

PETROLEUM DEVELOPMENT CORP Weld County CO

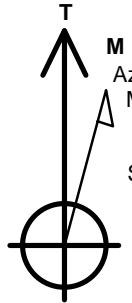
Well Name: **LDS 1V-214**

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	1402107.30	3249681.35	40.433720	-104.603050	
RKB - 13' WELL @ 4651.0ft (RKB - 13')						

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
50' E/W Hardline (1V-214)	1.0	-417.9	-3768.2	Rectangle (Sides: L6628.0 W100.0)
SHL 510'FNL & 368'FEL, Sec.1	1.0	0.0	0.0	Point
BHL 935'FNL & 2145'FEL, Sec.2	6725.0	-417.9	-7082.2	Point



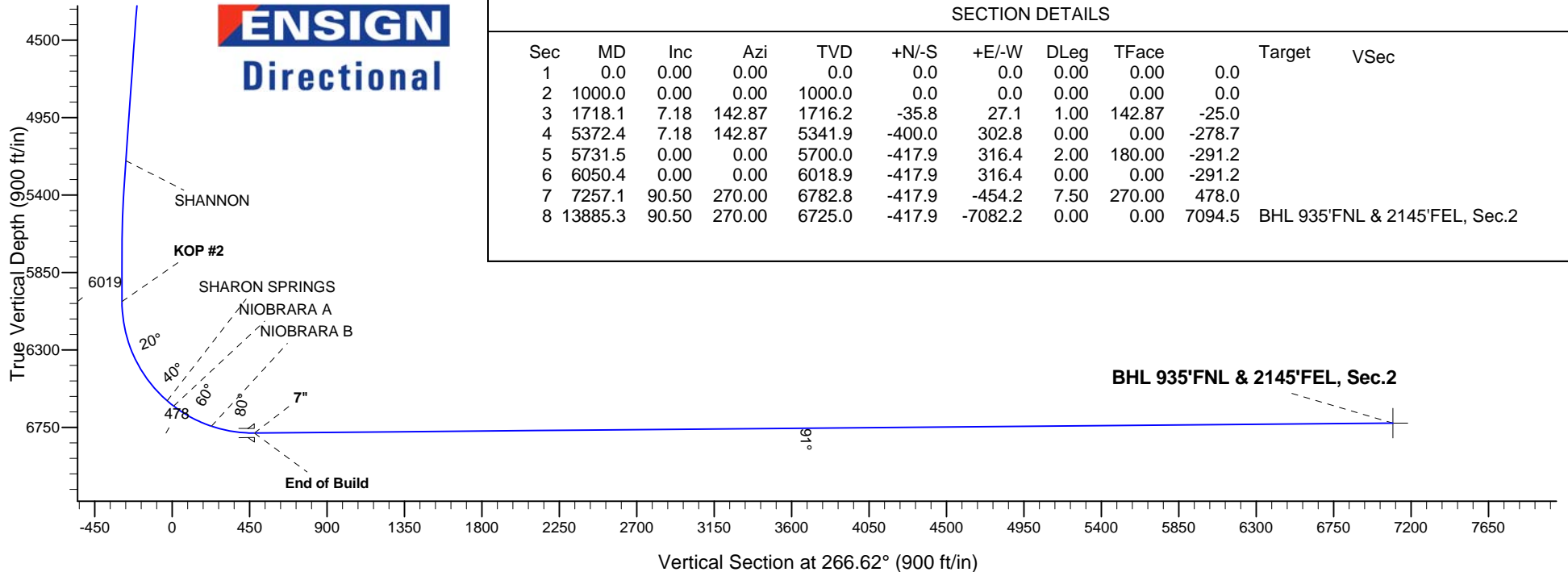
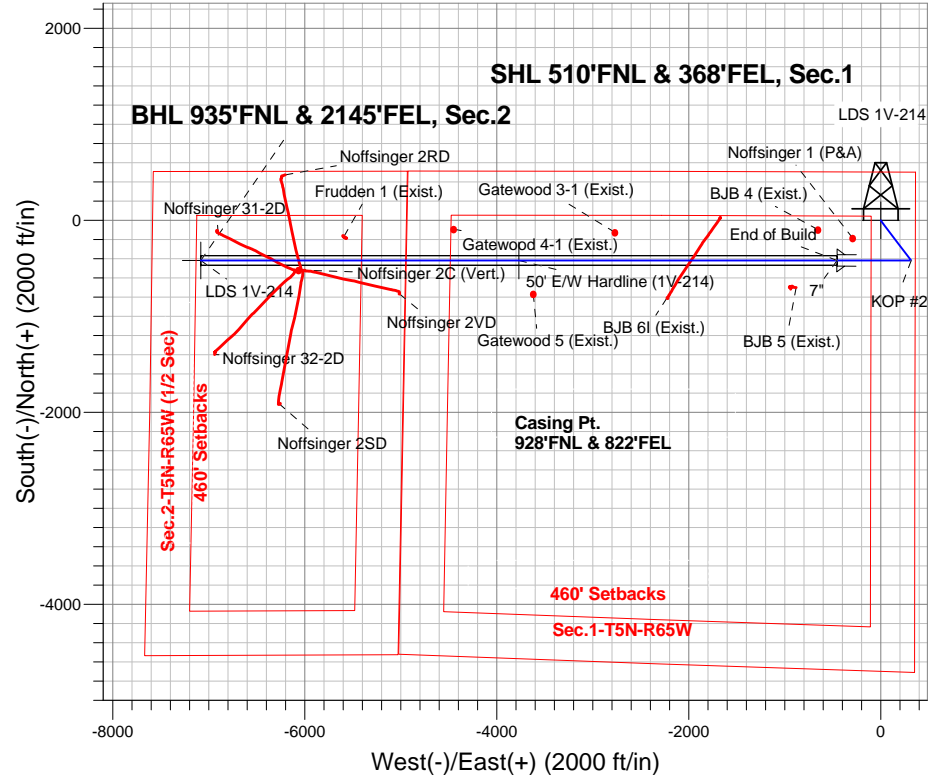
Azimuths to True North
Magnetic North: 8.26°

Magnetic Field
Strength: 52759.0snT
Dip Angle: 66.97°
Date: 4/30/2015
Model: IGRF2010

ANNOTATIONS

TVD	MD	Annotation
1000.0	1000.0	KOP #1
6018.9	6050.4	KOP #2
6782.8	7257.1	End of Build

LDS 5N65W1U Pad Sec.1-T5N-R65W
LDS 1V-214
Plan #2 (4-30-15)



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	Target	VSec
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0	
3	1718.1	7.18	142.87	1716.2	-35.8	27.1	1.00	142.87	-25.0	
4	5372.4	7.18	142.87	5341.9	-400.0	302.8	0.00	0.00	-278.7	
5	5731.5	0.00	0.00	5700.0	-417.9	316.4	2.00	180.00	-291.2	
6	6050.4	0.00	0.00	6018.9	-417.9	316.4	0.00	0.00	-291.2	
7	7257.1	90.50	270.00	6782.8	-417.9	-454.2	7.50	270.00	478.0	
8	13885.3	90.50	270.00	6725.0	-417.9	-7082.2	0.00	0.00	7094.5	BHL 935'FNL & 2145'FEL, Sec.2



PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.1-T5N-R65W

LDS 5N65W1U Pad Sec.1-T5N-R65W

LDS 1V-214

Wellbore #1

Plan: Plan #2 (4-30-15)

Standard Planning Report

30 April, 2015

Database:	Landmark	Local Co-ordinate Reference:	Well LDS 1V-214
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Project:	SEC.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	North Reference:	True
Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (4-30-15)		

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

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

Well	LDS 1V-214		
Well Position	+N/-S	43.7 ft	Northing:
	+E/-W	-41.8 ft	Easting:
Position Uncertainty		0.0 ft	Wellhead Elevation:
			ft
			Latitude:
			40.433720
			Longitude:
			-104.603050
			Ground Level:
			4,638.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	4/30/2015	8.26	66.97	52,759

Design	Plan #2 (4-30-15)			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	266.62

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,718.1	7.18	142.87	1,716.2	-35.8	27.1	1.00	1.00	0.00	142.87	
5,372.4	7.18	142.87	5,341.9	-400.0	302.8	0.00	0.00	0.00	0.00	
5,731.5	0.00	0.00	5,700.0	-417.9	316.4	2.00	-2.00	0.00	180.00	
6,050.4	0.00	0.00	6,018.9	-417.9	316.4	0.00	0.00	0.00	0.00	
7,257.1	90.50	270.00	6,782.8	-417.9	-454.2	7.50	7.50	0.00	270.00	
13,885.3	90.50	270.00	6,725.0	-417.9	-7,082.2	0.00	0.00	0.00	0.00	BHL 935'FNL & 214

Database:	Landmark	Local Co-ordinate Reference:	Well LDS 1V-214
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Project:	SEC.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	North Reference:	True
Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (4-30-15)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N-S (ft)	+E-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP #1									
1,100.0	1.00	142.87	1,100.0	-0.7	0.5	-0.5	1.00	1.00	0.00
1,200.0	2.00	142.87	1,200.0	-2.8	2.1	-1.9	1.00	1.00	0.00
1,300.0	3.00	142.87	1,299.9	-6.3	4.7	-4.4	1.00	1.00	0.00
1,400.0	4.00	142.87	1,399.7	-11.1	8.4	-7.8	1.00	1.00	0.00
1,500.0	5.00	142.87	1,499.4	-17.4	13.2	-12.1	1.00	1.00	0.00
1,600.0	6.00	142.87	1,598.9	-25.0	18.9	-17.4	1.00	1.00	0.00
1,700.0	7.00	142.87	1,698.3	-34.1	25.8	-23.7	1.00	1.00	0.00
1,718.1	7.18	142.87	1,716.2	-35.8	27.1	-25.0	1.00	1.00	0.00
1,800.0	7.18	142.87	1,797.5	-44.0	33.3	-30.7	0.00	0.00	0.00
1,900.0	7.18	142.87	1,896.7	-54.0	40.9	-37.6	0.00	0.00	0.00
2,000.0	7.18	142.87	1,995.9	-63.9	48.4	-44.5	0.00	0.00	0.00
2,100.0	7.18	142.87	2,095.1	-73.9	55.9	-51.5	0.00	0.00	0.00
2,200.0	7.18	142.87	2,194.3	-83.9	63.5	-58.4	0.00	0.00	0.00
2,300.0	7.18	142.87	2,293.6	-93.8	71.0	-65.4	0.00	0.00	0.00
2,400.0	7.18	142.87	2,392.8	-103.8	78.6	-72.3	0.00	0.00	0.00
2,500.0	7.18	142.87	2,492.0	-113.8	86.1	-79.3	0.00	0.00	0.00
2,600.0	7.18	142.87	2,591.2	-123.7	93.7	-86.2	0.00	0.00	0.00
2,700.0	7.18	142.87	2,690.4	-133.7	101.2	-93.2	0.00	0.00	0.00
2,800.0	7.18	142.87	2,789.6	-143.7	108.8	-100.1	0.00	0.00	0.00
2,900.0	7.18	142.87	2,888.9	-153.6	116.3	-107.0	0.00	0.00	0.00
3,000.0	7.18	142.87	2,988.1	-163.6	123.8	-114.0	0.00	0.00	0.00
3,100.0	7.18	142.87	3,087.3	-173.6	131.4	-120.9	0.00	0.00	0.00
3,200.0	7.18	142.87	3,186.5	-183.5	138.9	-127.9	0.00	0.00	0.00
3,300.0	7.18	142.87	3,285.7	-193.5	146.5	-134.8	0.00	0.00	0.00
3,400.0	7.18	142.87	3,384.9	-203.4	154.0	-141.8	0.00	0.00	0.00
3,500.0	7.18	142.87	3,484.1	-213.4	161.6	-148.7	0.00	0.00	0.00
3,501.9	7.18	142.87	3,486.0	-213.6	161.7	-148.8	0.00	0.00	0.00
PARKMAN									
3,600.0	7.18	142.87	3,583.4	-223.4	169.1	-155.7	0.00	0.00	0.00
3,700.0	7.18	142.87	3,682.6	-233.3	176.7	-162.6	0.00	0.00	0.00
3,800.0	7.18	142.87	3,781.8	-243.3	184.2	-169.5	0.00	0.00	0.00
3,900.0	7.18	142.87	3,881.0	-253.3	191.7	-176.5	0.00	0.00	0.00
4,000.0	7.18	142.87	3,980.2	-263.2	199.3	-183.4	0.00	0.00	0.00
4,100.0	7.18	142.87	4,079.4	-273.2	206.8	-190.4	0.00	0.00	0.00
4,200.0	7.18	142.87	4,178.7	-283.2	214.4	-197.3	0.00	0.00	0.00
4,265.9	7.18	142.87	4,244.0	-289.7	219.3	-201.9	0.00	0.00	0.00
SUSSEX									
4,300.0	7.18	142.87	4,277.9	-293.1	221.9	-204.3	0.00	0.00	0.00
4,400.0	7.18	142.87	4,377.1	-303.1	229.5	-211.2	0.00	0.00	0.00
4,500.0	7.18	142.87	4,476.3	-313.1	237.0	-218.2	0.00	0.00	0.00
4,600.0	7.18	142.87	4,575.5	-323.0	244.6	-225.1	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well LDS 1V-214
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Project:	SEC.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	North Reference:	True
Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (4-30-15)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,700.0	7.18	142.87	4,674.7	-333.0	252.1	-232.0	0.00	0.00	0.00
4,800.0	7.18	142.87	4,774.0	-343.0	259.6	-239.0	0.00	0.00	0.00
4,900.0	7.18	142.87	4,873.2	-352.9	267.2	-245.9	0.00	0.00	0.00
5,000.0	7.18	142.87	4,972.4	-362.9	274.7	-252.9	0.00	0.00	0.00
5,100.0	7.18	142.87	5,071.6	-372.9	282.3	-259.8	0.00	0.00	0.00
5,200.0	7.18	142.87	5,170.8	-382.8	289.8	-266.8	0.00	0.00	0.00
5,229.4	7.18	142.87	5,200.0	-385.8	292.0	-268.8	0.00	0.00	0.00
SHANNON									
5,300.0	7.18	142.87	5,270.0	-392.8	297.4	-273.7	0.00	0.00	0.00
5,372.4	7.18	142.87	5,341.9	-400.0	302.8	-278.7	0.00	0.00	0.00
5,400.0	6.63	142.87	5,369.3	-402.7	304.8	-280.6	2.00	-2.00	0.00
5,500.0	4.63	142.87	5,468.8	-410.5	310.8	-286.0	2.00	-2.00	0.00
5,600.0	2.63	142.87	5,568.6	-415.5	314.6	-289.6	2.00	-2.00	0.00
5,700.0	0.63	142.87	5,668.5	-417.8	316.3	-291.1	2.00	-2.00	0.00
5,731.5	0.00	0.00	5,700.0	-417.9	316.4	-291.2	2.00	-2.00	0.00
5,800.0	0.00	0.00	5,768.5	-417.9	316.4	-291.2	0.00	0.00	0.00
5,900.0	0.00	0.00	5,868.5	-417.9	316.4	-291.2	0.00	0.00	0.00
6,000.0	0.00	0.00	5,968.5	-417.9	316.4	-291.2	0.00	0.00	0.00
6,050.4	0.00	0.00	6,018.9	-417.9	316.4	-291.2	0.00	0.00	0.00
KOP #2									
6,100.0	3.72	270.00	6,068.5	-417.9	314.8	-289.6	7.50	7.50	0.00
6,200.0	11.22	270.00	6,167.6	-417.9	301.8	-276.7	7.50	7.50	0.00
6,300.0	18.72	270.00	6,264.1	-417.9	276.0	-250.9	7.50	7.50	0.00
6,400.0	26.22	270.00	6,356.4	-417.9	237.8	-212.8	7.50	7.50	0.00
6,500.0	33.72	270.00	6,443.0	-417.9	187.9	-162.9	7.50	7.50	0.00
6,600.0	41.22	270.00	6,522.3	-417.9	127.1	-102.2	7.50	7.50	0.00
6,700.0	48.72	270.00	6,593.0	-417.9	56.5	-31.7	7.50	7.50	0.00
6,703.0	48.94	270.00	6,595.0	-417.9	54.2	-29.5	7.50	7.50	0.00
SHARON SPRINGS									
6,752.0	52.62	270.00	6,626.0	-417.9	16.2	8.4	7.50	7.50	0.00
NIORARA A									
6,800.0	56.22	270.00	6,653.9	-417.9	-22.8	47.4	7.50	7.50	0.00
6,900.0	63.72	270.00	6,703.9	-417.9	-109.3	133.7	7.50	7.50	0.00
7,000.0	71.22	270.00	6,742.2	-417.9	-201.6	225.9	7.50	7.50	0.00
7,002.5	71.41	270.00	6,743.0	-417.9	-204.0	228.2	7.50	7.50	0.00
NIORARA B									
7,100.0	78.72	270.00	6,768.1	-417.9	-298.1	322.2	7.50	7.50	0.00
7,200.0	86.22	270.00	6,781.2	-417.9	-397.2	421.1	7.50	7.50	0.00
7,257.1	90.50	270.00	6,782.8	-417.9	-454.2	478.1	7.50	7.50	0.00
End of Build - 7"									
7,300.0	90.50	270.00	6,782.5	-417.9	-497.1	520.9	0.00	0.00	0.00
7,400.0	90.50	270.00	6,781.6	-417.9	-597.1	620.7	0.00	0.00	0.00
7,500.0	90.50	270.00	6,780.7	-417.9	-697.1	720.5	0.00	0.00	0.00
7,600.0	90.50	270.00	6,779.8	-417.9	-797.1	820.4	0.00	0.00	0.00
7,700.0	90.50	270.00	6,779.0	-417.9	-897.1	920.2	0.00	0.00	0.00
7,800.0	90.50	270.00	6,778.1	-417.9	-997.1	1,020.0	0.00	0.00	0.00
7,900.0	90.50	270.00	6,777.2	-417.9	-1,097.1	1,119.8	0.00	0.00	0.00
8,000.0	90.50	270.00	6,776.4	-417.9	-1,197.1	1,219.7	0.00	0.00	0.00
8,100.0	90.50	270.00	6,775.5	-417.9	-1,297.1	1,319.5	0.00	0.00	0.00
8,200.0	90.50	270.00	6,774.6	-417.9	-1,397.1	1,419.3	0.00	0.00	0.00
8,300.0	90.50	270.00	6,773.7	-417.9	-1,497.1	1,519.1	0.00	0.00	0.00
8,400.0	90.50	270.00	6,772.9	-417.9	-1,597.1	1,618.9	0.00	0.00	0.00

