.00
2,600.0	7.72	152.60	2,582.4	-239.4	124.1	-104.7	0.00	0.00	0.00
2,700.0	7.72	152.60	2,681.5	-251.3	130.3	-109.9	0.00	0.00	0.00
2,800.0	7.72	152.60	2,780.6	-263.3	136.5	-115.1	0.00	0.00	0.00
2,900.0	7.72	152.60	2,879.7	-275.2	142.7	-120.3	0.00	0.00	0.00
3,000.0	7.72	152.60	2,978.8	-287.1	148.8	-125.5	0.00	0.00	0.00
3,100.0	7.72	152.60	3,077.9	-299.0	155.0	-130.7	0.00	0.00	0.00
3,200.0	7.72	152.60	3,177.0	-311.0	161.2	-136.0	0.00	0.00	0.00
3,300.0	7.72	152.60	3,276.0	-322.9	167.4	-141.2	0.00	0.00	0.00
3,400.0	7.72	152.60	3,375.1	-334.8	173.6	-146.4	0.00	0.00	0.00
3,500.0	7.72	152.60	3,474.2	-346.7	179.8	-151.6	0.00	0.00	0.00
3,511.9	7.72	152.60	3,486.0	-348.2	180.5	-152.2	0.00	0.00	0.00
<b>PARKMAN</b>									
3,600.0	7.72	152.60	3,573.3	-358.7	185.9	-156.8	0.00	0.00	0.00
3,700.0	7.72	152.60	3,672.4	-370.6	192.1	-162.0	0.00	0.00	0.00
3,800.0	7.72	152.60	3,771.5	-382.5	198.3	-167.2	0.00	0.00	0.00
3,900.0	7.72	152.60	3,870.6	-394.5	204.5	-172.5	0.00	0.00	0.00
4,000.0	7.72	152.60	3,969.7	-406.4	210.7	-177.7	0.00	0.00	0.00
4,100.0	7.72	152.60	4,068.8	-418.3	216.9	-182.9	0.00	0.00	0.00
4,200.0	7.72	152.60	4,167.9	-430.2	223.0	-188.1	0.00	0.00	0.00
4,276.8	7.72	152.60	4,244.0	-439.4	227.8	-192.1	0.00	0.00	0.00
<b>SUSSEX</b>									
4,300.0	7.72	152.60	4,267.0	-442.2	229.2	-193.3	0.00	0.00	0.00
4,400.0	7.72	152.60	4,366.1	-454.1	235.4	-198.5	0.00	0.00	0.00
4,500.0	7.72	152.60	4,465.2	-466.0	241.6	-203.7	0.00	0.00	0.00
4,600.0	7.72	152.60	4,564.3	-477.9	247.8	-209.0	0.00	0.00	0.00

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<b>Project:</b>	SEC.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (9-4-14)		

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)
4,700.0	7.72	152.60	4,663.4	-489.9	254.0	-214.2	0.00	0.00	0.00
4,800.0	7.72	152.60	4,762.4	-501.8	260.1	-219.4	0.00	0.00	0.00
4,900.0	7.72	152.60	4,861.5	-513.7	266.3	-224.6	0.00	0.00	0.00
5,000.0	7.72	152.60	4,960.6	-525.6	272.5	-229.8	0.00	0.00	0.00
5,100.0	7.72	152.60	5,059.7	-537.6	278.7	-235.0	0.00	0.00	0.00
5,155.9	7.72	152.60	5,115.1	-544.2	282.1	-237.9	0.00	0.00	0.00
5,200.0	6.84	152.60	5,158.9	-549.2	284.7	-240.1	2.00	-2.00	0.00
5,241.4	6.01	152.60	5,200.0	-553.3	286.9	-241.9	2.00	-2.00	0.00
<b>SHANNON</b>									
5,300.0	4.84	152.60	5,258.3	-558.2	289.4	-244.1	2.00	-2.00	0.00
5,400.0	2.84	152.60	5,358.1	-564.2	292.5	-246.7	2.00	-2.00	0.00
5,500.0	0.84	152.60	5,458.1	-567.0	294.0	-247.9	2.00	-2.00	0.00
5,541.9	0.00	0.00	5,500.0	-567.3	294.1	-248.0	2.00	-2.00	0.00
5,600.0	0.00	0.00	5,558.1	-567.3	294.1	-248.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,658.1	-567.3	294.1	-248.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,758.1	-567.3	294.1	-248.0	0.00	0.00	0.00
5,900.0	0.00	0.00	5,858.1	-567.3	294.1	-248.0	0.00	0.00	0.00
6,000.0	0.00	0.00	5,958.1	-567.3	294.1	-248.0	0.00	0.00	0.00
6,062.1	0.00	0.00	6,020.2	-567.3	294.1	-248.0	0.00	0.00	0.00
<b>KOP #2</b>									
6,100.0	2.85	270.00	6,058.0	-567.3	293.2	-247.1	7.51	7.51	0.00
6,200.0	10.35	270.00	6,157.3	-567.3	281.7	-235.6	7.50	7.50	0.00
6,300.0	17.85	270.00	6,254.2	-567.3	257.3	-211.4	7.50	7.50	0.00
6,400.0	25.35	270.00	6,347.1	-567.3	220.6	-174.7	7.50	7.50	0.00
6,500.0	32.85	270.00	6,434.5	-567.3	172.0	-126.3	7.50	7.50	0.00
6,600.0	40.35	270.00	6,514.7	-567.3	112.4	-66.9	7.50	7.50	0.00
6,700.0	47.85	270.00	6,586.5	-567.3	42.9	2.4	7.50	7.50	0.00
6,712.9	48.81	270.00	6,595.0	-567.3	33.3	12.0	7.50	7.50	0.00
<b>SHARON SPRINGS</b>									
6,761.8	52.48	270.00	6,626.0	-567.3	-4.5	49.7	7.50	7.50	0.00
<b>NIORARA A</b>									
6,800.0	55.35	270.00	6,648.5	-567.3	-35.4	80.5	7.50	7.50	0.00
6,900.0	62.85	270.00	6,699.9	-567.3	-121.2	165.9	7.50	7.50	0.00
7,000.0	70.35	270.00	6,739.5	-567.3	-212.9	257.4	7.50	7.50	0.00
7,010.5	71.13	270.00	6,743.0	-567.3	-222.8	267.2	7.50	7.50	0.00
<b>NIORARA B</b>									
7,100.0	77.85	270.00	6,766.9	-567.3	-309.0	353.2	7.50	7.50	0.00
7,200.0	85.35	270.00	6,781.5	-567.3	-407.9	451.7	7.50	7.50	0.00
7,268.9	90.51	270.00	6,784.0	-567.3	-476.7	520.3	7.50	7.50	0.00
<b>End of Build - 7"</b>									
7,300.0	90.51	270.00	6,783.7	-567.3	-507.8	551.3	0.00	0.00	0.00
7,400.0	90.51	270.00	6,782.9	-567.3	-607.8	651.0	0.00	0.00	0.00
7,500.0	90.51	270.00	6,782.0	-567.3	-707.8	750.7	0.00	0.00	0.00
7,600.0	90.51	270.00	6,781.1	-567.3	-807.8	850.4	0.00	0.00	0.00
7,700.0	90.51	270.00	6,780.2	-567.3	-907.8	950.0	0.00	0.00	0.00
7,800.0	90.51	270.00	6,779.3	-567.3	-1,007.8	1,049.7	0.00	0.00	0.00
7,900.0	90.51	270.00	6,778.4	-567.3	-1,107.8	1,149.4	0.00	0.00	0.00
8,000.0	90.51	270.00	6,777.5	-567.3	-1,207.8	1,249.1	0.00	0.00	0.00
8,100.0	90.51	270.00	6,776.6	-567.3	-1,307.8	1,348.7	0.00	0.00	0.00
8,200.0	90.51	270.00	6,775.7	-567.3	-1,407.8	1,448.4	0.00	0.00	0.00
8,300.0	90.51	270.00	6,774.8	-567.3	-1,507.7	1,548.1	0.00	0.00	0.00
8,400.0	90.51	270.00	6,774.0	-567.3	-1,607.7	1,647.8	0.00	0.00	0.00

<b>Database:</b>	landmark	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
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<b>Project:</b>	SEC.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (9-4-14)		

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)
8,500.0	90.51	270.00	6,773.1	-567.3	-1,707.7	1,747.5	0.00	0.00	0.00
8,600.0	90.51	270.00	6,772.2	-567.3	-1,807.7	1,847.1	0.00	0.00	0.00
8,700.0	90.51	270.00	6,771.3	-567.3	-1,907.7	1,946.8	0.00	0.00	0.00
8,800.0	90.51	270.00	6,770.4	-567.3	-2,007.7	2,046.5	0.00	0.00	0.00
8,900.0	90.51	270.00	6,769.5	-567.3	-2,107.7	2,146.2	0.00	0.00	0.00
9,000.0	90.51	270.00	6,768.6	-567.3	-2,207.7	2,245.9	0.00	0.00	0.00
9,100.0	90.51	270.00	6,767.7	-567.3	-2,307.7	2,345.5	0.00	0.00	0.00
9,200.0	90.51	270.00	6,766.8	-567.3	-2,407.7	2,445.2	0.00	0.00	0.00
9,300.0	90.51	270.00	6,765.9	-567.3	-2,507.7	2,544.9	0.00	0.00	0.00
9,400.0	90.51	270.00	6,765.1	-567.3	-2,607.7	2,644.6	0.00	0.00	0.00
9,500.0	90.51	270.00	6,764.2	-567.3	-2,707.7	2,744.3	0.00	0.00	0.00
9,600.0	90.51	270.00	6,763.3	-567.3	-2,807.7	2,843.9	0.00	0.00	0.00
9,700.0	90.51	270.00	6,762.4	-567.3	-2,907.7	2,943.6	0.00	0.00	0.00
9,800.0	90.51	270.00	6,761.5	-567.3	-3,007.7	3,043.3	0.00	0.00	0.00
9,900.0	90.51	270.00	6,760.6	-567.3	-3,107.7	3,143.0	0.00	0.00	0.00
10,000.0	90.51	270.00	6,759.7	-567.3	-3,207.7	3,242.6	0.00	0.00	0.00
10,100.0	90.51	270.00	6,758.8	-567.3	-3,307.7	3,342.3	0.00	0.00	0.00
10,200.0	90.51	270.00	6,757.9	-567.3	-3,407.7	3,442.0	0.00	0.00	0.00
10,300.0	90.51	270.00	6,757.0	-567.3	-3,507.7	3,541.7	0.00	0.00	0.00
10,400.0	90.51	270.00	6,756.2	-567.3	-3,607.7	3,641.4	0.00	0.00	0.00
10,500.0	90.51	270.00	6,755.3	-567.3	-3,707.7	3,741.0	0.00	0.00	0.00
10,600.0	90.51	270.00	6,754.4	-567.3	-3,807.7	3,840.7	0.00	0.00	0.00
10,700.0	90.51	270.00	6,753.5	-567.3	-3,907.7	3,940.4	0.00	0.00	0.00
10,800.0	90.51	270.00	6,752.6	-567.3	-4,007.6	4,040.1	0.00	0.00	0.00
10,900.0	90.51	270.00	6,751.7	-567.3	-4,107.6	4,139.8	0.00	0.00	0.00
11,000.0	90.51	270.00	6,750.8	-567.3	-4,207.6	4,239.4	0.00	0.00	0.00
11,100.0	90.51	270.00	6,749.9	-567.3	-4,307.6	4,339.1	0.00	0.00	0.00
11,200.0	90.51	270.00	6,749.0	-567.3	-4,407.6	4,438.8	0.00	0.00	0.00
11,300.0	90.51	270.00	6,748.1	-567.3	-4,507.6	4,538.5	0.00	0.00	0.00
11,400.0	90.51	270.00	6,747.3	-567.3	-4,607.6	4,638.2	0.00	0.00	0.00
11,500.0	90.51	270.00	6,746.4	-567.3	-4,707.6	4,737.8	0.00	0.00	0.00
11,600.0	90.51	270.00	6,745.5	-567.3	-4,807.6	4,837.5	0.00	0.00	0.00
11,700.0	90.51	270.00	6,744.6	-567.3	-4,907.6	4,937.2	0.00	0.00	0.00
11,800.0	90.51	270.00	6,743.7	-567.3	-5,007.6	5,036.9	0.00	0.00	0.00
11,900.0	90.51	270.00	6,742.8	-567.3	-5,107.6	5,136.5	0.00	0.00	0.00
12,000.0	90.51	270.00	6,741.9	-567.3	-5,207.6	5,236.2	0.00	0.00	0.00
12,100.0	90.51	270.00	6,741.0	-567.3	-5,307.6	5,335.9	0.00	0.00	0.00
12,200.0	90.51	270.00	6,740.1	-567.3	-5,407.6	5,435.6	0.00	0.00	0.00
12,300.0	90.51	270.00	6,739.2	-567.3	-5,507.6	5,535.3	0.00	0.00	0.00
12,400.0	90.51	270.00	6,738.3	-567.3	-5,607.6	5,634.9	0.00	0.00	0.00
12,500.0	90.51	270.00	6,737.5	-567.3	-5,707.6	5,734.6	0.00	0.00	0.00
12,600.0	90.51	270.00	6,736.6	-567.3	-5,807.6	5,834.3	0.00	0.00	0.00
12,700.0	90.51	270.00	6,735.7	-567.3	-5,907.6	5,934.0	0.00	0.00	0.00
12,800.0	90.51	270.00	6,734.8	-567.3	-6,007.6	6,033.7	0.00	0.00	0.00
12,900.0	90.51	270.00	6,733.9	-567.3	-6,107.6	6,133.3	0.00	0.00	0.00
13,000.0	90.51	270.00	6,733.0	-567.3	-6,207.6	6,233.0	0.00	0.00	0.00
13,100.0	90.51	270.00	6,732.1	-567.3	-6,307.6	6,332.7	0.00	0.00	0.00
13,200.0	90.51	270.00	6,731.2	-567.3	-6,407.6	6,432.4	0.00	0.00	0.00
13,300.0	90.51	270.00	6,730.3	-567.3	-6,507.5	6,532.1	0.00	0.00	0.00
13,400.0	90.51	270.00	6,729.4	-567.3	-6,607.5	6,631.7	0.00	0.00	0.00
13,500.0	90.51	270.00	6,728.6	-567.3	-6,707.5	6,731.4	0.00	0.00	0.00
13,600.0	90.51	270.00	6,727.7	-567.3	-6,807.5	6,831.1	0.00	0.00	0.00
13,700.0	90.51	270.00	6,726.8	-567.3	-6,907.5	6,930.8	0.00	0.00	0.00

<b>Database:</b>	landmark	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Project:</b>	SEC.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (9-4-14)		

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)
13,800.0	90.51	270.00	6,725.9	-567.3	-7,007.5	7,030.5	0.00	0.00	0.00
13,899.8	90.51	270.00	6,725.0	-567.3	-7,107.3	7,129.9	0.00	0.00	0.00

Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
SHL 531'FNL & 347'F - plan hits target - Point	0.00	0.00	1.0	0.0	0.0	1,402,085.68	3,249,703.84	40.433660	-104.602970
BHL 1106'FNL & 214'F - plan hits target - Point	0.00	0.00	6,725.0	-567.3	-7,107.3	1,401,446.53	3,242,602.94	40.432100	-104.628500

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
7,268.9	6,784.0	7"	7	7-1/2	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,511.9	3,486.0	PARKMAN		0.00		
4,276.8	4,244.0	SUSSEX		0.00		
5,241.4	5,200.0	SHANNON		0.00		
6,712.9	6,595.0	SHARON SPRINGS		0.00		
6,761.8	6,626.0	NIOBRARA A		0.00		
7,010.5	6,743.0	NIOBRARA B		0.00		
	6,835.0	NIOBRARA C		0.00		
	6,864.0	FT HAYS		0.00		
	6,881.0	CODELL		0.00		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
400.0	400.0	0.0	0.0	KOP #1
6,062.1	6,020.2	-567.3	294.1	KOP #2
7,268.9	6,784.0	-567.3	-476.7	End of Build



# **PETROLEUM DEVELOPMENT CORP Weld County CO**

**SEC.1-T5N-R65W**

**LDS 5N65W1U Pad Sec.1-T5N-R65W**

**LDS 1V-204**

**Wellbore #1**

**Plan #1 (9-4-14)**

## **Anticollision Report**

**18 September, 2014**





<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Project:</b>	SEC.1-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Reference Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (9-4-14)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Plan #1 (9-4-14)
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria
<b>Interpolation Method:</b>	MD Interval 100.0ft
<b>Depth Range:</b>	Unlimited
<b>Results Limited by:</b>	Maximum center-center distance of 1,000.0ft
<b>Warning Levels Evaluated at:</b>	2.00 Sigma
<b>Error Model:</b>	ISCWSA
<b>Scan Method:</b>	Closest Approach 3D
<b>Error Surface:</b>	Elliptical Conic

Survey Tool Program		Date	9/18/2014		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	13,899.8	Plan #1 (9-4-14) (Wellbore #1)	MWD	MWD - Standard	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Existing Wells Sec.1-T5N-R65W						
BJB 4 (Exist.) - Wellbore #1 - Wellbore #1	7,468.7	6,766.2	494.4	332.4	3.052	CC, ES
BJB 4 (Exist.) - Wellbore #1 - Wellbore #1	7,500.0	6,766.0	495.4	332.7	3.045	SF
BJB 5 (Exist.) - Wellbore #1 - Wellbore #1	7,700.6	6,768.8	109.4	64.8	2.450	CC, ES, SF
BJB 6I (Exist.) - Wellbore #1 - Wellbore #1	9,032.8	6,910.4	221.4	136.5	2.607	CC, ES, SF
Gatewood 3-1 (Exist.) - Wellbore #1 - Wellbore #1	9,584.5	6,745.4	465.4	248.1	2.141	CC
Gatewood 3-1 (Exist.) - Wellbore #1 - Wellbore #1	9,600.0	6,745.3	465.7	247.9	2.138	ES, SF
Gatewood 4-1 (Exist.) - Wellbore #1 - Wellbore #1	11,263.2	6,736.5	498.5	234.7	1.890	CC, ES
Gatewood 4-1 (Exist.) - Wellbore #1 - Wellbore #1	11,300.0	6,736.1	499.8	235.0	1.888	SF
Gatewood 5 (Exist.) - Wellbore #1 - Wellbore #1	10,433.7	6,741.9	175.6	-65.2	0.729	Level 1, CC, ES, SF
Noffsinger 1 (P&A) - Wellbore #1 - Wellbore #1	400.0	431.0	353.1	343.7	37.532	CC
Noffsinger 1 (P&A) - Wellbore #1 - Wellbore #1	7,105.7	6,799.1	407.0	251.6	2.620	ES, SF
Existing Wells Sec.2-T5N-R65W						
Frudden 1 (Exist.) - Wellbore #1 - Wellbore #1	12,409.7	6,739.6	429.3	125.0	1.411	Level 3, CC, ES, SF
Wagner-Ehrlich 1 (P&A) - Wellbore #1 - Wellbore #1	13,382.0	6,722.6	360.8	38.1	1.118	Level 2, CC
Wagner-Ehrlich 1 (P&A) - Wellbore #1 - Wellbore #1	13,400.0	6,722.4	361.3	38.0	1.118	Level 2, ES, SF
LDS 5N65W1U Pad Sec.1-T5N-R65W						
LDS 1U-234 - Wellbore #1 - Plan #1 (9-4-14)	400.0	401.0	89.1	87.5	56.537	CC, ES
LDS 1U-234 - Wellbore #1 - Plan #1 (9-4-14)	13,899.8	13,868.9	801.6	396.6	1.979	SF
LDS 1U-304 - Wellbore #1 - Plan #1 (9-4-14)	400.0	402.0	120.3	118.7	76.233	CC, ES
LDS 1U-304 - Wellbore #1 - Plan #1 (9-4-14)	5,800.0	5,748.4	998.6	967.6	32.240	SF
LDS 1V-304 - Wellbore #1 - Plan #1 (9-4-14)	200.0	199.0	29.3	28.6	43.569	CC
LDS 1V-304 - Wellbore #1 - Plan #1 (9-4-14)	13,899.8	13,986.0	372.5	-28.4	0.929	Level 1, ES, SF
LDS 1V-314 - Wellbore #1 - Plan #1 (9-4-14)	400.0	400.0	60.5	58.9	38.425	CC
LDS 1V-314 - Wellbore #1 - Plan #1 (9-4-14)	13,899.8	13,965.7	253.4	-138.2	0.647	Level 1, ES, SF
LDS 1V-414 - Wellbore #1 - Plan #1 (9-4-14)	400.0	400.0	31.2	29.6	19.834	CC
LDS 1V-414 - Wellbore #1 - Plan #1 (9-4-14)	12,730.3	12,805.1	194.9	-21.8	0.899	Level 1, ES, SF
Noffsinger Pad Sec.2-T5N-R65W						
Noffsinger 2C (Vert.) - Wellbore #1 - Design #1	12,879.7	6,741.1	72.6	-116.7	0.383	Level 1, CC, ES, SF
Noffsinger 2VD - Wellbore #1 - Wellbore #1	11,830.6	6,882.8	176.7	9.0	1.054	Level 2, CC, ES, SF
Noffsinger 31-2D - Wellbore #1 - Wellbore #1	13,727.2	6,854.4	464.5	246.5	2.131	CC, ES, SF