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Project:	SEC.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	North Reference:	True
Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (4-30-15)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,500.0	90.50	270.00	6,772.0	-417.9	-1,697.1	1,718.8	0.00	0.00	0.00
8,600.0	90.50	270.00	6,771.1	-417.9	-1,797.1	1,818.6	0.00	0.00	0.00
8,700.0	90.50	270.00	6,770.2	-417.9	-1,897.1	1,918.4	0.00	0.00	0.00
8,800.0	90.50	270.00	6,769.4	-417.9	-1,997.1	2,018.2	0.00	0.00	0.00
8,900.0	90.50	270.00	6,768.5	-417.9	-2,097.1	2,118.1	0.00	0.00	0.00
9,000.0	90.50	270.00	6,767.6	-417.9	-2,197.1	2,217.9	0.00	0.00	0.00
9,100.0	90.50	270.00	6,766.8	-417.9	-2,297.1	2,317.7	0.00	0.00	0.00
9,200.0	90.50	270.00	6,765.9	-417.9	-2,397.1	2,417.5	0.00	0.00	0.00
9,300.0	90.50	270.00	6,765.0	-417.9	-2,497.1	2,517.3	0.00	0.00	0.00
9,400.0	90.50	270.00	6,764.1	-417.9	-2,597.1	2,617.2	0.00	0.00	0.00
9,500.0	90.50	270.00	6,763.3	-417.9	-2,697.1	2,717.0	0.00	0.00	0.00
9,600.0	90.50	270.00	6,762.4	-417.9	-2,797.0	2,816.8	0.00	0.00	0.00
9,700.0	90.50	270.00	6,761.5	-417.9	-2,897.0	2,916.6	0.00	0.00	0.00
9,800.0	90.50	270.00	6,760.7	-417.9	-2,997.0	3,016.5	0.00	0.00	0.00
9,900.0	90.50	270.00	6,759.8	-417.9	-3,097.0	3,116.3	0.00	0.00	0.00
10,000.0	90.50	270.00	6,758.9	-417.9	-3,197.0	3,216.1	0.00	0.00	0.00
10,100.0	90.50	270.00	6,758.0	-417.9	-3,297.0	3,315.9	0.00	0.00	0.00
10,200.0	90.50	270.00	6,757.2	-417.9	-3,397.0	3,415.7	0.00	0.00	0.00
10,300.0	90.50	270.00	6,756.3	-417.9	-3,497.0	3,515.6	0.00	0.00	0.00
10,400.0	90.50	270.00	6,755.4	-417.9	-3,597.0	3,615.4	0.00	0.00	0.00
10,500.0	90.50	270.00	6,754.5	-417.9	-3,697.0	3,715.2	0.00	0.00	0.00
10,600.0	90.50	270.00	6,753.7	-417.9	-3,797.0	3,815.0	0.00	0.00	0.00
10,700.0	90.50	270.00	6,752.8	-417.9	-3,897.0	3,914.9	0.00	0.00	0.00
10,800.0	90.50	270.00	6,751.9	-417.9	-3,997.0	4,014.7	0.00	0.00	0.00
10,900.0	90.50	270.00	6,751.1	-417.9	-4,097.0	4,114.5	0.00	0.00	0.00
11,000.0	90.50	270.00	6,750.2	-417.9	-4,197.0	4,214.3	0.00	0.00	0.00
11,100.0	90.50	270.00	6,749.3	-417.9	-4,297.0	4,314.2	0.00	0.00	0.00
11,200.0	90.50	270.00	6,748.4	-417.9	-4,397.0	4,414.0	0.00	0.00	0.00
11,300.0	90.50	270.00	6,747.6	-417.9	-4,497.0	4,513.8	0.00	0.00	0.00
11,400.0	90.50	270.00	6,746.7	-417.9	-4,597.0	4,613.6	0.00	0.00	0.00
11,500.0	90.50	270.00	6,745.8	-417.9	-4,697.0	4,713.4	0.00	0.00	0.00
11,600.0	90.50	270.00	6,744.9	-417.9	-4,797.0	4,813.3	0.00	0.00	0.00
11,700.0	90.50	270.00	6,744.1	-417.9	-4,897.0	4,913.1	0.00	0.00	0.00
11,800.0	90.50	270.00	6,743.2	-417.9	-4,997.0	5,012.9	0.00	0.00	0.00
11,900.0	90.50	270.00	6,742.3	-417.9	-5,097.0	5,112.7	0.00	0.00	0.00
12,000.0	90.50	270.00	6,741.5	-417.9	-5,197.0	5,212.6	0.00	0.00	0.00
12,100.0	90.50	270.00	6,740.6	-417.9	-5,297.0	5,312.4	0.00	0.00	0.00
12,200.0	90.50	270.00	6,739.7	-417.9	-5,397.0	5,412.2	0.00	0.00	0.00
12,300.0	90.50	270.00	6,738.8	-417.9	-5,496.9	5,512.0	0.00	0.00	0.00
12,400.0	90.50	270.00	6,738.0	-417.9	-5,596.9	5,611.8	0.00	0.00	0.00
12,500.0	90.50	270.00	6,737.1	-417.9	-5,696.9	5,711.7	0.00	0.00	0.00
12,600.0	90.50	270.00	6,736.2	-417.9	-5,796.9	5,811.5	0.00	0.00	0.00
12,700.0	90.50	270.00	6,735.3	-417.9	-5,896.9	5,911.3	0.00	0.00	0.00
12,800.0	90.50	270.00	6,734.5	-417.9	-5,996.9	6,011.1	0.00	0.00	0.00
12,900.0	90.50	270.00	6,733.6	-417.9	-6,096.9	6,111.0	0.00	0.00	0.00
13,000.0	90.50	270.00	6,732.7	-417.9	-6,196.9	6,210.8	0.00	0.00	0.00
13,100.0	90.50	270.00	6,731.9	-417.9	-6,296.9	6,310.6	0.00	0.00	0.00
13,200.0	90.50	270.00	6,731.0	-417.9	-6,396.9	6,410.4	0.00	0.00	0.00
13,300.0	90.50	270.00	6,730.1	-417.9	-6,496.9	6,510.2	0.00	0.00	0.00
13,400.0	90.50	270.00	6,729.2	-417.9	-6,596.9	6,610.1	0.00	0.00	0.00
13,500.0	90.50	270.00	6,728.4	-417.9	-6,696.9	6,709.9	0.00	0.00	0.00
13,600.0	90.50	270.00	6,727.5	-417.9	-6,796.9	6,809.7	0.00	0.00	0.00
13,700.0	90.50	270.00	6,726.6	-417.9	-6,896.9	6,909.5	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well LDS 1V-214
Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Project:	SEC.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	North Reference:	True
Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (4-30-15)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
13,800.0	90.50	270.00	6,725.7	-417.9	-6,996.9	7,009.4	0.00	0.00	0.00
13,885.3	90.50	270.00	6,725.0	-417.9	-7,082.2	7,094.5	0.00	0.00	0.00

Targets									
Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude
BHL 935'FNL & 2145'	- plan hits target center	0.00	0.00	6,725.0	-417.9	-7,082.2	1,401,617.77	3,242,604.04	40.432570
	- Point								-104.628490
SHL 510'FNL & 368'F	- plan hits target center	0.00	0.00	1.0	0.0	0.0	1,402,107.31	3,249,681.35	40.433720
	- Point								-104.603050
50' E/W Hardline (1V-	- plan misses target center by 3791.3ft at 1.0ft MD (1.0 TVD, 0.0 N, 0.0 E)	0.00	0.00	1.0	-417.9	-3,768.2	1,401,651.32	3,245,917.72	40.432572
	- Rectangle (sides W6,628.0 H100.0 D0.0)								-104.616586

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
7,257.1	6,782.8	7"	7	7-1/2	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,501.9	3,486.0	PARKMAN		0.00	
4,265.9	4,244.0	SUSSEX		0.00	
5,229.4	5,200.0	SHANNON		0.00	
6,703.0	6,595.0	SHARON SPRINGS		0.00	
6,752.0	6,626.0	NIOBRARA A		0.00	
7,002.5	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)	+N/-S (ft)	+E/-W (ft)	Comment
1,000.0	1,000.0	0.0	0.0	KOP #1
6,050.4	6,018.9	-417.9	316.4	KOP #2
7,257.1	6,782.8	-417.9	-454.2	End of Build



PETROLEUM DEVELOPMENT CORP Weld County CO

SEC.1-T5N-R65W

LDS 5N65W1U Pad Sec.1-T5N-R65W

LDS 1V-214

Wellbore #1

Plan #2 (4-30-15)

Anticollision Report

30 April, 2015



Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	Offset Datum

Reference	Plan #2 (4-30-15)
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria
Interpolation Method:	MD Interval 100.0ft
Depth Range:	Unlimited
Results Limited by:	Maximum center-center distance of 1,000.0ft
Warning Levels Evaluated at:	2.00 Sigma
Error Model:	ISCWSA
Scan Method:	Closest Approach 3D
Error Surface:	Elliptical Conic

Survey Tool Program		Date	4/30/2015		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	13,884.5	Plan #2 (4-30-15) (Wellbore #1)	MWD	MWD - Standard	

Summary						
Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Separation Factor	Warning
Existing Wells Sec.1-T5N-R65W						
BJB 4 (Exist.) - Wellbore #1 - Wellbore #1	7,457.1	6,767.1	323.2	161.4	1.997	CC, ES, SF
BJB 5 (Exist.) - Wellbore #1 - Wellbore #1	7,688.9	6,769.8	280.6	236.1	6.309	CC
BJB 5 (Exist.) - Wellbore #1 - Wellbore #1	7,700.0	6,769.5	280.8	236.1	6.276	ES, SF
BJB 6I (Exist.) - Wellbore #1 - Wellbore #1	9,021.2	6,911.3	392.6	307.9	4.633	CC, ES
BJB 6I (Exist.) - Wellbore #1 - Wellbore #1	9,100.0	6,911.5	400.5	313.6	4.608	SF
Gatewood 3-1 (Exist.) - Wellbore #1 - Wellbore #1	9,572.9	6,746.6	294.2	77.0	1.354	Level 3, CC, ES, SF
Gatewood 4-1 (Exist.) - Wellbore #1 - Wellbore #1	11,251.6	6,738.0	327.3	63.6	1.241	Level 2, CC, ES, SF
Gatewood 5 (Exist.) - Wellbore #1 - Wellbore #1	10,422.1	6,743.2	346.9	106.2	1.441	Level 3, CC, ES, SF
Noffsinger 1 (P&A) - Wellbore #1 - Wellbore #1	7,094.1	6,799.9	235.8	80.6	1.519	CC
Noffsinger 1 (P&A) - Wellbore #1 - Wellbore #1	7,100.0	6,801.1	235.9	80.5	1.519	ES, SF
Existing Wells Sec.2-T5N-R65W						
Frudden 1 (Exist.) - Wellbore #1 - Wellbore #1	12,398.2	6,738.6	258.1	-46.1	0.848	Level 1, CC
Frudden 1 (Exist.) - Wellbore #1 - Wellbore #1	12,400.0	6,738.6	258.1	-46.1	0.848	Level 1, ES, SF
LDS 5N65W1U Pad Sec.1-T5N-R65W						
LDS 1U-234 - Wellbore #1 - Plan #2 (4-13-15)	1,000.0	1,001.0	57.9	53.6	13.544	CC, ES
LDS 1U-234 - Wellbore #1 - Plan #2 (4-13-15)	13,885.3	13,869.2	521.1	117.8	1.292	Level 3, SF
LDS 1U-304 - Wellbore #1 - Plan #2 (4-13-15)	1,000.0	1,002.0	89.1	84.8	20.837	CC, ES
LDS 1U-304 - Wellbore #1 - Plan #2 (4-13-15)	13,885.3	13,954.6	747.8	344.8	1.855	SF
LDS 1V-204 - Wellbore #1 - Plan #2 (4-15-15)	200.0	199.0	60.5	59.8	90.054	CC, ES
LDS 1V-204 - Wellbore #1 - Plan #2 (4-15-15)	13,885.3	13,911.7	480.9	76.2	1.188	Level 2, SF
LDS 1V-304 - Wellbore #1 - Plan #2 (4-13-15)	400.0	400.0	31.2	29.6	19.836	CC
LDS 1V-304 - Wellbore #1 - Plan #2 (4-13-15)	13,885.3	13,939.7	219.1	-171.6	0.561	Level 1, ES, SF
LDS 1V-314 - Wellbore #1 - Plan #2 (4-30-15)	1,000.0	1,000.0	29.3	25.0	6.856	CC
LDS 1V-314 - Wellbore #1 - Plan #2 (4-30-15)	13,885.3	13,959.9	201.3	-181.1	0.526	Level 1, ES, SF
Noffsinger Pad Sec.2-T5N-R65W						
Noffsinger 2C (Vert.) - Wellbore #1 - Design #1	12,868.1	6,742.9	98.6	-90.5	0.522	Level 1, CC, ES, SF
Noffsinger 2RD - Wellbore #1 - Wellbore #1	13,026.1	6,851.8	885.1	691.4	4.569	CC, ES
Noffsinger 2RD - Wellbore #1 - Wellbore #1	13,100.0	6,849.0	888.2	692.4	4.536	SF
Noffsinger 2SD - Wellbore #1 - Wellbore #1						Out of range
Noffsinger 2VD - Wellbore #1 - Wellbore #1	11,819.0	6,883.0	347.9	180.4	2.076	CC, ES, SF
Noffsinger 31-2D - Wellbore #1 - Wellbore #1	13,715.8	6,851.3	293.3	75.4	1.346	Level 3, CC, ES, SF
Noffsinger 32-2D - Wellbore #1 - Wellbore #1	13,736.5	6,868.9	966.5	747.0	4.404	CC, ES
Noffsinger 32-2D - Wellbore #1 - Wellbore #1	13,800.0	6,868.6	968.5	747.3	4.378	SF

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	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
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	-98.24	-98.24	-94.7	-654.2	661.2				
100.0	100.0	86.0	86.0	0.1	1.7	-98.24	-98.24	-94.7	-654.2	661.0	659.2	1.83	360.706	
200.0	200.0	186.0	186.0	0.3	3.7	-98.24	-98.24	-94.7	-654.2	661.0	657.0	4.06	162.920	
300.0	300.0	286.0	286.0	0.6	5.7	-98.24	-98.24	-94.7	-654.2	661.0	654.7	6.28	105.223	
400.0	400.0	386.0	386.0	0.8	7.7	-98.24	-98.24	-94.7	-654.2	661.0	652.5	8.51	77.705	
500.0	500.0	486.0	486.0	1.0	9.7	-98.24	-98.24	-94.7	-654.2	661.0	650.3	10.73	61.596	
600.0	600.0	586.0	586.0	1.2	11.7	-98.24	-98.24	-94.7	-654.2	661.0	648.1	12.96	51.019	
700.0	700.0	686.0	686.0	1.5	13.7	-98.24	-98.24	-94.7	-654.2	661.0	645.8	15.18	43.542	
800.0	800.0	786.0	786.0	1.7	15.7	-98.24	-98.24	-94.7	-654.2	661.0	643.6	17.41	37.977	
900.0	900.0	886.0	886.0	1.9	17.7	-98.24	-98.24	-94.7	-654.2	661.0	641.4	19.63	33.673	
1,000.0	1,000.0	986.0	986.0	2.1	19.7	-98.24	-98.24	-94.7	-654.2	661.0	639.2	21.86	30.245	
1,100.0	1,100.0	1,086.0	1,086.0	2.3	21.7	118.95	118.95	-94.7	-654.2	661.4	637.4	24.05	27.499	
1,200.0	1,200.0	1,186.0	1,186.0	2.5	23.7	119.14	119.14	-94.7	-654.2	662.7	636.5	26.23	25.266	
1,300.0	1,299.9	1,285.9	1,285.9	2.7	25.7	119.45	119.45	-94.7	-654.2	664.9	636.4	28.41	23.401	
1,400.0	1,399.7	1,385.7	1,385.7	2.9	27.7	119.88	119.88	-94.7	-654.2	667.9	637.3	30.60	21.829	
1,500.0	1,499.4	1,485.4	1,485.4	3.1	29.7	120.42	120.42	-94.7	-654.2	671.8	639.0	32.79	20.492	
1,600.0	1,598.9	1,584.9	1,584.9	3.3	31.7	121.08	121.08	-94.7	-654.2	676.7	641.8	34.98	19.348	
1,700.0	1,698.3	1,684.3	1,684.3	3.6	33.7	121.84	121.84	-94.7	-654.2	682.7	645.5	37.17	18.365	
1,800.0	1,797.5	1,783.5	1,783.5	3.9	35.7	122.70	122.70	-94.7	-654.2	689.4	650.0	39.39	17.501	
1,900.0	1,896.7	1,882.7	1,882.7	4.1	37.7	123.56	123.56	-94.7	-654.2	696.2	654.6	41.62	16.729	
2,000.0	1,995.9	1,981.9	1,981.9	4.4	39.6	124.41	124.41	-94.7	-654.2	703.3	659.4	43.85	16.037	
2,100.0	2,095.1	2,081.1	2,081.1	4.7	41.6	125.24	125.24	-94.7	-654.2	710.4	664.4	46.09	15.414	
2,200.0	2,194.3	2,180.3	2,180.3	5.0	43.6	126.05	126.05	-94.7	-654.2	717.8	669.4	48.33	14.851	
2,300.0	2,293.6	2,279.6	2,279.6	5.3	45.6	126.84	126.84	-94.7	-654.2	725.2	674.7	50.57	14.340	
2,400.0	2,392.8	2,378.8	2,378.8	5.6	47.6	127.62	127.62	-94.7	-654.2	732.8	680.0	52.82	13.875	
2,500.0	2,492.0	2,478.0	2,478.0	5.9	49.6	128.38	128.38	-94.7	-654.2	740.6	685.5	55.06	13.450	
2,600.0	2,591.2	2,577.2	2,577.2	6.2	51.5	129.13	129.13	-94.7	-654.2	748.4	691.1	57.31	13.060	
2,700.0	2,690.4	2,676.4	2,676.4	6.5	53.5	129.86	129.86	-94.7	-654.2	756.4	696.9	59.55	12.702	
2,800.0	2,789.6	2,775.6	2,775.6	6.8	55.5	130.58	130.58	-94.7	-654.2	764.5	702.7	61.80	12.372	
2,900.0	2,888.9	2,874.9	2,874.9	7.1	57.5	131.28	131.28	-94.7	-654.2	772.7	708.7	64.04	12.067	
3,000.0	2,988.1	2,974.1	2,974.1	7.4	59.5	131.96	131.96	-94.7	-654.2	781.1	714.8	66.28	11.784	
3,100.0	3,087.3	3,073.3	3,073.3	7.8	61.5	132.63	132.63	-94.7	-654.2	789.5	721.0	68.53	11.522	
3,200.0	3,186.5	3,172.5	3,172.5	8.1	63.5	133.29	133.29	-94.7	-654.2	798.1	727.3	70.77	11.278	
3,300.0	3,285.7	3,271.7	3,271.7	8.4	65.4	133.93	133.93	-94.7	-654.2	806.7	733.7	73.01	11.050	
3,400.0	3,384.9	3,370.9	3,370.9	8.7	67.4	134.56	134.56	-94.7	-654.2	815.5	740.3	75.25	10.838	
3,500.0	3,484.1	3,470.1	3,470.1	9.0	69.4	135.18	135.18	-94.7	-654.2	824.4	746.9	77.49	10.639	
3,600.0	3,583.4	3,569.4	3,569.4	9.4	71.4	135.78	135.78	-94.7	-654.2	833.3	753.6	79.72	10.452	
3,700.0	3,682.6	3,668.6	3,668.6	9.7	73.4	136.38	136.38	-94.7	-654.2	842.3	760.4	81.96	10.277	
3,800.0	3,781.8	3,767.8	3,767.8	10.0	75.4	136.95	136.95	-94.7	-654.2	851.5	767.3	84.20	10.113	
3,900.0	3,881.0	3,867.0	3,867.0	10.3	77.3	137.52	137.52	-94.7	-654.2	860.7	774.3	86.43	9.958	
4,000.0	3,980.2	3,966.2	3,966.2	10.7	79.3	138.07	138.07	-94.7	-654.2	870.0	781.3	88.66	9.812	
4,100.0	4,079.4	4,065.4	4,065.4	11.0	81.3	138.62	138.62	-94.7	-654.2	879.3	788.4	90.90	9.674	
4,200.0	4,178.7	4,164.7	4,164.7	11.3	83.3	139.15	139.15	-94.7	-654.2	888.8	795.7	93.13	9.544	
4,300.0	4,277.9	4,263.9	4,263.9	11.6	85.3	139.67	139.67	-94.7	-654.2	898.3	803.0	95.36	9.420	
4,400.0	4,377.1	4,363.1	4,363.1	12.0	87.3	140.18	140.18	-94.7	-654.2	907.9	810.3	97.59	9.303	
4,500.0	4,476.3	4,462.3	4,462.3	12.3	89.2	140.67	140.67	-94.7	-654.2	917.6	817.8	99.82	9.193	
4,600.0	4,575.5	4,561.5	4,561.5	12.6	91.2	141.16	141.16	-94.7	-654.2	927.3	825.3	102.05	9.087	
4,700.0	4,674.7	4,660.7	4,660.7	12.9	93.2	141.64	141.64	-94.7	-654.2	937.1	832.8	104.27	8.987	
4,800.0	4,774.0	4,760.0	4,760.0	13.3	95.2	142.11	142.11	-94.7	-654.2	947.0	840.5	106.50	8.892	
4,900.0	4,873.2	4,859.2	4,859.2	13.6	97.2	142.57	142.57	-94.7	-654.2	956.9	848.2	108.72	8.801	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	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		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
5,000.0	4,972.4	4,958.4	4,958.4	13.9	99.2	143.02	-94.7	-654.2	966.9	855.9	110.95	8.715	
5,100.0	5,071.6	5,057.6	5,057.6	14.2	101.2	143.45	-94.7	-654.2	976.9	863.8	113.17	8.632	
5,200.0	5,170.8	5,156.8	5,156.8	14.6	103.1	143.89	-94.7	-654.2	987.0	871.6	115.39	8.554	
5,300.0	5,270.0	5,256.0	5,256.0	14.9	105.1	144.31	-94.7	-654.2	997.2	879.6	117.61	8.478	
6,300.0	6,264.1	6,250.1	6,250.1	16.5	125.0	20.15	-94.7	-654.2	984.7	851.7	133.06	7.401	
6,400.0	6,356.4	6,342.4	6,342.4	16.5	126.8	22.00	-94.7	-654.2	948.8	819.7	129.05	7.352	
6,500.0	6,443.0	6,429.0	6,429.0	16.5	128.6	24.77	-94.7	-654.2	902.0	778.2	123.76	7.288	
6,600.0	6,522.3	6,508.3	6,508.3	16.4	130.2	28.81	-94.7	-654.2	845.5	727.1	118.40	7.141	
6,700.0	6,593.0	6,579.0	6,579.0	16.4	131.6	34.58	-94.7	-654.2	780.7	665.5	115.22	6.776	
6,800.0	6,653.9	6,639.9	6,639.9	16.4	132.8	42.64	-94.7	-654.2	709.3	592.0	117.37	6.043	
6,900.0	6,703.9	6,689.9	6,689.9	16.6	133.8	53.26	-94.7	-654.2	633.6	506.8	126.73	4.999	
7,000.0	6,742.2	6,728.2	6,728.2	17.7	134.6	65.73	-94.7	-654.2	556.2	416.0	140.15	3.968	
7,100.0	6,768.1	6,754.1	6,754.1	19.3	135.1	77.84	-94.7	-654.2	480.9	330.0	150.91	3.187	
7,200.0	6,781.2	6,767.2	6,767.2	21.2	135.3	87.00	-94.7	-654.2	413.0	256.8	156.17	2.644	
7,300.0	6,782.5	6,768.5	6,768.5	23.2	135.4	90.24	-94.7	-654.2	359.4	200.9	158.44	2.268	
7,400.0	6,781.6	6,767.6	6,767.6	25.3	135.4	90.09	-94.7	-654.2	328.2	167.7	160.55	2.044	
7,457.1	6,781.1	6,767.1	6,767.1	26.6	135.3	90.00	-94.7	-654.2	323.2	161.4	161.83	1.997 CC, ES, SF	
7,500.0	6,780.7	6,766.7	6,766.7	27.6	135.3	89.93	-94.7	-654.2	326.1	163.3	162.79	2.003	
7,600.0	6,779.8	6,765.8	6,765.8	29.9	135.3	89.78	-94.7	-654.2	353.4	188.3	165.12	2.140	
7,700.0	6,779.0	6,765.0	6,765.0	32.4	135.3	89.62	-94.7	-654.2	404.3	236.8	167.52	2.414	
7,800.0	6,778.1	6,764.1	6,764.1	34.8	135.3	89.47	-94.7	-654.2	471.2	301.3	169.97	2.772	
7,900.0	6,777.2	6,763.2	6,763.2	37.4	135.3	89.31	-94.7	-654.2	548.3	375.8	172.48	3.179	
8,000.0	6,776.4	6,762.4	6,762.4	39.9	135.2	89.16	-94.7	-654.2	631.8	456.8	175.02	3.610	
8,100.0	6,775.5	6,761.5	6,761.5	42.5	135.2	89.01	-94.7	-654.2	719.6	542.0	177.59	4.052	
8,200.0	6,774.6	6,760.6	6,760.6	45.1	135.2	88.85	-94.7	-654.2	810.2	630.0	180.18	4.496	
8,300.0	6,773.7	6,759.7	6,759.7	47.8	135.2	88.70	-94.7	-654.2	902.7	720.0	182.80	4.939	
8,400.0	6,772.9	6,758.9	6,758.9	50.4	135.2	88.54	-94.7	-654.2	996.8	811.3	185.43	5.375	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	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	
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)			
6,700.0	6,593.0	6,597.9	6,596.3	16.4	12.1	-24.61	-698.6	-888.7	986.0	964.1	21.99	44.844		
6,800.0	6,653.9	6,657.6	6,656.0	16.4	12.3	-30.84	-698.6	-887.8	909.5	887.9	21.62	42.064		
6,900.0	6,703.9	6,706.3	6,704.7	16.6	12.4	-40.06	-698.6	-887.1	826.9	804.1	22.80	36.266		
7,000.0	6,742.2	6,743.2	6,741.6	17.7	12.5	-53.11	-698.6	-886.5	740.2	714.2	26.07	28.396		
7,100.0	6,768.1	6,767.7	6,766.1	19.3	12.5	-69.26	-698.6	-886.1	651.6	621.2	30.38	21.445		
7,200.0	6,781.2	6,779.3	6,777.7	21.2	12.5	-84.95	-698.6	-886.0	563.7	530.1	33.60	16.776		
7,300.0	6,782.5	6,779.0	6,777.4	23.2	12.5	-91.91	-698.6	-886.0	479.6	444.0	35.55	13.488		
7,400.0	6,781.6	6,776.7	6,775.1	25.3	12.5	-91.43	-698.6	-886.0	402.8	365.1	37.70	10.684		
7,500.0	6,780.7	6,774.3	6,772.7	27.6	12.5	-90.94	-698.6	-886.0	338.3	298.3	39.96	8.465		
7,600.0	6,779.8	6,771.9	6,770.3	29.9	12.5	-90.46	-698.6	-886.1	294.4	252.1	42.32	6.956		
7,688.9	6,779.1	6,769.8	6,768.2	32.1	12.5	-90.03	-698.6	-886.1	280.6	236.1	44.48	6.309 CC		
7,700.0	6,779.0	6,769.5	6,767.9	32.4	12.5	-89.97	-698.6	-886.1	280.8	236.1	44.75	6.276 ES, SF		
7,800.0	6,778.1	6,767.2	6,765.6	34.8	12.5	-89.49	-698.6	-886.1	301.8	254.6	47.23	6.390		
7,900.0	6,777.2	6,764.8	6,763.2	37.4	12.5	-89.01	-698.6	-886.2	351.1	301.3	49.76	7.056		
8,000.0	6,776.4	6,762.4	6,760.8	39.9	12.5	-88.52	-698.6	-886.2	418.8	366.5	52.32	8.006		
8,100.0	6,775.5	6,760.1	6,758.5	42.5	12.5	-88.04	-698.6	-886.2	497.6	442.7	54.90	9.063		
8,200.0	6,774.6	6,757.7	6,756.1	45.1	12.5	-87.56	-698.6	-886.3	582.9	525.4	57.51	10.135		
8,300.0	6,773.7	6,755.3	6,753.7	47.8	12.5	-87.07	-698.6	-886.3	672.2	612.1	60.13	11.179		
8,400.0	6,772.9	6,753.0	6,751.4	50.4	12.5	-86.59	-698.6	-886.4	764.2	701.5	62.76	12.176		
8,500.0	6,772.0	6,750.6	6,749.0	53.1	12.5	-86.11	-698.6	-886.4	858.0	792.6	65.41	13.118		
8,600.0	6,771.1	6,748.2	6,746.6	55.8	12.5	-85.63	-698.6	-886.4	953.0	885.0	68.06	14.004		

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	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	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)				
8,200.0	6,774.6	6,909.7	6,755.5	45.1	22.4	-89.71	-810.6	-2,218.3	910.3	847.6	62.65	14.530			
8,300.0	6,773.7	6,909.9	6,755.6	47.8	22.4	-89.74	-810.6	-2,218.3	821.2	755.9	65.29	12.578			
8,400.0	6,772.9	6,910.1	6,755.8	50.4	22.4	-89.76	-810.6	-2,218.3	734.9	667.0	67.95	10.815			
8,500.0	6,772.0	6,910.3	6,756.0	53.1	22.4	-89.79	-810.6	-2,218.3	652.6	581.9	70.63	9.240			
8,600.0	6,771.1	6,910.5	6,756.2	55.8	22.4	-89.82	-810.6	-2,218.3	575.8	502.5	73.32	7.854			
8,700.0	6,770.2	6,910.7	6,756.4	58.5	22.4	-89.85	-810.6	-2,218.3	507.3	431.3	76.02	6.674			
8,800.0	6,769.4	6,910.9	6,756.6	61.2	22.4	-89.87	-810.6	-2,218.3	450.7	372.0	78.73	5.725			
8,900.0	6,768.5	6,911.1	6,756.8	63.9	22.4	-89.90	-810.6	-2,218.3	410.9	329.5	81.45	5.045			
9,000.0	6,767.6	6,911.3	6,757.0	66.7	22.4	-89.93	-810.6	-2,218.3	393.2	309.0	84.17	4.672			
9,021.2	6,767.4	6,911.3	6,757.0	67.2	22.4	-89.94	-810.6	-2,218.3	392.6	307.9	84.75	4.633 CC, ES			
9,100.0	6,766.8	6,911.5	6,757.2	69.4	22.4	-89.96	-810.6	-2,218.3	400.5	313.6	86.91	4.608 SF			
9,200.0	6,765.9	6,911.7	6,757.4	72.1	22.4	-89.99	-810.6	-2,218.3	431.4	341.8	89.65	4.813			
9,300.0	6,765.0	6,911.9	6,757.6	74.9	22.4	-90.03	-810.6	-2,218.3	481.5	389.2	92.39	5.212			
9,400.0	6,764.1	6,912.1	6,757.8	77.6	22.4	-90.06	-810.6	-2,218.3	545.6	450.4	95.14	5.734			
9,500.0	6,763.3	6,912.3	6,758.1	80.4	22.4	-90.09	-810.6	-2,218.3	619.2	521.3	97.89	6.325			
9,600.0	6,762.4	6,912.6	6,758.3	83.1	22.4	-90.12	-810.6	-2,218.3	699.4	598.7	100.65	6.949			
9,700.0	6,761.5	6,912.8	6,758.5	85.9	22.4	-90.16	-810.6	-2,218.3	784.2	680.8	103.41	7.583			
9,800.0	6,760.7	6,913.1	6,758.8	88.6	22.4	-90.19	-810.6	-2,218.3	872.2	766.0	106.17	8.215			
9,900.0	6,759.8	6,913.3	6,759.0	91.4	22.4	-90.23	-810.6	-2,218.3	962.5	853.6	108.94	8.835			