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Project:</b>	SEC.1-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Reference Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (9-4-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Existing Wells Sec.1-T5N-R65W - BJB 4 (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0ft
Survey Program: 7064-UNKNOWN													Offset Well Error:	0.0ft
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	-96.15	-72.9	-676.5	680.6					
100.0	100.0	84.0	84.0	0.1	1.7	-96.15	-72.9	-676.5	680.4	678.6	1.79	379.556		
200.0	200.0	184.0	184.0	0.3	3.7	-96.15	-72.9	-676.5	680.4	676.4	4.02	169.362		
300.0	300.0	284.0	284.0	0.6	5.7	-96.15	-72.9	-676.5	680.4	674.1	6.24	108.999		
400.0	400.0	384.0	384.0	0.8	7.7	-96.15	-72.9	-676.5	680.4	671.9	8.47	80.358		
500.0	500.0	484.0	484.0	1.0	9.7	111.38	-72.9	-676.5	681.0	670.4	10.67	63.854		
600.0	599.8	583.8	583.8	1.2	11.7	111.75	-72.9	-676.5	682.9	670.1	12.85	53.139		
700.0	699.5	683.5	683.5	1.4	13.7	112.37	-72.9	-676.5	686.2	671.2	15.06	45.575		
800.0	798.7	782.7	782.7	1.7	15.7	113.22	-72.9	-676.5	691.0	673.7	17.28	39.976		
900.0	897.8	881.8	881.8	2.0	17.6	114.23	-72.9	-676.5	696.4	676.9	19.54	35.638		
1,000.0	996.9	980.9	980.9	2.3	19.6	115.22	-72.9	-676.5	702.1	680.3	21.81	32.191		
1,100.0	1,096.0	1,080.0	1,080.0	2.6	21.6	116.20	-72.9	-676.5	707.9	683.9	24.08	29.394		
1,200.0	1,195.1	1,179.1	1,179.1	2.9	23.6	117.16	-72.9	-676.5	714.0	687.7	26.36	27.084		
1,300.0	1,294.2	1,278.2	1,278.2	3.2	25.6	118.10	-72.9	-676.5	720.3	691.7	28.64	25.147		
1,400.0	1,393.3	1,377.3	1,377.3	3.6	27.5	119.03	-72.9	-676.5	726.8	695.8	30.92	23.502		
1,500.0	1,492.4	1,476.4	1,476.4	3.9	29.5	119.94	-72.9	-676.5	733.4	700.2	33.20	22.088		
1,600.0	1,591.5	1,575.5	1,575.5	4.2	31.5	120.84	-72.9	-676.5	740.3	704.8	35.48	20.862		
1,700.0	1,690.5	1,674.5	1,674.5	4.6	33.5	121.71	-72.9	-676.5	747.3	709.5	37.76	19.790		
1,800.0	1,789.6	1,773.6	1,773.6	4.9	35.5	122.58	-72.9	-676.5	754.5	714.4	40.04	18.845		
1,900.0	1,888.7	1,872.7	1,872.7	5.2	37.5	123.42	-72.9	-676.5	761.8	719.5	42.31	18.006		
2,000.0	1,987.8	1,971.8	1,971.8	5.6	39.4	124.25	-72.9	-676.5	769.4	724.8	44.58	17.258		
2,100.0	2,086.9	2,070.9	2,070.9	5.9	41.4	125.07	-72.9	-676.5	777.1	730.2	46.85	16.586		
2,200.0	2,186.0	2,170.0	2,170.0	6.3	43.4	125.86	-72.9	-676.5	784.9	735.8	49.12	15.980		
2,300.0	2,285.1	2,269.1	2,269.1	6.6	45.4	126.65	-72.9	-676.5	792.9	741.5	51.38	15.431		
2,400.0	2,384.2	2,368.2	2,368.2	7.0	47.4	127.41	-72.9	-676.5	801.0	747.4	53.65	14.932		
2,500.0	2,483.3	2,467.3	2,467.3	7.3	49.3	128.16	-72.9	-676.5	809.3	753.4	55.91	14.476		
2,600.0	2,582.4	2,566.4	2,566.4	7.6	51.3	128.90	-72.9	-676.5	817.7	759.6	58.16	14.059		
2,700.0	2,681.5	2,665.5	2,665.5	8.0	53.3	129.62	-72.9	-676.5	826.3	765.9	60.42	13.676		
2,800.0	2,780.6	2,764.6	2,764.6	8.3	55.3	130.33	-72.9	-676.5	835.0	772.3	62.67	13.322		
2,900.0	2,879.7	2,863.7	2,863.7	8.7	57.3	131.02	-72.9	-676.5	843.8	778.8	64.93	12.996		
3,000.0	2,978.8	2,962.8	2,962.8	9.0	59.3	131.70	-72.9	-676.5	852.7	785.5	67.17	12.693		
3,100.0	3,077.9	3,061.9	3,061.9	9.4	61.2	132.36	-72.9	-676.5	861.7	792.3	69.42	12.413		
3,200.0	3,177.0	3,161.0	3,161.0	9.7	63.2	133.01	-72.9	-676.5	870.9	799.2	71.67	12.152		
3,300.0	3,276.0	3,260.0	3,260.0	10.0	65.2	133.65	-72.9	-676.5	880.1	806.2	73.91	11.908		
3,400.0	3,375.1	3,359.1	3,359.1	10.4	67.2	134.27	-72.9	-676.5	889.5	813.3	76.15	11.681		
3,500.0	3,474.2	3,458.2	3,458.2	10.7	69.2	134.88	-72.9	-676.5	899.0	820.6	78.39	11.468		
3,600.0	3,573.3	3,557.3	3,557.3	11.1	71.1	135.48	-72.9	-676.5	908.5	827.9	80.63	11.268		
3,700.0	3,672.4	3,656.4	3,656.4	11.4	73.1	136.06	-72.9	-676.5	918.2	835.3	82.87	11.081		
3,800.0	3,771.5	3,755.5	3,755.5	11.8	75.1	136.64	-72.9	-676.5	928.0	842.9	85.10	10.905		
3,900.0	3,870.6	3,854.6	3,854.6	12.1	77.1	137.20	-72.9	-676.5	937.8	850.5	87.33	10.739		
4,000.0	3,969.7	3,953.7	3,953.7	12.5	79.1	137.75	-72.9	-676.5	947.8	858.2	89.56	10.582		
4,100.0	4,068.8	4,052.8	4,052.8	12.8	81.1	138.29	-72.9	-676.5	957.8	866.0	91.79	10.434		
4,200.0	4,167.9	4,151.9	4,151.9	13.2	83.0	138.81	-72.9	-676.5	967.9	873.9	94.02	10.294		
4,300.0	4,267.0	4,251.0	4,251.0	13.5	85.0	139.33	-72.9	-676.5	978.1	881.8	96.25	10.162		
4,400.0	4,366.1	4,350.1	4,350.1	13.8	87.0	139.83	-72.9	-676.5	988.4	889.9	98.48	10.037		
4,500.0	4,465.2	4,449.2	4,449.2	14.2	89.0	140.33	-72.9	-676.5	998.7	898.0	100.70	9.918		
6,500.0	6,434.5	6,418.5	6,418.5	18.0	128.4	34.75	-72.9	-676.5	982.0	853.5	128.47	7.644		
6,600.0	6,514.7	6,498.7	6,498.7	18.0	130.0	39.43	-72.9	-676.5	931.0	805.4	125.61	7.412		
6,700.0	6,586.5	6,570.5	6,570.5	17.9	131.4	45.68	-72.9	-676.5	872.9	747.5	125.35	6.964		
6,800.0	6,648.5	6,632.5	6,632.5	17.9	132.7	53.60	-72.9	-676.5	809.6	680.3	129.29	6.262		
6,900.0	6,699.9	6,683.9	6,683.9	17.9	133.7	62.86	-72.9	-676.5	743.5	606.5	137.06	5.425		

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

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Project:</b>	SEC.1-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Reference Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (9-4-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Existing Wells Sec.1-T5N-R65W - BJB 4 (Exist.) - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 ft
Survey Program: 7064-UNKNOWN												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)		
7,000.0	6,739.5	6,723.5	6,723.5	18.2	134.5	72.50	-72.9	-676.5	677.8	532.0	145.77	4.650	
7,100.0	6,766.9	6,750.9	6,750.9	19.6	135.0	81.11	-72.9	-676.5	616.0	463.7	152.36	4.043	
7,200.0	6,781.5	6,765.5	6,765.5	21.3	135.3	87.48	-72.9	-676.5	562.7	406.6	156.15	3.604	
7,300.0	6,783.7	6,767.7	6,767.7	23.3	135.4	90.17	-72.9	-676.5	522.4	364.1	158.37	3.299	
7,400.0	6,782.9	6,766.9	6,766.9	25.4	135.3	90.07	-72.9	-676.5	499.2	338.7	160.47	3.111	
7,468.7	6,782.2	6,766.2	6,766.2	27.0	135.3	90.00	-72.9	-676.5	494.4	332.4	162.00	3.052 CC, ES	
7,500.0	6,782.0	6,766.0	6,766.0	27.7	135.3	89.97	-72.9	-676.5	495.4	332.7	162.69	3.045 SF	
7,600.0	6,781.1	6,765.1	6,765.1	30.0	135.3	89.86	-72.9	-676.5	511.6	346.6	165.01	3.100	
7,700.0	6,780.2	6,764.2	6,764.2	32.4	135.3	89.76	-72.9	-676.5	545.9	378.5	167.40	3.261	
7,800.0	6,779.3	6,763.3	6,763.3	34.9	135.3	89.66	-72.9	-676.5	595.2	425.3	169.86	3.504	
7,900.0	6,778.4	6,762.4	6,762.4	37.4	135.2	89.56	-72.9	-676.5	656.1	483.8	172.36	3.807	
8,000.0	6,777.5	6,761.5	6,761.5	40.0	135.2	89.45	-72.9	-676.5	725.8	550.9	174.90	4.150	
8,100.0	6,776.6	6,760.6	6,760.6	42.5	135.2	89.35	-72.9	-676.5	801.9	624.4	177.46	4.518	
8,200.0	6,775.7	6,759.7	6,759.7	45.2	135.2	89.25	-72.9	-676.5	882.7	702.7	180.06	4.903	
8,300.0	6,774.8	6,758.8	6,758.8	47.8	135.2	89.14	-72.9	-676.5	967.2	784.5	182.67	5.295	

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Project:</b>	SEC.1-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Reference Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (9-4-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Existing Wells Sec.1-T5N-R65W - BJB 5 (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 100-NS-GYRO-MS													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
6,700.0	6,586.5	6,589.4	6,587.8	17.9	12.1	-9.87	-676.8	-911.1	960.3	938.6	21.74	44.171		
6,800.0	6,648.5	6,650.3	6,648.7	17.9	12.2	-12.68	-676.8	-910.2	881.6	861.7	19.91	44.281		
6,900.0	6,699.9	6,700.3	6,698.7	17.9	12.4	-17.40	-676.7	-909.4	795.9	777.2	18.67	42.625		
7,000.0	6,739.5	6,738.6	6,737.0	18.2	12.4	-26.02	-676.7	-908.8	704.6	685.2	19.37	36.373		
7,100.0	6,766.9	6,764.6	6,763.0	19.6	12.5	-42.99	-676.7	-908.4	609.4	585.0	24.46	24.916		
7,200.0	6,781.5	6,777.7	6,776.1	21.3	12.5	-73.18	-676.7	-908.3	512.3	479.5	32.73	15.649		
7,300.0	6,783.7	6,778.4	6,776.8	23.3	12.5	-95.02	-676.7	-908.2	415.2	379.9	35.30	11.762		
7,400.0	6,782.9	6,776.0	6,774.4	25.4	12.5	-93.78	-676.7	-908.3	319.8	282.3	37.49	8.530		
7,500.0	6,782.0	6,773.6	6,772.0	27.7	12.5	-92.53	-676.7	-908.3	228.5	188.7	39.80	5.740		
7,600.0	6,781.1	6,771.2	6,769.6	30.0	12.5	-91.29	-676.7	-908.3	148.6	106.4	42.19	3.522		
7,700.0	6,780.2	6,768.8	6,767.2	32.4	12.5	-90.04	-676.7	-908.4	109.4	64.8	44.65	2.451		
7,700.6	6,780.2	6,768.8	6,767.2	32.4	12.5	-90.03	-676.7	-908.4	109.4	64.8	44.66	2.450 CC, ES, SF		
7,800.0	6,779.3	6,766.5	6,764.9	34.9	12.5	-88.79	-676.7	-908.4	147.8	100.7	47.14	3.135		
7,900.0	6,778.4	6,764.1	6,762.5	37.4	12.5	-87.54	-676.7	-908.5	227.4	177.7	49.65	4.580		
8,000.0	6,777.5	6,761.7	6,760.1	40.0	12.5	-86.29	-676.7	-908.5	318.7	266.5	52.18	6.107		
8,100.0	6,776.6	6,759.3	6,757.7	42.5	12.5	-85.05	-676.7	-908.5	414.0	359.3	54.71	7.567		
8,200.0	6,775.7	6,756.9	6,755.3	45.2	12.5	-83.81	-676.7	-908.6	511.1	453.9	57.23	8.931		
8,300.0	6,774.8	6,754.5	6,752.9	47.8	12.5	-82.58	-676.7	-908.6	609.1	549.4	59.74	10.197		
8,400.0	6,774.0	6,752.1	6,750.5	50.4	12.5	-81.35	-676.7	-908.6	707.7	645.5	62.22	11.373		
8,500.0	6,773.1	6,749.7	6,748.1	53.1	12.5	-80.13	-676.7	-908.7	806.6	741.9	64.69	12.470		
8,600.0	6,772.2	6,747.4	6,745.8	55.8	12.5	-78.93	-676.7	-908.7	905.8	838.6	67.12	13.496		

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Project:</b>	SEC.1-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Reference Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (9-4-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Existing Wells Sec.1-T5N-R65W - BJB 6I (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 552-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		
8,100.0	6,776.6	6,908.8	6,754.6	42.5	22.4	-89.54	-788.7	-2,240.5	958.8	898.8	59.91	16.004		
8,200.0	6,775.7	6,909.0	6,754.7	45.2	22.4	-89.58	-788.7	-2,240.5	861.8	799.2	62.52	13.783		
8,300.0	6,774.8	6,909.1	6,754.9	47.8	22.4	-89.62	-788.7	-2,240.5	765.6	700.4	65.16	11.748		
8,400.0	6,774.0	6,909.3	6,755.0	50.4	22.4	-89.66	-788.7	-2,240.5	670.5	602.6	67.82	9.886		
8,500.0	6,773.1	6,909.5	6,755.2	53.1	22.4	-89.70	-788.7	-2,240.5	577.0	506.5	70.49	8.185		
8,600.0	6,772.2	6,909.6	6,755.3	55.8	22.4	-89.75	-788.7	-2,240.5	486.2	413.0	73.18	6.644		
8,700.0	6,771.3	6,909.8	6,755.5	58.5	22.4	-89.79	-788.7	-2,240.5	399.8	323.9	75.88	5.269		
8,800.0	6,770.4	6,910.0	6,755.7	61.2	22.4	-89.83	-788.7	-2,240.5	321.3	242.7	78.58	4.089		
8,900.0	6,769.5	6,910.1	6,755.8	63.9	22.4	-89.88	-788.7	-2,240.5	258.2	176.9	81.30	3.176		
9,000.0	6,768.6	6,910.3	6,756.0	66.6	22.4	-89.92	-788.7	-2,240.5	223.8	139.8	84.02	2.664		
9,032.8	6,768.3	6,910.4	6,756.1	67.5	22.4	-89.94	-788.7	-2,240.5	221.4	136.5	84.92	2.607 CC, ES, SF		
9,100.0	6,767.7	6,910.5	6,756.2	69.3	22.4	-89.97	-788.7	-2,240.6	231.4	144.6	86.75	2.667		
9,200.0	6,766.8	6,910.7	6,756.4	72.1	22.4	-90.02	-788.7	-2,240.6	277.4	188.0	89.49	3.100		
9,300.0	6,765.9	6,910.9	6,756.6	74.8	22.4	-90.06	-788.7	-2,240.6	347.0	254.8	92.23	3.762		
9,400.0	6,765.1	6,911.0	6,756.8	77.5	22.4	-90.11	-788.7	-2,240.6	428.8	333.8	94.98	4.514		
9,500.0	6,764.2	6,911.2	6,756.9	80.3	22.4	-90.16	-788.7	-2,240.6	517.0	419.3	97.73	5.290		
9,600.0	6,763.3	6,911.4	6,757.1	83.0	22.4	-90.21	-788.7	-2,240.6	608.9	508.4	100.48	6.059		
9,700.0	6,762.4	6,911.6	6,757.3	85.8	22.4	-90.27	-788.7	-2,240.6	703.0	599.7	103.24	6.809		
9,800.0	6,761.5	6,911.8	6,757.6	88.6	22.4	-90.32	-788.7	-2,240.6	798.5	692.5	106.00	7.533		
9,900.0	6,760.6	6,912.0	6,757.8	91.3	22.4	-90.37	-788.7	-2,240.6	895.0	786.2	108.76	8.229		
10,000.0	6,759.7	6,912.3	6,758.0	94.1	22.4	-90.43	-788.7	-2,240.6	992.2	880.7	111.53	8.896		

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Project:</b>	SEC.1-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Reference Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (9-4-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Existing Wells Sec.1-T5N-R65W - Gatewood 3-1 (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 7060-UNKNOWN													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
8,700.0	6,771.3	6,753.3	6,753.3	58.5	135.1	90.97	-101.9	-2,792.2	999.5	806.1	193.32	5.170		
8,800.0	6,770.4	6,752.4	6,752.4	61.2	135.0	90.86	-101.9	-2,792.2	912.2	716.1	196.01	4.654		
8,900.0	6,769.5	6,751.5	6,751.5	63.9	135.0	90.75	-101.9	-2,792.2	827.7	629.0	198.72	4.165		
9,000.0	6,768.6	6,750.6	6,750.6	66.6	135.0	90.64	-101.9	-2,792.2	747.2	545.7	201.42	3.709		
9,100.0	6,767.7	6,749.7	6,749.7	69.3	135.0	90.53	-101.9	-2,792.2	671.8	467.7	204.14	3.291		
9,200.0	6,766.8	6,748.8	6,748.8	72.1	135.0	90.42	-101.9	-2,792.2	603.7	396.9	206.86	2.918		
9,300.0	6,765.9	6,747.9	6,747.9	74.8	135.0	90.31	-101.9	-2,792.2	545.5	335.9	209.59	2.603		
9,400.0	6,765.1	6,747.1	6,747.1	77.5	134.9	90.20	-101.9	-2,792.2	500.7	288.4	212.32	2.358		
9,500.0	6,764.2	6,746.2	6,746.2	80.3	134.9	90.09	-101.9	-2,792.2	473.1	258.0	215.05	2.200		
9,584.5	6,763.4	6,745.4	6,745.4	82.6	134.9	90.00	-101.9	-2,792.2	465.4	248.1	217.36	2.141 CC		
9,600.0	6,763.3	6,745.3	6,745.3	83.0	134.9	89.98	-101.9	-2,792.2	465.7	247.9	217.79	2.138 ES, SF		
9,700.0	6,762.4	6,744.4	6,744.4	85.8	134.9	89.87	-101.9	-2,792.2	479.6	259.0	220.53	2.175		
9,800.0	6,761.5	6,743.5	6,743.5	88.6	134.9	89.76	-101.9	-2,792.2	512.9	289.6	223.27	2.297		
9,900.0	6,760.6	6,742.6	6,742.6	91.3	134.9	89.65	-101.9	-2,792.2	562.3	336.3	226.01	2.488		
10,000.0	6,759.7	6,741.7	6,741.7	94.1	134.8	89.54	-101.9	-2,792.2	623.9	395.2	228.76	2.727		
10,100.0	6,758.8	6,740.8	6,740.8	96.9	134.8	89.44	-101.9	-2,792.2	694.5	463.0	231.50	3.000		
10,200.0	6,757.9	6,739.9	6,739.9	99.6	134.8	89.33	-101.9	-2,792.2	771.7	537.4	234.25	3.294		
10,300.0	6,757.0	6,739.0	6,739.0	102.4	134.8	89.22	-101.9	-2,792.2	853.5	616.5	237.00	3.601		
10,400.0	6,756.2	6,738.2	6,738.2	105.2	134.8	89.11	-101.9	-2,792.2	939.0	699.2	239.75	3.916		

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Project:</b>	SEC.1-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Reference Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore:</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (9-4-14)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Existing Wells Sec.1-T5N-R65W - Gatewood 4-1 (Exist.) - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 7045-UNKNOWN												<b>Offset Well Error:</b>	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,400.0	6,756.2	6,744.2	6,744.2	105.2	134.9	90.88	-68.8	-4,470.8	996.8	756.9	239.91	4.155	
10,500.0	6,755.3	6,743.3	6,743.3	107.9	134.9	90.78	-68.8	-4,470.8	911.6	668.9	242.67	3.756	
10,600.0	6,754.4	6,742.4	6,742.4	110.7	134.8	90.68	-68.8	-4,470.8	829.6	584.2	245.44	3.380	
10,700.0	6,753.5	6,741.5	6,741.5	113.5	134.8	90.58	-68.8	-4,470.8	752.1	503.9	248.20	3.030	
10,800.0	6,752.6	6,740.6	6,740.6	116.3	134.8	90.47	-68.8	-4,470.8	680.5	429.5	250.97	2.711	
10,900.0	6,751.7	6,739.7	6,739.7	119.1	134.8	90.37	-68.8	-4,470.8	616.8	363.0	253.74	2.431	
11,000.0	6,750.8	6,738.8	6,738.8	121.8	134.8	90.27	-68.8	-4,470.8	563.7	307.2	256.51	2.198	
11,100.0	6,749.9	6,737.9	6,737.9	124.6	134.8	90.17	-68.8	-4,470.8	524.5	265.2	259.27	2.023	
11,200.0	6,749.0	6,737.0	6,737.0	127.4	134.7	90.06	-68.8	-4,470.8	502.5	240.4	262.04	1.918	
11,263.2	6,748.5	6,736.5	6,736.5	129.2	134.7	90.00	-68.8	-4,470.8	498.5	234.7	263.79	1.890 CC, ES	
11,300.0	6,748.1	6,736.1	6,736.1	130.2	134.7	89.96	-68.8	-4,470.8	499.8	235.0	264.81	1.888 SF	
11,400.0	6,747.3	6,735.3	6,735.3	133.0	134.7	89.86	-68.8	-4,470.8	516.9	249.3	267.58	1.932	
11,500.0	6,746.4	6,734.4	6,734.4	135.8	134.7	89.76	-68.8	-4,470.8	551.9	281.5	270.35	2.041	
11,600.0	6,745.5	6,733.5	6,733.5	138.6	134.7	89.66	-68.8	-4,470.8	601.6	328.5	273.12	2.203	
11,700.0	6,744.6	6,732.6	6,732.6	141.4	134.7	89.55	-68.8	-4,470.8	662.8	386.9	275.89	2.402	
11,800.0	6,743.7	6,731.7	6,731.7	144.1	134.6	89.45	-68.8	-4,470.8	732.5	453.9	278.66	2.629	
11,900.0	6,742.8	6,730.8	6,730.8	146.9	134.6	89.35	-68.8	-4,470.8	808.7	527.2	281.42	2.873	
12,000.0	6,741.9	6,729.9	6,729.9	149.7	134.6	89.25	-68.8	-4,470.8	889.5	605.4	284.19	3.130	
12,100.0	6,741.0	6,729.0	6,729.0	152.5	134.6	89.14	-68.8	-4,470.8	974.0	687.0	286.96	3.394	