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	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
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)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
8,700.0	6,770.2	6,754.2	6,754.2	58.5	135.1	91.48	91.48	-123.7	-2,769.9	921.1	727.7	193.45	4.762	
8,800.0	6,769.4	6,753.4	6,753.4	61.2	135.1	91.31	91.31	-123.7	-2,769.9	827.0	630.8	196.15	4.216	
8,900.0	6,768.5	6,752.5	6,752.5	63.9	135.1	91.14	91.14	-123.7	-2,769.9	734.4	535.5	198.86	3.693	
9,000.0	6,767.6	6,751.6	6,751.6	66.7	135.0	90.97	90.97	-123.7	-2,769.9	644.0	442.4	201.58	3.195	
9,100.0	6,766.8	6,750.8	6,750.8	69.4	135.0	90.80	90.80	-123.7	-2,769.9	556.9	352.6	204.30	2.726	
9,200.0	6,765.9	6,749.9	6,749.9	72.1	135.0	90.63	90.63	-123.7	-2,769.9	475.0	267.9	207.03	2.294	
9,300.0	6,765.0	6,749.0	6,749.0	74.9	135.0	90.46	90.46	-123.7	-2,769.9	401.3	191.5	209.76	1.913	
9,400.0	6,764.1	6,748.1	6,748.1	77.6	135.0	90.29	90.29	-123.7	-2,769.9	341.3	128.8	212.49	1.606	
9,500.0	6,763.3	6,747.3	6,747.3	80.4	134.9	90.12	90.12	-123.7	-2,769.9	303.1	87.9	215.23	1.408	Level 3
9,572.9	6,762.6	6,746.6	6,746.6	82.4	134.9	90.00	90.00	-123.7	-2,769.9	294.2	77.0	217.23	1.354	Level 3, CC, ES, SF
9,600.0	6,762.4	6,746.4	6,746.4	83.1	134.9	89.95	89.95	-123.7	-2,769.9	295.5	77.5	217.97	1.356	Level 3
9,700.0	6,761.5	6,745.5	6,745.5	85.9	134.9	89.78	89.78	-123.7	-2,769.9	320.5	99.8	220.71	1.452	Level 3
9,800.0	6,760.7	6,744.7	6,744.7	88.6	134.9	89.61	89.61	-123.7	-2,769.9	371.7	148.2	223.45	1.663	
9,900.0	6,759.8	6,743.8	6,743.8	91.4	134.9	89.44	89.44	-123.7	-2,769.9	440.0	213.8	226.19	1.945	
10,000.0	6,758.9	6,742.9	6,742.9	94.2	134.9	89.27	89.27	-123.7	-2,769.9	518.6	289.7	228.93	2.265	
10,100.0	6,758.0	6,742.0	6,742.0	96.9	134.8	89.10	89.10	-123.7	-2,769.9	603.7	372.0	231.68	2.606	
10,200.0	6,757.2	6,741.2	6,741.2	99.7	134.8	88.93	88.93	-123.7	-2,769.9	692.7	458.3	234.42	2.955	
10,300.0	6,756.3	6,740.3	6,740.3	102.5	134.8	88.76	88.76	-123.7	-2,769.9	784.4	547.2	237.16	3.307	
10,400.0	6,755.4	6,739.4	6,739.4	105.3	134.8	88.59	88.59	-123.7	-2,769.9	877.9	638.0	239.90	3.659	
10,500.0	6,754.5	6,738.5	6,738.5	108.0	134.8	88.42	88.42	-123.7	-2,769.9	972.7	730.0	242.64	4.009	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Sec.1-T5N-R65W - Gatewood 4-1 (Exist.) - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 ft
Survey Program: 7045-UNKNOWN												Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,400.0	6,755.4	6,745.4	6,745.4	105.3	134.9	91.30	-90.7	-4,448.6	912.3	672.2	240.07	3.800	
10,500.0	6,754.5	6,744.5	6,744.5	108.0	134.9	91.15	-90.7	-4,448.6	819.7	576.9	242.84	3.376	
10,600.0	6,753.7	6,743.7	6,743.7	110.8	134.9	91.00	-90.7	-4,448.6	729.1	483.5	245.61	2.969	
10,700.0	6,752.8	6,742.8	6,742.8	113.6	134.9	90.84	-90.7	-4,448.6	641.3	393.0	248.39	2.582	
10,800.0	6,751.9	6,741.9	6,741.9	116.4	134.8	90.69	-90.7	-4,448.6	557.7	306.5	251.16	2.220	
10,900.0	6,751.1	6,741.1	6,741.1	119.2	134.8	90.54	-90.7	-4,448.6	480.3	226.4	253.93	1.892	
11,000.0	6,750.2	6,740.2	6,740.2	122.0	134.8	90.38	-90.7	-4,448.6	412.8	156.1	256.70	1.608	
11,100.0	6,749.3	6,739.3	6,739.3	124.7	134.8	90.23	-90.7	-4,448.6	360.7	101.2	259.47	1.390	Level 3
11,200.0	6,748.4	6,738.4	6,738.4	127.5	134.8	90.08	-90.7	-4,448.6	331.3	69.1	262.24	1.263	Level 3
11,251.6	6,748.0	6,738.0	6,738.0	129.0	134.8	90.00	-90.7	-4,448.6	327.3	63.6	263.67	1.241	Level 2, CC, ES, SF
11,300.0	6,747.6	6,737.6	6,737.6	130.3	134.8	89.93	-90.7	-4,448.6	330.8	65.8	265.01	1.248	Level 2
11,400.0	6,746.7	6,736.7	6,736.7	133.1	134.7	89.77	-90.7	-4,448.6	359.3	91.6	267.78	1.342	Level 3
11,500.0	6,745.8	6,735.8	6,735.8	135.9	134.7	89.62	-90.7	-4,448.6	410.9	140.3	270.55	1.519	
11,600.0	6,744.9	6,734.9	6,734.9	138.7	134.7	89.47	-90.7	-4,448.6	478.0	204.7	273.32	1.749	
11,700.0	6,744.1	6,734.1	6,734.1	141.5	134.7	89.31	-90.7	-4,448.6	555.1	279.0	276.08	2.011	
11,800.0	6,743.2	6,733.2	6,733.2	144.3	134.7	89.16	-90.7	-4,448.6	638.6	359.8	278.85	2.290	
11,900.0	6,742.3	6,732.3	6,732.3	147.1	134.6	89.01	-90.7	-4,448.6	726.3	444.7	281.61	2.579	
12,000.0	6,741.5	6,731.5	6,731.5	149.9	134.6	88.86	-90.7	-4,448.6	816.8	532.4	284.37	2.872	
12,100.0	6,740.6	6,730.6	6,730.6	152.7	134.6	88.70	-90.7	-4,448.6	909.3	622.2	287.13	3.167	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Sec.1-T5N-R65W - Gatewood 5 (Exist.) - Wellbore #1 - Wellbore #1												Offset Site Error: 0.0 ft	
Survey Program: 7123-UNKNOWN												Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
9,500.0	6,763.3	6,751.3	6,751.3	80.4	135.0	-91.33	-764.8	-3,619.1	985.1	769.9	215.23	4.577	
9,600.0	6,762.4	6,750.4	6,750.4	83.1	135.0	-91.18	-764.8	-3,619.1	892.2	674.2	217.99	4.093	
9,700.0	6,761.5	6,749.5	6,749.5	85.9	135.0	-91.04	-764.8	-3,619.1	801.0	580.3	220.74	3.629	
9,800.0	6,760.7	6,748.7	6,748.7	88.6	135.0	-90.90	-764.8	-3,619.1	712.2	488.7	223.50	3.187	
9,900.0	6,759.8	6,747.8	6,747.8	91.4	135.0	-90.75	-764.8	-3,619.1	626.8	400.5	226.26	2.770	
10,000.0	6,758.9	6,746.9	6,746.9	94.2	134.9	-90.61	-764.8	-3,619.1	546.3	317.3	229.02	2.385	
10,100.0	6,758.0	6,746.0	6,746.0	96.9	134.9	-90.46	-764.8	-3,619.1	473.3	241.5	231.78	2.042	
10,200.0	6,757.2	6,745.2	6,745.2	99.7	134.9	-90.32	-764.8	-3,619.1	411.9	177.3	234.54	1.756	
10,300.0	6,756.3	6,744.3	6,744.3	102.5	134.9	-90.18	-764.8	-3,619.1	367.7	130.4	237.31	1.550	
10,400.0	6,755.4	6,743.4	6,743.4	105.3	134.9	-90.03	-764.8	-3,619.1	347.6	107.5	240.07	1.448	Level 3
10,422.1	6,755.2	6,743.2	6,743.2	105.9	134.9	-90.00	-764.8	-3,619.1	346.9	106.2	240.68	1.441	Level 3, CC, ES, SF
10,500.0	6,754.5	6,742.5	6,742.5	108.0	134.9	-89.89	-764.8	-3,619.1	355.5	112.7	242.83	1.464	Level 3
10,600.0	6,753.7	6,741.7	6,741.7	110.8	134.8	-89.74	-764.8	-3,619.1	389.8	144.2	245.60	1.587	
10,700.0	6,752.8	6,740.8	6,740.8	113.6	134.8	-89.60	-764.8	-3,619.1	444.5	196.1	248.36	1.790	
10,800.0	6,751.9	6,739.9	6,739.9	116.4	134.8	-89.46	-764.8	-3,619.1	513.0	261.8	251.12	2.043	
10,900.0	6,751.1	6,739.1	6,739.1	119.2	134.8	-89.31	-764.8	-3,619.1	590.5	336.6	253.89	2.326	
11,000.0	6,750.2	6,738.2	6,738.2	122.0	134.8	-89.17	-764.8	-3,619.1	674.0	417.4	256.65	2.626	
11,100.0	6,749.3	6,737.3	6,737.3	124.7	134.7	-89.02	-764.8	-3,619.1	761.5	502.1	259.41	2.935	
11,200.0	6,748.4	6,736.4	6,736.4	127.5	134.7	-88.88	-764.8	-3,619.1	851.7	589.6	262.17	3.249	
11,300.0	6,747.6	6,735.6	6,735.6	130.3	134.7	-88.73	-764.8	-3,619.1	943.9	679.0	264.93	3.563	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	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	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
0.0	0.0	33.0	33.0	0.0	0.7	-121.93	-182.2	-292.3	344.4	343.8	0.66	521.685	
100.0	100.0	133.0	133.0	0.1	2.7	-121.93	-182.2	-292.3	344.4	341.6	2.77	124.222	
200.0	200.0	233.0	233.0	0.3	4.7	-121.93	-182.2	-292.3	344.4	339.4	5.00	68.920	
300.0	300.0	333.0	333.0	0.6	6.7	-121.93	-182.2	-292.3	344.4	337.2	7.22	47.689	
400.0	400.0	433.0	433.0	0.8	8.7	-121.93	-182.2	-292.3	344.4	335.0	9.45	36.458	
500.0	500.0	533.0	533.0	1.0	10.7	-121.93	-182.2	-292.3	344.4	332.7	11.67	29.509	
600.0	600.0	633.0	633.0	1.2	12.7	-121.93	-182.2	-292.3	344.4	330.5	13.90	24.785	
700.0	700.0	733.0	733.0	1.5	14.7	-121.93	-182.2	-292.3	344.4	328.3	16.12	21.364	
800.0	800.0	833.0	833.0	1.7	16.7	-121.93	-182.2	-292.3	344.4	326.1	18.35	18.773	
900.0	900.0	933.0	933.0	1.9	18.7	-121.93	-182.2	-292.3	344.4	323.8	20.57	16.743	
1,000.0	1,000.0	1,033.0	1,033.0	2.1	20.7	-121.93	-182.2	-292.3	344.4	321.6	22.80	15.109	
1,100.0	1,100.0	1,133.0	1,133.0	2.3	22.7	95.34	-182.2	-292.3	344.5	319.5	24.99	13.783	
1,200.0	1,200.0	1,233.0	1,233.0	2.5	24.7	95.77	-182.2	-292.3	344.7	317.6	27.17	12.687	
1,300.0	1,299.9	1,332.9	1,332.9	2.7	26.7	96.49	-182.2	-292.3	345.2	315.9	29.36	11.757	
1,400.0	1,399.7	1,432.7	1,432.7	2.9	28.7	97.48	-182.2	-292.3	346.0	314.4	31.56	10.963	
1,500.0	1,499.4	1,532.4	1,532.4	3.1	30.6	98.75	-182.2	-292.3	347.1	313.3	33.76	10.280	
1,600.0	1,598.9	1,631.9	1,631.9	3.3	32.6	100.29	-182.2	-292.3	348.7	312.7	35.97	9.692	
1,700.0	1,698.3	1,731.3	1,731.3	3.6	34.6	102.07	-182.2	-292.3	350.9	312.7	38.20	9.186	
1,800.0	1,797.5	1,830.5	1,830.5	3.9	36.6	104.03	-182.2	-292.3	353.7	313.3	40.43	8.748	
1,900.0	1,896.7	1,929.7	1,929.7	4.1	38.6	105.96	-182.2	-292.3	357.0	314.3	42.68	8.365	
2,000.0	1,995.9	2,028.9	2,028.9	4.4	40.6	107.86	-182.2	-292.3	360.6	315.7	44.92	8.028	
2,100.0	2,095.1	2,128.1	2,128.1	4.7	42.6	109.71	-182.2	-292.3	364.7	317.5	47.17	7.731	
2,200.0	2,194.3	2,227.3	2,227.3	5.0	44.5	111.53	-182.2	-292.3	369.1	319.7	49.43	7.468	
2,300.0	2,293.6	2,326.6	2,326.6	5.3	46.5	113.30	-182.2	-292.3	373.9	322.2	51.68	7.235	
2,400.0	2,392.8	2,425.8	2,425.8	5.6	48.5	115.02	-182.2	-292.3	379.1	325.1	53.93	7.029	
2,500.0	2,492.0	2,525.0	2,525.0	5.9	50.5	116.70	-182.2	-292.3	384.6	328.4	56.18	6.845	
2,600.0	2,591.2	2,624.2	2,624.2	6.2	52.5	118.33	-182.2	-292.3	390.4	331.9	58.43	6.681	
2,700.0	2,690.4	2,723.4	2,723.4	6.5	54.5	119.91	-182.2	-292.3	396.5	335.8	60.68	6.534	
2,800.0	2,789.6	2,822.6	2,822.6	6.8	56.5	121.44	-182.2	-292.3	402.9	340.0	62.93	6.403	
2,900.0	2,888.9	2,921.9	2,921.9	7.1	58.4	122.93	-182.2	-292.3	409.6	344.4	65.17	6.285	
3,000.0	2,988.1	3,021.1	3,021.1	7.4	60.4	124.36	-182.2	-292.3	416.6	349.2	67.41	6.180	
3,100.0	3,087.3	3,120.3	3,120.3	7.8	62.4	125.75	-182.2	-292.3	423.8	354.1	69.65	6.085	
3,200.0	3,186.5	3,219.5	3,219.5	8.1	64.4	127.09	-182.2	-292.3	431.2	359.4	71.88	5.999	
3,300.0	3,285.7	3,318.7	3,318.7	8.4	66.4	128.39	-182.2	-292.3	438.9	364.8	74.11	5.922	
3,400.0	3,384.9	3,417.9	3,417.9	8.7	68.4	129.64	-182.2	-292.3	446.8	370.5	76.34	5.853	
3,500.0	3,484.1	3,517.1	3,517.1	9.0	70.3	130.84	-182.2	-292.3	454.9	376.4	78.57	5.790	
3,600.0	3,583.4	3,616.4	3,616.4	9.4	72.3	132.01	-182.2	-292.3	463.3	382.5	80.80	5.733	
3,700.0	3,682.6	3,715.6	3,715.6	9.7	74.3	133.13	-182.2	-292.3	471.7	388.7	83.02	5.682	
3,800.0	3,781.8	3,814.8	3,814.8	10.0	76.3	134.22	-182.2	-292.3	480.4	395.2	85.24	5.636	
3,900.0	3,881.0	3,914.0	3,914.0	10.3	78.3	135.26	-182.2	-292.3	489.2	401.8	87.46	5.594	
4,000.0	3,980.2	4,013.2	4,013.2	10.7	80.3	136.27	-182.2	-292.3	498.2	408.6	89.68	5.556	
4,100.0	4,079.4	4,112.4	4,112.4	11.0	82.2	137.24	-182.2	-292.3	507.4	415.5	91.90	5.521	
4,200.0	4,178.7	4,211.7	4,211.7	11.3	84.2	138.18	-182.2	-292.3	516.7	422.5	94.11	5.490	
4,300.0	4,277.9	4,310.9	4,310.9	11.6	86.2	139.08	-182.2	-292.3	526.1	429.7	96.32	5.461	
4,400.0	4,377.1	4,410.1	4,410.1	12.0	88.2	139.96	-182.2	-292.3	535.6	437.1	98.54	5.436	
4,500.0	4,476.3	4,509.3	4,509.3	12.3	90.2	140.80	-182.2	-292.3	545.3	444.5	100.75	5.412	
4,600.0	4,575.5	4,608.5	4,608.5	12.6	92.2	141.61	-182.2	-292.3	555.0	452.1	102.96	5.391	
4,700.0	4,674.7	4,707.7	4,707.7	12.9	94.2	142.40	-182.2	-292.3	564.9	459.8	105.16	5.372	
4,800.0	4,774.0	4,807.0	4,807.0	13.3	96.1	143.16	-182.2	-292.3	574.9	467.5	107.37	5.354	
4,900.0	4,873.2	4,906.2	4,906.2	13.6	98.1	143.89	-182.2	-292.3	585.0	475.4	109.58	5.338	
5,000.0	4,972.4	5,005.4	5,005.4	13.9	100.1	144.59	-182.2	-292.3	595.2	483.4	111.79	5.324	

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	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	5,071.6	5,104.6	5,104.6	14.2	102.1	145.28		-182.2	-292.3	605.4	491.4	113.99	5.311	
5,200.0	5,170.8	5,203.8	5,203.8	14.6	104.1	145.94		-182.2	-292.3	615.8	499.6	116.20	5.299	
5,300.0	5,270.0	5,303.0	5,303.0	14.9	106.1	146.58		-182.2	-292.3	626.2	507.8	118.40	5.289	
5,400.0	5,369.3	5,402.3	5,402.3	15.2	108.0	147.22		-182.2	-292.3	636.6	515.9	120.68	5.275	
5,500.0	5,468.8	5,501.8	5,501.8	15.4	110.0	147.78		-182.2	-292.3	644.8	521.7	123.10	5.238	
5,600.0	5,568.6	5,601.6	5,601.6	15.6	112.0	148.13		-182.2	-292.3	650.2	524.8	125.42	5.184	
5,700.0	5,668.5	5,701.5	5,701.5	15.8	114.0	148.29		-182.2	-292.3	652.6	525.0	127.65	5.113	
5,800.0	5,768.5	5,801.5	5,801.5	15.9	116.0	-68.83		-182.2	-292.3	652.8	521.6	131.13	4.978	
5,900.0	5,868.5	5,901.5	5,901.5	16.1	118.0	-68.83		-182.2	-292.3	652.8	519.5	133.29	4.897	
6,000.0	5,968.5	6,001.5	6,001.5	16.2	120.0	-68.83		-182.2	-292.3	652.8	517.3	135.45	4.819	
6,100.0	6,068.5	6,101.5	6,101.5	16.4	122.0	21.27		-182.2	-292.3	651.3	515.2	136.04	4.787	
6,200.0	6,167.6	6,200.6	6,200.6	16.5	124.0	22.03		-182.2	-292.3	639.2	503.1	136.06	4.698	
6,300.0	6,264.1	6,297.1	6,297.1	16.5	125.9	23.66		-182.2	-292.3	615.3	481.2	134.10	4.588	
6,400.0	6,356.4	6,389.4	6,389.4	16.5	127.8	26.37		-182.2	-292.3	580.2	449.6	130.57	4.443	
6,500.0	6,443.0	6,476.0	6,476.0	16.5	129.5	30.56		-182.2	-292.3	534.9	408.5	126.43	4.231	
6,600.0	6,522.3	6,555.3	6,555.3	16.4	131.1	36.78		-182.2	-292.3	481.1	357.5	123.66	3.891	
6,700.0	6,593.0	6,626.0	6,626.0	16.4	132.5	45.70		-182.2	-292.3	421.0	295.7	125.32	3.359	
6,800.0	6,653.9	6,686.9	6,686.9	16.4	133.7	57.56		-182.2	-292.3	358.1	224.7	133.39	2.685	
6,900.0	6,703.9	6,736.9	6,736.9	16.6	134.7	71.03		-182.2	-292.3	298.5	154.0	144.46	2.066	
7,000.0	6,742.2	6,775.2	6,775.2	17.7	135.5	82.94		-182.2	-292.3	252.6	100.5	152.11	1.661	
7,094.1	6,766.9	6,799.9	6,799.9	19.2	136.0	90.00		-182.2	-292.3	235.8	80.6	155.19	1.519 CC	
7,100.0	6,768.1	6,801.1	6,801.1	19.3	136.0	90.28		-182.2	-292.3	235.9	80.5	155.31	1.519 ES, SF	
7,200.0	6,781.2	6,814.2	6,814.2	21.2	136.3	91.68		-182.2	-292.3	258.1	100.7	157.33	1.640	
7,300.0	6,782.5	6,815.5	6,815.5	23.2	136.3	89.57		-182.2	-292.3	312.3	153.0	159.36	1.960	
7,400.0	6,781.6	6,814.6	6,814.6	25.3	136.3	89.35		-182.2	-292.3	385.4	223.9	161.47	2.387	
7,500.0	6,780.7	6,813.7	6,813.7	27.6	136.3	89.14		-182.2	-292.3	468.5	304.8	163.69	2.862	
7,600.0	6,779.8	6,812.8	6,812.8	29.9	136.3	88.93		-182.2	-292.3	557.2	391.2	166.01	3.356	
7,700.0	6,779.0	6,812.0	6,812.0	32.4	136.2	88.72		-182.2	-292.3	649.2	480.7	168.40	3.855	
7,800.0	6,778.1	6,811.1	6,811.1	34.8	136.2	88.51		-182.2	-292.3	743.2	572.4	170.85	4.350	
7,900.0	6,777.2	6,810.2	6,810.2	37.4	136.2	88.29		-182.2	-292.3	838.6	665.3	173.34	4.838	
8,000.0	6,776.4	6,809.4	6,809.4	39.9	136.2	88.08		-182.2	-292.3	935.0	759.2	175.86	5.317	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	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
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)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
11,500.0	6,745.8	6,768.6	6,768.0	135.9	142.1	97.52	97.52	-160.4	-5,594.4	934.0	658.5	275.49	3.390	
11,600.0	6,744.9	6,765.2	6,764.6	138.7	142.2	96.78	96.78	-160.3	-5,594.5	838.4	559.6	278.84	3.007	
11,700.0	6,744.1	6,761.8	6,761.2	141.5	142.4	96.04	96.04	-160.3	-5,594.6	744.0	461.8	282.15	2.637	
11,800.0	6,743.2	6,758.5	6,757.9	144.3	142.5	95.30	95.30	-160.2	-5,594.6	651.1	365.7	285.43	2.281	
11,900.0	6,742.3	6,755.1	6,754.5	147.1	142.6	94.56	94.56	-160.2	-5,594.7	560.8	272.1	288.67	1.943	
12,000.0	6,741.5	6,751.8	6,751.2	149.9	142.8	93.82	93.82	-160.1	-5,594.8	474.3	182.4	291.86	1.625	
12,100.0	6,740.6	6,748.5	6,747.9	152.7	142.9	93.09	93.09	-160.1	-5,594.9	394.2	99.2	295.02	1.336	Level 3
12,200.0	6,739.7	6,745.2	6,744.6	155.4	143.0	92.35	92.35	-160.0	-5,595.0	325.3	27.2	298.13	1.091	Level 2
12,300.0	6,738.8	6,741.9	6,741.3	158.2	143.2	91.62	91.62	-160.0	-5,595.1	276.1	-25.1	301.20	0.917	Level 1
12,398.2	6,738.0	6,738.6	6,738.1	161.0	143.3	90.91	90.91	-159.9	-5,595.1	258.1	-46.1	304.16	0.848	Level 1, CC
12,400.0	6,738.0	6,738.6	6,738.0	161.0	143.3	90.89	90.89	-159.9	-5,595.1	258.1	-46.1	304.22	0.848	Level 1, ES, SF
12,500.0	6,737.1	6,735.3	6,734.7	163.8	143.4	90.16	90.16	-159.9	-5,595.2	277.4	-29.8	307.19	0.903	Level 1
12,600.0	6,736.2	6,732.0	6,731.4	166.6	143.6	89.44	89.44	-159.8	-5,595.3	327.6	17.4	310.12	1.056	Level 2
12,700.0	6,735.3	6,728.8	6,728.2	169.4	143.7	88.72	88.72	-159.7	-5,595.4	397.0	84.0	313.00	1.268	Level 3
12,800.0	6,734.5	6,725.5	6,724.9	172.2	143.8	88.00	88.00	-159.7	-5,595.4	477.4	161.6	315.83	1.512	
12,900.0	6,733.6	6,722.3	6,721.7	175.0	144.0	87.28	87.28	-159.6	-5,595.5	564.1	245.5	318.61	1.770	
13,000.0	6,732.7	6,719.0	6,718.5	177.8	144.1	86.57	86.57	-159.6	-5,595.6	654.5	333.2	321.34	2.037	
13,100.0	6,731.9	6,715.8	6,715.3	180.6	144.2	85.86	85.86	-159.5	-5,595.7	747.4	423.4	324.02	2.307	
13,200.0	6,731.0	6,712.6	6,712.0	183.4	144.3	85.15	85.15	-159.5	-5,595.8	841.9	515.3	326.65	2.577	
13,300.0	6,730.1	6,709.4	6,708.8	186.2	144.5	84.45	84.45	-159.4	-5,595.8	937.6	608.3	329.23	2.848	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	Offset Datum

Offset Design LDS 5N65W1U Pad Sec.1-T5N-R65W - LDS 1U-234 - Wellbore #1 - Plan #2 (4-13-15)													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
0.0	0.0	1.0	1.0	0.0	0.0	-46.18		40.1	-41.8	57.9	57.9	0.00	N/A	
100.0	100.0	101.0	101.0	0.1	0.1	-46.18		40.1	-41.8	57.9	57.6	0.23	254.921	
200.0	200.0	201.0	201.0	0.3	0.3	-46.18		40.1	-41.8	57.9	57.2	0.68	85.538	
300.0	300.0	301.0	301.0	0.6	0.6	-46.18		40.1	-41.8	57.9	56.7	1.13	51.391	
400.0	400.0	401.0	401.0	0.8	0.8	-46.18		40.1	-41.8	57.9	56.3	1.58	36.729	
500.0	500.0	501.0	501.0	1.0	1.0	-46.18		40.1	-41.8	57.9	55.8	2.03	28.576	
600.0	600.0	601.0	601.0	1.2	1.2	-46.18		40.1	-41.8	57.9	55.4	2.47	23.385	
700.0	700.0	701.0	701.0	1.5	1.5	-46.18		40.1	-41.8	57.9	54.9	2.92	19.790	
800.0	800.0	801.0	801.0	1.7	1.7	-46.18		40.1	-41.8	57.9	54.5	3.37	17.153	
900.0	900.0	901.0	901.0	1.9	1.9	-46.18		40.1	-41.8	57.9	54.0	3.82	15.136	
1,000.0	1,000.0	1,001.0	1,001.0	2.1	2.1	-46.18		40.1	-41.8	57.9	53.6	4.27	13.544 CC, ES	
1,100.0	1,100.0	1,101.0	1,101.0	2.3	2.4	171.08		40.1	-41.8	58.7	54.0	4.70	12.505	
1,200.0	1,200.0	1,201.0	1,201.0	2.5	2.6	171.45		40.1	-41.8	61.3	56.2	5.10	12.023	
1,300.0	1,299.9	1,300.9	1,300.9	2.7	2.8	172.01		40.1	-41.8	65.6	60.1	5.51	11.914	
1,400.0	1,399.7	1,400.7	1,400.7	2.9	3.0	172.68		40.1	-41.8	71.7	65.8	5.92	12.104	
1,500.0	1,499.4	1,500.4	1,500.4	3.1	3.3	173.39		40.1	-41.8	79.5	73.1	6.34	12.537	
1,600.0	1,598.9	1,599.9	1,599.9	3.3	3.5	174.09		40.1	-41.8	89.0	82.2	6.76	13.170	
1,700.0	1,698.3	1,699.3	1,699.3	3.6	3.7	174.75		40.1	-41.8	100.3	93.1	7.18	13.967	
1,800.0	1,797.5	1,798.5	1,798.5	3.9	3.9	175.33		40.1	-41.8	112.7	105.1	7.61	14.808	
1,900.0	1,896.7	1,897.7	1,897.7	4.1	4.2	175.79		40.1	-41.8	125.2	117.1	8.05	15.553	
2,000.0	1,995.9	1,996.9	1,996.9	4.4	4.4	176.18		40.1	-41.8	137.6	129.1	8.49	16.216	
2,100.0	2,095.1	2,096.1	2,096.1	4.7	4.6	176.49		40.1	-41.8	150.1	141.2	8.93	16.810	
2,200.0	2,194.3	2,195.3	2,195.3	5.0	4.8	176.76		40.1	-41.8	162.6	153.2	9.37	17.345	
2,300.0	2,293.6	2,294.6	2,294.6	5.3	5.0	176.99		40.1	-41.8	175.1	165.2	9.82	17.828	
2,400.0	2,392.8	2,393.8	2,393.8	5.6	5.3	177.19		40.1	-41.8	187.5	177.3	10.27	18.266	
2,500.0	2,492.0	2,493.0	2,493.0	5.9	5.5	177.37		40.1	-41.8	200.0	189.3	10.72	18.666	
2,600.0	2,591.2	2,593.9	2,593.9	6.2	5.7	177.71		40.2	-41.0	212.1	201.0	11.16	19.011	
2,700.0	2,690.4	2,695.1	2,695.1	6.5	5.9	178.41		40.6	-38.5	223.4	211.8	11.59	19.273	
2,800.0	2,789.6	2,796.4	2,796.3	6.8	6.1	179.44		41.4	-34.2	233.9	221.9	12.03	19.444	
2,900.0	2,888.9	2,897.7	2,897.4	7.1	6.3	-179.25		42.4	-28.2	243.6	231.2	12.47	19.538	
3,000.0	2,988.1	2,999.0	2,998.4	7.4	6.6	-177.68		43.8	-20.4	252.8	239.8	12.92	19.565	
3,100.0	3,087.3	3,100.2	3,099.1	7.8	6.8	-175.86		45.5	-10.8	261.4	248.0	13.38	19.536	
3,200.0	3,186.5	3,201.1	3,199.4	8.1	7.0	-173.81		47.4	0.5	269.5	255.7	13.85	19.462	
3,300.0	3,285.7	3,301.3	3,298.7	8.4	7.3	-171.57		49.7	13.2	277.5	263.2	14.34	19.357	
3,400.0	3,384.9	3,400.4	3,397.0	8.7	7.5	-169.42		51.9	26.3	285.8	270.9	14.84	19.262	
3,500.0	3,484.1	3,499.5	3,495.2	9.0	7.8	-167.39		54.2	39.3	294.4	279.1	15.35	19.182	
3,600.0	3,583.4	3,598.6	3,593.4	9.4	8.0	-165.48		56.5	52.3	303.4	287.5	15.87	19.115	
3,700.0	3,682.6	3,697.7	3,691.6	9.7	8.3	-163.68		58.7	65.3	312.7	296.3	16.41	19.060	
3,800.0	3,781.8	3,796.8	3,789.8	10.0	8.6	-161.98		61.0	78.3	322.3	305.3	16.95	19.014	
3,900.0	3,881.0	3,895.9	3,888.0	10.3	8.8	-160.38		63.3	91.3	332.2	314.7	17.50	18.977	
4,000.0	3,980.2	3,995.0	3,986.2	10.7	9.1	-158.87		65.5	104.3	342.3	324.2	18.06	18.947	
4,100.0	4,079.4	4,094.1	4,084.4	11.0	9.4	-157.45		67.8	117.3	352.6	334.0	18.63	18.924	
4,200.0	4,178.7	4,193.2	4,182.6	11.3	9.7	-156.11		70.1	130.3	363.1	343.9	19.21	18.907	
4,300.0	4,277.9	4,292.3	4,280.8	11.6	10.0	-154.85		72.4	143.3	373.9	354.1	19.79	18.895	
4,400.0	4,377.1	4,391.4	4,379.0	12.0	10.3	-153.66		74.6	156.3	384.7	364.4	20.37	18.887	
4,500.0	4,476.3	4,490.5	4,477.3	12.3	10.6	-152.53		76.9	169.3	395.8	374.8	20.96	18.884	
4,600.0	4,575.5	4,589.5	4,575.5	12.6	10.9	-151.47		79.2	182.3	407.0	385.4	21.55	18.884	
4,700.0	4,674.7	4,688.6	4,673.7	12.9	11.2	-150.46		81.4	195.4	418.3	396.2	22.15	18.887	
4,800.0	4,774.0	4,787.7	4,771.9	13.3	11.5	-149.50		83.7	208.4	429.8	407.0	22.75	18.893	
4,900.0	4,873.2	4,886.8	4,870.1	13.6	11.8	-148.60		86.0	221.4	441.3	418.0	23.35	18.901	
5,000.0	4,972.4	4,985.9	4,968.3	13.9	12.1	-147.74		88.2	234.4	453.0	429.0	23.95	18.911	

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	Offset Datum

Offset Design												LDS 5N65W1U Pad Sec.1-T5N-R65W - LDS 1U-234 - Wellbore #1 - Plan #2 (4-13-15)		Offset Site Error:		0.0 ft
Survey Program: 0-MWD												Offset Well Error:		0.0 ft		
Reference		Offset		Semi Major Axis			Distance						Warning			
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor				
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)					
5,100.0	5,071.6	5,085.0	5,066.5	14.2	12.4	-146.92	90.5	247.4	464.7	440.2	24.56	18.923				
5,200.0	5,170.8	5,184.1	5,164.7	14.6	12.7	-146.15	92.8	260.4	476.6	451.4	25.17	18.937				
5,300.0	5,270.0	5,283.2	5,262.9	14.9	13.0	-145.41	95.0	273.4	488.5	462.7	25.78	18.952				
5,400.0	5,369.3	5,382.3	5,361.1	15.2	13.3	-144.73	97.3	286.4	500.4	474.0	26.39	18.962				
5,500.0	5,468.8	5,482.7	5,460.7	15.4	13.6	-144.02	99.6	299.3	510.3	483.3	26.96	18.928				
5,600.0	5,568.6	5,585.1	5,562.6	15.6	13.8	-143.39	101.3	309.4	516.9	489.5	27.43	18.845				
5,700.0	5,668.5	5,688.1	5,665.3	15.8	14.1	-142.90	102.5	316.0	520.3	492.5	27.84	18.690				
5,800.0	5,768.5	5,791.3	5,768.5	15.9	14.2	0.28	103.0	319.0	520.9	493.3	27.59	18.883				
5,900.0	5,868.5	5,892.3	5,869.5	16.1	14.4	0.30	103.0	319.1	521.0	493.0	27.94	18.648				
6,000.0	5,968.5	5,992.3	5,969.5	16.2	14.6	0.30	103.0	319.1	521.0	492.7	28.31	18.404				
6,100.0	6,068.5	6,092.5	6,069.7	16.4	14.8	90.30	103.0	317.5	521.0	491.7	29.26	17.803				
6,200.0	6,167.6	6,192.9	6,169.1	16.5	14.9	90.30	103.0	304.5	521.0	491.5	29.45	17.693				
6,300.0	6,264.1	6,293.2	6,265.9	16.5	14.9	90.29	103.0	278.5	521.0	491.5	29.51	17.655				
6,400.0	6,356.4	6,393.5	6,358.6	16.5	14.9	90.27	103.0	240.0	521.0	491.4	29.52	17.649				
6,500.0	6,443.0	6,493.9	6,445.3	16.5	14.9	90.26	103.0	189.8	521.0	491.4	29.57	17.615				
6,600.0	6,522.3	6,594.2	6,524.7	16.4	15.1	90.23	103.0	128.7	521.0	491.1	29.82	17.469				
6,700.0	6,593.0	6,694.4	6,595.4	16.4	15.4	90.21	103.0	57.7	521.0	490.5	30.43	17.122				
6,800.0	6,653.9	6,794.6	6,656.2	16.4	15.9	90.17	103.0	-21.9	521.0	489.4	31.56	16.509				
6,900.0	6,703.9	6,894.8	6,706.1	16.6	16.8	90.14	103.0	-108.7	521.0	487.6	33.33	15.632				
7,000.0	6,742.2	6,995.0	6,744.1	17.7	18.0	90.11	103.0	-201.3	521.0	485.2	35.77	14.562				
7,100.0	6,768.1	7,095.1	6,769.7	19.3	19.6	90.07	103.0	-298.0	521.0	482.1	38.85	13.410				
7,200.0	6,781.2	7,195.1	6,782.5	21.2	21.3	90.03	103.0	-397.2	521.0	478.5	42.42	12.280				
7,300.0	6,782.5	7,295.2	6,783.5	23.2	23.3	90.01	103.0	-497.1	521.0	474.6	46.36	11.238				
7,400.0	6,781.6	7,395.2	6,782.6	25.3	25.4	90.00	103.0	-597.1	521.0	470.4	50.60	10.296				
7,500.0	6,780.7	7,495.2	6,781.7	27.6	27.6	90.00	103.0	-697.1	521.0	465.9	55.09	9.457				
7,600.0	6,779.8	7,595.2	6,780.8	29.9	30.0	90.00	103.0	-797.1	521.0	461.2	59.77	8.717				
7,700.0	6,779.0	7,695.2	6,780.0	32.4	32.4	90.00	103.0	-897.1	521.0	456.4	64.60	8.065				
7,800.0	6,778.1	7,795.2	6,779.1	34.8	34.8	90.00	103.0	-997.1	521.0	451.4	69.54	7.491				
7,900.0	6,777.2	7,895.2	6,778.2	37.4	37.4	89.99	103.0	-1,097.1	521.0	446.4	74.59	6.984				
8,000.0	6,776.4	7,995.2	6,777.3	39.9	39.9	89.99	103.0	-1,197.1	521.0	441.2	79.71	6.536				
8,100.0	6,775.5	8,095.1	6,776.4	42.5	42.5	89.99	103.0	-1,297.1	521.0	436.1	84.89	6.137				
8,200.0	6,774.6	8,195.1	6,775.5	45.1	45.1	89.99	103.0	-1,397.1	521.0	430.8	90.13	5.780				
8,300.0	6,773.7	8,295.1	6,774.6	47.8	47.7	89.99	103.0	-1,497.1	521.0	425.5	95.41	5.460				
8,400.0	6,772.9	8,395.1	6,773.7	50.4	50.4	89.98	103.0	-1,597.1	521.0	420.2	100.73	5.172				
8,500.0	6,772.0	8,495.1	6,772.8	53.1	53.1	89.98	103.0	-1,697.1	521.0	414.9	106.07	4.911				
8,600.0	6,771.1	8,595.1	6,771.9	55.8	55.8	89.98	103.0	-1,797.1	521.0	409.5	111.45	4.674				
8,700.0	6,770.2	8,695.1	6,771.1	58.5	58.5	89.98	103.0	-1,897.1	521.0	404.1	116.85	4.458				
8,800.0	6,769.4	8,795.1	6,770.2	61.2	61.2	89.98	103.0	-1,997.1	521.0	398.7	122.27	4.261				
8,900.0	6,768.5	8,895.1	6,769.3	63.9	63.9	89.97	103.0	-2,097.1	521.0	393.3	127.70	4.079				
9,000.0	6,767.6	8,995.1	6,768.4	66.7	66.6	89.97	103.0	-2,197.1	521.0	387.8	133.15	3.912				
9,100.0	6,766.8	9,095.1	6,767.5	69.4	69.3	89.97	103.0	-2,297.1	521.0	382.3	138.62	3.758				
9,200.0	6,765.9	9,195.1	6,766.6	72.1	72.1	89.97	103.0	-2,397.1	521.0	376.9	144.09	3.615				
9,300.0	6,765.0	9,295.1	6,765.7	74.9	74.8	89.97	103.0	-2,497.1	521.0	371.4	149.58	3.483				
9,400.0	6,764.1	9,395.1	6,764.8	77.6	77.5	89.97	103.0	-2,597.1	521.0	365.9	155.08	3.359				
9,500.0	6,763.3	9,495.1	6,763.9	80.4	80.3	89.96	103.0	-2,697.1	521.0	360.4	160.58	3.244				
9,600.0	6,762.4	9,595.1	6,763.0	83.1	83.1	89.96	103.0	-2,797.0	521.0	354.9	166.09	3.137				
9,700.0	6,761.5	9,695.1	6,762.2	85.9	85.8	89.96	103.0	-2,897.0	521.0	349.3	171.61	3.036				
9,800.0	6,760.7	9,795.1	6,761.3	88.6	88.6	89.96	103.0	-2,997.0	521.0	343.8	177.14	2.941				
9,900.0	6,759.8	9,895.1	6,760.4	91.4	91.3	89.96	103.0	-3,097.0	521.0	338.3	182.67	2.852				
10,000.0	6,758.9	9,995.1	6,759.5	94.2	94.1	89.95	103.0	-3,197.0	521.0	332.7	188.21	2.768				
10,100.0	6,758.0	10,095.1	6,758.6	96.9	96.9	89.95	103.0	-3,297.0	521.0	327.2	193.75	2.689				

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	Offset Datum

Offset Design LDS 5N65W1U Pad Sec.1-T5N-R65W - LDS 1U-234 - Wellbore #1 - Plan #2 (4-13-15)													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
10,200.0	6,757.2	10,195.1	6,757.7	99.7	99.7	89.95	89.95	103.0	-3,397.0	521.0	321.7	199.30	2.614	
10,300.0	6,756.3	10,295.1	6,756.8	102.5	102.4	89.95	89.95	103.0	-3,497.0	521.0	316.1	204.85	2.543	
10,400.0	6,755.4	10,395.1	6,755.9	105.3	105.2	89.95	89.95	103.0	-3,597.0	521.0	310.6	210.40	2.476	
10,500.0	6,754.5	10,495.1	6,755.0	108.0	108.0	89.94	89.94	103.0	-3,697.0	521.0	305.0	215.96	2.412	
10,600.0	6,753.7	10,595.1	6,754.1	110.8	110.8	89.94	89.94	103.0	-3,797.0	521.0	299.4	221.52	2.352	
10,700.0	6,752.8	10,695.1	6,753.3	113.6	113.5	89.94	89.94	103.0	-3,897.0	521.0	293.9	227.08	2.294	
10,800.0	6,751.9	10,795.1	6,752.4	116.4	116.3	89.94	89.94	103.0	-3,997.0	521.0	288.3	232.65	2.239	
10,900.0	6,751.1	10,895.1	6,751.5	119.2	119.1	89.94	89.94	103.0	-4,097.0	521.0	282.7	238.22	2.187	
11,000.0	6,750.2	10,995.1	6,750.6	122.0	121.9	89.93	89.93	103.0	-4,197.0	521.0	277.2	243.79	2.137	
11,100.0	6,749.3	11,095.1	6,749.7	124.7	124.7	89.93	89.93	103.0	-4,297.0	521.0	271.6	249.36	2.089	
11,200.0	6,748.4	11,195.1	6,748.8	127.5	127.5	89.93	89.93	103.0	-4,397.0	521.0	266.0	254.94	2.043	
11,300.0	6,747.6	11,295.1	6,747.9	130.3	130.3	89.93	89.93	103.0	-4,497.0	521.0	260.4	260.51	2.000	
11,400.0	6,746.7	11,395.1	6,747.0	133.1	133.0	89.93	89.93	103.0	-4,597.0	521.0	254.9	266.09	1.958	
11,500.0	6,745.8	11,495.1	6,746.1	135.9	135.8	89.92	89.92	103.0	-4,697.0	521.0	249.3	271.67	1.918	
11,600.0	6,744.9	11,595.1	6,745.2	138.7	138.6	89.92	89.92	103.0	-4,797.0	521.0	243.7	277.26	1.879	
11,700.0	6,744.1	11,695.1	6,744.4	141.5	141.4	89.92	89.92	103.0	-4,897.0	521.0	238.1	282.84	1.842	
11,800.0	6,743.2	11,795.1	6,743.5	144.3	144.2	89.92	89.92	103.0	-4,997.0	521.0	232.5	288.42	1.806	
11,900.0	6,742.3	11,895.1	6,742.6	147.1	147.0	89.92	89.92	103.0	-5,097.0	521.0	226.9	294.01	1.772	
12,000.0	6,741.5	11,995.1	6,741.7	149.9	149.8	89.92	89.92	103.0	-5,197.0	521.0	221.4	299.60	1.739	
12,100.0	6,740.6	12,095.1	6,740.8	152.7	152.6	89.91	89.91	103.0	-5,296.9	521.0	215.8	305.19	1.707	
12,200.0	6,739.7	12,195.1	6,739.9	155.4	155.4	89.91	89.91	103.0	-5,396.9	521.0	210.2	310.78	1.676	
12,300.0	6,738.8	12,295.1	6,739.0	158.2	158.2	89.91	89.91	103.0	-5,496.9	521.0	204.6	316.37	1.647	
12,400.0	6,738.0	12,395.1	6,738.1	161.0	161.0	89.91	89.91	103.0	-5,596.9	521.0	199.0	321.96	1.618	
12,500.0	6,737.1	12,495.1	6,737.2	163.8	163.8	89.91	89.91	103.0	-5,696.9	521.0	193.4	327.55	1.590	
12,600.0	6,736.2	12,595.1	6,736.3	166.6	166.6	89.90	89.90	103.0	-5,796.9	521.0	187.8	333.15	1.564	
12,700.0	6,735.3	12,695.1	6,735.5	169.4	169.4	89.90	89.90	103.0	-5,896.9	521.0	182.2	338.74	1.538	
12,800.0	6,734.5	12,795.1	6,734.6	172.2	172.2	89.90	89.90	103.0	-5,996.9	521.0	176.6	344.34	1.513	
12,900.0	6,733.6	12,895.1	6,733.7	175.0	175.0	89.90	89.90	103.0	-6,096.9	521.0	171.0	349.93	1.489 Level 3	
13,000.0	6,732.7	12,995.1	6,732.8	177.8	177.8	89.90	89.90	103.0	-6,196.9	521.0	165.4	355.53	1.465 Level 3	
13,100.0	6,731.9	13,095.1	6,731.9	180.6	180.6	89.89	89.89	103.0	-6,296.9	521.0	159.8	361.13	1.443 Level 3	
13,200.0	6,731.0	13,195.1	6,731.0	183.4	183.4	89.89	89.89	103.0	-6,396.9	521.0	154.2	366.73	1.421 Level 3	
13,300.0	6,730.1	13,295.1	6,730.1	186.2	186.1	89.89	89.89	103.0	-6,496.9	521.0	148.6	372.33	1.399 Level 3	
13,400.0	6,729.2	13,395.1	6,729.2	189.0	188.9	89.89	89.89	103.0	-6,596.9	521.0	143.0	377.93	1.378 Level 3	
13,500.0	6,728.4	13,495.1	6,728.3	191.8	191.7	89.89	89.89	103.0	-6,696.9	521.0	137.4	383.53	1.358 Level 3	
13,600.0	6,727.5	13,595.1	6,727.4	194.6	194.5	89.88	89.88	103.0	-6,796.9	521.0	131.8	389.13	1.339 Level 3	
13,700.0	6,726.6	13,695.1	6,726.5	197.4	197.3	89.88	89.88	103.0	-6,896.9	521.0	126.2	394.73	1.320 Level 3	
13,800.0	6,725.7	13,795.1	6,725.7	200.2	200.2	89.88	89.88	103.0	-6,996.9	521.0	120.6	400.33	1.301 Level 3	
13,857.5	6,725.2	13,852.7	6,725.1	201.3	201.2	89.88	89.88	103.0	-7,054.4	521.0	118.5	402.46	1.294 Level 3	
13,885.3	6,725.0	13,869.2	6,725.0	201.8	201.5	89.88	89.88	103.0	-7,070.9	521.1	117.8	403.25	1.292 Level 3, SF	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	Offset Datum