<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Project:</b>	SEC.1-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Reference Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (9-4-14)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Existing Wells Sec.1-T5N-R65W - Gatewood 5 (Exist.) - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 7123-UNKNOWN												<b>Offset Well Error:</b>	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
9,500.0	6,764.2	6,750.2	6,750.2	80.3	135.0	-92.71	-742.9	-3,641.4	950.0	735.2	214.84	4.422	
9,600.0	6,763.3	6,749.3	6,749.3	83.0	135.0	-92.42	-742.9	-3,641.4	852.0	634.3	217.63	3.915	
9,700.0	6,762.4	6,748.4	6,748.4	85.8	135.0	-92.13	-742.9	-3,641.4	754.4	534.0	220.42	3.423	
9,800.0	6,761.5	6,747.5	6,747.5	88.6	134.9	-91.84	-742.9	-3,641.4	657.6	434.4	223.21	2.946	
9,900.0	6,760.6	6,746.6	6,746.6	91.3	134.9	-91.55	-742.9	-3,641.4	561.8	335.8	225.99	2.486	
10,000.0	6,759.7	6,745.7	6,745.7	94.1	134.9	-91.26	-742.9	-3,641.4	467.9	239.1	228.78	2.045	
10,100.0	6,758.8	6,744.8	6,744.8	96.9	134.9	-90.97	-742.9	-3,641.4	377.1	145.5	231.56	1.628	
10,200.0	6,757.9	6,743.9	6,743.9	99.6	134.9	-90.68	-742.9	-3,641.4	292.3	58.0	234.33	1.248	Level 2
10,300.0	6,757.0	6,743.0	6,743.0	102.4	134.9	-90.39	-742.9	-3,641.4	220.7	-16.4	237.11	0.931	Level 1
10,400.0	6,756.2	6,742.2	6,742.2	105.2	134.8	-90.10	-742.9	-3,641.4	178.8	-61.0	239.88	0.746	Level 1
10,433.7	6,755.9	6,741.9	6,741.9	106.1	134.8	-90.00	-742.9	-3,641.4	175.6	-65.2	240.81	0.729	Level 1, CC, ES, SF
10,500.0	6,755.3	6,741.3	6,741.3	107.9	134.8	-89.81	-742.9	-3,641.4	187.7	-54.9	242.64	0.774	Level 1
10,600.0	6,754.4	6,740.4	6,740.4	110.7	134.8	-89.52	-742.9	-3,641.4	241.9	-3.5	245.40	0.986	Level 1
10,700.0	6,753.5	6,739.5	6,739.5	113.5	134.8	-89.23	-742.9	-3,641.4	319.0	70.8	248.16	1.285	Level 3
10,800.0	6,752.6	6,738.6	6,738.6	116.3	134.8	-88.94	-742.9	-3,641.4	406.2	155.3	250.91	1.619	
10,900.0	6,751.7	6,737.7	6,737.7	119.1	134.8	-88.65	-742.9	-3,641.4	498.3	244.6	253.65	1.964	
11,000.0	6,750.8	6,736.8	6,736.8	121.8	134.7	-88.36	-742.9	-3,641.4	592.9	336.5	256.39	2.312	
11,100.0	6,749.9	6,735.9	6,735.9	124.6	134.7	-88.07	-742.9	-3,641.4	689.0	429.9	259.12	2.659	
11,200.0	6,749.0	6,735.0	6,735.0	127.4	134.7	-87.78	-742.9	-3,641.4	786.1	524.3	261.85	3.002	
11,300.0	6,748.1	6,734.1	6,734.1	130.2	134.7	-87.49	-742.9	-3,641.4	883.9	619.3	264.57	3.341	
11,400.0	6,747.3	6,733.3	6,733.3	133.0	134.7	-87.20	-742.9	-3,641.4	982.1	714.8	267.28	3.674	



<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Project:</b>	SEC.1-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Reference Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (9-4-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Existing Wells Sec.1-T5N-R65W - Noffsinger 1 (P&A) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 7140-UNKNOWN													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
0.0	0.0	31.0	31.0	0.0	0.6	-117.00		-160.3	-314.6	353.1	352.4	0.62	569.274	
100.0	100.0	131.0	131.0	0.1	2.6	-117.00		-160.3	-314.6	353.1	350.3	2.73	129.205	
200.0	200.0	231.0	231.0	0.3	4.6	-117.00		-160.3	-314.6	353.1	348.1	4.96	71.220	
300.0	300.0	331.0	331.0	0.6	6.6	-117.00		-160.3	-314.6	353.1	345.9	7.18	49.159	
400.0	400.0	431.0	431.0	0.8	8.6	-117.00		-160.3	-314.6	353.1	343.7	9.41	37.532 CC	
500.0	500.0	531.0	531.0	1.0	10.6	90.68		-160.3	-314.6	353.1	341.5	11.61	30.422	
600.0	599.8	630.8	630.8	1.2	12.6	91.53		-160.3	-314.6	353.2	339.4	13.80	25.598	
700.0	699.5	730.5	730.5	1.4	14.6	92.93		-160.3	-314.6	353.5	337.5	16.01	22.077	
800.0	798.7	829.7	829.7	1.7	16.6	94.86		-160.3	-314.6	354.4	336.1	18.26	19.408	
900.0	897.8	928.8	928.8	2.0	18.6	97.00		-160.3	-314.6	355.8	335.2	20.53	17.330	
1,000.0	996.9	1,027.9	1,027.9	2.3	20.6	99.12		-160.3	-314.6	357.7	334.8	22.81	15.678	
1,100.0	1,096.0	1,127.0	1,127.0	2.6	22.5	101.21		-160.3	-314.6	360.0	334.9	25.10	14.343	
1,200.0	1,195.1	1,226.1	1,226.1	2.9	24.5	103.27		-160.3	-314.6	362.9	335.5	27.40	13.248	
1,300.0	1,294.2	1,325.2	1,325.2	3.2	26.5	105.30		-160.3	-314.6	366.3	336.6	29.69	12.337	
1,400.0	1,393.3	1,424.3	1,424.3	3.6	28.5	107.29		-160.3	-314.6	370.1	338.1	31.98	11.572	
1,500.0	1,492.4	1,523.4	1,523.4	3.9	30.5	109.24		-160.3	-314.6	374.3	340.0	34.27	10.922	
1,600.0	1,591.5	1,622.5	1,622.5	4.2	32.4	111.14		-160.3	-314.6	379.0	342.4	36.56	10.367	
1,700.0	1,690.5	1,721.5	1,721.5	4.6	34.4	113.00		-160.3	-314.6	384.1	345.2	38.84	9.889	
1,800.0	1,789.6	1,820.6	1,820.6	4.9	36.4	114.80		-160.3	-314.6	389.6	348.4	41.12	9.475	
1,900.0	1,888.7	1,919.7	1,919.7	5.2	38.4	116.56		-160.3	-314.6	395.4	352.0	43.39	9.114	
2,000.0	1,987.8	2,018.8	2,018.8	5.6	40.4	118.26		-160.3	-314.6	401.7	356.0	45.65	8.798	
2,100.0	2,086.9	2,117.9	2,117.9	5.9	42.4	119.91		-160.3	-314.6	408.2	360.3	47.92	8.520	
2,200.0	2,186.0	2,217.0	2,217.0	6.3	44.3	121.51		-160.3	-314.6	415.1	365.0	50.17	8.274	
2,300.0	2,285.1	2,316.1	2,316.1	6.6	46.3	123.05		-160.3	-314.6	422.4	369.9	52.43	8.056	
2,400.0	2,384.2	2,415.2	2,415.2	7.0	48.3	124.54		-160.3	-314.6	429.9	375.2	54.67	7.863	
2,500.0	2,483.3	2,514.3	2,514.3	7.3	50.3	125.98		-160.3	-314.6	437.7	380.8	56.92	7.690	
2,600.0	2,582.4	2,613.4	2,613.4	7.6	52.3	127.37		-160.3	-314.6	445.8	386.6	59.16	7.535	
2,700.0	2,681.5	2,712.5	2,712.5	8.0	54.2	128.71		-160.3	-314.6	454.1	392.7	61.39	7.397	
2,800.0	2,780.6	2,811.6	2,811.6	8.3	56.2	130.00		-160.3	-314.6	462.7	399.0	63.62	7.272	
2,900.0	2,879.7	2,910.7	2,910.7	8.7	58.2	131.25		-160.3	-314.6	471.4	405.6	65.85	7.159	
3,000.0	2,978.8	3,009.8	3,009.8	9.0	60.2	132.45		-160.3	-314.6	480.5	412.4	68.08	7.058	
3,100.0	3,077.9	3,108.9	3,108.9	9.4	62.2	133.60		-160.3	-314.6	489.7	419.4	70.30	6.966	
3,200.0	3,177.0	3,208.0	3,208.0	9.7	64.2	134.71		-160.3	-314.6	499.1	426.6	72.52	6.882	
3,300.0	3,276.0	3,307.0	3,307.0	10.0	66.1	135.78		-160.3	-314.6	508.7	433.9	74.73	6.806	
3,400.0	3,375.1	3,406.1	3,406.1	10.4	68.1	136.82		-160.3	-314.6	518.4	441.5	76.95	6.737	
3,500.0	3,474.2	3,505.2	3,505.2	10.7	70.1	137.81		-160.3	-314.6	528.3	449.2	79.16	6.674	
3,600.0	3,573.3	3,604.3	3,604.3	11.1	72.1	138.76		-160.3	-314.6	538.4	457.0	81.37	6.617	
3,700.0	3,672.4	3,703.4	3,703.4	11.4	74.1	139.69		-160.3	-314.6	548.6	465.0	83.58	6.564	
3,800.0	3,771.5	3,802.5	3,802.5	11.8	76.1	140.57		-160.3	-314.6	559.0	473.2	85.78	6.516	
3,900.0	3,870.6	3,901.6	3,901.6	12.1	78.0	141.43		-160.3	-314.6	569.4	481.4	87.99	6.472	
4,000.0	3,969.7	4,000.7	4,000.7	12.5	80.0	142.25		-160.3	-314.6	580.0	489.8	90.19	6.431	
4,100.0	4,068.8	4,099.8	4,099.8	12.8	82.0	143.05		-160.3	-314.6	590.8	498.4	92.39	6.394	
4,200.0	4,167.9	4,198.9	4,198.9	13.2	84.0	143.82		-160.3	-314.6	601.6	507.0	94.60	6.359	
4,300.0	4,267.0	4,298.0	4,298.0	13.5	86.0	144.56		-160.3	-314.6	612.5	515.7	96.80	6.328	
4,400.0	4,366.1	4,397.1	4,397.1	13.8	87.9	145.27		-160.3	-314.6	623.5	524.5	99.00	6.299	
4,500.0	4,465.2	4,496.2	4,496.2	14.2	89.9	145.96		-160.3	-314.6	634.7	533.5	101.20	6.271	
4,600.0	4,564.3	4,595.3	4,595.3	14.5	91.9	146.62		-160.3	-314.6	645.9	542.5	103.39	6.247	
4,700.0	4,663.4	4,694.4	4,694.4	14.9	93.9	147.27		-160.3	-314.6	657.1	551.6	105.59	6.223	
4,800.0	4,762.4	4,793.4	4,793.4	15.2	95.9	147.89		-160.3	-314.6	668.5	560.7	107.79	6.202	
4,900.0	4,861.5	4,892.5	4,892.5	15.6	97.9	148.49		-160.3	-314.6	680.0	570.0	109.99	6.182	
5,000.0	4,960.6	4,991.6	4,991.6	15.9	99.8	149.07		-160.3	-314.6	691.5	579.3	112.19	6.164	

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

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Project:</b>	SEC.1-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Reference Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (9-4-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Existing Wells Sec.1-T5N-R65W - Noffsinger 1 (P&A) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 7140-UNKNOWN													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.0	5,059.7	5,090.7	5,090.7	16.3	101.8	149.63		-160.3	-314.6	703.1	588.7	114.38	6.147	
5,200.0	5,158.9	5,189.9	5,189.9	16.6	103.8	150.21		-160.3	-314.6	714.4	597.7	116.71	6.121	
5,300.0	5,258.3	5,289.3	5,289.3	16.8	105.8	150.70		-160.3	-314.6	723.3	604.2	119.12	6.072	
5,400.0	5,358.1	5,389.1	5,389.1	17.0	107.8	151.01		-160.3	-314.6	729.1	607.7	121.44	6.004	
5,500.0	5,458.1	5,489.1	5,489.1	17.1	109.8	151.16		-160.3	-314.6	731.9	608.3	123.66	5.919	
5,600.0	5,558.1	5,589.1	5,589.1	17.3	111.8	-56.23		-160.3	-314.6	732.2	604.2	128.06	5.718	
5,700.0	5,658.1	5,689.1	5,689.1	17.4	113.8	-56.23		-160.3	-314.6	732.2	602.0	130.20	5.624	
5,800.0	5,758.1	5,789.1	5,789.1	17.5	115.8	-56.23		-160.3	-314.6	732.2	599.9	132.33	5.533	
5,900.0	5,858.1	5,889.1	5,889.1	17.6	117.8	-56.23		-160.3	-314.6	732.2	597.7	134.47	5.445	
6,000.0	5,958.1	5,989.1	5,989.1	17.8	119.8	-56.23		-160.3	-314.6	732.2	595.6	136.61	5.360	
6,100.0	6,058.0	6,089.0	6,089.0	17.9	121.8	33.84		-160.3	-314.6	731.4	595.0	136.44	5.361	
6,200.0	6,157.3	6,188.3	6,188.3	18.0	123.8	34.76		-160.3	-314.6	721.9	584.9	137.03	5.268	
6,300.0	6,254.2	6,285.2	6,285.2	18.0	125.7	36.78		-160.3	-314.6	702.0	565.8	136.15	5.156	
6,400.0	6,347.1	6,378.1	6,378.1	18.0	127.6	40.08		-160.3	-314.6	672.3	538.0	134.36	5.004	
6,500.0	6,434.5	6,465.5	6,465.5	18.0	129.3	44.88		-160.3	-314.6	634.3	501.5	132.80	4.777	
6,600.0	6,514.7	6,545.7	6,545.7	18.0	130.9	51.36		-160.3	-314.6	589.9	456.9	133.02	4.435	
6,700.0	6,586.5	6,617.5	6,617.5	17.9	132.3	59.48		-160.3	-314.6	541.7	405.4	136.28	3.975	
6,800.0	6,648.5	6,679.5	6,679.5	17.9	133.6	68.70		-160.3	-314.6	493.5	351.4	142.14	3.472	
6,900.0	6,699.9	6,730.9	6,730.9	17.9	134.6	77.76		-160.3	-314.6	450.6	302.3	148.26	3.039	
7,000.0	6,739.5	6,770.5	6,770.5	18.2	135.4	85.20		-160.3	-314.6	419.5	266.9	152.60	2.749	
7,100.0	6,766.9	6,797.9	6,797.9	19.6	136.0	89.83		-160.3	-314.6	407.0	251.8	155.22	2.622	
7,105.7	6,768.1	6,799.1	6,799.1	19.7	136.0	90.00		-160.3	-314.6	407.0	251.6	155.35	2.620 ES, SF	
7,200.0	6,781.5	6,812.5	6,812.5	21.3	136.3	91.07		-160.3	-314.6	417.6	260.3	157.30	2.655	
7,300.0	6,783.7	6,814.7	6,814.7	23.3	136.3	89.76		-160.3	-314.6	450.5	291.2	159.30	2.828	
7,400.0	6,782.9	6,813.9	6,813.9	25.4	136.3	89.63		-160.3	-314.6	501.6	340.2	161.39	3.108	
7,500.0	6,782.0	6,813.0	6,813.0	27.7	136.3	89.51		-160.3	-314.6	565.9	402.3	163.61	3.459	
7,600.0	6,781.1	6,812.1	6,812.1	30.0	136.2	89.38		-160.3	-314.6	639.4	473.5	165.93	3.854	
7,700.0	6,780.2	6,811.2	6,811.2	32.4	136.2	89.26		-160.3	-314.6	719.4	551.1	168.32	4.274	
7,800.0	6,779.3	6,810.3	6,810.3	34.9	136.2	89.13		-160.3	-314.6	803.8	633.1	170.77	4.707	
7,900.0	6,778.4	6,809.4	6,809.4	37.4	136.2	89.01		-160.3	-314.6	891.5	718.2	173.26	5.145	
8,000.0	6,777.5	6,808.5	6,808.5	40.0	136.2	88.88		-160.3	-314.6	981.5	805.7	175.80	5.583	

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Project:</b>	SEC.1-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Reference Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (9-4-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Existing Wells Sec.2-T5N-R65W - Frudden 1 (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 100-UNKNOWN													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (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		
11,600.0	6,745.5	6,766.6	6,766.0	138.6	142.2	94.50	-138.5	-5,616.7	916.1	636.4	279.73	3.275		
11,700.0	6,744.6	6,763.3	6,762.7	141.4	142.3	94.06	-138.4	-5,616.8	829.1	546.3	282.81	2.932		
11,800.0	6,743.7	6,759.9	6,759.3	144.1	142.4	93.61	-138.4	-5,616.9	745.4	459.5	285.88	2.607		
11,900.0	6,742.8	6,756.5	6,756.0	146.9	142.6	93.16	-138.3	-5,617.0	666.2	377.3	288.93	2.306		
12,000.0	6,741.9	6,753.2	6,752.6	149.7	142.7	92.72	-138.3	-5,617.0	593.3	301.3	291.97	2.032		
12,100.0	6,741.0	6,749.9	6,749.3	152.5	142.9	92.27	-138.2	-5,617.1	529.3	234.3	295.00	1.794		
12,200.0	6,740.1	6,746.5	6,746.0	155.3	143.0	91.83	-138.2	-5,617.2	477.7	179.7	298.01	1.603		
12,300.0	6,739.2	6,743.2	6,742.7	158.1	143.1	91.39	-138.1	-5,617.3	443.1	142.1	301.00	1.472	Level 3	
12,400.0	6,738.3	6,739.9	6,739.4	160.9	143.2	90.95	-138.1	-5,617.4	429.4	125.4	303.98	1.413	Level 3	
12,409.7	6,738.3	6,739.6	6,739.0	161.2	143.3	90.90	-138.1	-5,617.4	429.3	125.0	304.27	1.411	Level 3, CC, ES, SF	
12,500.0	6,737.5	6,736.6	6,736.1	163.7	143.4	90.51	-138.0	-5,617.4	438.7	131.7	306.94	1.429	Level 3	
12,600.0	6,736.6	6,733.4	6,732.8	166.5	143.5	90.07	-138.0	-5,617.5	469.5	159.6	309.88	1.515		
12,700.0	6,735.7	6,730.1	6,729.5	169.3	143.6	89.63	-137.9	-5,617.6	518.1	205.3	312.81	1.656		
12,800.0	6,734.8	6,726.8	6,726.3	172.1	143.8	89.20	-137.9	-5,617.7	580.0	264.3	315.72	1.837		
12,900.0	6,733.9	6,723.6	6,723.0	174.9	143.9	88.77	-137.8	-5,617.8	651.5	332.8	318.61	2.045		
13,000.0	6,733.0	6,720.3	6,719.8	177.7	144.0	88.34	-137.8	-5,617.8	729.6	408.1	321.49	2.269		
13,100.0	6,732.1	6,717.1	6,716.6	180.5	144.2	87.91	-137.7	-5,617.9	812.6	488.2	324.34	2.505		
13,200.0	6,731.2	6,713.9	6,713.3	183.3	144.3	87.48	-137.6	-5,618.0	899.0	571.8	327.18	2.748		
13,300.0	6,730.3	6,710.7	6,710.1	186.1	144.4	87.05	-137.6	-5,618.1	987.9	657.9	330.00	2.994		

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Project:</b>	SEC.1-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Reference Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (9-4-14)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Existing Wells Sec.2-T5N-R65W - Wagner-Ehrlich 1 (P&A) - Wellbore #1 - Wellbore #1													<b>Offset Site Error:</b>	0.0 ft
<b>Survey Program:</b> 7030-UNKNOWN													<b>Offset Well Error:</b>	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
12,500.0	6,737.5	6,730.5	6,730.5	163.7	134.6	-91.25	-928.1	-6,589.6	953.0	654.8	298.13	3.196		
12,600.0	6,736.6	6,729.6	6,729.6	166.5	134.6	-91.11	-928.1	-6,589.6	861.2	560.3	300.92	2.862		
12,700.0	6,735.7	6,728.7	6,728.7	169.3	134.6	-90.96	-928.1	-6,589.6	771.6	467.9	303.72	2.540		
12,800.0	6,734.8	6,727.8	6,727.8	172.1	134.6	-90.82	-928.1	-6,589.6	684.8	378.3	306.51	2.234		
12,900.0	6,733.9	6,726.9	6,726.9	174.9	134.5	-90.68	-928.1	-6,589.6	602.1	292.8	309.30	1.947		
13,000.0	6,733.0	6,726.0	6,726.0	177.7	134.5	-90.54	-928.1	-6,589.6	525.5	213.4	312.09	1.684		
13,100.0	6,732.1	6,725.1	6,725.1	180.5	134.5	-90.40	-928.1	-6,589.6	458.0	143.1	314.88	1.454 Level 3		
13,200.0	6,731.2	6,724.2	6,724.2	183.3	134.5	-90.26	-928.1	-6,589.6	404.1	86.5	317.67	1.272 Level 3		
13,300.0	6,730.3	6,723.3	6,723.3	186.1	134.5	-90.12	-928.1	-6,589.6	370.0	49.6	320.45	1.155 Level 2		
13,382.0	6,729.6	6,722.6	6,722.6	188.4	134.5	-90.00	-928.1	-6,589.6	360.8	38.1	322.74	1.118 Level 2, CC		
13,400.0	6,729.4	6,722.4	6,722.4	188.9	134.4	-89.97	-928.1	-6,589.6	361.3	38.0	323.24	1.118 Level 2, ES, SF		
13,500.0	6,728.6	6,721.6	6,721.6	191.7	134.4	-89.83	-928.1	-6,589.6	379.6	53.6	326.02	1.164 Level 2		
13,600.0	6,727.7	6,720.7	6,720.7	194.5	134.4	-89.69	-928.1	-6,589.6	421.5	92.7	328.80	1.282 Level 3		
13,700.0	6,726.8	6,719.8	6,719.8	197.3	134.4	-89.55	-928.1	-6,589.6	480.9	149.3	331.58	1.450 Level 3		
13,800.0	6,725.9	6,718.9	6,718.9	200.1	134.4	-89.41	-928.1	-6,589.6	552.2	217.8	334.36	1.651		
13,899.8	6,725.0	6,718.0	6,718.0	202.9	134.4	-89.27	-928.1	-6,589.6	631.0	293.9	337.13	1.872		