Offset Design LDS 5N65W1U Pad Sec.1-T5N-R65W - LDS 1U-304 - Wellbore #1 - Plan #2 (4-13-15)													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
0.0	0.0	2.0	2.0	0.0	0.0	-45.95	-45.95	61.9	-64.0	89.1	89.1	0.00	N/A	
100.0	100.0	102.0	102.0	0.1	0.1	-45.95	-45.95	61.9	-64.0	89.1	88.9	0.23	388.554	
200.0	200.0	202.0	202.0	0.3	0.3	-45.95	-45.95	61.9	-64.0	89.1	88.4	0.68	131.234	
300.0	300.0	302.0	302.0	0.6	0.6	-45.95	-45.95	61.9	-64.0	89.1	88.0	1.13	78.949	
400.0	400.0	402.0	402.0	0.8	0.8	-45.95	-45.95	61.9	-64.0	89.1	87.5	1.58	56.457	
500.0	500.0	502.0	502.0	1.0	1.0	-45.95	-45.95	61.9	-64.0	89.1	87.1	2.03	43.939	
600.0	600.0	602.0	602.0	1.2	1.2	-45.95	-45.95	61.9	-64.0	89.1	86.6	2.48	35.964	
700.0	700.0	702.0	702.0	1.5	1.5	-45.95	-45.95	61.9	-64.0	89.1	86.2	2.93	30.440	
800.0	800.0	802.0	802.0	1.7	1.7	-45.95	-45.95	61.9	-64.0	89.1	85.7	3.38	26.387	
900.0	900.0	902.0	902.0	1.9	1.9	-45.95	-45.95	61.9	-64.0	89.1	85.3	3.83	23.286	
1,000.0	1,000.0	1,002.0	1,002.0	2.1	2.1	-45.95	-45.95	61.9	-64.0	89.1	84.8	4.28	20.837 CC, ES	
1,100.0	1,100.0	1,102.0	1,102.0	2.3	2.4	171.26	171.26	61.9	-64.0	89.9	85.2	4.70	19.141	
1,200.0	1,200.0	1,202.0	1,202.0	2.5	2.6	171.50	171.50	61.9	-64.0	92.5	87.4	5.10	18.135	
1,300.0	1,299.9	1,301.9	1,301.9	2.7	2.8	171.88	171.88	61.9	-64.0	96.8	91.3	5.51	17.572	
1,400.0	1,399.7	1,401.7	1,401.7	2.9	3.0	172.35	172.35	61.9	-64.0	102.9	97.0	5.92	17.367	
1,500.0	1,499.4	1,501.7	1,501.7	3.1	3.3	173.34	173.34	62.4	-63.3	110.5	104.2	6.34	17.446	
1,600.0	1,598.9	1,601.5	1,601.4	3.3	3.5	175.12	175.12	64.0	-61.1	119.7	113.0	6.74	17.749	
1,700.0	1,698.3	1,701.0	1,700.8	3.6	3.7	177.45	177.45	66.5	-57.5	130.6	123.4	7.16	18.239	
1,800.0	1,797.5	1,800.2	1,799.9	3.9	3.9	-179.88	-179.88	69.9	-52.6	142.7	135.1	7.59	18.804	
1,900.0	1,896.7	1,899.2	1,898.5	4.1	4.1	-177.00	-177.00	74.4	-46.2	155.1	147.0	8.03	19.317	
2,000.0	1,995.9	1,997.9	1,996.8	4.4	4.4	-173.97	-173.97	79.7	-38.5	167.9	159.4	8.48	19.797	
2,100.0	2,095.1	2,096.2	2,094.5	4.7	4.6	-170.85	-170.85	86.1	-29.4	181.3	172.4	8.95	20.259	
2,200.0	2,194.3	2,194.7	2,192.2	5.0	4.9	-167.87	-167.87	93.0	-19.4	195.4	185.9	9.43	20.709	
2,300.0	2,293.6	2,293.2	2,290.0	5.3	5.1	-165.28	-165.28	99.9	-9.5	209.9	200.0	9.93	21.137	
2,400.0	2,392.8	2,391.7	2,387.8	5.6	5.4	-163.03	-163.03	106.9	0.4	224.8	214.3	10.43	21.542	
2,500.0	2,492.0	2,490.3	2,485.6	5.9	5.7	-161.06	-161.06	113.8	10.4	240.0	229.0	10.95	21.921	
2,600.0	2,591.2	2,588.8	2,583.3	6.2	5.9	-159.33	-159.33	120.7	20.3	255.4	243.9	11.46	22.275	
2,700.0	2,690.4	2,687.3	2,681.1	6.5	6.2	-157.79	-157.79	127.6	30.3	271.0	259.0	11.99	22.606	
2,800.0	2,789.6	2,785.8	2,778.9	6.8	6.5	-156.42	-156.42	134.6	40.2	286.8	274.3	12.52	22.913	
2,900.0	2,888.9	2,884.4	2,876.7	7.1	6.8	-155.20	-155.20	141.5	50.1	302.8	289.7	13.05	23.200	
3,000.0	2,988.1	2,982.9	2,974.5	7.4	7.1	-154.09	-154.09	148.4	60.1	318.8	305.2	13.59	23.467	
3,100.0	3,087.3	3,081.4	3,072.2	7.8	7.4	-153.10	-153.10	155.3	70.0	335.0	320.9	14.13	23.716	
3,200.0	3,186.5	3,179.9	3,170.0	8.1	7.7	-152.19	-152.19	162.3	80.0	351.3	336.6	14.67	23.949	
3,300.0	3,285.7	3,278.5	3,267.8	8.4	8.0	-151.36	-151.36	169.2	89.9	367.6	352.4	15.21	24.166	
3,400.0	3,384.9	3,377.0	3,365.6	8.7	8.2	-150.61	-150.61	176.1	99.8	384.0	368.2	15.76	24.370	
3,500.0	3,484.1	3,475.5	3,463.3	9.0	8.5	-149.91	-149.91	183.0	109.8	400.5	384.2	16.31	24.561	
3,600.0	3,583.4	3,574.0	3,561.1	9.4	8.8	-149.28	-149.28	190.0	119.7	417.0	400.1	16.85	24.740	
3,700.0	3,682.6	3,672.6	3,658.9	9.7	9.1	-148.69	-148.69	196.9	129.7	433.6	416.1	17.41	24.909	
3,800.0	3,781.8	3,771.1	3,756.7	10.0	9.4	-148.14	-148.14	203.8	139.6	450.2	432.2	17.96	25.067	
3,900.0	3,881.0	3,869.6	3,854.4	10.3	9.7	-147.63	-147.63	210.7	149.5	466.8	448.3	18.51	25.217	
4,000.0	3,980.2	3,968.1	3,952.2	10.7	10.1	-147.16	-147.16	217.7	159.5	483.5	464.4	19.07	25.358	
4,100.0	4,079.4	4,066.6	4,050.0	11.0	10.4	-146.72	-146.72	224.6	169.4	500.2	480.6	19.62	25.491	
4,200.0	4,178.7	4,165.2	4,147.8	11.3	10.7	-146.30	-146.30	231.5	179.4	516.9	496.8	20.18	25.617	
4,300.0	4,277.9	4,263.7	4,245.5	11.6	11.0	-145.92	-145.92	238.4	189.3	533.7	513.0	20.74	25.737	
4,400.0	4,377.1	4,362.2	4,343.3	12.0	11.3	-145.55	-145.55	245.4	199.2	550.5	529.2	21.29	25.851	
4,500.0	4,476.3	4,460.7	4,441.1	12.3	11.6	-145.21	-145.21	252.3	209.2	567.3	545.4	21.85	25.958	
4,600.0	4,575.5	4,559.3	4,538.9	12.6	11.9	-144.89	-144.89	259.2	219.1	584.1	561.7	22.41	26.061	
4,700.0	4,674.7	4,657.8	4,636.6	12.9	12.2	-144.59	-144.59	266.1	229.0	600.9	578.0	22.97	26.158	
4,800.0	4,774.0	4,756.3	4,734.4	13.3	12.5	-144.30	-144.30	273.1	239.0	617.8	594.3	23.53	26.251	
4,900.0	4,873.2	4,854.8	4,832.2	13.6	12.8	-144.02	-144.02	280.0	248.9	634.7	610.6	24.09	26.340	
5,000.0	4,972.4	4,953.4	4,930.0	13.9	13.1	-143.77	-143.77	286.9	258.9	651.5	626.9	24.66	26.425	

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	Offset Datum

Offset Design LDS 5N65W1U Pad Sec.1-T5N-R65W - LDS 1U-304 - Wellbore #1 - Plan #2 (4-13-15)													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	5,071.6	5,051.9	5,027.7	14.2	13.4	-143.52		293.8	268.8	668.4	643.2	25.22	26.506	
5,200.0	5,170.8	5,150.4	5,125.5	14.6	13.7	-143.29		300.8	278.7	685.3	659.5	25.78	26.583	
5,300.0	5,270.0	5,248.9	5,223.3	14.9	14.0	-143.07		307.7	288.7	702.2	675.9	26.34	26.657	
5,400.0	5,369.3	5,347.5	5,321.1	15.2	14.3	-142.90		314.6	298.6	719.1	692.2	26.91	26.718	
5,500.0	5,468.8	5,458.6	5,431.5	15.4	14.6	-142.78		321.7	308.8	733.3	705.8	27.43	26.732	
5,600.0	5,568.6	5,575.4	5,548.0	15.6	14.9	-142.70		326.6	315.9	742.5	714.6	27.88	26.635	
5,700.0	5,668.5	5,692.8	5,665.3	15.8	15.1	-142.66		328.8	319.0	746.6	718.4	28.26	26.418	
5,800.0	5,768.5	5,798.0	5,770.5	15.9	15.3	0.21		328.9	319.2	746.9	718.3	28.58	26.130	
5,900.0	5,868.5	5,898.0	5,870.5	16.1	15.4	0.21		328.9	319.2	746.9	717.9	28.94	25.811	
6,000.0	5,968.5	5,998.0	5,970.5	16.2	15.6	0.21		328.9	319.2	746.9	717.6	29.29	25.496	
6,038.4	6,006.9	6,036.4	6,008.9	16.3	15.7	90.25		328.9	319.2	746.9	717.4	29.48	25.338	
6,100.0	6,068.5	6,098.0	6,070.5	16.4	15.8	90.34		328.9	319.2	746.9	717.2	29.70	25.151	
6,200.0	6,167.6	6,198.4	6,170.8	16.5	15.9	91.10		328.9	316.2	747.0	717.1	29.96	24.937	
6,300.0	6,264.1	6,300.5	6,271.6	16.5	16.0	91.90		328.9	300.3	747.3	717.2	30.07	24.854	
6,400.0	6,356.4	6,404.1	6,370.8	16.5	16.0	92.68		328.9	270.7	747.7	717.6	30.08	24.857	
6,500.0	6,443.0	6,509.1	6,466.3	16.5	16.0	93.42		328.9	227.3	748.2	718.1	30.08	24.872	
6,600.0	6,522.3	6,615.6	6,556.1	16.4	15.9	94.09		328.9	170.3	748.8	718.6	30.21	24.788	
6,700.0	6,593.0	6,723.4	6,638.2	16.4	15.9	94.70		328.9	100.4	749.4	718.8	30.63	24.465	
6,800.0	6,653.9	6,832.5	6,710.3	16.4	16.1	95.22		328.9	18.7	750.0	718.5	31.55	23.774	
6,900.0	6,703.9	6,942.6	6,770.6	16.6	16.7	95.65		328.9	-73.3	750.5	717.4	33.12	22.659	
7,000.0	6,742.2	7,053.6	6,817.3	17.7	17.8	95.97		328.9	-173.9	751.0	715.5	35.45	21.184	
7,100.0	6,768.1	7,165.2	6,849.1	19.3	19.4	96.18		328.9	-280.7	751.2	712.7	38.51	19.506	
7,200.0	6,781.2	7,277.1	6,865.1	21.2	21.3	96.27		328.9	-391.5	751.4	709.2	42.18	17.815	
7,300.0	6,782.5	7,384.1	6,866.2	23.2	23.4	96.25		328.9	-498.4	751.3	705.2	46.17	16.273	
7,400.0	6,781.6	7,484.1	6,864.6	25.3	25.4	96.19		328.9	-598.4	751.3	700.9	50.35	14.920	
7,500.0	6,780.7	7,584.1	6,863.1	27.6	27.6	96.14		328.9	-698.4	751.2	696.4	54.78	13.711	
7,600.0	6,779.8	7,684.1	6,861.5	29.9	29.9	96.09		328.9	-798.4	751.1	691.7	59.41	12.642	
7,700.0	6,779.0	7,784.1	6,859.9	32.4	32.3	96.03		328.9	-898.4	751.0	686.8	64.20	11.699	
7,800.0	6,778.1	7,884.1	6,858.4	34.8	34.8	95.98		328.9	-998.4	751.0	681.9	69.10	10.867	
7,900.0	6,777.2	7,984.1	6,856.8	37.4	37.3	95.93		328.9	-1,098.3	750.9	676.8	74.11	10.132	
8,000.0	6,776.4	8,084.1	6,855.2	39.9	39.8	95.88		328.9	-1,198.3	750.8	671.6	79.19	9.481	
8,100.0	6,775.5	8,184.1	6,853.6	42.5	42.4	95.82		328.9	-1,298.3	750.7	666.4	84.34	8.901	
8,200.0	6,774.6	8,284.1	6,852.1	45.1	45.0	95.77		328.9	-1,398.3	750.7	661.1	89.55	8.383	
8,300.0	6,773.7	8,384.1	6,850.5	47.8	47.6	95.72		328.9	-1,498.3	750.6	655.8	94.80	7.918	
8,400.0	6,772.9	8,484.1	6,848.9	50.4	50.2	95.66		328.9	-1,598.3	750.5	650.4	100.09	7.499	
8,500.0	6,772.0	8,584.1	6,847.4	53.1	52.9	95.61		328.9	-1,698.2	750.5	645.0	105.41	7.119	
8,600.0	6,771.1	8,684.1	6,845.8	55.8	55.6	95.56		328.9	-1,798.2	750.4	639.6	110.76	6.775	
8,700.0	6,770.2	8,784.1	6,844.2	58.5	58.3	95.50		328.9	-1,898.2	750.3	634.2	116.14	6.461	
8,800.0	6,769.4	8,884.1	6,842.6	61.2	61.0	95.45		328.9	-1,998.2	750.3	628.7	121.53	6.173	
8,900.0	6,768.5	8,984.1	6,841.1	63.9	63.7	95.40		328.9	-2,098.2	750.2	623.2	126.95	5.909	
9,000.0	6,767.6	9,084.1	6,839.5	66.7	66.4	95.35		328.9	-2,198.2	750.1	617.7	132.38	5.666	
9,100.0	6,766.8	9,184.1	6,837.9	69.4	69.1	95.29		328.9	-2,298.2	750.1	612.2	137.83	5.442	
9,200.0	6,765.9	9,284.1	6,836.4	72.1	71.8	95.24		328.9	-2,398.1	750.0	606.7	143.29	5.234	
9,300.0	6,765.0	9,384.1	6,834.8	74.9	74.6	95.19		328.9	-2,498.1	749.9	601.2	148.76	5.041	
9,400.0	6,764.1	9,484.1	6,833.2	77.6	77.3	95.13		328.9	-2,598.1	749.9	595.6	154.24	4.862	
9,500.0	6,763.3	9,584.1	6,831.6	80.4	80.1	95.08		328.9	-2,698.1	749.8	590.1	159.73	4.694	
9,600.0	6,762.4	9,684.1	6,830.1	83.1	82.8	95.03		328.9	-2,798.1	749.7	584.5	165.23	4.537	
9,700.0	6,761.5	9,784.1	6,828.5	85.9	85.6	94.97		328.9	-2,898.1	749.7	578.9	170.74	4.391	
9,800.0	6,760.7	9,884.1	6,826.9	88.6	88.3	94.92		328.9	-2,998.1	749.6	573.4	176.26	4.253	
9,900.0	6,759.8	9,984.1	6,825.4	91.4	91.1	94.87		328.9	-3,098.0	749.6	567.8	181.78	4.123	
10,000.0	6,758.9	10,084.1	6,823.8	94.2	93.9	94.81		328.9	-3,198.0	749.5	562.2	187.31	4.001	