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Project:</b>	SEC.1-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Reference Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (9-4-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design LDS 5N65W1U Pad Sec.1-T5N-R65W - LDS 1U-234 - Wellbore #1 - Plan #1 (9-4-14)													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 (ft)	Offset (ft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.0	0.0	1.0	1.0	0.0	0.0	-45.95	61.9	-64.0	89.1	89.1	0.00	N/A		
100.0	100.0	101.0	101.0	0.1	0.1	-45.95	61.9	-64.0	89.1	88.9	0.23	392.402		
200.0	200.0	201.0	201.0	0.3	0.3	-45.95	61.9	-64.0	89.1	88.4	0.68	131.670		
300.0	300.0	301.0	301.0	0.6	0.6	-45.95	61.9	-64.0	89.1	88.0	1.13	79.107		
400.0	400.0	401.0	401.0	0.8	0.8	-45.95	61.9	-64.0	89.1	87.5	1.58	56.537 CC, ES		
500.0	500.0	501.0	501.0	1.0	1.0	161.79	61.9	-64.0	90.7	88.7	2.00	45.299		
600.0	599.8	600.8	600.8	1.2	1.2	162.74	61.9	-64.0	95.7	93.3	2.42	39.538		
700.0	699.5	700.5	700.5	1.4	1.5	164.12	61.9	-64.0	104.1	101.2	2.85	36.504		
800.0	798.7	799.7	799.7	1.7	1.7	165.71	61.9	-64.0	115.8	112.5	3.29	35.216		
900.0	897.8	898.8	898.8	2.0	1.9	167.19	61.9	-64.0	128.9	125.2	3.73	34.552		
1,000.0	996.9	997.9	997.9	2.3	2.1	168.39	61.9	-64.0	142.0	137.8	4.18	33.999		
1,100.0	1,096.0	1,097.0	1,097.0	2.6	2.4	169.39	61.9	-64.0	155.2	150.6	4.63	33.538		
1,200.0	1,195.1	1,196.1	1,196.1	2.9	2.6	170.23	61.9	-64.0	168.4	163.4	5.08	33.148		
1,300.0	1,294.2	1,295.2	1,295.2	3.2	2.8	170.95	61.9	-64.0	181.7	176.2	5.54	32.817		
1,400.0	1,393.3	1,394.3	1,394.3	3.6	3.0	171.57	61.9	-64.0	195.0	189.0	5.99	32.532		
1,500.0	1,492.4	1,493.4	1,493.4	3.9	3.2	172.11	61.9	-64.0	208.3	201.8	6.45	32.284		
1,600.0	1,591.5	1,592.5	1,592.5	4.2	3.5	172.59	61.9	-64.0	221.6	214.7	6.91	32.068		
1,700.0	1,690.5	1,691.5	1,691.5	4.6	3.7	173.01	61.9	-64.0	234.9	227.6	7.37	31.877		
1,800.0	1,789.6	1,790.6	1,790.6	4.9	3.9	173.39	61.9	-64.0	248.3	240.4	7.83	31.707		
1,900.0	1,888.7	1,889.7	1,889.7	5.2	4.1	173.73	61.9	-64.0	261.6	253.3	8.29	31.555		
2,000.0	1,987.8	1,988.8	1,988.8	5.6	4.4	174.03	61.9	-64.0	275.0	266.2	8.75	31.419		
2,100.0	2,086.9	2,087.9	2,087.9	5.9	4.6	174.31	61.9	-64.0	288.3	279.1	9.21	31.296		
2,200.0	2,186.0	2,187.0	2,187.0	6.3	4.8	174.56	61.9	-64.0	301.7	292.0	9.68	31.184		
2,300.0	2,285.1	2,286.1	2,286.1	6.6	5.0	174.79	61.9	-64.0	315.1	305.0	10.14	31.082		
2,400.0	2,384.2	2,385.2	2,385.2	7.0	5.2	175.01	61.9	-64.0	328.5	317.9	10.60	30.988		
2,500.0	2,483.3	2,484.3	2,484.3	7.3	5.5	175.20	61.9	-64.0	341.9	330.8	11.06	30.902		
2,600.0	2,582.4	2,584.6	2,584.6	7.6	5.7	175.59	62.5	-62.9	355.1	343.6	11.52	30.826		
2,700.0	2,681.5	2,684.9	2,684.8	8.0	5.9	176.49	64.5	-58.6	368.0	356.1	11.97	30.751		
2,800.0	2,780.6	2,784.8	2,784.3	8.3	6.1	177.84	68.0	-51.2	380.8	368.3	12.42	30.662		
2,900.0	2,879.7	2,884.0	2,882.9	8.7	6.3	179.61	72.9	-40.8	393.5	380.7	12.88	30.563		
3,000.0	2,978.8	2,982.3	2,980.3	9.0	6.6	-178.55	78.5	-29.2	406.6	393.3	13.35	30.464		
3,100.0	3,077.9	3,080.6	3,077.8	9.4	6.8	-176.82	84.0	-17.6	420.1	406.3	13.83	30.371		
3,200.0	3,177.0	3,178.9	3,175.2	9.7	7.1	-175.20	89.5	-5.9	434.0	419.6	14.33	30.287		
3,300.0	3,276.0	3,277.2	3,272.7	10.0	7.3	-173.68	95.0	5.7	448.1	433.3	14.83	30.207		
3,400.0	3,375.1	3,375.5	3,370.1	10.4	7.6	-172.25	100.5	17.4	462.6	447.2	15.35	30.134		
3,500.0	3,474.2	3,473.8	3,467.6	10.7	7.8	-170.91	106.1	29.0	477.3	461.4	15.88	30.066		
3,600.0	3,573.3	3,572.1	3,565.0	11.1	8.1	-169.65	111.6	40.6	492.3	475.9	16.41	30.004		
3,700.0	3,672.4	3,670.4	3,662.5	11.4	8.4	-168.46	117.1	52.3	507.5	490.5	16.95	29.947		
3,800.0	3,771.5	3,768.7	3,759.9	11.8	8.7	-167.35	122.6	63.9	522.9	505.4	17.49	29.895		
3,900.0	3,870.6	3,867.0	3,857.4	12.1	8.9	-166.29	128.1	75.5	538.5	520.4	18.04	29.849		
4,000.0	3,969.7	3,965.3	3,954.9	12.5	9.2	-165.30	133.7	87.2	554.2	535.6	18.59	29.807		
4,100.0	4,068.8	4,063.6	4,052.3	12.8	9.5	-164.36	139.2	98.8	570.1	551.0	19.15	29.769		
4,200.0	4,167.9	4,161.9	4,149.8	13.2	9.8	-163.47	144.7	110.4	586.2	566.5	19.71	29.736		
4,300.0	4,267.0	4,260.2	4,247.2	13.5	10.1	-162.62	150.2	122.1	602.4	582.1	20.28	29.706		
4,400.0	4,366.1	4,358.5	4,344.7	13.8	10.4	-161.82	155.7	133.7	618.7	597.8	20.84	29.680		
4,500.0	4,465.2	4,456.8	4,442.1	14.2	10.7	-161.07	161.3	145.3	635.1	613.7	21.41	29.658		
4,600.0	4,564.3	4,555.1	4,539.6	14.5	11.0	-160.35	166.8	157.0	651.6	629.6	21.99	29.638		
4,700.0	4,663.4	4,653.4	4,637.0	14.9	11.3	-159.66	172.3	168.6	668.2	645.7	22.56	29.621		
4,800.0	4,762.4	4,751.7	4,734.5	15.2	11.6	-159.01	177.8	180.2	684.9	661.8	23.13	29.607		
4,900.0	4,861.5	4,850.0	4,831.9	15.6	11.9	-158.39	183.3	191.9	701.7	678.0	23.71	29.595		
5,000.0	4,960.6	4,948.3	4,929.4	15.9	12.2	-157.80	188.9	203.5	718.6	694.3	24.29	29.585		

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

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Project:</b>	SEC.1-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Reference Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (9-4-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design LDS 5N65W1U Pad Sec.1-T5N-R65W - LDS 1U-234 - Wellbore #1 - Plan #1 (9-4-14)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.0	5,059.7	5,046.6	5,026.9	16.3	12.5	-157.24		194.4	215.1	735.5	710.6	24.87	29.577	
5,200.0	5,158.9	5,145.0	5,124.3	16.6	12.8	-156.74		199.9	226.8	752.2	726.7	25.45	29.550	
5,300.0	5,258.3	5,243.6	5,222.2	16.8	13.1	-156.24		205.4	238.4	766.3	740.3	26.01	29.465	
5,400.0	5,358.1	5,342.6	5,320.3	17.0	13.4	-155.64		211.0	250.2	777.3	750.8	26.53	29.297	
5,500.0	5,458.1	5,441.7	5,418.5	17.1	13.7	-154.92		216.6	261.9	785.3	758.3	27.03	29.053	
5,600.0	5,558.1	5,540.8	5,516.8	17.3	14.0	-1.49		222.1	273.6	790.8	761.7	29.10	27.179	
5,700.0	5,658.1	5,652.0	5,627.2	17.4	14.3	-0.65		227.6	285.1	795.6	766.1	29.44	27.028	
5,800.0	5,758.1	5,765.1	5,740.0	17.5	14.5	-0.09		231.3	292.8	798.8	769.0	29.77	26.834	
5,900.0	5,858.1	5,878.6	5,853.4	17.6	14.7	0.17		233.0	296.5	800.3	770.2	30.10	26.587	
6,000.0	5,958.1	5,984.2	5,959.1	17.8	14.9	0.20		233.2	296.9	800.5	770.0	30.43	26.303	
6,100.0	6,058.0	6,084.4	6,059.2	17.9	15.1	90.18		233.2	295.7	800.5	771.0	29.49	27.147	
6,155.7	6,113.5	6,140.3	6,114.8	18.0	15.2	90.16		233.2	290.5	800.5	770.9	29.61	27.038	
6,200.0	6,157.3	6,184.7	6,158.6	18.0	15.2	90.14		233.2	283.5	800.5	770.8	29.68	26.967	
6,300.0	6,254.2	6,284.8	6,255.6	18.0	15.2	90.09		233.2	258.5	800.5	770.7	29.76	26.900	
6,400.0	6,347.1	6,384.9	6,348.3	18.0	15.2	90.04		233.2	221.1	800.5	770.7	29.77	26.889	
6,500.0	6,434.5	6,485.0	6,435.3	18.0	15.2	89.99		233.2	171.9	800.5	770.7	29.82	26.846	
6,600.0	6,514.7	6,584.9	6,515.1	18.0	15.3	89.94		233.2	111.8	800.5	770.5	30.04	26.650	
6,700.0	6,586.5	6,684.7	6,586.2	17.9	15.5	89.89		233.2	41.9	800.5	769.9	30.59	26.166	
6,800.0	6,648.5	6,784.5	6,647.7	17.9	16.0	89.84		233.2	-36.6	800.5	768.9	31.65	25.292	
6,900.0	6,699.9	6,884.1	6,698.3	17.9	16.8	89.80		233.2	-122.4	800.5	767.2	33.33	24.015	
7,000.0	6,739.5	6,983.7	6,737.3	18.2	17.9	89.76		233.2	-213.9	800.5	764.9	35.69	22.430	
7,100.0	6,766.9	7,083.2	6,764.1	19.6	19.4	89.72		233.3	-309.7	800.6	761.9	38.68	20.699	
7,200.0	6,781.5	7,182.7	6,778.2	21.3	21.1	89.69		233.3	-408.1	800.6	758.4	42.18	18.980	
7,300.0	6,783.7	7,282.3	6,780.2	23.3	23.1	89.67		233.3	-507.6	800.6	754.5	46.06	17.381	
7,400.0	6,782.9	7,382.3	6,779.3	25.4	25.2	89.68		233.3	-607.6	800.6	750.3	50.27	15.926	
7,500.0	6,782.0	7,482.3	6,778.5	27.7	27.4	89.68		233.3	-707.6	800.6	745.9	54.72	14.630	
7,600.0	6,781.1	7,582.3	6,777.7	30.0	29.7	89.68		233.3	-807.6	800.6	741.3	59.38	13.484	
7,700.0	6,780.2	7,682.3	6,776.8	32.4	32.1	89.69		233.3	-907.6	800.6	736.5	64.19	12.474	
7,800.0	6,779.3	7,782.3	6,776.0	34.9	34.5	89.69		233.3	-1,007.6	800.7	731.5	69.12	11.584	
7,900.0	6,778.4	7,882.3	6,775.1	37.4	37.0	89.70		233.4	-1,107.6	800.7	726.5	74.14	10.799	
8,000.0	6,777.5	7,982.3	6,774.3	40.0	39.6	89.70		233.4	-1,207.6	800.7	721.4	79.25	10.103	
8,100.0	6,776.6	8,082.3	6,773.5	42.5	42.2	89.70		233.4	-1,307.6	800.7	716.3	84.43	9.484	
8,200.0	6,775.7	8,182.3	6,772.6	45.2	44.8	89.71		233.4	-1,407.6	800.7	711.1	89.65	8.931	
8,300.0	6,774.8	8,282.3	6,771.8	47.8	47.4	89.71		233.4	-1,507.6	800.7	705.8	94.93	8.435	
8,400.0	6,774.0	8,382.3	6,771.0	50.4	50.1	89.71		233.4	-1,607.6	800.7	700.5	100.23	7.989	
8,500.0	6,773.1	8,482.3	6,770.1	53.1	52.7	89.72		233.4	-1,707.6	800.7	695.2	105.58	7.585	
8,600.0	6,772.2	8,582.3	6,769.3	55.8	55.4	89.72		233.5	-1,807.6	800.8	689.8	110.95	7.218	
8,700.0	6,771.3	8,682.3	6,768.4	58.5	58.1	89.73		233.5	-1,907.6	800.8	684.4	116.34	6.883	
8,800.0	6,770.4	8,782.3	6,767.6	61.2	60.8	89.73		233.5	-2,007.6	800.8	679.0	121.75	6.577	
8,900.0	6,769.5	8,882.3	6,766.8	63.9	63.5	89.73		233.5	-2,107.6	800.8	673.6	127.18	6.296	
9,000.0	6,768.6	8,982.3	6,765.9	66.6	66.2	89.74		233.5	-2,207.6	800.8	668.2	132.63	6.038	
9,100.0	6,767.7	9,082.3	6,765.1	69.3	69.0	89.74		233.5	-2,307.6	800.8	662.7	138.09	5.799	
9,200.0	6,766.8	9,182.3	6,764.3	72.1	71.7	89.74		233.5	-2,407.6	800.8	657.3	143.56	5.578	
9,300.0	6,765.9	9,282.3	6,763.4	74.8	74.4	89.75		233.5	-2,507.6	800.9	651.8	149.05	5.373	
9,400.0	6,765.1	9,382.3	6,762.6	77.5	77.2	89.75		233.6	-2,607.6	800.9	646.3	154.54	5.182	
9,500.0	6,764.2	9,482.3	6,761.7	80.3	79.9	89.76		233.6	-2,707.6	800.9	640.8	160.04	5.004	
9,600.0	6,763.3	9,582.3	6,760.9	83.0	82.7	89.76		233.6	-2,807.6	800.9	635.3	165.55	4.838	
9,700.0	6,762.4	9,682.3	6,760.1	85.8	85.4	89.76		233.6	-2,907.6	800.9	629.8	171.07	4.682	
9,800.0	6,761.5	9,782.3	6,759.2	88.6	88.2	89.77		233.6	-3,007.6	800.9	624.3	176.59	4.535	
9,900.0	6,760.6	9,882.3	6,758.4	91.3	91.0	89.77		233.6	-3,107.5	800.9	618.8	182.12	4.398	
10,000.0	6,759.7	9,982.3	6,757.6	94.1	93.7	89.77		233.6	-3,207.5	800.9	613.3	187.66	4.268	

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

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Project:</b>	SEC.1-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Reference Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (9-4-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design LDS 5N65W1U Pad Sec.1-T5N-R65W - LDS 1U-234 - Wellbore #1 - Plan #1 (9-4-14)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
10,100.0	6,758.8	10,082.3	6,756.7	96.9	96.5	89.78	233.7	-3,307.5	801.0	607.8	193.20	4.146		
10,200.0	6,757.9	10,182.3	6,755.9	99.6	99.3	89.78	233.7	-3,407.5	801.0	602.2	198.74	4.030		
10,300.0	6,757.0	10,282.3	6,755.0	102.4	102.0	89.79	233.7	-3,507.5	801.0	596.7	204.29	3.921		
10,400.0	6,756.2	10,382.3	6,754.2	105.2	104.8	89.79	233.7	-3,607.5	801.0	591.2	209.84	3.817		
10,500.0	6,755.3	10,482.3	6,753.4	107.9	107.6	89.79	233.7	-3,707.5	801.0	585.6	215.40	3.719		
10,600.0	6,754.4	10,582.3	6,752.5	110.7	110.4	89.80	233.7	-3,807.5	801.0	580.1	220.96	3.625		
10,700.0	6,753.5	10,682.3	6,751.7	113.5	113.2	89.80	233.7	-3,907.5	801.0	574.5	226.52	3.536		
10,800.0	6,752.6	10,782.3	6,750.9	116.3	115.9	89.80	233.7	-4,007.5	801.1	569.0	232.08	3.452		
10,900.0	6,751.7	10,882.3	6,750.0	119.1	118.7	89.81	233.8	-4,107.5	801.1	563.4	237.65	3.371		
11,000.0	6,750.8	10,982.3	6,749.2	121.8	121.5	89.81	233.8	-4,207.5	801.1	557.9	243.22	3.294		
11,100.0	6,749.9	11,082.3	6,748.3	124.6	124.3	89.82	233.8	-4,307.5	801.1	552.3	248.79	3.220		
11,200.0	6,749.0	11,182.3	6,747.5	127.4	127.1	89.82	233.8	-4,407.5	801.1	546.7	254.37	3.149		
11,300.0	6,748.1	11,282.3	6,746.7	130.2	129.9	89.82	233.8	-4,507.5	801.1	541.2	259.94	3.082		
11,400.0	6,747.3	11,382.3	6,745.8	133.0	132.7	89.83	233.8	-4,607.5	801.1	535.6	265.52	3.017		
11,500.0	6,746.4	11,482.3	6,745.0	135.8	135.4	89.83	233.8	-4,707.5	801.1	530.0	271.10	2.955		
11,600.0	6,745.5	11,582.3	6,744.1	138.6	138.2	89.83	233.9	-4,807.5	801.2	524.5	276.68	2.896		
11,700.0	6,744.6	11,682.3	6,743.3	141.4	141.0	89.84	233.9	-4,907.5	801.2	518.9	282.26	2.838		
11,800.0	6,743.7	11,782.3	6,742.5	144.1	143.8	89.84	233.9	-5,007.5	801.2	513.3	287.85	2.783		
11,900.0	6,742.8	11,882.3	6,741.6	146.9	146.6	89.85	233.9	-5,107.5	801.2	507.8	293.43	2.730		
12,000.0	6,741.9	11,982.3	6,740.8	149.7	149.4	89.85	233.9	-5,207.5	801.2	502.2	299.02	2.679		
12,100.0	6,741.0	12,082.3	6,740.0	152.5	152.2	89.85	233.9	-5,307.5	801.2	496.6	304.61	2.630		
12,200.0	6,740.1	12,182.3	6,739.1	155.3	155.0	89.86	233.9	-5,407.5	801.2	491.0	310.19	2.583		
12,300.0	6,739.2	12,282.3	6,738.3	158.1	157.8	89.86	234.0	-5,507.5	801.3	485.5	315.78	2.537		
12,400.0	6,738.3	12,382.3	6,737.4	160.9	160.6	89.86	234.0	-5,607.5	801.3	479.9	321.38	2.493		
12,500.0	6,737.5	12,482.3	6,736.6	163.7	163.4	89.87	234.0	-5,707.5	801.3	474.3	326.97	2.451		
12,600.0	6,736.6	12,582.3	6,735.8	166.5	166.2	89.87	234.0	-5,807.5	801.3	468.7	332.56	2.409		
12,700.0	6,735.7	12,682.3	6,734.9	169.3	169.0	89.88	234.0	-5,907.5	801.3	463.2	338.15	2.370		
12,800.0	6,734.8	12,782.3	6,734.1	172.1	171.8	89.88	234.0	-6,007.4	801.3	457.6	343.75	2.331		
12,900.0	6,733.9	12,882.3	6,733.3	174.9	174.6	89.88	234.0	-6,107.4	801.3	452.0	349.34	2.294		
13,000.0	6,733.0	12,982.3	6,732.4	177.7	177.4	89.89	234.0	-6,207.4	801.3	446.4	354.94	2.258		
13,100.0	6,732.1	13,082.3	6,731.6	180.5	180.2	89.89	234.1	-6,307.4	801.4	440.8	360.54	2.223		
13,200.0	6,731.2	13,182.3	6,730.7	183.3	183.0	89.89	234.1	-6,407.4	801.4	435.2	366.13	2.189		
13,300.0	6,730.3	13,282.3	6,729.9	186.1	185.7	89.90	234.1	-6,507.4	801.4	429.7	371.73	2.156		
13,400.0	6,729.4	13,382.3	6,729.1	188.9	188.5	89.90	234.1	-6,607.4	801.4	424.1	377.33	2.124		
13,500.0	6,728.6	13,482.3	6,728.2	191.7	191.3	89.91	234.1	-6,707.4	801.4	418.5	382.93	2.093		
13,600.0	6,727.7	13,582.3	6,727.4	194.5	194.1	89.91	234.1	-6,807.4	801.4	412.9	388.53	2.063		
13,700.0	6,726.8	13,682.3	6,726.6	197.3	196.9	89.91	234.1	-6,907.4	801.4	407.3	394.13	2.033		
13,800.0	6,725.9	13,782.3	6,725.7	200.1	199.7	89.92	234.2	-7,007.4	801.5	401.7	399.73	2.005		
13,855.4	6,725.4	13,837.7	6,725.3	201.6	201.3	89.92	234.2	-7,062.8	801.5	398.6	402.83	1.990		
13,899.8	6,725.0	13,868.9	6,725.0	202.9	202.2	89.92	234.2	-7,094.0	801.6	396.6	404.94	1.979 SF		



<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Project:</b>	SEC.1-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Reference Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (9-4-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design LDS 5N65W1U Pad Sec.1-T5N-R65W - LDS 1U-304 - Wellbore #1 - Plan #1 (9-4-14)													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 (ft)	Offset (ft)	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.0	0.0	2.0	2.0	0.0	0.0	-45.84	83.8	-86.3	120.3	120.3	0.00	N/A		
100.0	100.0	102.0	102.0	0.1	0.1	-45.84	83.8	-86.3	120.3	120.1	0.23	524.665		
200.0	200.0	202.0	202.0	0.3	0.3	-45.84	83.8	-86.3	120.3	119.6	0.68	177.205		
300.0	300.0	302.0	302.0	0.6	0.6	-45.84	83.8	-86.3	120.3	119.2	1.13	106.605		
400.0	400.0	402.0	402.0	0.8	0.8	-45.84	83.8	-86.3	120.3	118.7	1.58	76.233 CC, ES		
500.0	500.0	502.0	502.0	1.0	1.0	161.81	83.8	-86.3	121.9	119.9	2.01	60.810		
600.0	599.8	601.8	601.8	1.2	1.2	162.52	83.8	-86.3	126.9	124.5	2.42	52.379		
700.0	699.5	701.5	701.5	1.4	1.5	163.58	83.8	-86.3	135.3	132.4	2.85	47.404		
800.0	798.7	800.7	800.7	1.7	1.7	164.86	83.8	-86.3	147.0	143.7	3.29	44.650		
900.0	897.8	899.8	899.8	2.0	1.9	166.12	83.8	-86.3	160.0	156.2	3.73	42.848		
1,000.0	996.9	998.9	998.9	2.3	2.1	167.19	83.8	-86.3	173.1	168.9	4.18	41.387		
1,100.0	1,096.0	1,098.0	1,098.0	2.6	2.4	168.10	83.8	-86.3	186.2	181.6	4.63	40.186		
1,200.0	1,195.1	1,197.1	1,197.1	2.9	2.6	168.90	83.8	-86.3	199.4	194.3	5.09	39.187		
1,300.0	1,294.2	1,296.2	1,296.2	3.2	2.8	169.60	83.8	-86.3	212.6	207.0	5.54	38.345		
1,400.0	1,393.3	1,395.3	1,395.3	3.6	3.0	170.21	83.8	-86.3	225.8	219.8	6.00	37.627		
1,500.0	1,492.4	1,493.5	1,493.5	3.9	3.2	171.12	84.8	-85.2	239.2	232.8	6.45	37.075		
1,600.0	1,591.5	1,591.3	1,591.2	4.2	3.5	172.69	88.1	-81.6	253.1	246.2	6.90	36.695		
1,700.0	1,690.5	1,688.4	1,687.9	4.6	3.7	174.79	93.6	-75.6	267.7	260.4	7.35	36.444		
1,800.0	1,789.6	1,785.2	1,784.0	4.9	3.9	177.29	101.2	-67.3	283.4	275.6	7.81	36.297		
1,900.0	1,888.7	1,883.1	1,881.2	5.2	4.1	179.72	109.4	-58.3	299.7	291.4	8.28	36.183		
2,000.0	1,987.8	1,981.0	1,978.3	5.6	4.4	-178.11	117.6	-49.3	316.5	307.8	8.77	36.088		
2,100.0	2,086.9	2,078.8	2,075.4	5.9	4.7	-176.15	125.8	-40.4	333.8	324.5	9.27	36.011		
2,200.0	2,186.0	2,176.7	2,172.6	6.3	4.9	-174.39	134.0	-31.4	351.3	341.6	9.77	35.946		
2,300.0	2,285.1	2,274.6	2,269.7	6.6	5.2	-172.79	142.2	-22.4	369.2	358.9	10.29	35.895		
2,400.0	2,384.2	2,372.5	2,366.8	7.0	5.5	-171.34	150.5	-13.4	387.3	376.5	10.80	35.854		
2,500.0	2,483.3	2,470.4	2,463.9	7.3	5.7	-170.02	158.7	-4.4	405.6	394.3	11.32	35.822		
2,600.0	2,582.4	2,568.3	2,561.1	7.6	6.0	-168.81	166.9	4.6	424.2	412.3	11.85	35.797		
2,700.0	2,681.5	2,666.2	2,658.2	8.0	6.3	-167.71	175.1	13.5	442.9	430.5	12.38	35.779		
2,800.0	2,780.6	2,764.1	2,755.3	8.3	6.6	-166.69	183.3	22.5	461.7	448.8	12.91	35.767		
2,900.0	2,879.7	2,862.0	2,852.5	8.7	6.9	-165.75	191.6	31.5	480.7	467.2	13.44	35.759		
3,000.0	2,978.8	2,959.9	2,949.6	9.0	7.2	-164.89	199.8	40.5	499.8	485.8	13.98	35.756		
3,100.0	3,077.9	3,057.7	3,046.7	9.4	7.5	-164.08	208.0	49.5	519.0	504.4	14.51	35.755		
3,200.0	3,177.0	3,155.6	3,143.8	9.7	7.8	-163.34	216.2	58.5	538.2	523.2	15.05	35.758		
3,300.0	3,276.0	3,253.5	3,241.0	10.0	8.1	-162.64	224.4	67.5	557.6	542.0	15.59	35.762		
3,400.0	3,375.1	3,351.4	3,338.1	10.4	8.4	-162.00	232.6	76.4	577.0	560.9	16.13	35.769		
3,500.0	3,474.2	3,449.3	3,435.2	10.7	8.7	-161.39	240.9	85.4	596.5	579.9	16.67	35.777		
3,600.0	3,573.3	3,547.2	3,532.4	11.1	9.0	-160.82	249.1	94.4	616.1	598.9	17.22	35.787		
3,700.0	3,672.4	3,645.1	3,629.5	11.4	9.3	-160.29	257.3	103.4	635.7	618.0	17.76	35.797		
3,800.0	3,771.5	3,743.0	3,726.6	11.8	9.6	-159.79	265.5	112.4	655.4	637.1	18.30	35.809		
3,900.0	3,870.6	3,840.9	3,823.8	12.1	9.9	-159.32	273.7	121.4	675.1	656.3	18.85	35.821		
4,000.0	3,969.7	3,938.8	3,920.9	12.5	10.2	-158.87	282.0	130.4	694.9	675.5	19.39	35.834		
4,100.0	4,068.8	4,036.6	4,018.0	12.8	10.5	-158.45	290.2	139.3	714.7	694.7	19.94	35.847		
4,200.0	4,167.9	4,134.5	4,115.1	13.2	10.8	-158.06	298.4	148.3	734.5	714.0	20.48	35.860		
4,300.0	4,267.0	4,232.4	4,212.3	13.5	11.1	-157.68	306.6	157.3	754.3	733.3	21.03	35.874		
4,400.0	4,366.1	4,330.3	4,309.4	13.8	11.4	-157.32	314.8	166.3	774.2	752.7	21.57	35.888		
4,500.0	4,465.2	4,428.2	4,406.5	14.2	11.7	-156.98	323.0	175.3	794.2	772.0	22.12	35.902		
4,600.0	4,564.3	4,526.1	4,503.7	14.5	12.0	-156.66	331.3	184.3	814.1	791.4	22.67	35.916		
4,700.0	4,663.4	4,624.0	4,600.8	14.9	12.3	-156.35	339.5	193.3	834.1	810.9	23.21	35.930		
4,800.0	4,762.4	4,721.9	4,697.9	15.2	12.7	-156.06	347.7	202.2	854.1	830.3	23.76	35.943		
4,900.0	4,861.5	4,819.8	4,795.1	15.6	13.0	-155.78	355.9	211.2	874.1	849.8	24.31	35.957		
5,000.0	4,960.6	4,917.7	4,892.2	15.9	13.3	-155.51	364.1	220.2	894.1	869.2	24.86	35.971		

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



<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Project:</b>	SEC.1-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Reference Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (9-4-14)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> LDS 5N65W1U Pad Sec.1-T5N-R65W - LDS 1U-304 - Wellbore #1 - Plan #1 (9-4-14)												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.0	5,059.7	5,015.5	4,989.3	16.3	13.6	-155.26	372.4	229.2	914.1	888.7	25.40	35.984	
5,200.0	5,158.9	5,113.5	5,086.5	16.6	13.9	-155.08	380.6	238.2	933.9	907.9	25.96	35.969	
5,300.0	5,258.3	5,211.9	5,184.1	16.8	14.2	-154.90	388.8	247.2	951.1	924.6	26.49	35.898	
5,400.0	5,358.1	5,310.6	5,282.1	17.0	14.5	-154.63	397.1	256.3	965.1	938.1	26.99	35.757	
5,500.0	5,458.1	5,409.7	5,380.4	17.1	14.8	-154.25	405.4	265.4	976.1	948.7	27.46	35.549	
5,600.0	5,558.1	5,508.9	5,478.9	17.3	15.1	-1.15	413.8	274.5	984.6	954.4	30.18	32.626	
5,700.0	5,658.1	5,618.4	5,587.5	17.4	15.5	-0.57	422.7	284.3	992.7	962.2	30.58	32.461	
5,800.0	5,758.1	5,748.4	5,717.0	17.5	15.7	-0.09	430.3	292.6	998.6	967.6	30.97	32.240 SF	

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Project:</b>	SEC.1-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Reference Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (9-4-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design LDS 5N65W1U Pad Sec.1-T5N-R65W - LDS 1V-304 - Wellbore #1 - Plan #1 (9-4-14)													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 (ft)	Offset (ft)	Semi Major Axis (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	138.28		-21.9	19.5	29.3				
100.0	100.0	99.0	99.0	0.1	0.1	138.28		-21.9	19.5	29.3	29.1	0.22	130.926	
200.0	200.0	199.0	199.0	0.3	0.3	138.28		-21.9	19.5	29.3	28.6	0.67	43.569 CC	
300.0	300.0	298.1	298.0	0.6	0.5	139.60		-23.5	20.0	30.8	29.7	1.10	28.043	
400.0	400.0	396.9	396.7	0.8	0.7	142.89		-28.3	21.4	35.6	34.1	1.53	23.242	
500.0	500.0	495.4	494.8	1.0	1.0	-6.06		-36.4	23.9	42.0	40.1	1.94	21.611	
600.0	599.8	593.6	592.4	1.2	1.3	-2.66		-47.7	27.3	48.4	46.1	2.36	20.553	
700.0	699.5	691.6	689.2	1.4	1.6	0.58		-62.2	31.6	54.8	52.0	2.79	19.680	
800.0	798.7	790.6	786.5	1.7	2.0	3.67		-79.4	36.8	60.7	57.5	3.23	18.789	
900.0	897.8	890.4	884.6	2.0	2.4	6.38		-97.1	42.1	65.8	62.2	3.70	17.801	
1,000.0	996.9	990.3	982.7	2.3	2.8	8.69		-114.8	47.4	71.1	66.9	4.18	17.024	
1,100.0	1,096.0	1,090.1	1,080.8	2.6	3.2	10.69		-132.5	52.7	76.4	71.7	4.66	16.394	
1,200.0	1,195.1	1,189.9	1,178.9	2.9	3.6	12.42		-150.2	58.1	81.8	76.7	5.15	15.872	
1,300.0	1,294.2	1,289.7	1,277.1	3.2	4.0	13.93		-167.9	63.4	87.3	81.6	5.65	15.436	
1,400.0	1,393.3	1,389.6	1,375.2	3.6	4.4	15.27		-185.6	68.7	92.8	86.7	6.16	15.058	
1,500.0	1,492.4	1,489.4	1,473.3	3.9	4.8	16.46		-203.2	74.0	98.4	91.7	6.68	14.733	
1,600.0	1,591.5	1,589.2	1,571.4	4.2	5.2	17.52		-220.9	79.3	104.0	96.8	7.20	14.448	
1,700.0	1,690.5	1,689.0	1,669.5	4.6	5.7	18.46		-238.6	84.7	109.6	101.9	7.72	14.197	
1,800.0	1,789.6	1,788.9	1,767.6	4.9	6.1	19.32		-256.3	90.0	115.3	107.1	8.25	13.974	
1,900.0	1,888.7	1,888.7	1,865.7	5.2	6.5	20.10		-274.0	95.3	121.0	112.2	8.78	13.775	
2,000.0	1,987.8	1,988.5	1,963.8	5.6	6.9	20.80		-291.7	100.6	126.7	117.4	9.32	13.595	
2,100.0	2,086.9	2,088.3	2,061.9	5.9	7.3	21.45		-309.4	105.9	132.4	122.6	9.86	13.433	
2,200.0	2,186.0	2,188.2	2,160.0	6.3	7.8	22.04		-327.1	111.2	138.2	127.8	10.40	13.286	
2,300.0	2,285.1	2,288.0	2,258.1	6.6	8.2	22.59		-344.8	116.6	143.9	133.0	10.95	13.151	
2,400.0	2,384.2	2,387.8	2,356.2	7.0	8.6	23.09		-362.5	121.9	149.7	138.2	11.49	13.028	
2,500.0	2,483.3	2,487.6	2,454.3	7.3	9.0	23.55		-380.1	127.2	155.5	143.5	12.04	12.915	
2,600.0	2,582.4	2,587.5	2,552.4	7.6	9.5	23.99		-397.8	132.5	161.3	148.7	12.59	12.810	
2,700.0	2,681.5	2,687.3	2,650.5	8.0	9.9	24.39		-415.5	137.8	167.1	153.9	13.14	12.714	
2,800.0	2,780.6	2,787.1	2,748.6	8.3	10.3	24.76		-433.2	143.2	172.9	159.2	13.70	12.624	
2,900.0	2,879.7	2,886.9	2,846.7	8.7	10.7	25.11		-450.9	148.5	178.7	164.5	14.25	12.541	
3,000.0	2,978.8	2,986.8	2,944.8	9.0	11.1	25.44		-468.6	153.8	184.5	169.7	14.81	12.463	
3,100.0	3,077.9	3,086.6	3,042.9	9.4	11.6	25.75		-486.3	159.1	190.3	175.0	15.36	12.391	
3,200.0	3,177.0	3,186.4	3,141.0	9.7	12.0	26.04		-504.0	164.4	196.2	180.3	15.92	12.323	
3,300.0	3,276.0	3,286.2	3,239.1	10.0	12.4	26.31		-521.7	169.7	202.0	185.5	16.48	12.259	
3,400.0	3,375.1	3,386.1	3,337.2	10.4	12.8	26.57		-539.4	175.1	207.9	190.8	17.04	12.199	
3,500.0	3,474.2	3,485.9	3,435.3	10.7	13.3	26.81		-557.0	180.4	213.7	196.1	17.60	12.143	
3,600.0	3,573.3	3,585.7	3,533.4	11.1	13.7	27.05		-574.7	185.7	219.5	201.4	18.16	12.090	
3,700.0	3,672.4	3,685.5	3,631.5	11.4	14.1	27.26		-592.4	191.0	225.4	206.7	18.72	12.040	
3,800.0	3,771.5	3,785.4	3,729.6	11.8	14.5	27.47		-610.1	196.3	231.2	212.0	19.28	11.992	
3,900.0	3,870.6	3,885.2	3,827.7	12.1	14.9	27.67		-627.8	201.7	237.1	217.3	19.85	11.947	
4,000.0	3,969.7	3,985.0	3,925.8	12.5	15.4	27.86		-645.5	207.0	243.0	222.6	20.41	11.905	
4,100.0	4,068.8	4,084.8	4,023.9	12.8	15.8	28.04		-663.2	212.3	248.8	227.9	20.97	11.864	
4,200.0	4,167.9	4,184.7	4,122.0	13.2	16.2	28.21		-680.9	217.6	254.7	233.2	21.54	11.825	
4,300.0	4,267.0	4,284.5	4,220.1	13.5	16.6	28.37		-698.6	222.9	260.6	238.5	22.10	11.789	
4,400.0	4,366.1	4,384.3	4,318.2	13.8	17.1	28.53		-716.3	228.2	266.4	243.8	22.67	11.754	
4,500.0	4,465.2	4,484.1	4,416.3	14.2	17.5	28.68		-733.9	233.6	272.3	249.1	23.23	11.720	
4,600.0	4,564.3	4,584.0	4,514.4	14.5	17.9	28.82		-751.6	238.9	278.2	254.4	23.80	11.688	
4,700.0	4,663.4	4,683.8	4,612.5	14.9	18.3	28.96		-769.3	244.2	284.0	259.7	24.36	11.658	
4,800.0	4,762.4	4,783.6	4,710.6	15.2	18.7	29.09		-787.0	249.5	289.9	265.0	24.93	11.628	
4,900.0	4,861.5	4,883.4	4,808.7	15.6	19.2	29.21		-804.7	254.8	295.8	270.3	25.50	11.600	
5,000.0	4,960.6	4,983.3	4,906.8	15.9	19.6	29.34		-822.4	260.2	301.7	275.6	26.07	11.573	

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

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Project:</b>	SEC.1-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Reference Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (9-4-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design LDS 5N65W1U Pad Sec.1-T5N-R65W - LDS 1V-304 - Wellbore #1 - Plan #1 (9-4-14)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.0	5,059.7	5,083.1	5,004.9	16.3	20.0	29.45		-840.1	265.5	307.5	280.9	26.63	11.548	
5,200.0	5,158.9	5,182.9	5,103.0	16.6	20.4	29.56		-857.8	270.8	313.7	286.5	27.18	11.544	
5,300.0	5,258.3	5,282.5	5,200.9	16.8	20.9	29.47		-875.4	276.1	322.5	294.8	27.61	11.680	
5,400.0	5,358.1	5,385.4	5,302.0	17.0	21.3	29.11		-893.5	281.5	334.1	306.1	27.95	11.950	
5,500.0	5,458.1	5,497.2	5,412.5	17.1	21.6	28.60		-910.0	286.5	346.0	317.8	28.21	12.265	
5,600.0	5,558.1	5,609.8	5,524.3	17.3	21.8	-179.38		-922.5	290.3	356.7	319.0	37.71	9.461	
5,700.0	5,658.1	5,723.1	5,637.3	17.4	22.0	-179.79		-930.8	292.8	364.1	326.0	38.08	9.560	
5,800.0	5,758.1	5,837.0	5,751.0	17.5	22.2	-179.98		-934.8	294.0	367.6	329.2	38.40	9.574	
5,900.0	5,858.1	5,943.0	5,857.1	17.6	22.3	-180.00		-935.2	294.1	367.9	329.3	38.66	9.519	
6,000.0	5,958.1	6,043.0	5,957.1	17.8	22.4	-180.00		-935.2	294.1	367.9	329.1	38.89	9.461	
6,053.4	6,011.5	6,096.4	6,010.5	17.8	22.5	-90.11		-935.2	294.1	368.0	338.1	29.88	12.313	
6,100.0	6,058.0	6,143.0	6,057.0	17.9	22.5	-90.14		-935.2	294.1	368.0	337.9	30.02	12.256	
6,200.0	6,157.3	6,243.3	6,157.1	18.0	22.6	-91.01		-935.2	288.2	368.0	337.9	30.12	12.218	
6,300.0	6,254.2	6,344.4	6,256.3	18.0	22.6	-91.87		-935.2	269.0	368.1	338.0	30.11	12.228	
6,400.0	6,347.1	6,446.2	6,352.7	18.0	22.7	-92.70		-935.2	236.6	368.4	338.3	30.05	12.259	
6,500.0	6,434.5	6,548.7	6,444.7	18.0	22.7	-93.48		-935.2	191.4	368.6	338.6	30.04	12.273	
6,600.0	6,514.7	6,652.0	6,530.3	18.0	22.6	-94.21		-935.2	133.8	368.9	338.7	30.20	12.218	
6,700.0	6,586.5	6,755.9	6,607.8	17.9	22.6	-94.86		-935.2	64.8	369.3	338.6	30.69	12.032	
6,800.0	6,648.5	6,860.3	6,675.6	17.9	22.6	-95.42		-935.2	-14.6	369.6	337.9	31.69	11.665	
6,900.0	6,699.9	6,965.3	6,732.2	17.9	22.7	-95.89		-935.2	-102.9	369.9	336.6	33.30	11.107	
7,000.0	6,739.5	7,070.7	6,776.3	18.2	22.8	-96.25		-935.2	-198.6	370.2	334.5	35.60	10.396	
7,100.0	6,766.9	7,176.4	6,806.8	19.6	23.1	-96.51		-935.2	-299.7	370.3	331.8	38.56	9.605	
7,200.0	6,781.5	7,282.3	6,823.2	21.3	24.0	-96.64		-935.2	-404.2	370.4	328.4	42.05	8.810	
7,300.0	6,783.7	7,386.2	6,825.8	23.3	25.4	-96.68		-935.2	-508.1	370.5	324.5	45.92	8.067	
7,400.0	6,782.9	7,486.2	6,825.1	25.4	27.2	-96.71		-935.2	-608.1	370.5	320.4	50.10	7.395	
7,500.0	6,782.0	7,586.2	6,824.5	27.7	29.2	-96.74		-935.2	-708.1	370.5	316.0	54.52	6.795	
7,600.0	6,781.1	7,686.2	6,823.8	30.0	31.4	-96.78		-935.2	-808.1	370.5	311.4	59.14	6.265	
7,700.0	6,780.2	7,786.2	6,823.2	32.4	33.7	-96.81		-935.2	-908.1	370.6	306.7	63.92	5.798	
7,800.0	6,779.3	7,886.2	6,822.5	34.9	36.1	-96.85		-935.2	-1,008.1	370.6	301.8	68.81	5.386	
7,900.0	6,778.4	7,986.2	6,821.8	37.4	38.5	-96.88		-935.2	-1,108.1	370.6	296.8	73.80	5.022	
8,000.0	6,777.5	8,086.2	6,821.2	40.0	41.0	-96.92		-935.2	-1,208.1	370.6	291.8	78.87	4.700	
8,100.0	6,776.6	8,186.2	6,820.5	42.5	43.5	-96.95		-935.2	-1,308.1	370.7	286.7	84.00	4.413	
8,200.0	6,775.7	8,286.2	6,819.8	45.2	46.1	-96.99		-935.2	-1,408.1	370.7	281.5	89.18	4.157	
8,300.0	6,774.8	8,386.2	6,819.2	47.8	48.7	-97.02		-935.2	-1,508.0	370.7	276.3	94.41	3.927	
8,400.0	6,774.0	8,486.2	6,818.5	50.4	51.3	-97.06		-935.2	-1,608.0	370.8	271.1	99.68	3.720	
8,500.0	6,773.1	8,586.2	6,817.8	53.1	53.9	-97.09		-935.2	-1,708.0	370.8	265.8	104.97	3.532	
8,600.0	6,772.2	8,686.2	6,817.2	55.8	56.6	-97.13		-935.2	-1,808.0	370.8	260.5	110.30	3.362	
8,700.0	6,771.3	8,786.2	6,816.5	58.5	59.2	-97.16		-935.2	-1,908.0	370.8	255.2	115.64	3.207	
8,800.0	6,770.4	8,886.2	6,815.9	61.2	61.9	-97.20		-935.2	-2,008.0	370.9	249.9	121.00	3.065	
8,900.0	6,769.5	8,986.2	6,815.2	63.9	64.6	-97.23		-935.2	-2,108.0	370.9	244.5	126.39	2.935	
9,000.0	6,768.6	9,086.2	6,814.5	66.6	67.3	-97.27		-935.2	-2,208.0	370.9	239.1	131.78	2.815	
9,100.0	6,767.7	9,186.2	6,813.9	69.3	70.0	-97.30		-935.2	-2,308.0	371.0	233.8	137.19	2.704	
9,200.0	6,766.8	9,286.2	6,813.2	72.1	72.7	-97.34		-935.2	-2,408.0	371.0	228.4	142.61	2.601	
9,300.0	6,765.9	9,386.2	6,812.5	74.8	75.4	-97.37		-935.2	-2,508.0	371.0	223.0	148.04	2.506	
9,400.0	6,765.1	9,486.2	6,811.9	77.5	78.2	-97.41		-935.2	-2,608.0	371.0	217.6	153.48	2.418	
9,500.0	6,764.2	9,586.2	6,811.2	80.3	80.9	-97.44		-935.2	-2,708.0	371.1	212.1	158.93	2.335	
9,600.0	6,763.3	9,686.2	6,810.6	83.0	83.6	-97.48		-935.2	-2,808.0	371.1	206.7	164.38	2.258	
9,700.0	6,762.4	9,786.2	6,809.9	85.8	86.4	-97.51		-935.2	-2,908.0	371.1	201.3	169.84	2.185	
9,800.0	6,761.5	9,886.2	6,809.2	88.6	89.1	-97.54		-935.2	-3,008.0	371.2	195.9	175.31	2.117	
9,900.0	6,760.6	9,986.2	6,808.6	91.3	91.9	-97.58		-935.2	-3,108.0	371.2	190.4	180.78	2.053	
10,000.0	6,759.7	10,086.2	6,807.9	94.1	94.6	-97.61		-935.2	-3,208.0	371.2	185.0	186.26	1.993	