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	Offset Datum

Offset Design LDS 5N65W1U Pad Sec.1-T5N-R65W - LDS 1U-304 - Wellbore #1 - Plan #2 (4-13-15)												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance					Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)		
10,100.0	6,758.0	10,184.1	6,822.2	96.9	96.6	94.76	328.9	-3,298.0	749.4	556.6	192.84	3.886	
10,200.0	6,757.2	10,284.1	6,820.7	99.7	99.4	94.71	328.9	-3,398.0	749.4	551.0	198.38	3.777	
10,300.0	6,756.3	10,384.1	6,819.1	102.5	102.2	94.65	328.9	-3,498.0	749.3	545.4	203.93	3.674	
10,400.0	6,755.4	10,484.1	6,817.5	105.3	104.9	94.60	328.9	-3,598.0	749.3	539.8	209.47	3.577	
10,500.0	6,754.5	10,584.1	6,815.9	108.0	107.7	94.55	328.9	-3,698.0	749.2	534.2	215.03	3.484	
10,600.0	6,753.7	10,684.1	6,814.4	110.8	110.5	94.49	328.9	-3,797.9	749.1	528.6	220.58	3.396	
10,700.0	6,752.8	10,784.1	6,812.8	113.6	113.3	94.44	328.9	-3,897.9	749.1	523.0	226.14	3.312	
10,800.0	6,751.9	10,884.1	6,811.2	116.4	116.0	94.39	328.9	-3,997.9	749.0	517.3	231.71	3.233	
10,900.0	6,751.1	10,984.1	6,809.7	119.2	118.8	94.33	328.9	-4,097.9	749.0	511.7	237.27	3.157	
11,000.0	6,750.2	11,084.1	6,808.1	122.0	121.6	94.28	328.9	-4,197.9	748.9	506.1	242.84	3.084	
11,100.0	6,749.3	11,184.1	6,806.5	124.7	124.4	94.23	328.9	-4,297.9	748.9	500.5	248.42	3.015	
11,200.0	6,748.4	11,284.1	6,804.9	127.5	127.2	94.18	328.9	-4,397.9	748.8	494.8	253.99	2.948	
11,300.0	6,747.6	11,384.1	6,803.4	130.3	130.0	94.12	328.9	-4,497.8	748.8	489.2	259.57	2.885	
11,400.0	6,746.7	11,484.0	6,801.8	133.1	132.8	94.07	328.9	-4,597.8	748.7	483.6	265.15	2.824	
11,500.0	6,745.8	11,584.0	6,800.2	135.9	135.5	94.02	328.9	-4,697.8	748.7	477.9	270.73	2.765	
11,600.0	6,744.9	11,684.0	6,798.7	138.7	138.3	93.96	328.9	-4,797.8	748.6	472.3	276.31	2.709	
11,700.0	6,744.1	11,784.0	6,797.1	141.5	141.1	93.91	328.9	-4,897.8	748.6	466.7	281.90	2.655	
11,800.0	6,743.2	11,884.0	6,795.5	144.3	143.9	93.86	328.9	-4,997.8	748.5	461.0	287.49	2.604	
11,900.0	6,742.3	11,984.0	6,794.0	147.1	146.7	93.80	328.9	-5,097.7	748.5	455.4	293.08	2.554	
12,000.0	6,741.5	12,084.0	6,792.4	149.9	149.5	93.75	328.9	-5,197.7	748.4	449.8	298.67	2.506	
12,100.0	6,740.6	12,184.0	6,790.8	152.7	152.3	93.70	328.9	-5,297.7	748.4	444.1	304.26	2.460	
12,200.0	6,739.7	12,284.0	6,789.2	155.4	155.1	93.64	328.9	-5,397.7	748.3	438.5	309.86	2.415	
12,300.0	6,738.8	12,384.0	6,787.7	158.2	157.9	93.59	328.9	-5,497.7	748.3	432.8	315.45	2.372	
12,400.0	6,738.0	12,484.0	6,786.1	161.0	160.7	93.54	328.9	-5,597.7	748.3	427.2	321.05	2.331	
12,500.0	6,737.1	12,584.0	6,784.5	163.8	163.5	93.48	328.9	-5,697.7	748.2	421.6	326.65	2.291	
12,600.0	6,736.2	12,684.0	6,783.0	166.6	166.3	93.43	328.9	-5,797.6	748.2	415.9	332.25	2.252	
12,700.0	6,735.3	12,784.0	6,781.4	169.4	169.1	93.38	328.9	-5,897.6	748.1	410.3	337.85	2.214	
12,800.0	6,734.5	12,884.0	6,779.8	172.2	171.8	93.32	328.9	-5,997.6	748.1	404.6	343.46	2.178	
12,900.0	6,733.6	12,984.0	6,778.2	175.0	174.6	93.27	328.9	-6,097.6	748.0	399.0	349.06	2.143	
13,000.0	6,732.7	13,084.0	6,776.7	177.8	177.4	93.22	328.9	-6,197.6	748.0	393.3	354.66	2.109	
13,100.0	6,731.9	13,184.0	6,775.1	180.6	180.2	93.16	328.9	-6,297.6	748.0	387.7	360.27	2.076	
13,200.0	6,731.0	13,284.0	6,773.5	183.4	183.0	93.11	328.9	-6,397.6	747.9	382.1	365.88	2.044	
13,300.0	6,730.1	13,384.0	6,772.0	186.2	185.8	93.06	328.9	-6,497.5	747.9	376.4	371.48	2.013	
13,400.0	6,729.2	13,484.0	6,770.4	189.0	188.6	93.00	328.9	-6,597.5	747.9	370.8	377.09	1.983	
13,500.0	6,728.4	13,584.0	6,768.8	191.8	191.4	92.95	328.9	-6,697.5	747.8	365.1	382.70	1.954	
13,600.0	6,727.5	13,684.0	6,767.3	194.6	194.2	92.89	328.9	-6,797.5	747.8	359.5	388.31	1.926	
13,700.0	6,726.6	13,784.0	6,765.7	197.4	197.0	92.84	328.9	-6,897.5	747.7	353.8	393.92	1.898	
13,800.0	6,725.7	13,884.0	6,764.1	200.2	199.8	92.79	328.9	-6,997.5	747.7	348.2	399.54	1.871	
13,856.9	6,725.2	13,940.9	6,763.2	201.2	201.4	92.76	328.9	-7,054.4	747.7	345.5	402.16	1.859	
13,885.3	6,725.0	13,954.6	6,763.0	201.8	201.8	92.75	328.9	-7,068.1	747.8	344.8	403.06	1.855 SF	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	Offset Datum

Offset Design LDS 5N65W1U Pad Sec.1-T5N-R65W - LDS 1V-204 - Wellbore #1 - Plan #2 (4-15-15)													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
0.0	0.0	0.0	0.0	0.0	0.0	136.27	136.27	-43.7	41.8	60.5				
100.0	100.0	99.0	99.0	0.1	0.1	136.27	136.27	-43.7	41.8	60.5	60.3	0.22	270.613	
200.0	200.0	199.0	199.0	0.3	0.3	136.27	136.27	-43.7	41.8	60.5	59.8	0.67	90.054 CC, ES	
300.0	300.0	298.1	298.1	0.6	0.5	136.61	136.61	-44.5	42.1	61.3	60.2	1.10	55.861	
400.0	400.0	397.0	397.0	0.8	0.7	137.61	137.61	-47.0	42.9	63.6	62.1	1.52	41.842	
500.0	500.0	495.9	495.8	1.0	0.9	139.11	139.11	-51.0	44.2	67.6	65.6	1.96	34.527	
600.0	600.0	594.6	594.3	1.2	1.2	140.94	140.94	-56.7	46.0	73.1	70.7	2.40	30.473	
700.0	700.0	693.1	692.5	1.5	1.4	142.92	142.92	-63.9	48.3	80.4	77.5	2.85	28.222	
800.0	800.0	791.3	790.2	1.7	1.7	144.89	144.89	-72.8	51.2	89.4	86.1	3.30	27.057	
900.0	900.0	889.1	887.4	1.9	2.0	146.76	146.76	-83.1	54.5	100.1	96.3	3.76	26.589	
1,000.0	1,000.0	986.5	984.0	2.1	2.3	148.47	148.47	-95.1	58.3	112.5	108.3	4.23	26.586	
1,100.0	1,100.0	1,083.6	1,080.1	2.3	2.6	7.16	7.16	-108.5	62.6	125.8	121.2	4.64	27.087	
1,200.0	1,200.0	1,180.4	1,175.7	2.5	2.9	8.65	8.65	-123.4	67.4	139.1	134.1	5.06	27.505	
1,300.0	1,299.9	1,277.5	1,271.2	2.7	3.3	10.09	10.09	-139.9	72.7	152.5	147.0	5.48	27.807	
1,400.0	1,399.7	1,376.7	1,368.7	2.9	3.7	11.46	11.46	-157.2	78.3	164.7	158.8	5.92	27.840	
1,500.0	1,499.4	1,476.0	1,466.3	3.1	4.1	12.76	12.76	-174.6	83.9	175.4	169.0	6.36	27.593	
1,600.0	1,598.9	1,575.6	1,564.1	3.3	4.5	14.05	14.05	-192.0	89.4	184.4	177.6	6.80	27.109	
1,700.0	1,698.3	1,675.2	1,662.1	3.6	4.9	15.35	15.35	-209.5	95.0	191.9	184.6	7.26	26.443	
1,800.0	1,797.5	1,774.9	1,760.1	3.9	5.3	16.66	16.66	-226.9	100.6	198.3	190.6	7.72	25.681	
1,900.0	1,896.7	1,874.6	1,858.1	4.1	5.7	17.89	17.89	-244.4	106.2	204.8	196.6	8.20	24.991	
2,000.0	1,995.9	1,974.3	1,956.1	4.4	6.1	19.05	19.05	-261.8	111.8	211.4	202.7	8.68	24.369	
2,100.0	2,095.1	2,074.0	2,054.1	4.7	6.6	20.14	20.14	-279.3	117.4	218.1	208.9	9.16	23.805	
2,200.0	2,194.3	2,173.6	2,152.1	5.0	7.0	21.16	21.16	-296.7	123.0	224.8	215.2	9.65	23.291	
2,300.0	2,293.6	2,273.3	2,250.0	5.3	7.4	22.13	22.13	-314.1	128.6	231.7	221.5	10.15	22.821	
2,400.0	2,392.8	2,373.0	2,348.0	5.6	7.8	23.03	23.03	-331.6	134.2	238.5	227.9	10.65	22.390	
2,500.0	2,492.0	2,472.7	2,446.0	5.9	8.2	23.89	23.89	-349.0	139.8	245.5	234.3	11.16	21.992	
2,600.0	2,591.2	2,572.4	2,544.0	6.2	8.6	24.70	24.70	-366.5	145.4	252.5	240.8	11.68	21.624	
2,700.0	2,690.4	2,672.1	2,642.0	6.5	9.0	25.47	25.47	-383.9	151.0	259.5	247.3	12.19	21.283	
2,800.0	2,789.6	2,771.8	2,740.0	6.8	9.5	26.19	26.19	-401.4	156.6	266.6	253.9	12.72	20.966	
2,900.0	2,888.9	2,871.5	2,838.0	7.1	9.9	26.88	26.88	-418.8	162.2	273.7	260.5	13.24	20.671	
3,000.0	2,988.1	2,971.2	2,936.0	7.4	10.3	27.53	27.53	-436.3	167.8	280.9	267.1	13.77	20.395	
3,100.0	3,087.3	3,070.9	3,034.0	7.8	10.7	28.15	28.15	-453.7	173.4	288.1	273.8	14.31	20.137	
3,200.0	3,186.5	3,170.6	3,132.0	8.1	11.1	28.74	28.74	-471.1	179.0	295.3	280.5	14.84	19.895	
3,300.0	3,285.7	3,270.3	3,230.0	8.4	11.6	29.30	29.30	-488.6	184.6	302.5	287.2	15.38	19.667	
3,400.0	3,384.9	3,370.0	3,328.0	8.7	12.0	29.84	29.84	-506.0	190.2	309.8	293.9	15.93	19.453	
3,500.0	3,484.1	3,469.7	3,426.0	9.0	12.4	30.35	30.35	-523.5	195.8	317.1	300.7	16.47	19.251	
3,600.0	3,583.4	3,569.4	3,524.0	9.4	12.8	30.84	30.84	-540.9	201.4	324.5	307.5	17.02	19.061	
3,700.0	3,682.6	3,669.1	3,622.0	9.7	13.2	31.31	31.31	-558.4	207.0	331.8	314.3	17.58	18.880	
3,800.0	3,781.8	3,768.7	3,720.0	10.0	13.6	31.75	31.75	-575.8	212.6	339.2	321.1	18.13	18.710	
3,900.0	3,881.0	3,868.4	3,818.0	10.3	14.1	32.18	32.18	-593.3	218.2	346.6	327.9	18.69	18.548	
4,000.0	3,980.2	3,968.1	3,916.0	10.7	14.5	32.59	32.59	-610.7	223.8	354.0	334.8	19.25	18.395	
4,100.0	4,079.4	4,067.8	4,014.0	11.0	14.9	32.98	32.98	-628.1	229.4	361.4	341.6	19.81	18.249	
4,200.0	4,178.7	4,167.5	4,112.0	11.3	15.3	33.36	33.36	-645.6	235.0	368.9	348.5	20.37	18.110	
4,300.0	4,277.9	4,267.2	4,210.0	11.6	15.7	33.72	33.72	-663.0	240.6	376.4	355.4	20.93	17.978	
4,400.0	4,377.1	4,366.9	4,308.0	12.0	16.2	34.07	34.07	-680.5	246.2	383.8	362.3	21.50	17.852	
4,500.0	4,476.3	4,466.6	4,405.9	12.3	16.6	34.40	34.40	-697.9	251.8	391.3	369.3	22.07	17.732	
4,600.0	4,575.5	4,566.3	4,503.9	12.6	17.0	34.72	34.72	-715.4	257.4	398.8	376.2	22.64	17.617	
4,700.0	4,674.7	4,666.0	4,601.9	12.9	17.4	35.03	35.03	-732.8	263.0	406.3	383.1	23.21	17.507	
4,800.0	4,774.0	4,765.7	4,699.9	13.3	17.8	35.33	35.33	-750.3	268.6	413.9	390.1	23.78	17.402	
4,900.0	4,873.2	4,865.4	4,797.9	13.6	18.3	35.62	35.62	-767.7	274.2	421.4	397.1	24.36	17.301	
5,000.0	4,972.4	4,965.1	4,895.9	13.9	18.7	35.90	35.90	-785.1	279.8	429.0	404.0	24.93	17.205	

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	Offset Datum

Offset Design												LDS 5N65W1U Pad Sec.1-T5N-R65W - LDS 1V-204 - Wellbore #1 - Plan #2 (4-15-15)		Offset Site Error:		0.0 ft
Survey Program: 0-MWD														Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance					Warning				
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation			Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)					
5,100.0	5,071.6	5,064.8	4,993.9	14.2	19.1	36.16	-802.6	285.4	436.5	411.0	25.51	17.112				
5,200.0	5,170.8	5,164.5	5,091.9	14.6	19.5	36.42	-820.0	291.0	444.1	418.0	26.09	17.023				
5,300.0	5,270.0	5,264.1	5,189.9	14.9	19.9	36.67	-837.5	296.6	451.7	425.0	26.67	16.938				
5,400.0	5,369.3	5,366.5	5,290.5	15.2	20.4	36.94	-855.3	302.4	459.3	432.1	27.24	16.863				
5,500.0	5,468.8	5,484.3	5,406.9	15.4	20.7	37.18	-873.0	308.1	466.5	438.8	27.71	16.836				
5,600.0	5,568.6	5,602.6	5,524.3	15.6	21.0	37.29	-886.2	312.3	472.6	444.5	28.11	16.814				
5,700.0	5,668.5	5,721.2	5,642.5	15.8	21.2	37.26	-894.7	315.0	477.6	449.1	28.44	16.793				
5,800.0	5,768.5	5,840.0	5,761.3	15.9	21.3	-179.98	-898.6	316.3	480.7	445.0	35.72	13.457				
5,900.0	5,868.5	5,946.2	5,867.5	16.1	21.5	-179.99	-898.8	316.3	480.9	444.9	36.00	13.357				
6,000.0	5,968.5	6,046.2	5,967.5	16.2	21.6	-179.99	-898.8	316.3	480.9	444.6	36.26	13.260				
6,014.0	5,982.5	6,060.2	5,981.5	16.3	21.6	-90.00	-898.8	316.3	480.9	451.4	29.49	16.307				
6,100.0	6,068.5	6,146.1	6,067.3	16.4	21.7	-89.81	-898.8	313.2	480.9	451.1	29.77	16.151				
6,200.0	6,167.6	6,245.7	6,165.7	16.5	21.7	-89.51	-898.8	297.8	480.9	450.9	29.98	16.039				
6,300.0	6,264.1	6,345.0	6,260.8	16.5	21.7	-89.22	-898.8	269.8	480.9	450.8	30.08	15.991				
6,400.0	6,356.4	6,444.0	6,351.3	16.5	21.7	-88.94	-898.8	229.9	481.0	450.9	30.11	15.973				
6,500.0	6,443.0	6,542.6	6,435.6	16.5	21.7	-88.68	-898.8	178.8	481.0	450.8	30.19	15.932				
6,600.0	6,522.3	6,641.1	6,512.5	16.4	21.7	-88.44	-898.8	117.4	481.1	450.6	30.45	15.796				
6,700.0	6,593.0	6,739.2	6,580.7	16.4	21.7	-88.23	-898.8	46.8	481.1	450.0	31.07	15.486				
6,800.0	6,653.9	6,837.2	6,639.1	16.4	21.7	-88.04	-898.8	-31.7	481.2	449.0	32.19	14.947				
6,900.0	6,703.9	6,935.0	6,687.0	16.6	21.8	-87.90	-898.8	-116.9	481.2	447.3	33.95	14.175				
7,000.0	6,742.2	7,032.7	6,723.5	17.7	22.0	-87.78	-898.8	-207.5	481.2	444.9	36.37	13.231				
7,100.0	6,768.1	7,130.3	6,748.2	19.3	22.4	-87.71	-898.8	-301.8	481.3	441.8	39.42	12.209				
7,200.0	6,781.2	7,227.8	6,760.7	21.2	23.5	-87.67	-898.8	-398.4	481.3	438.3	42.97	11.200				
7,300.0	6,782.5	7,326.4	6,762.0	23.2	25.0	-87.68	-898.8	-497.0	481.3	434.4	46.91	10.260				
7,400.0	6,781.6	7,426.4	6,761.4	25.3	27.0	-87.71	-898.8	-597.0	481.3	430.1	51.15	9.409				
7,500.0	6,780.7	7,526.4	6,760.8	27.6	29.1	-87.75	-898.8	-697.0	481.3	425.6	55.63	8.650				
7,600.0	6,779.8	7,626.4	6,760.2	29.9	31.3	-87.78	-898.8	-797.0	481.2	420.9	60.31	7.980				
7,700.0	6,779.0	7,726.4	6,759.7	32.4	33.7	-87.82	-898.8	-897.0	481.2	416.1	65.13	7.388				
7,800.0	6,778.1	7,826.4	6,759.1	34.8	36.1	-87.86	-898.8	-997.0	481.2	411.1	70.08	6.867				
7,900.0	6,777.2	7,926.4	6,758.5	37.4	38.6	-87.89	-898.8	-1,097.0	481.2	406.1	75.11	6.406				
8,000.0	6,776.4	8,026.4	6,757.9	39.9	41.1	-87.93	-898.8	-1,197.0	481.2	401.0	80.23	5.998				
8,100.0	6,775.5	8,126.4	6,757.4	42.5	43.6	-87.96	-898.8	-1,297.0	481.2	395.8	85.41	5.634				
8,200.0	6,774.6	8,226.4	6,756.8	45.1	46.2	-88.00	-898.8	-1,397.0	481.2	390.5	90.64	5.309				
8,300.0	6,773.7	8,326.4	6,756.2	47.8	48.8	-88.03	-898.8	-1,497.0	481.2	385.3	95.91	5.017				
8,400.0	6,772.9	8,426.4	6,755.6	50.4	51.4	-88.07	-898.8	-1,597.0	481.2	379.9	101.22	4.753				
8,500.0	6,772.0	8,526.4	6,755.1	53.1	54.1	-88.10	-898.8	-1,697.0	481.1	374.6	106.56	4.515				
8,600.0	6,771.1	8,626.4	6,754.5	55.8	56.7	-88.14	-898.8	-1,797.0	481.1	369.2	111.93	4.298				
8,700.0	6,770.2	8,726.4	6,753.9	58.5	59.4	-88.17	-898.8	-1,897.0	481.1	363.8	117.33	4.101				
8,800.0	6,769.4	8,826.4	6,753.3	61.2	62.1	-88.21	-898.8	-1,997.0	481.1	358.4	122.74	3.920				
8,900.0	6,768.5	8,926.4	6,752.8	63.9	64.8	-88.24	-898.8	-2,097.0	481.1	352.9	128.17	3.754				
9,000.0	6,767.6	9,026.4	6,752.2	66.7	67.5	-88.28	-898.8	-2,197.0	481.1	347.5	133.62	3.601				
9,100.0	6,766.8	9,126.4	6,751.6	69.4	70.2	-88.31	-898.8	-2,297.0	481.1	342.0	139.08	3.459				
9,200.0	6,765.9	9,226.4	6,751.0	72.1	72.9	-88.35	-898.8	-2,397.0	481.1	336.5	144.55	3.328				
9,300.0	6,765.0	9,326.4	6,750.5	74.9	75.7	-88.39	-898.8	-2,497.0	481.1	331.0	150.04	3.206				
9,400.0	6,764.1	9,426.4	6,749.9	77.6	78.4	-88.42	-898.8	-2,597.0	481.1	325.5	155.53	3.093				
9,500.0	6,763.3	9,526.4	6,749.3	80.4	81.1	-88.46	-898.8	-2,697.0	481.1	320.0	161.03	2.987				
9,600.0	6,762.4	9,626.4	6,748.7	83.1	83.9	-88.49	-898.8	-2,797.0	481.0	314.5	166.54	2.888				
9,700.0	6,761.5	9,726.4	6,748.2	85.9	86.6	-88.53	-898.8	-2,897.0	481.0	309.0	172.06	2.796				
9,800.0	6,760.7	9,826.4	6,747.6	88.6	89.4	-88.56	-898.8	-2,997.0	481.0	303.4	177.58	2.709				
9,900.0	6,759.8	9,926.4	6,747.0	91.4	92.1	-88.60	-898.8	-3,097.0	481.0	297.9	183.11	2.627				
10,000.0	6,758.9	10,026.4	6,746.4	94.2	94.9	-88.63	-898.8	-3,197.0	481.0	292.4	188.65	2.550				