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

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Project:</b>	SEC.1-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Reference Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (9-4-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design LDS 5N65W1U Pad Sec.1-T5N-R65W - LDS 1V-304 - Wellbore #1 - Plan #1 (9-4-14)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
10,100.0	6,758.8	10,186.2	6,807.2	96.9	97.4	-97.65	-935.2	-3,308.0	371.3	179.5	191.74	1.936		
10,200.0	6,757.9	10,286.2	6,806.6	99.6	100.2	-97.68	-935.2	-3,408.0	371.3	174.1	197.22	1.883		
10,300.0	6,757.0	10,386.2	6,805.9	102.4	102.9	-97.72	-935.2	-3,508.0	371.3	168.6	202.71	1.832		
10,400.0	6,756.2	10,486.2	6,805.2	105.2	105.7	-97.75	-935.2	-3,608.0	371.3	163.1	208.19	1.784		
10,500.0	6,755.3	10,586.2	6,804.6	107.9	108.5	-97.79	-935.2	-3,708.0	371.4	157.7	213.69	1.738		
10,600.0	6,754.4	10,686.2	6,803.9	110.7	111.2	-97.82	-935.2	-3,808.0	371.4	152.2	219.18	1.695		
10,700.0	6,753.5	10,786.2	6,803.3	113.5	114.0	-97.86	-935.2	-3,908.0	371.4	146.8	224.68	1.653		
10,800.0	6,752.6	10,886.2	6,802.6	116.3	116.8	-97.89	-935.2	-4,008.0	371.5	141.3	230.17	1.614		
10,900.0	6,751.7	10,986.2	6,801.9	119.1	119.5	-97.93	-935.2	-4,108.0	371.5	135.8	235.67	1.576		
11,000.0	6,750.8	11,086.2	6,801.3	121.8	122.3	-97.96	-935.2	-4,208.0	371.5	130.4	241.17	1.541		
11,100.0	6,749.9	11,186.2	6,800.6	124.6	125.1	-98.00	-935.2	-4,308.0	371.6	124.9	246.68	1.506		
11,200.0	6,749.0	11,286.2	6,799.9	127.4	127.9	-98.03	-935.2	-4,408.0	371.6	119.4	252.18	1.474	Level 3	
11,300.0	6,748.1	11,386.2	6,799.3	130.2	130.7	-98.06	-935.2	-4,508.0	371.6	113.9	257.68	1.442	Level 3	
11,400.0	6,747.3	11,486.2	6,798.6	133.0	133.4	-98.10	-935.2	-4,608.0	371.7	108.5	263.19	1.412	Level 3	
11,500.0	6,746.4	11,586.2	6,798.0	135.8	136.2	-98.13	-935.2	-4,708.0	371.7	103.0	268.70	1.383	Level 3	
11,600.0	6,745.5	11,686.2	6,797.3	138.6	139.0	-98.17	-935.2	-4,808.0	371.7	97.5	274.20	1.356	Level 3	
11,700.0	6,744.6	11,786.2	6,796.6	141.4	141.8	-98.20	-935.2	-4,908.0	371.8	92.0	279.71	1.329	Level 3	
11,800.0	6,743.7	11,886.2	6,796.0	144.1	144.6	-98.24	-935.2	-5,008.0	371.8	86.6	285.22	1.304	Level 3	
11,900.0	6,742.8	11,986.2	6,795.3	146.9	147.4	-98.27	-935.2	-5,108.0	371.8	81.1	290.72	1.279	Level 3	
12,000.0	6,741.9	12,086.2	6,794.6	149.7	150.2	-98.31	-935.2	-5,208.0	371.9	75.6	296.23	1.255	Level 3	
12,100.0	6,741.0	12,186.2	6,794.0	152.5	152.9	-98.34	-935.2	-5,308.0	371.9	70.1	301.74	1.232	Level 2	
12,200.0	6,740.1	12,286.2	6,793.3	155.3	155.7	-98.38	-935.2	-5,408.0	371.9	64.7	307.25	1.210	Level 2	
12,300.0	6,739.2	12,386.2	6,792.6	158.1	158.5	-98.41	-935.2	-5,507.9	372.0	59.2	312.76	1.189	Level 2	
12,400.0	6,738.3	12,486.2	6,792.0	160.9	161.3	-98.45	-935.2	-5,607.9	372.0	53.7	318.27	1.169	Level 2	
12,500.0	6,737.5	12,586.2	6,791.3	163.7	164.1	-98.48	-935.2	-5,707.9	372.0	48.2	323.78	1.149	Level 2	
12,600.0	6,736.6	12,686.2	6,790.7	166.5	166.9	-98.51	-935.2	-5,807.9	372.1	42.8	329.28	1.130	Level 2	
12,700.0	6,735.7	12,786.2	6,790.0	169.3	169.7	-98.55	-935.2	-5,907.9	372.1	37.3	334.79	1.111	Level 2	
12,800.0	6,734.8	12,886.2	6,789.3	172.1	172.5	-98.58	-935.2	-6,007.9	372.1	31.8	340.30	1.094	Level 2	
12,900.0	6,733.9	12,986.2	6,788.7	174.9	175.3	-98.62	-935.2	-6,107.9	372.2	26.3	345.81	1.076	Level 2	
13,000.0	6,733.0	13,086.2	6,788.0	177.7	178.1	-98.65	-935.2	-6,207.9	372.2	20.9	351.32	1.059	Level 2	
13,100.0	6,732.1	13,186.2	6,787.3	180.5	180.9	-98.69	-935.2	-6,307.9	372.2	15.4	356.82	1.043	Level 2	
13,200.0	6,731.2	13,286.2	6,786.7	183.3	183.7	-98.72	-935.2	-6,407.9	372.3	9.9	362.33	1.027	Level 2	
13,300.0	6,730.3	13,386.2	6,786.0	186.1	186.4	-98.76	-935.2	-6,507.9	372.3	4.5	367.84	1.012	Level 2	
13,400.0	6,729.4	13,486.2	6,785.3	188.9	189.2	-98.79	-935.2	-6,607.9	372.3	-1.0	373.34	0.997	Level 1	
13,500.0	6,728.6	13,586.2	6,784.7	191.7	192.0	-98.83	-935.2	-6,707.9	372.4	-6.5	378.85	0.983	Level 1	
13,600.0	6,727.7	13,686.2	6,784.0	194.5	194.8	-98.86	-935.2	-6,807.9	372.4	-12.0	384.35	0.969	Level 1	
13,700.0	6,726.8	13,786.2	6,783.4	197.3	197.6	-98.89	-935.2	-6,907.9	372.4	-17.4	389.86	0.955	Level 1	
13,800.0	6,725.9	13,886.2	6,782.7	200.1	200.4	-98.93	-935.2	-7,007.9	372.5	-22.9	395.36	0.942	Level 1	
13,899.8	6,725.0	13,986.0	6,782.0	202.9	203.2	-98.96	-935.2	-7,107.7	372.5	-28.4	400.85	0.929	Level 1, ES, SF	

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Project:</b>	SEC.1-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Reference Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (9-4-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design LDS 5N65W1U Pad Sec.1-T5N-R65W - LDS 1V-314 - Wellbore #1 - Plan #1 (9-4-14)													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 (ft)	Offset (ft)	Semi Major Axis (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-43.69		43.7	-41.8	60.5				
100.0	100.0	100.0	100.0	0.1	0.1	-43.69		43.7	-41.8	60.5	60.2	0.22	268.973	
200.0	200.0	200.0	200.0	0.3	0.3	-43.69		43.7	-41.8	60.5	59.8	0.67	89.658	
300.0	300.0	300.0	300.0	0.6	0.6	-43.69		43.7	-41.8	60.5	59.3	1.12	53.795	
400.0	400.0	400.0	400.0	0.8	0.8	-43.69		43.7	-41.8	60.5	58.9	1.57	38.425 CC	
500.0	500.0	500.0	500.0	1.0	1.0	164.16		43.7	-41.8	62.1	60.1	2.00	31.052	
600.0	599.8	599.8	599.8	1.2	1.2	165.35		43.7	-41.8	67.2	64.8	2.42	27.774	
700.0	699.5	699.5	699.5	1.4	1.5	166.98		43.7	-41.8	75.6	72.8	2.85	26.555	
800.0	798.7	798.7	798.7	1.7	1.7	168.73		43.7	-41.8	87.5	84.2	3.29	26.644	
900.0	897.8	897.8	897.8	2.0	1.9	170.23		43.7	-41.8	100.7	97.0	3.73	27.045	
1,000.0	996.9	996.9	996.9	2.3	2.1	171.37		43.7	-41.8	114.0	109.8	4.17	27.336	
1,100.0	1,096.0	1,096.0	1,096.0	2.6	2.4	172.28		43.7	-41.8	127.3	122.7	4.62	27.555	
1,200.0	1,195.1	1,195.1	1,195.1	2.9	2.6	173.01		43.7	-41.8	140.6	135.6	5.07	27.725	
1,300.0	1,294.2	1,294.2	1,294.2	3.2	2.8	173.62		43.7	-41.8	154.0	148.5	5.53	27.860	
1,400.0	1,393.3	1,393.3	1,393.3	3.6	3.0	174.13		43.7	-41.8	167.3	161.4	5.98	27.969	
1,500.0	1,492.4	1,492.4	1,492.4	3.9	3.2	174.57		43.7	-41.8	180.7	174.3	6.44	28.058	
1,600.0	1,591.5	1,591.5	1,591.5	4.2	3.5	174.94		43.7	-41.8	194.1	187.2	6.90	28.133	
1,700.0	1,690.5	1,690.5	1,690.5	4.6	3.7	175.38		42.5	-40.6	206.0	198.6	7.35	28.034	
1,800.0	1,789.6	1,789.6	1,789.6	4.9	3.9	175.96		38.3	-36.8	214.2	206.4	7.77	27.555	
1,900.0	1,888.7	1,888.7	1,888.7	5.2	4.1	176.72		31.1	-30.2	218.8	210.6	8.21	26.650	
2,000.0	1,987.8	1,987.8	1,987.8	5.6	4.3	177.59		21.9	-21.8	220.3	211.7	8.65	25.480	
2,100.0	2,086.9	2,086.9	2,086.9	5.9	4.5	178.45		12.6	-13.3	221.6	212.5	9.08	24.390	
2,200.0	2,186.0	2,186.0	2,186.0	6.3	4.8	179.30		3.4	-4.8	222.8	213.3	9.53	23.390	
2,300.0	2,285.1	2,285.1	2,285.1	6.6	5.0	-179.87		-5.8	3.6	224.2	214.2	9.98	22.471	
2,400.0	2,384.2	2,384.2	2,384.2	7.0	5.3	-179.04		-15.1	12.1	225.5	215.1	10.43	21.626	
2,500.0	2,483.3	2,483.3	2,483.3	7.3	5.5	-178.23		-24.3	20.5	227.0	216.1	10.89	20.844	
2,600.0	2,582.4	2,582.4	2,582.4	7.6	5.8	-177.42		-33.5	29.0	228.4	217.1	11.35	20.122	
2,700.0	2,681.5	2,681.5	2,681.5	8.0	6.1	-176.63		-42.8	37.4	229.9	218.1	11.82	19.452	
2,800.0	2,780.6	2,780.6	2,780.6	8.3	6.4	-175.84		-52.0	45.9	231.5	219.2	12.29	18.829	
2,900.0	2,879.7	2,879.7	2,879.7	8.7	6.7	-175.07		-61.2	54.3	233.1	220.3	12.77	18.250	
3,000.0	2,978.8	2,978.8	2,978.8	9.0	7.0	-174.30		-70.5	62.8	234.7	221.5	13.25	17.709	
3,100.0	3,077.9	3,077.9	3,077.9	9.4	7.3	-173.55		-79.7	71.2	236.4	222.7	13.74	17.204	
3,200.0	3,177.0	3,177.0	3,177.0	9.7	7.6	-172.81		-89.0	79.7	238.1	223.9	14.23	16.730	
3,300.0	3,276.0	3,276.0	3,276.0	10.0	7.9	-172.08		-98.2	88.1	239.9	225.1	14.73	16.287	
3,400.0	3,375.1	3,375.1	3,375.1	10.4	8.2	-171.36		-107.4	96.6	241.7	226.4	15.23	15.870	
3,500.0	3,474.2	3,474.2	3,474.2	10.7	8.5	-170.65		-116.7	105.1	243.5	227.8	15.73	15.478	
3,600.0	3,573.3	3,573.3	3,573.3	11.1	8.8	-169.95		-125.9	113.5	245.4	229.1	16.24	15.108	
3,700.0	3,672.4	3,672.4	3,672.4	11.4	9.1	-169.26		-135.1	122.0	247.3	230.5	16.75	14.759	
3,800.0	3,771.5	3,771.5	3,771.5	11.8	9.4	-168.58		-144.4	130.4	249.2	232.0	17.27	14.430	
3,900.0	3,870.6	3,870.6	3,870.6	12.1	9.7	-167.91		-153.6	138.9	251.2	233.4	17.79	14.118	
4,000.0	3,969.7	3,969.7	3,969.7	12.5	10.0	-167.26		-162.8	147.3	253.2	234.9	18.32	13.823	
4,100.0	4,068.8	4,068.8	4,068.8	12.8	10.3	-166.61		-172.1	155.8	255.3	236.4	18.85	13.543	
4,200.0	4,167.9	4,167.9	4,167.9	13.2	10.7	-165.97		-181.3	164.2	257.3	238.0	19.38	13.278	
4,300.0	4,267.0	4,267.0	4,267.0	13.5	11.0	-165.35		-190.5	172.7	259.4	239.5	19.92	13.025	
4,400.0	4,366.1	4,366.1	4,366.1	13.8	11.3	-164.73		-199.8	181.1	261.6	241.1	20.46	12.785	
4,500.0	4,465.2	4,465.2	4,465.2	14.2	11.6	-164.13		-209.0	189.6	263.7	242.7	21.00	12.557	
4,600.0	4,564.3	4,564.3	4,564.3	14.5	11.9	-163.53		-218.2	198.0	265.9	244.4	21.55	12.339	
4,700.0	4,663.4	4,663.4	4,663.4	14.9	12.3	-162.95		-227.5	206.5	268.2	246.1	22.10	12.132	
4,800.0	4,762.4	4,762.4	4,762.4	15.2	12.6	-162.37		-236.7	214.9	270.4	247.8	22.66	11.934	
4,900.0	4,861.5	4,861.5	4,861.5	15.6	12.9	-161.80		-245.9	223.4	272.7	249.5	23.22	11.744	
5,000.0	4,960.6	4,960.6	4,960.6	15.9	13.2	-161.25		-255.2	231.9	275.0	251.2	23.78	11.564	

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

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Project:</b>	SEC.1-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Reference Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (9-4-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design LDS 5N65W1U Pad Sec.1-T5N-R65W - LDS 1V-314 - Wellbore #1 - Plan #1 (9-4-14)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.0	5,059.7	5,114.2	5,088.4	16.3	13.5	-160.70	-264.4	240.3	277.3	253.0	24.35	11.391		
5,200.0	5,158.9	5,214.2	5,187.6	16.6	13.9	-160.14	-273.6	248.8	279.4	254.5	24.91	11.213		
5,300.0	5,258.3	5,314.1	5,286.7	16.8	14.2	-159.37	-282.9	257.2	278.7	253.2	25.45	10.949		
5,400.0	5,358.1	5,413.9	5,385.7	17.0	14.5	-158.31	-292.1	265.7	274.8	248.8	25.99	10.572		
5,500.0	5,458.1	5,513.4	5,484.5	17.1	14.8	-156.91	-301.3	274.1	267.8	241.2	26.54	10.089		
5,600.0	5,558.1	5,609.9	5,580.3	17.3	15.1	-2.68	-310.0	282.1	258.5	227.8	30.69	8.422		
5,700.0	5,658.1	5,703.2	5,673.1	17.4	15.3	-1.38	-316.6	288.1	251.2	220.3	30.89	8.133		
5,800.0	5,758.1	5,796.9	5,766.6	17.5	15.5	-0.48	-320.9	292.0	246.5	215.4	31.11	7.924		
5,900.0	5,858.1	5,890.9	5,860.5	17.6	15.7	-0.03	-323.0	294.0	244.3	212.9	31.37	7.789		
5,957.4	5,915.5	5,945.8	5,915.5	17.7	15.8	0.01	-323.2	294.1	244.1	212.5	31.53	7.740		
6,000.0	5,958.1	5,988.4	5,958.1	17.8	15.8	0.01	-323.2	294.1	244.1	212.4	31.67	7.707		
6,052.9	6,010.9	6,041.3	6,010.9	17.8	15.9	90.17	-323.2	294.1	244.1	215.1	29.02	8.411		
6,100.0	6,058.0	6,088.4	6,058.0	17.9	16.0	90.23	-323.2	294.1	244.1	214.9	29.18	8.363		
6,200.0	6,157.3	6,188.4	6,158.1	18.0	16.2	92.45	-323.2	292.2	244.3	214.6	29.70	8.226		
6,300.0	6,254.2	6,290.0	6,258.5	18.0	16.2	94.95	-323.2	278.2	245.0	214.9	30.08	8.145		
6,400.0	6,347.1	6,393.0	6,357.7	18.0	16.3	97.36	-323.2	250.5	246.1	215.8	30.30	8.124		
6,500.0	6,434.5	6,497.5	6,453.6	18.0	16.2	99.64	-323.2	209.0	247.6	217.2	30.39	8.147		
6,600.0	6,514.7	6,603.5	6,544.1	18.0	16.2	101.75	-323.2	154.0	249.3	218.9	30.47	8.183		
6,700.0	6,586.5	6,711.0	6,627.2	17.9	16.2	103.62	-323.2	86.0	251.2	220.5	30.71	8.179		
6,800.0	6,648.5	6,819.7	6,700.7	17.9	16.2	105.25	-323.2	6.1	253.0	221.7	31.32	8.078		
6,900.0	6,699.9	6,929.5	6,762.7	17.9	16.4	106.59	-323.2	-84.5	254.7	222.2	32.53	7.830		
7,000.0	6,739.5	7,040.3	6,811.5	18.2	17.3	107.62	-323.2	-183.9	256.1	221.6	34.48	7.428		
7,100.0	6,766.9	7,151.9	6,845.6	19.6	18.9	108.33	-323.2	-290.0	257.1	219.9	37.23	6.908		
7,200.0	6,781.5	7,263.9	6,863.9	21.3	20.8	108.71	-323.2	-400.3	257.7	217.0	40.70	6.332		
7,300.0	6,783.7	7,372.3	6,866.6	23.3	23.0	108.76	-323.2	-508.7	257.8	213.2	44.62	5.777		
7,400.0	6,782.9	7,472.3	6,865.5	25.4	25.1	108.71	-323.2	-608.7	257.7	209.1	48.63	5.300		
7,500.0	6,782.0	7,572.3	6,864.4	27.7	27.3	108.67	-323.2	-708.7	257.6	204.8	52.87	4.873		
7,600.0	6,781.1	7,672.3	6,863.3	30.0	29.6	108.62	-323.2	-808.7	257.6	200.3	57.30	4.495		
7,700.0	6,780.2	7,772.3	6,862.2	32.4	32.0	108.57	-323.2	-908.7	257.5	195.6	61.87	4.161		
7,800.0	6,779.3	7,872.3	6,861.1	34.9	34.5	108.52	-323.2	-1,008.7	257.4	190.8	66.57	3.867		
7,900.0	6,778.4	7,972.3	6,859.9	37.4	37.0	108.47	-323.2	-1,108.7	257.3	186.0	71.36	3.606		
8,000.0	6,777.5	8,072.3	6,858.8	40.0	39.6	108.43	-323.2	-1,208.7	257.3	181.0	76.23	3.375		
8,100.0	6,776.6	8,172.3	6,857.7	42.5	42.2	108.38	-323.2	-1,308.7	257.2	176.0	81.17	3.169		
8,200.0	6,775.7	8,272.3	6,856.6	45.2	44.8	108.33	-323.2	-1,408.7	257.1	171.0	86.16	2.984		
8,300.0	6,774.8	8,372.3	6,855.5	47.8	47.4	108.28	-323.2	-1,508.6	257.1	165.9	91.19	2.819		
8,400.0	6,774.0	8,472.3	6,854.4	50.4	50.1	108.23	-323.2	-1,608.6	257.0	160.7	96.26	2.670		
8,500.0	6,773.1	8,572.3	6,853.2	53.1	52.7	108.19	-323.2	-1,708.6	256.9	155.5	101.37	2.534		
8,600.0	6,772.2	8,672.3	6,852.1	55.8	55.4	108.14	-323.2	-1,808.6	256.8	150.3	106.51	2.411		
8,700.0	6,771.3	8,772.3	6,851.0	58.5	58.1	108.09	-323.2	-1,908.6	256.8	145.1	111.67	2.299		
8,800.0	6,770.4	8,872.3	6,849.9	61.2	60.8	108.04	-323.2	-2,008.6	256.7	139.8	116.85	2.197		
8,900.0	6,769.5	8,972.3	6,848.8	63.9	63.5	107.99	-323.2	-2,108.6	256.6	134.6	122.06	2.103		
9,000.0	6,768.6	9,072.3	6,847.7	66.6	66.2	107.95	-323.2	-2,208.6	256.6	129.3	127.28	2.016		
9,100.0	6,767.7	9,172.3	6,846.5	69.3	69.0	107.90	-323.2	-2,308.6	256.5	124.0	132.52	1.936		
9,200.0	6,766.8	9,272.3	6,845.4	72.1	71.7	107.85	-323.2	-2,408.6	256.4	118.7	137.77	1.861		
9,300.0	6,765.9	9,372.3	6,844.3	74.8	74.5	107.80	-323.2	-2,508.6	256.3	113.3	143.03	1.792		
9,400.0	6,765.1	9,472.3	6,843.2	77.5	77.2	107.75	-323.2	-2,608.6	256.3	108.0	148.31	1.728		
9,500.0	6,764.2	9,572.3	6,842.1	80.3	79.9	107.70	-323.2	-2,708.6	256.2	102.6	153.60	1.668		
9,600.0	6,763.3	9,672.3	6,841.0	83.0	82.7	107.66	-323.2	-2,808.6	256.1	97.2	158.90	1.612		
9,700.0	6,762.4	9,772.3	6,839.8	85.8	85.5	107.61	-323.2	-2,908.6	256.1	91.9	164.21	1.559		
9,800.0	6,761.5	9,872.3	6,838.7	88.6	88.2	107.56	-323.2	-3,008.6	256.0	86.5	169.52	1.510		
9,900.0	6,760.6	9,972.3	6,837.6	91.3	91.0	107.51	-323.2	-3,108.5	255.9	81.1	174.85	1.464	Level 3	

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



<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Project:</b>	SEC.1-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Reference Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (9-4-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design LDS 5N65W1U Pad Sec.1-T5N-R65W - LDS 1V-314 - Wellbore #1 - Plan #1 (9-4-14)													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)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,000.0	6,759.7	10,072.3	6,836.5	94.1	93.7	107.46		-323.2	-3,208.5	255.9	75.7	180.18	1.420	Level 3
10,100.0	6,758.8	10,172.3	6,835.4	96.9	96.5	107.41		-323.2	-3,308.5	255.8	70.3	185.52	1.379	Level 3
10,200.0	6,757.9	10,272.3	6,834.3	99.6	99.3	107.37		-323.2	-3,408.5	255.7	64.9	190.87	1.340	Level 3
10,300.0	6,757.0	10,372.3	6,833.1	102.4	102.1	107.32		-323.2	-3,508.5	255.7	59.4	196.23	1.303	Level 3
10,400.0	6,756.2	10,472.3	6,832.0	105.2	104.8	107.27		-323.2	-3,608.5	255.6	54.0	201.59	1.268	Level 3
10,500.0	6,755.3	10,572.3	6,830.9	107.9	107.6	107.22		-323.2	-3,708.5	255.5	48.6	206.95	1.235	Level 2
10,600.0	6,754.4	10,672.3	6,829.8	110.7	110.4	107.17		-323.2	-3,808.5	255.5	43.1	212.32	1.203	Level 2
10,700.0	6,753.5	10,772.3	6,828.7	113.5	113.2	107.12		-323.2	-3,908.5	255.4	37.7	217.70	1.173	Level 2
10,800.0	6,752.6	10,872.3	6,827.6	116.3	116.0	107.07		-323.2	-4,008.5	255.3	32.2	223.08	1.145	Level 2
10,900.0	6,751.7	10,972.3	6,826.4	119.1	118.7	107.03		-323.2	-4,108.5	255.3	26.8	228.47	1.117	Level 2
11,000.0	6,750.8	11,072.3	6,825.3	121.8	121.5	106.98		-323.2	-4,208.5	255.2	21.3	233.86	1.091	Level 2
11,100.0	6,749.9	11,172.3	6,824.2	124.6	124.3	106.93		-323.2	-4,308.5	255.1	15.9	239.26	1.066	Level 2
11,200.0	6,749.0	11,272.3	6,823.1	127.4	127.1	106.88		-323.2	-4,408.5	255.1	10.4	244.66	1.043	Level 2
11,300.0	6,748.1	11,372.3	6,822.0	130.2	129.9	106.83		-323.2	-4,508.5	255.0	4.9	250.07	1.020	Level 2
11,400.0	6,747.3	11,472.3	6,820.9	133.0	132.7	106.78		-323.2	-4,608.4	254.9	-0.5	255.48	0.998	Level 1
11,500.0	6,746.4	11,572.3	6,819.7	135.8	135.5	106.73		-323.2	-4,708.4	254.9	-6.0	260.89	0.977	Level 1
11,600.0	6,745.5	11,672.3	6,818.6	138.6	138.2	106.68		-323.2	-4,808.4	254.8	-11.5	266.31	0.957	Level 1
11,700.0	6,744.6	11,772.3	6,817.5	141.4	141.0	106.63		-323.2	-4,908.4	254.7	-17.0	271.73	0.937	Level 1
11,800.0	6,743.7	11,872.3	6,816.4	144.1	143.8	106.59		-323.2	-5,008.4	254.7	-22.5	277.16	0.919	Level 1
11,900.0	6,742.8	11,972.3	6,815.3	146.9	146.6	106.54		-323.2	-5,108.4	254.6	-28.0	282.59	0.901	Level 1
12,000.0	6,741.9	12,072.3	6,814.1	149.7	149.4	106.49		-323.2	-5,208.4	254.5	-33.5	288.02	0.884	Level 1
12,100.0	6,741.0	12,172.3	6,813.0	152.5	152.2	106.44		-323.2	-5,308.4	254.5	-39.0	293.46	0.867	Level 1
12,200.0	6,740.1	12,272.3	6,811.9	155.3	155.0	106.39		-323.2	-5,408.4	254.4	-44.5	298.90	0.851	Level 1
12,300.0	6,739.2	12,372.3	6,810.8	158.1	157.8	106.34		-323.2	-5,508.4	254.4	-50.0	304.34	0.836	Level 1
12,400.0	6,738.3	12,472.3	6,809.7	160.9	160.6	106.29		-323.2	-5,608.4	254.3	-55.5	309.79	0.821	Level 1
12,500.0	6,737.5	12,572.3	6,808.6	163.7	163.4	106.24		-323.2	-5,708.4	254.2	-61.0	315.24	0.806	Level 1
12,600.0	6,736.6	12,672.3	6,807.4	166.5	166.2	106.19		-323.2	-5,808.4	254.2	-66.5	320.70	0.793	Level 1
12,700.0	6,735.7	12,772.3	6,806.3	169.3	169.0	106.14		-323.2	-5,908.4	254.1	-72.1	326.15	0.779	Level 1
12,800.0	6,734.8	12,872.3	6,805.2	172.1	171.8	106.10		-323.2	-6,008.4	254.0	-77.6	331.61	0.766	Level 1
12,900.0	6,733.9	12,972.3	6,804.1	174.9	174.6	106.05		-323.2	-6,108.3	254.0	-83.1	337.08	0.753	Level 1
13,000.0	6,733.0	13,072.3	6,803.0	177.7	177.4	106.00		-323.2	-6,208.3	253.9	-88.6	342.54	0.741	Level 1
13,100.0	6,732.1	13,172.3	6,801.9	180.5	180.2	105.95		-323.2	-6,308.3	253.8	-94.2	348.01	0.729	Level 1
13,200.0	6,731.2	13,272.3	6,800.7	183.3	183.0	105.90		-323.2	-6,408.3	253.8	-99.7	353.48	0.718	Level 1
13,300.0	6,730.3	13,372.3	6,799.6	186.1	185.8	105.85		-323.2	-6,508.3	253.7	-105.2	358.96	0.707	Level 1
13,400.0	6,729.4	13,472.3	6,798.5	188.9	188.6	105.80		-323.2	-6,608.3	253.7	-110.8	364.44	0.696	Level 1
13,500.0	6,728.6	13,572.3	6,797.4	191.7	191.4	105.75		-323.2	-6,708.3	253.6	-116.3	369.92	0.686	Level 1
13,600.0	6,727.7	13,672.3	6,796.3	194.5	194.2	105.70		-323.2	-6,808.3	253.5	-121.9	375.40	0.675	Level 1
13,700.0	6,726.8	13,772.3	6,795.2	197.3	197.0	105.65		-323.2	-6,908.3	253.5	-127.4	380.89	0.665	Level 1
13,800.0	6,725.9	13,872.3	6,794.0	200.1	199.8	105.60		-323.2	-7,008.3	253.4	-133.0	386.38	0.656	Level 1
13,870.5	6,725.3	13,942.9	6,793.3	202.0	201.7	105.57		-323.2	-7,078.8	253.4	-136.9	390.25	0.649	Level 1
13,899.8	6,725.0	13,965.7	6,793.0	202.9	202.4	105.56		-323.2	-7,101.6	253.4	-138.2	391.68	0.647	Level 1, ES, SF

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Project:</b>	SEC.1-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Reference Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (9-4-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design LDS 5N65W1U Pad Sec.1-T5N-R65W - LDS 1V-414 - Wellbore #1 - Plan #1 (9-4-14)													Offset Site Error:	0.0 ft
Survey Program: 0-MWDD													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
0.0	0.0	0.0	0.0	0.0	0.0	-45.53		21.9	-22.3	31.2				
100.0	100.0	100.0	100.0	0.1	0.1	-45.53		21.9	-22.3	31.2	31.0	0.22	138.836	
200.0	200.0	200.0	200.0	0.3	0.3	-45.53		21.9	-22.3	31.2	30.5	0.67	46.279	
300.0	300.0	300.0	300.0	0.6	0.6	-45.53		21.9	-22.3	31.2	30.1	1.12	27.767	
400.0	400.0	400.0	400.0	0.8	0.8	-45.53		21.9	-22.3	31.2	29.6	1.57	19.834 CC	
500.0	500.0	500.0	500.0	1.0	1.0	162.81		21.9	-22.3	32.9	30.9	2.00	16.427	
600.0	599.8	599.8	599.8	1.2	1.2	165.12		21.9	-22.3	37.9	35.5	2.42	15.668	
700.0	699.5	699.5	699.5	1.4	1.5	167.85		21.9	-22.3	46.4	43.5	2.85	16.280	
800.0	798.7	798.7	798.7	1.7	1.7	170.33		21.9	-22.3	58.3	55.0	3.28	17.754	
900.0	897.8	897.8	897.8	2.0	1.9	172.13		21.9	-22.3	71.6	67.9	3.72	19.227	
1,000.0	996.9	996.9	996.9	2.3	2.1	173.37		21.9	-22.3	84.9	80.8	4.17	20.373	
1,100.0	1,096.0	1,099.4	1,099.3	2.6	2.3	174.32		20.4	-21.3	96.6	92.0	4.60	21.026	
1,200.0	1,195.1	1,202.7	1,202.5	2.9	2.5	175.11		15.9	-18.3	104.8	99.8	5.01	20.929	
1,300.0	1,294.2	1,306.4	1,305.8	3.2	2.7	175.86		8.3	-13.2	109.3	103.9	5.43	20.129	
1,400.0	1,393.3	1,408.3	1,407.0	3.6	3.0	176.62		-1.9	-6.4	110.7	104.9	5.86	18.882	
1,500.0	1,492.4	1,508.3	1,506.2	3.9	3.2	177.36		-12.2	0.5	111.8	105.5	6.30	17.729	
1,600.0	1,591.5	1,608.3	1,605.4	4.2	3.5	178.08		-22.6	7.5	112.8	106.0	6.75	16.713	
1,700.0	1,690.5	1,708.3	1,704.6	4.6	3.7	178.80		-32.9	14.4	113.8	106.6	7.20	15.813	
1,800.0	1,789.6	1,808.3	1,803.8	4.9	4.0	179.50		-43.2	21.3	114.9	107.3	7.66	15.011	
1,900.0	1,888.7	1,908.3	1,903.1	5.2	4.3	-179.81		-53.5	28.2	116.0	107.9	8.11	14.296	
2,000.0	1,987.8	2,008.2	2,002.3	5.6	4.6	-179.14		-63.9	35.1	117.1	108.5	8.58	13.652	
2,100.0	2,086.9	2,108.2	2,101.5	5.9	4.9	-178.48		-74.2	42.0	118.2	109.2	9.04	13.072	
2,200.0	2,186.0	2,208.2	2,200.7	6.3	5.2	-177.83		-84.5	48.9	119.4	109.8	9.51	12.545	
2,300.0	2,285.1	2,308.2	2,299.9	6.6	5.5	-177.19		-94.9	55.8	120.5	110.5	9.99	12.067	
2,400.0	2,384.2	2,408.2	2,399.1	7.0	5.8	-176.57		-105.2	62.7	121.7	111.2	10.46	11.629	
2,500.0	2,483.3	2,508.2	2,498.3	7.3	6.1	-175.96		-115.5	69.6	122.9	111.9	10.94	11.229	
2,600.0	2,582.4	2,608.1	2,597.5	7.6	6.4	-175.36		-125.8	76.6	124.0	112.6	11.42	10.860	
2,700.0	2,681.5	2,708.1	2,696.7	8.0	6.7	-174.77		-136.2	83.5	125.3	113.3	11.91	10.520	
2,800.0	2,780.6	2,808.1	2,795.9	8.3	7.0	-174.19		-146.5	90.4	126.5	114.1	12.39	10.206	
2,900.0	2,879.7	2,908.1	2,895.2	8.7	7.4	-173.62		-156.8	97.3	127.7	114.8	12.88	9.915	
3,000.0	2,978.8	3,008.1	2,994.4	9.0	7.7	-173.06		-167.2	104.2	128.9	115.6	13.37	9.644	
3,100.0	3,077.9	3,108.1	3,093.6	9.4	8.0	-172.52		-177.5	111.1	130.2	116.3	13.86	9.391	
3,200.0	3,177.0	3,208.1	3,192.8	9.7	8.3	-171.98		-187.8	118.0	131.5	117.1	14.36	9.155	
3,300.0	3,276.0	3,308.0	3,292.0	10.0	8.6	-171.46		-198.1	124.9	132.7	117.9	14.86	8.934	
3,400.0	3,375.1	3,408.0	3,391.2	10.4	9.0	-170.94		-208.5	131.8	134.0	118.7	15.36	8.727	
3,500.0	3,474.2	3,508.0	3,490.4	10.7	9.3	-170.44		-218.8	138.7	135.3	119.5	15.86	8.533	
3,600.0	3,573.3	3,608.0	3,589.6	11.1	9.6	-169.94		-229.1	145.7	136.6	120.3	16.37	8.349	
3,700.0	3,672.4	3,708.0	3,688.8	11.4	9.9	-169.46		-239.4	152.6	138.0	121.1	16.87	8.177	
3,800.0	3,771.5	3,808.0	3,788.0	11.8	10.3	-168.98		-249.8	159.5	139.3	121.9	17.38	8.014	
3,900.0	3,870.6	3,907.9	3,887.2	12.1	10.6	-168.51		-260.1	166.4	140.6	122.7	17.89	7.860	
4,000.0	3,969.7	4,007.9	3,986.5	12.5	10.9	-168.06		-270.4	173.3	142.0	123.6	18.41	7.714	
4,100.0	4,068.8	4,107.9	4,085.7	12.8	11.2	-167.61		-280.8	180.2	143.3	124.4	18.92	7.575	
4,200.0	4,167.9	4,207.9	4,184.9	13.2	11.6	-167.16		-291.1	187.1	144.7	125.3	19.44	7.444	
4,300.0	4,267.0	4,307.9	4,284.1	13.5	11.9	-166.73		-301.4	194.0	146.1	126.1	19.96	7.319	
4,400.0	4,366.1	4,407.9	4,383.3	13.8	12.2	-166.31		-311.7	200.9	147.5	127.0	20.48	7.200	
4,500.0	4,465.2	4,507.9	4,482.5	14.2	12.5	-165.89		-322.1	207.8	148.9	127.9	21.01	7.087	
4,600.0	4,564.3	4,607.8	4,581.7	14.5	12.9	-165.48		-332.4	214.8	150.3	128.7	21.53	6.979	
4,700.0	4,663.4	4,707.8	4,680.9	14.9	13.2	-165.08		-342.7	221.7	151.7	129.6	22.06	6.876	
4,800.0	4,762.4	4,807.8	4,780.1	15.2	13.5	-164.68		-353.1	228.6	153.1	130.5	22.59	6.777	
4,900.0	4,861.5	4,907.8	4,879.3	15.6	13.9	-164.29		-363.4	235.5	154.5	131.4	23.12	6.683	
5,000.0	4,960.6	5,007.8	4,978.5	15.9	14.2	-163.91		-373.7	242.4	155.9	132.3	23.65	6.593	

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



<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Project:</b>	SEC.1-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Reference Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (9-4-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design LDS 5N65W1U Pad Sec.1-T5N-R65W - LDS 1V-414 - Wellbore #1 - Plan #1 (9-4-14)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.0	5,059.7	5,107.8	5,077.8	16.3	14.5	-163.54	-384.0	249.3	157.4	133.2	24.19	6.506		
5,200.0	5,158.9	5,207.7	5,177.0	16.6	14.8	-163.14	-394.4	256.2	158.5	133.8	24.72	6.411		
5,300.0	5,258.3	5,307.7	5,276.2	16.8	15.2	-162.42	-404.7	263.1	156.8	131.6	25.23	6.215		
5,400.0	5,358.1	5,407.5	5,375.2	17.0	15.5	-161.24	-415.0	270.0	151.8	126.1	25.75	5.895		
5,500.0	5,458.1	5,507.1	5,474.0	17.1	15.8	-159.49	-425.3	276.9	143.7	117.3	26.31	5.460		
5,600.0	5,558.1	5,605.2	5,571.4	17.3	16.1	-4.54	-435.3	283.6	133.1	101.0	32.11	4.144		
5,700.0	5,658.1	5,700.0	5,665.7	17.4	16.3	-2.45	-443.0	288.8	124.6	92.4	32.23	3.866		
5,800.0	5,758.1	5,797.4	5,762.8	17.5	16.5	-0.87	-448.3	292.3	119.1	86.7	32.38	3.679		
5,900.0	5,858.1	5,894.0	5,859.4	17.6	16.7	-0.06	-450.8	294.0	116.5	83.9	32.58	3.576		
5,957.4	5,915.5	5,950.0	5,915.5	17.7	16.8	0.01	-451.0	294.1	116.3	83.5	32.74	3.551		
6,000.0	5,958.1	5,992.6	5,958.1	17.8	16.8	0.01	-451.0	294.1	116.3	83.4	32.87	3.537		
6,053.0	6,011.1	6,045.6	6,011.1	17.8	16.9	90.36	-451.0	294.1	116.3	87.2	29.12	3.993		
6,100.0	6,058.0	6,092.6	6,058.0	17.9	17.0	90.48	-451.0	294.1	116.3	87.0	29.29	3.970		
6,200.0	6,157.3	6,192.7	6,158.1	18.0	17.1	95.13	-451.0	292.2	116.7	86.6	30.13	3.874		
6,300.0	6,254.2	6,294.2	6,258.5	18.0	17.2	100.30	-451.0	278.1	118.2	87.3	30.85	3.831		
6,400.0	6,347.1	6,397.2	6,357.7	18.0	17.2	105.18	-451.0	250.5	120.5	89.3	31.25	3.856		
6,500.0	6,434.5	6,501.8	6,453.6	18.0	17.2	109.63	-451.0	209.0	123.5	92.2	31.32	3.944		
6,600.0	6,514.7	6,607.8	6,544.1	18.0	17.2	113.58	-451.0	154.0	126.9	95.8	31.11	4.080		
6,700.0	6,586.5	6,715.2	6,627.2	17.9	17.1	116.97	-451.0	86.0	130.5	99.7	30.83	4.234		
6,800.0	6,648.5	6,823.9	6,700.7	17.9	17.1	119.78	-451.0	6.1	134.0	103.3	30.71	4.364		
6,900.0	6,699.9	6,933.8	6,762.7	17.9	17.0	122.02	-451.0	-84.5	137.2	106.1	31.06	4.417		
7,000.0	6,739.5	7,044.6	6,811.5	18.2	17.4	123.70	-451.0	-183.8	139.8	107.7	32.13	4.351		
7,100.0	6,766.9	7,156.1	6,845.6	19.6	19.0	124.83	-451.0	-289.9	141.7	107.6	34.07	4.157		
7,200.0	6,781.5	7,268.1	6,863.9	21.3	21.0	125.42	-451.0	-400.3	142.7	105.8	36.91	3.866		
7,300.0	6,783.7	7,375.3	6,867.2	23.3	23.1	125.68	-451.0	-507.4	143.1	102.9	40.27	3.555		
7,400.0	6,782.9	7,475.3	6,867.7	25.4	25.2	126.11	-451.0	-607.4	143.9	100.4	43.55	3.305		
7,500.0	6,782.0	7,575.3	6,868.1	27.7	27.5	126.54	-451.0	-707.4	144.7	97.7	46.98	3.080		
7,600.0	6,781.1	7,675.2	6,868.6	30.0	29.8	126.97	-451.0	-807.4	145.5	95.0	50.54	2.880		
7,700.0	6,780.2	7,775.2	6,869.0	32.4	32.2	127.39	-451.0	-907.4	146.3	92.2	54.18	2.701		
7,800.0	6,779.3	7,875.2	6,869.5	34.9	34.7	127.80	-451.0	-1,007.4	147.2	89.3	57.88	2.542		
7,900.0	6,778.4	7,975.2	6,870.0	37.4	37.2	128.21	-451.0	-1,107.3	148.0	86.4	61.62	2.402		
8,000.0	6,777.5	8,075.2	6,870.4	40.0	39.7	128.62	-451.0	-1,207.3	148.8	83.4	65.39	2.276		
8,100.0	6,776.6	8,175.2	6,870.9	42.5	42.3	129.02	-451.0	-1,307.3	149.7	80.5	69.17	2.164		
8,200.0	6,775.7	8,275.2	6,871.3	45.2	44.9	129.42	-451.0	-1,407.3	150.5	77.6	72.95	2.063		
8,300.0	6,774.8	8,375.2	6,871.8	47.8	47.6	129.81	-451.0	-1,507.3	151.4	74.7	76.72	1.973		
8,400.0	6,774.0	8,475.2	6,872.2	50.4	50.2	130.20	-451.0	-1,607.3	152.2	71.7	80.49	1.891		
8,500.0	6,773.1	8,575.2	6,872.7	53.1	52.9	130.58	-451.0	-1,707.3	153.1	68.9	84.24	1.818		
8,600.0	6,772.2	8,675.2	6,873.1	55.8	55.6	130.96	-451.0	-1,807.3	154.0	66.0	87.97	1.750		
8,700.0	6,771.3	8,775.1	6,873.6	58.5	58.3	131.34	-451.0	-1,907.3	154.9	63.2	91.68	1.689		
8,800.0	6,770.4	8,875.1	6,874.0	61.2	61.0	131.71	-451.0	-2,007.3	155.8	60.4	95.37	1.633		
8,900.0	6,769.5	8,975.1	6,874.5	63.9	63.7	132.08	-451.0	-2,107.2	156.7	57.6	99.03	1.582		
9,000.0	6,768.6	9,075.1	6,874.9	66.6	66.4	132.44	-451.0	-2,207.2	157.6	54.9	102.67	1.535		
9,100.0	6,767.7	9,175.1	6,875.4	69.3	69.1	132.80	-451.0	-2,307.2	158.5	52.2	106.28	1.491 Level 3		
9,200.0	6,766.8	9,275.1	6,875.9	72.1	71.8	133.15	-451.0	-2,407.2	159.4	49.5	109.85	1.451 Level 3		
9,300.0	6,765.9	9,375.1	6,876.3	74.8	74.6	133.50	-451.0	-2,507.2	160.3	46.9	113.40	1.414 Level 3		
9,400.0	6,765.1	9,475.1	6,876.8	77.5	77.3	133.85	-451.0	-2,607.2	161.2	44.3	116.92	1.379 Level 3		
9,500.0	6,764.2	9,575.1	6,877.2	80.3	80.1	134.19	-451.0	-2,707.2	162.2	41.8	120.40	1.347 Level 3		
9,600.0	6,763.3	9,675.1	6,877.7	83.0	82.8	134.53	-451.0	-2,807.2	163.1	39.3	123.86	1.317 Level 3		
9,700.0	6,762.4	9,775.1	6,878.1	85.8	85.6	134.87	-451.0	-2,907.2	164.1	36.8	127.28	1.289 Level 3		
9,800.0	6,761.5	9,875.0	6,878.6	88.6	88.3	135.20	-451.0	-3,007.2	165.0	34.3	130.67	1.263 Level 3		
9,900.0	6,760.6	9,975.0	6,879.0	91.3	91.1	135.52	-451.0	-3,107.1	166.0	31.9	134.03	1.238 Level 2		

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

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Project:</b>	SEC.1-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Reference Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (9-4-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design LDS 5N65W1U Pad Sec.1-T5N-R65W - LDS 1V-414 - Wellbore #1 - Plan #1 (9-4-14)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
10,000.0	6,759.7	10,075.0	6,879.5	94.1	93.9	135.85	-451.0	-3,207.1	166.9	29.6	137.35	1.215	Level 2	
10,100.0	6,758.8	10,175.0	6,879.9	96.9	96.6	136.17	-451.0	-3,307.1	167.9	27.2	140.65	1.194	Level 2	
10,200.0	6,757.9	10,275.0	6,880.4	99.6	99.4	136.48	-451.0	-3,407.1	168.9	25.0	143.91	1.173	Level 2	
10,300.0	6,757.0	10,375.0	6,880.8	102.4	102.2	136.79	-451.0	-3,507.1	169.8	22.7	147.14	1.154	Level 2	
10,400.0	6,756.2	10,475.0	6,881.3	105.2	105.0	137.10	-451.0	-3,607.1	170.8	20.5	150.34	1.136	Level 2	
10,500.0	6,755.3	10,575.0	6,881.7	107.9	107.7	137.41	-451.0	-3,707.1	171.8	18.3	153.51	1.119	Level 2	
10,600.0	6,754.4	10,675.0	6,882.2	110.7	110.5	137.71	-451.0	-3,807.1	172.8	16.2	156.65	1.103	Level 2	
10,700.0	6,753.5	10,775.0	6,882.7	113.5	113.3	138.01	-451.0	-3,907.1	173.8	14.0	159.76	1.088	Level 2	
10,800.0	6,752.6	10,875.0	6,883.1	116.3	116.1	138.30	-451.0	-4,007.1	174.8	12.0	162.84	1.073	Level 2	
10,900.0	6,751.7	10,974.9	6,883.6	119.1	118.9	138.59	-451.0	-4,107.0	175.8	9.9	165.88	1.060	Level 2	
11,000.0	6,750.8	11,074.9	6,884.0	121.8	121.6	138.88	-451.0	-4,207.0	176.8	7.9	168.90	1.047	Level 2	
11,100.0	6,749.9	11,174.9	6,884.5	124.6	124.4	139.17	-451.0	-4,307.0	177.8	5.9	171.89	1.035	Level 2	
11,200.0	6,749.0	11,274.9	6,884.9	127.4	127.2	139.45	-451.0	-4,407.0	178.9	4.0	174.85	1.023	Level 2	
11,300.0	6,748.1	11,374.9	6,885.4	130.2	130.0	139.73	-451.0	-4,507.0	179.9	2.1	177.78	1.012	Level 2	
11,400.0	6,747.3	11,474.9	6,885.8	133.0	132.8	140.00	-451.0	-4,607.0	180.9	0.2	180.68	1.001	Level 2	
11,500.0	6,746.4	11,574.9	6,886.3	135.8	135.6	140.27	-451.0	-4,707.0	181.9	-1.6	183.55	0.991	Level 1	
11,600.0	6,745.5	11,674.9	6,886.7	138.6	138.4	140.54	-451.0	-4,807.0	183.0	-3.4	186.40	0.982	Level 1	
11,700.0	6,744.6	11,774.9	6,887.2	141.4	141.1	140.81	-451.0	-4,907.0	184.0	-5.2	189.22	0.972	Level 1	
11,800.0	6,743.7	11,874.9	6,887.6	144.1	143.9	141.07	-451.0	-5,007.0	185.1	-7.0	192.01	0.964	Level 1	
11,900.0	6,742.8	11,974.9	6,888.1	146.9	146.7	141.33	-451.0	-5,106.9	186.1	-8.7	194.77	0.955	Level 1	
12,000.0	6,741.9	12,074.8	6,888.6	149.7	149.5	141.59	-451.0	-5,206.9	187.1	-10.4	197.51	0.948	Level 1	
12,100.0	6,741.0	12,174.8	6,889.0	152.5	152.3	141.84	-451.0	-5,306.9	188.2	-12.0	200.22	0.940	Level 1	
12,200.0	6,740.1	12,274.8	6,889.5	155.3	155.1	142.09	-451.0	-5,406.9	189.3	-13.6	202.91	0.933	Level 1	
12,300.0	6,739.2	12,374.8	6,889.9	158.1	157.9	142.34	-451.0	-5,506.9	190.3	-15.2	205.57	0.926	Level 1	
12,400.0	6,738.3	12,474.8	6,890.4	160.9	160.7	142.59	-451.0	-5,606.9	191.4	-16.8	208.21	0.919	Level 1	
12,500.0	6,737.5	12,574.8	6,890.8	163.7	163.5	142.83	-451.0	-5,706.9	192.5	-18.4	210.82	0.913	Level 1	
12,600.0	6,736.6	12,674.8	6,891.3	166.5	166.3	143.07	-451.0	-5,806.9	193.5	-19.9	213.41	0.907	Level 1	
12,700.0	6,735.7	12,774.8	6,891.7	169.3	169.1	143.31	-451.0	-5,906.9	194.6	-21.4	215.98	0.901	Level 1	
12,730.3	6,735.4	12,805.1	6,891.9	170.1	169.9	143.38	-451.0	-5,937.1	194.9	-21.8	216.75	0.899	Level 1, ES, SF	
12,800.0	6,734.8	12,834.6	6,892.0	172.1	170.7	143.45	-451.0	-5,966.7	199.8	-18.4	218.20	0.916	Level 1	
12,900.0	6,733.9	12,834.6	6,892.0	174.9	170.7	143.45	-451.0	-5,966.7	241.6	21.6	219.96	1.098	Level 2	
13,000.0	6,733.0	12,834.6	6,892.0	177.7	170.7	143.45	-451.0	-5,966.7	311.2	89.5	221.72	1.404	Level 3	
13,100.0	6,732.1	12,834.6	6,892.0	180.5	170.7	143.45	-451.0	-5,966.7	394.1	170.6	223.48	1.763		
13,200.0	6,731.2	12,834.6	6,892.0	183.3	170.7	143.45	-451.0	-5,966.7	483.5	258.2	225.24	2.147		
13,300.0	6,730.3	12,834.6	6,892.0	186.1	170.7	143.45	-451.0	-5,966.7	576.4	349.4	227.00	2.539		
13,400.0	6,729.4	12,834.6	6,892.0	188.9	170.7	143.45	-451.0	-5,966.7	671.3	442.6	228.76	2.935		
13,500.0	6,728.6	12,834.6	6,892.0	191.7	170.7	143.45	-451.0	-5,966.7	767.6	537.0	230.52	3.330		
13,600.0	6,727.7	12,834.6	6,892.0	194.5	170.7	143.45	-451.0	-5,966.7	864.6	632.4	232.28	3.722		
13,700.0	6,726.8	12,834.6	6,892.0	197.3	170.7	143.45	-451.0	-5,966.7	962.3	728.3	234.04	4.112		

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Project:</b>	SEC.1-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Reference Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (9-4-14)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design      Noffsinger Pad Sec.2-T5N-R65W - Noffsinger 2C (Vert.) - Wellbore #1 - Design #1													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
11,900.0	6,742.8	6,749.8	6,749.8	146.9	15.1	96.85		-494.7	-6,087.2	982.3	821.4	160.95	6.103	
12,000.0	6,741.9	6,748.9	6,748.9	149.7	15.1	96.16		-494.7	-6,087.2	882.6	718.7	163.92	5.385	
12,100.0	6,741.0	6,748.0	6,748.0	152.5	15.1	95.46		-494.7	-6,087.2	783.0	616.2	166.87	4.692	
12,200.0	6,740.1	6,747.1	6,747.1	155.3	15.1	94.76		-494.7	-6,087.2	683.5	513.7	169.81	4.025	
12,300.0	6,739.2	6,746.2	6,746.2	158.1	15.1	94.07		-494.7	-6,087.2	584.2	411.5	172.73	3.382	
12,400.0	6,738.3	6,745.3	6,745.3	160.9	15.0	93.37		-494.7	-6,087.2	485.1	309.5	175.63	2.762	
12,500.0	6,737.5	6,744.5	6,744.5	163.7	15.0	92.67		-494.7	-6,087.2	386.5	208.0	178.52	2.165	
12,600.0	6,736.6	6,743.6	6,743.6	166.5	15.0	91.96		-494.7	-6,087.2	288.9	107.6	181.38	1.593	
12,700.0	6,735.7	6,742.7	6,742.7	169.3	15.0	91.26		-494.7	-6,087.2	193.8	9.6	184.22	1.052 Level 2	
12,800.0	6,734.8	6,741.8	6,741.8	172.1	15.0	90.56		-494.7	-6,087.2	107.8	-79.3	187.04	0.576 Level 1	
12,879.7	6,734.1	6,741.1	6,741.1	174.3	15.0	90.00		-494.7	-6,087.2	72.6	-116.7	189.27	0.383 Level 1, CC, ES, SF	
12,900.0	6,733.9	6,740.9	6,740.9	174.9	15.0	89.86		-494.7	-6,087.2	75.4	-114.5	189.83	0.397 Level 1	
13,000.0	6,733.0	6,740.0	6,740.0	177.7	15.0	89.15		-494.7	-6,087.2	140.5	-52.1	192.60	0.730 Level 1	
13,100.0	6,732.1	6,739.1	6,739.1	180.5	15.0	88.45		-494.7	-6,087.2	232.0	36.6	195.34	1.187 Level 2	
13,200.0	6,731.2	6,738.2	6,738.2	183.3	15.0	87.75		-494.7	-6,087.2	328.4	130.4	198.05	1.658	
13,300.0	6,730.3	6,737.3	6,737.3	186.1	15.0	87.05		-494.7	-6,087.2	426.5	225.8	200.73	2.125	
13,400.0	6,729.4	6,736.4	6,736.4	188.9	15.0	86.35		-494.7	-6,087.2	525.3	321.9	203.39	2.583	
13,500.0	6,728.6	6,735.6	6,735.6	191.7	15.0	85.65		-494.7	-6,087.2	624.5	418.5	206.01	3.032	
13,600.0	6,727.7	6,734.7	6,734.7	194.5	15.0	84.95		-494.7	-6,087.2	723.9	515.3	208.60	3.470	
13,700.0	6,726.8	6,733.8	6,733.8	197.3	15.0	84.26		-494.7	-6,087.2	823.5	612.3	211.15	3.900	
13,800.0	6,725.9	6,732.9	6,732.9	200.1	15.0	83.56		-494.7	-6,087.2	923.1	709.5	213.68	4.320	

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Project:</b>	SEC.1-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Reference Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (9-4-14)	<b>Offset TVD Reference:</b>	Offset Datum

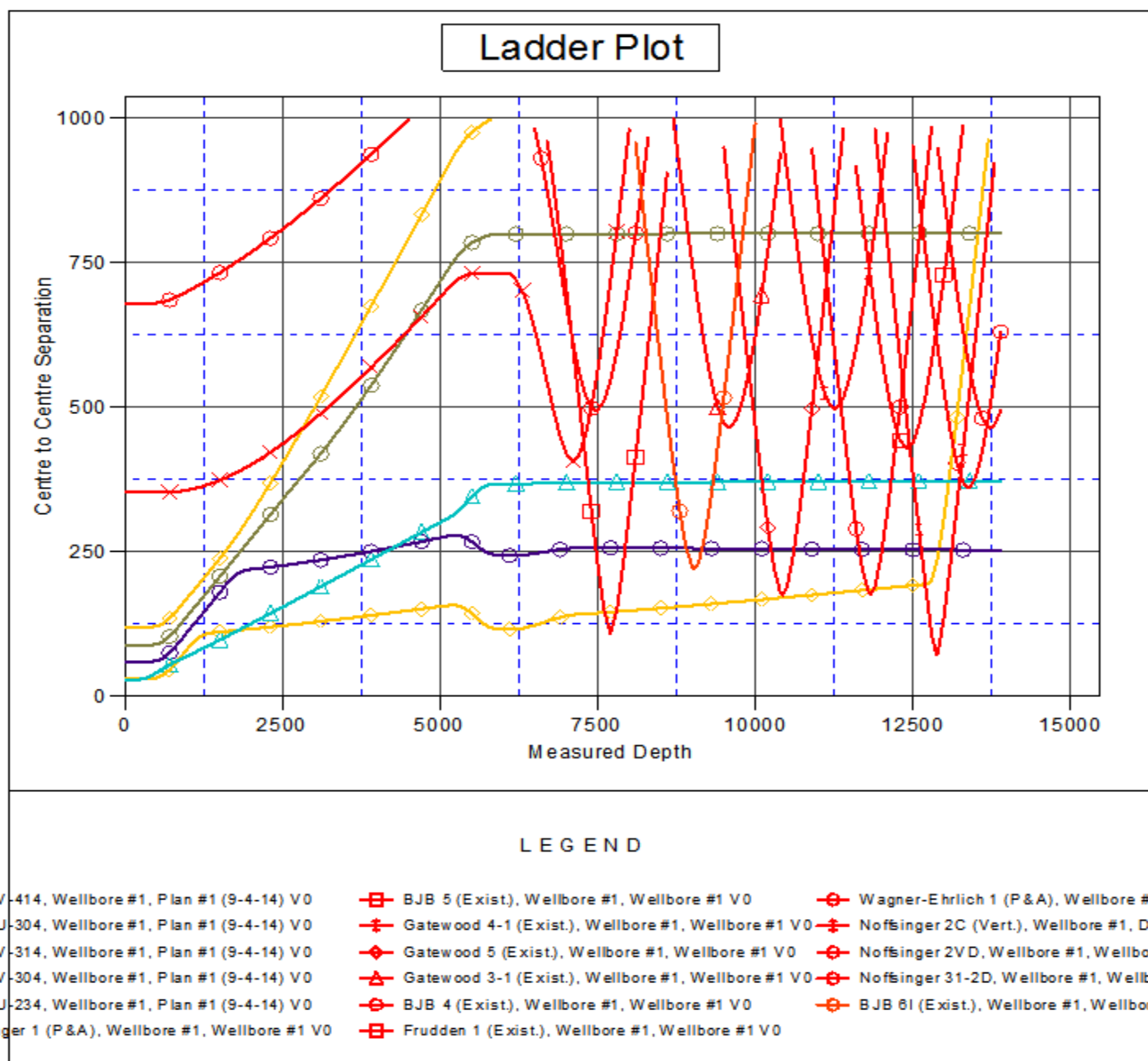
Offset Design      Noffsinger Pad Sec.2-T5N-R65W - Noffsinger 2VD - Wellbore #1 - Wellbore #1													Offset Site Error:		0.0 ft
Survey Program: 700-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
10,900.0	6,751.7	6,906.3	6,772.5	119.1	23.2	-97.11	-744.1	-5,037.9	947.0	806.4	140.61	6.735			
11,000.0	6,750.8	6,903.5	6,769.7	121.8	23.2	-96.21	-744.1	-5,037.9	849.0	705.4	143.63	5.911			
11,100.0	6,749.9	6,900.7	6,766.9	124.6	23.2	-95.33	-744.1	-5,038.0	751.5	604.9	146.63	5.125			
11,200.0	6,749.0	6,898.1	6,764.2	127.4	23.2	-94.47	-744.1	-5,038.0	654.8	505.2	149.60	4.377			
11,300.0	6,748.1	6,895.5	6,761.6	130.2	23.2	-93.63	-744.1	-5,038.1	559.1	406.6	152.54	3.666			
11,400.0	6,747.3	6,892.9	6,759.1	133.0	23.2	-92.82	-744.1	-5,038.1	465.4	309.9	155.46	2.994			
11,500.0	6,746.4	6,890.5	6,756.7	135.8	23.2	-92.02	-744.0	-5,038.1	374.8	216.5	158.34	2.367			
11,600.0	6,745.5	6,888.1	6,754.3	138.6	23.2	-91.24	-744.0	-5,038.2	290.5	129.3	161.21	1.802			
11,700.0	6,744.6	6,885.7	6,751.9	141.4	23.2	-90.49	-744.0	-5,038.2	219.7	55.7	164.04	1.339	Level 3		
11,800.0	6,743.7	6,883.5	6,749.6	144.1	23.2	-89.75	-744.0	-5,038.2	179.3	12.5	166.85	1.075	Level 2		
11,830.6	6,743.4	6,882.8	6,749.0	145.0	23.2	-89.53	-744.0	-5,038.2	176.7	9.0	167.71	1.054	Level 2, CC, ES, SF		
11,900.0	6,742.8	6,881.2	6,747.4	146.9	23.2	-89.03	-744.0	-5,038.3	189.8	20.2	169.64	1.119	Level 2		
12,000.0	6,741.9	6,879.1	6,745.3	149.7	23.2	-88.33	-743.9	-5,038.3	244.7	72.3	172.40	1.419	Level 3		
12,100.0	6,741.0	6,877.0	6,743.1	152.5	23.2	-87.64	-743.9	-5,038.3	322.1	146.9	175.13	1.839			
12,200.0	6,740.1	6,874.9	6,741.1	155.3	23.2	-86.98	-743.9	-5,038.3	409.4	231.5	177.85	2.302			
12,300.0	6,739.2	6,872.9	6,739.1	158.1	23.2	-86.33	-743.9	-5,038.4	501.4	320.9	180.54	2.777			
12,400.0	6,738.3	6,870.9	6,737.1	160.9	23.2	-85.69	-743.9	-5,038.4	596.0	412.8	183.21	3.253			
12,500.0	6,737.5	6,869.0	6,735.2	163.7	23.2	-85.08	-743.8	-5,038.4	692.1	506.3	185.86	3.724			
12,600.0	6,736.6	6,867.1	6,733.3	166.5	23.2	-84.47	-743.8	-5,038.4	789.2	600.7	188.49	4.187			
12,700.0	6,735.7	6,865.3	6,731.5	169.3	23.2	-83.88	-743.8	-5,038.4	886.9	695.8	191.10	4.641			
12,800.0	6,734.8	6,863.5	6,729.7	172.1	23.2	-83.31	-743.8	-5,038.5	985.1	791.4	193.69	5.086			

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Project:</b>	SEC.1-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Reference Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (9-4-14)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Noffsinger Pad Sec.2-T5N-R65W - Noffsinger 31-2D - Wellbore #1 - Wellbore #1												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 700-MWD												<b>Offset Well Error:</b>	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)					
12,900.0	6,733.9	6,888.5	6,781.4	174.9	21.3	95.90	-104.0	-6,933.8	948.1	754.1	194.05	4.886	
13,000.0	6,733.0	6,884.0	6,777.0	177.7	21.3	95.35	-103.8	-6,933.9	862.4	665.4	197.00	4.378	
13,100.0	6,732.1	6,880.2	6,773.1	180.5	21.2	94.88	-103.7	-6,934.0	780.1	580.2	199.92	3.902	
13,200.0	6,731.2	6,875.9	6,768.8	183.3	21.2	94.35	-103.6	-6,934.2	702.3	499.5	202.84	3.463	
13,300.0	6,730.3	6,871.7	6,764.6	186.1	21.2	93.83	-103.5	-6,934.3	630.9	425.1	205.75	3.066	
13,400.0	6,729.4	6,867.5	6,760.5	188.9	21.2	93.32	-103.4	-6,934.5	568.0	359.4	208.64	2.723	
13,500.0	6,728.6	6,863.4	6,756.4	191.7	21.2	92.82	-103.3	-6,934.6	517.0	305.5	211.52	2.444	
13,600.0	6,727.7	6,859.4	6,752.4	194.5	21.2	92.33	-103.2	-6,934.7	481.6	267.2	214.39	2.246	
13,700.0	6,726.8	6,855.4	6,748.4	197.3	21.2	91.84	-103.0	-6,934.9	465.3	248.0	217.25	2.142	
13,727.2	6,726.5	6,854.4	6,747.4	198.0	21.2	91.71	-103.0	-6,934.9	464.5	246.5	218.02	2.131 CC, ES, SF	
13,800.0	6,725.9	6,851.6	6,744.5	200.1	21.2	91.36	-102.9	-6,935.0	470.2	250.1	220.09	2.136	
13,899.8	6,725.0	6,847.7	6,740.7	202.9	21.2	90.89	-102.8	-6,935.1	495.5	272.5	222.91	2.223	

<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
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<b>Reference Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (9-4-14)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4653.0ft (Original Well Elev) Coordinates are relative to: LDS 1V-204  
 Offset Depths are relative to Offset Datum  
 Central Meridian is -105.500000 °  
 Coordinate System is US State Plane 1983, Colorado Northern Zone  
 Grid Convergence at Surface is: 0.58°



<b>Company:</b>	PETROLEUM DEVELOPMENT CORP Weld County CO	<b>Local Co-ordinate Reference:</b>	Well LDS 1V-204
<b>Project:</b>	SEC.1-T5N-R65W	<b>TVD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Reference Site:</b>	LDS 5N65W1U Pad Sec.1-T5N-R65W	<b>MD Reference:</b>	WELL @ 4653.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	LDS 1V-204	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	landmark
<b>Reference Design:</b>	Plan #1 (9-4-14)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4653.0ft (Original Well Elev) Coordinates are relative to: LDS 1V-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: 0.58°