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	Offset Datum

Offset Design LDS 5N65W1U Pad Sec.1-T5N-R65W - LDS 1V-204 - Wellbore #1 - Plan #2 (4-15-15)													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
10,100.0	6,758.0	10,126.4	6,745.9	96.9	97.6	-88.67	-88.67	-898.8	-3,297.0	481.0	286.8	194.19	2.477	
10,200.0	6,757.2	10,226.4	6,745.3	99.7	100.4	-88.70	-88.70	-898.8	-3,397.0	481.0	281.3	199.73	2.408	
10,300.0	6,756.3	10,326.4	6,744.7	102.5	103.2	-88.74	-88.74	-898.8	-3,497.0	481.0	275.7	205.28	2.343	
10,400.0	6,755.4	10,426.4	6,744.1	105.3	105.9	-88.77	-88.77	-898.8	-3,597.0	481.0	270.2	210.84	2.281	
10,500.0	6,754.5	10,526.4	6,743.5	108.0	108.7	-88.81	-88.81	-898.8	-3,697.0	481.0	264.6	216.39	2.223	
10,600.0	6,753.7	10,626.4	6,743.0	110.8	111.5	-88.84	-88.84	-898.8	-3,797.0	481.0	259.0	221.95	2.167	
10,700.0	6,752.8	10,726.4	6,742.4	113.6	114.3	-88.88	-88.88	-898.8	-3,897.0	481.0	253.5	227.51	2.114	
10,800.0	6,751.9	10,826.4	6,741.8	116.4	117.0	-88.92	-88.92	-898.8	-3,997.0	481.0	247.9	233.08	2.064	
10,900.0	6,751.1	10,926.4	6,741.2	119.2	119.8	-88.95	-88.95	-898.8	-4,096.9	481.0	242.3	238.65	2.015	
11,000.0	6,750.2	11,026.4	6,740.7	122.0	122.6	-88.99	-88.99	-898.8	-4,196.9	481.0	236.7	244.22	1.969	
11,100.0	6,749.3	11,126.4	6,740.1	124.7	125.4	-89.02	-89.02	-898.8	-4,296.9	481.0	231.2	249.79	1.925	
11,200.0	6,748.4	11,226.4	6,739.5	127.5	128.1	-89.06	-89.06	-898.8	-4,396.9	480.9	225.6	255.36	1.883	
11,300.0	6,747.6	11,326.4	6,738.9	130.3	130.9	-89.09	-89.09	-898.8	-4,496.9	480.9	220.0	260.94	1.843	
11,400.0	6,746.7	11,426.4	6,738.4	133.1	133.7	-89.13	-89.13	-898.8	-4,596.9	480.9	214.4	266.52	1.805	
11,500.0	6,745.8	11,526.4	6,737.8	135.9	136.5	-89.16	-89.16	-898.8	-4,696.9	480.9	208.8	272.10	1.767	
11,600.0	6,744.9	11,626.4	6,737.2	138.7	139.3	-89.20	-89.20	-898.8	-4,796.9	480.9	203.2	277.68	1.732	
11,700.0	6,744.1	11,726.4	6,736.6	141.5	142.1	-89.23	-89.23	-898.8	-4,896.9	480.9	197.7	283.27	1.698	
11,800.0	6,743.2	11,826.4	6,736.1	144.3	144.9	-89.27	-89.27	-898.8	-4,996.9	480.9	192.1	288.85	1.665	
11,900.0	6,742.3	11,926.4	6,735.5	147.1	147.6	-89.30	-89.30	-898.8	-5,096.9	480.9	186.5	294.44	1.633	
12,000.0	6,741.5	12,026.4	6,734.9	149.9	150.4	-89.34	-89.34	-898.8	-5,196.9	480.9	180.9	300.02	1.603	
12,100.0	6,740.6	12,126.4	6,734.3	152.7	153.2	-89.37	-89.37	-898.8	-5,296.9	480.9	175.3	305.61	1.574	
12,200.0	6,739.7	12,226.4	6,733.8	155.4	156.0	-89.41	-89.41	-898.8	-5,396.9	480.9	169.7	311.20	1.545	
12,300.0	6,738.8	12,326.4	6,733.2	158.2	158.8	-89.45	-89.45	-898.8	-5,496.9	480.9	164.1	316.79	1.518	
12,400.0	6,738.0	12,426.4	6,732.6	161.0	161.6	-89.48	-89.48	-898.8	-5,596.9	480.9	158.5	322.39	1.492 Level 3	
12,500.0	6,737.1	12,526.4	6,732.0	163.8	164.4	-89.52	-89.52	-898.8	-5,696.9	480.9	152.9	327.98	1.466 Level 3	
12,600.0	6,736.2	12,626.4	6,731.5	166.6	167.2	-89.55	-89.55	-898.8	-5,796.9	480.9	147.3	333.57	1.442 Level 3	
12,700.0	6,735.3	12,726.4	6,730.9	169.4	170.0	-89.59	-89.59	-898.8	-5,896.9	480.9	141.7	339.17	1.418 Level 3	
12,800.0	6,734.5	12,826.4	6,730.3	172.2	172.8	-89.62	-89.62	-898.8	-5,996.9	480.9	136.1	344.76	1.395 Level 3	
12,900.0	6,733.6	12,926.4	6,729.7	175.0	175.6	-89.66	-89.66	-898.8	-6,096.9	480.9	130.5	350.36	1.373 Level 3	
13,000.0	6,732.7	13,026.4	6,729.1	177.8	178.4	-89.69	-89.69	-898.8	-6,196.9	480.9	124.9	355.96	1.351 Level 3	
13,100.0	6,731.9	13,126.4	6,728.6	180.6	181.2	-89.73	-89.73	-898.8	-6,296.9	480.9	119.3	361.55	1.330 Level 3	
13,200.0	6,731.0	13,226.4	6,728.0	183.4	184.0	-89.76	-89.76	-898.8	-6,396.9	480.9	113.7	367.15	1.310 Level 3	
13,300.0	6,730.1	13,326.4	6,727.4	186.2	186.7	-89.80	-89.80	-898.8	-6,496.9	480.9	108.1	372.75	1.290 Level 3	
13,400.0	6,729.2	13,426.4	6,726.8	189.0	189.5	-89.83	-89.83	-898.8	-6,596.9	480.9	102.5	378.35	1.271 Level 3	
13,500.0	6,728.4	13,526.4	6,726.3	191.8	192.3	-89.87	-89.87	-898.8	-6,696.9	480.9	96.9	383.95	1.252 Level 3	
13,600.0	6,727.5	13,626.4	6,725.7	194.6	195.1	-89.90	-89.90	-898.8	-6,796.9	480.9	91.3	389.55	1.234 Level 2	
13,700.0	6,726.6	13,726.4	6,725.1	197.4	197.9	-89.94	-89.94	-898.8	-6,896.9	480.9	85.7	395.15	1.217 Level 2	
13,800.0	6,725.7	13,826.4	6,724.5	200.2	200.7	-89.98	-89.98	-898.8	-6,996.9	480.9	80.1	400.75	1.200 Level 2	
13,838.7	6,725.4	13,865.1	6,724.3	200.9	201.8	-89.99	-89.99	-898.8	-7,035.6	480.9	78.4	402.53	1.195 Level 2	
13,885.3	6,725.0	13,911.7	6,724.0	201.8	203.1	-90.01	-90.01	-898.8	-7,082.2	480.9	76.2	404.68	1.188 Level 2, SF	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	Offset Datum

Offset Design LDS 5N65W1U Pad Sec.1-T5N-R65W - LDS 1V-304 - Wellbore #1 - Plan #2 (4-13-15)													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
0.0	0.0	0.0	0.0	0.0	0.0	134.47	134.47	-21.9	22.3	31.2				
100.0	100.0	100.0	100.0	0.1	0.1	134.47	134.47	-21.9	22.3	31.2	31.0	0.22	138.849	
200.0	200.0	200.0	200.0	0.3	0.3	134.47	134.47	-21.9	22.3	31.2	30.5	0.67	46.283	
300.0	300.0	300.0	300.0	0.6	0.6	134.47	134.47	-21.9	22.3	31.2	30.1	1.12	27.770	
400.0	400.0	400.0	400.0	0.8	0.8	134.47	134.47	-21.9	22.3	31.2	29.6	1.57	19.836 CC	
500.0	500.0	499.5	499.5	1.0	1.0	134.99	134.99	-22.6	22.6	32.0	30.0	2.00	16.037	
600.0	600.0	598.9	598.9	1.2	1.2	136.41	136.41	-25.0	23.8	34.5	32.1	2.41	14.313	
700.0	700.0	698.2	698.1	1.5	1.4	138.36	138.36	-28.8	25.6	38.6	35.8	2.84	13.630	
800.0	800.0	797.3	797.0	1.7	1.6	140.47	140.47	-34.3	28.3	44.5	41.2	3.27	13.614	
900.0	900.0	896.2	895.6	1.9	1.8	142.49	142.49	-41.2	31.6	52.1	48.4	3.71	14.040	
1,000.0	1,000.0	994.8	993.7	2.1	2.1	144.27	144.27	-49.6	35.7	61.5	57.3	4.16	14.766	
1,100.0	1,100.0	1,093.1	1,091.4	2.3	2.3	2.93	2.93	-59.6	40.5	71.7	67.1	4.57	15.691	
1,200.0	1,200.0	1,191.3	1,188.8	2.5	2.6	4.32	4.32	-71.0	46.0	81.9	76.9	4.97	16.476	
1,300.0	1,299.9	1,290.7	1,287.2	2.7	3.0	5.58	5.58	-83.4	52.1	91.4	86.0	5.38	16.980	
1,400.0	1,399.7	1,390.4	1,385.9	2.9	3.3	6.71	6.71	-95.9	58.1	99.2	93.4	5.80	17.101	
1,500.0	1,499.4	1,490.1	1,484.7	3.1	3.6	7.81	7.81	-108.4	64.2	105.4	99.1	6.23	16.914	
1,600.0	1,598.9	1,590.0	1,583.6	3.3	3.9	8.92	8.92	-120.9	70.2	109.8	103.2	6.66	16.483	
1,700.0	1,698.3	1,690.0	1,682.6	3.6	4.3	10.10	10.10	-133.5	76.3	112.6	105.5	7.10	15.854	
1,800.0	1,797.5	1,789.9	1,781.6	3.9	4.6	11.34	11.34	-146.0	82.3	114.3	106.7	7.55	15.128	
1,900.0	1,896.7	1,889.9	1,880.5	4.1	4.9	12.55	12.55	-158.5	88.4	116.0	108.0	8.01	14.474	
2,000.0	1,995.9	1,989.8	1,979.5	4.4	5.3	13.72	13.72	-171.0	94.5	117.8	109.3	8.48	13.887	
2,100.0	2,095.1	2,089.8	2,078.5	4.7	5.6	14.86	14.86	-183.6	100.5	119.6	110.6	8.95	13.359	
2,200.0	2,194.3	2,189.7	2,177.5	5.0	6.0	15.96	15.96	-196.1	106.6	121.4	112.0	9.43	12.881	
2,300.0	2,293.6	2,289.7	2,276.5	5.3	6.3	17.03	17.03	-208.6	112.6	123.3	113.4	9.91	12.446	
2,400.0	2,392.8	2,389.6	2,375.5	5.6	6.7	18.07	18.07	-221.2	118.7	125.2	114.9	10.39	12.050	
2,500.0	2,492.0	2,489.6	2,474.4	5.9	7.0	19.08	19.08	-233.7	124.8	127.2	116.3	10.89	11.687	
2,600.0	2,591.2	2,589.6	2,573.4	6.2	7.4	20.05	20.05	-246.2	130.8	129.2	117.9	11.38	11.354	
2,700.0	2,690.4	2,689.5	2,672.4	6.5	7.7	21.00	21.00	-258.7	136.9	131.3	119.4	11.88	11.047	
2,800.0	2,789.6	2,789.5	2,771.4	6.8	8.1	21.91	21.91	-271.3	143.0	133.4	121.0	12.39	10.764	
2,900.0	2,888.9	2,889.4	2,870.4	7.1	8.4	22.80	22.80	-283.8	149.0	135.5	122.6	12.90	10.501	
3,000.0	2,988.1	2,989.4	2,969.4	7.4	8.8	23.66	23.66	-296.3	155.1	137.6	124.2	13.42	10.257	
3,100.0	3,087.3	3,089.3	3,068.3	7.8	9.1	24.49	24.49	-308.9	161.1	139.8	125.9	13.94	10.030	
3,200.0	3,186.5	3,189.3	3,167.3	8.1	9.4	25.29	25.29	-321.4	167.2	142.0	127.6	14.47	9.818	
3,300.0	3,285.7	3,289.2	3,266.3	8.4	9.8	26.08	26.08	-333.9	173.3	144.3	129.3	15.00	9.620	
3,400.0	3,384.9	3,389.2	3,365.3	8.7	10.1	26.83	26.83	-346.4	179.3	146.5	131.0	15.53	9.435	
3,500.0	3,484.1	3,489.2	3,464.3	9.0	10.5	27.57	27.57	-359.0	185.4	148.8	132.8	16.07	9.261	
3,600.0	3,583.4	3,589.1	3,563.2	9.4	10.9	28.28	28.28	-371.5	191.5	151.1	134.5	16.61	9.098	
3,700.0	3,682.6	3,689.1	3,662.2	9.7	11.2	28.97	28.97	-384.0	197.5	153.5	136.3	17.16	8.944	
3,800.0	3,781.8	3,789.0	3,761.2	10.0	11.6	29.64	29.64	-396.6	203.6	155.8	138.1	17.71	8.800	
3,900.0	3,881.0	3,889.0	3,860.2	10.3	11.9	30.29	30.29	-409.1	209.6	158.2	139.9	18.26	8.663	
4,000.0	3,980.2	3,988.9	3,959.2	10.7	12.3	30.92	30.92	-421.6	215.7	160.6	141.8	18.82	8.534	
4,100.0	4,079.4	4,088.9	4,058.2	11.0	12.6	31.53	31.53	-434.1	221.8	163.0	143.6	19.38	8.412	
4,200.0	4,178.7	4,188.9	4,157.1	11.3	13.0	32.13	32.13	-446.7	227.8	165.4	145.5	19.94	8.296	
4,300.0	4,277.9	4,288.8	4,256.1	11.6	13.3	32.70	32.70	-459.2	233.9	167.9	147.4	20.51	8.187	
4,400.0	4,377.1	4,388.8	4,355.1	12.0	13.7	33.26	33.26	-471.7	240.0	170.4	149.3	21.08	8.082	
4,500.0	4,476.3	4,488.7	4,454.1	12.3	14.0	33.81	33.81	-484.2	246.0	172.8	151.2	21.65	7.984	
4,600.0	4,575.5	4,588.7	4,553.1	12.6	14.4	34.34	34.34	-496.8	252.1	175.3	153.1	22.22	7.889	
4,700.0	4,674.7	4,688.6	4,652.1	12.9	14.7	34.85	34.85	-509.3	258.1	177.9	155.1	22.80	7.800	
4,800.0	4,774.0	4,788.6	4,751.0	13.3	15.1	35.35	35.35	-521.8	264.2	180.4	157.0	23.38	7.714	
4,900.0	4,873.2	4,888.5	4,850.0	13.6	15.4	35.84	35.84	-534.4	270.3	182.9	159.0	23.96	7.633	
5,000.0	4,972.4	4,988.5	4,949.0	13.9	15.8	36.31	36.31	-546.9	276.3	185.5	160.9	24.55	7.555	

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	Offset Datum

Offset Design												LDS 5N65W1U Pad Sec.1-T5N-R65W - LDS 1V-304 - Wellbore #1 - Plan #2 (4-13-15)		Offset Site Error:		0.0 ft
Survey Program: 0-MWD														Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis		Distance								Warning		
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)					
5,100.0	5,071.6	5,088.5	5,048.0	14.2	16.1	36.77	-559.4	282.4	188.0	162.9	25.13	7.481				
5,200.0	5,170.8	5,188.4	5,147.0	14.6	16.5	37.21	-571.9	288.4	190.6	164.9	25.72	7.410				
5,300.0	5,270.0	5,288.4	5,245.9	14.9	16.8	37.65	-584.5	294.5	193.2	166.9	26.31	7.342				
5,400.0	5,369.3	5,388.3	5,344.9	15.2	17.2	38.06	-597.0	300.6	195.9	169.0	26.90	7.284				
5,500.0	5,468.8	5,491.1	5,446.7	15.4	17.5	38.09	-609.5	306.6	200.3	173.0	27.36	7.322				
5,600.0	5,568.6	5,597.7	5,552.8	15.6	17.7	37.89	-619.6	311.5	204.7	177.0	27.72	7.386				
5,700.0	5,668.5	5,704.5	5,659.3	15.8	17.9	37.56	-626.1	314.7	208.5	180.5	28.01	7.445				
5,800.0	5,768.5	5,811.5	5,766.3	15.9	18.1	-179.91	-629.1	316.1	211.1	178.9	32.27	6.542				
5,900.0	5,868.5	5,913.8	5,868.5	16.1	18.2	-179.94	-629.2	316.2	211.3	178.7	32.58	6.486				
6,000.0	5,968.5	6,013.8	5,968.5	16.2	18.4	-179.94	-629.2	316.2	211.3	178.4	32.86	6.429				
6,050.5	6,019.0	6,064.2	6,019.0	16.3	18.4	-90.16	-629.2	316.2	211.3	182.2	29.12	7.255				
6,100.0	6,068.5	6,113.8	6,068.5	16.4	18.5	-90.36	-629.2	316.1	211.3	182.0	29.26	7.221				
6,200.0	6,167.6	6,214.1	6,168.5	16.5	18.6	-91.80	-629.2	308.4	211.4	182.1	29.30	7.214				
6,300.0	6,264.1	6,315.2	6,267.3	16.5	18.6	-93.20	-629.2	287.4	211.6	182.4	29.24	7.238				
6,400.0	6,356.4	6,417.0	6,363.1	16.5	18.6	-94.56	-629.2	253.3	212.0	182.8	29.14	7.274				
6,500.0	6,443.0	6,519.5	6,454.2	16.5	18.6	-95.83	-629.2	206.4	212.4	183.3	29.10	7.299				
6,600.0	6,522.3	6,622.6	6,538.6	16.4	18.6	-97.00	-629.2	147.3	212.9	183.6	29.26	7.277				
6,700.0	6,593.0	6,726.3	6,614.8	16.4	18.6	-98.05	-629.2	77.0	213.4	183.6	29.77	7.169				
6,800.0	6,653.9	6,830.6	6,681.0	16.4	18.5	-98.96	-629.2	-3.4	213.9	183.1	30.80	6.945				
6,900.0	6,703.9	6,935.3	6,735.9	16.6	18.5	-99.70	-629.2	-92.5	214.4	181.9	32.47	6.602				
7,000.0	6,742.2	7,040.4	6,778.2	17.7	18.7	-100.27	-629.2	-188.6	214.7	179.9	34.81	6.168				
7,100.0	6,768.1	7,145.8	6,807.0	19.3	19.9	-100.66	-629.2	-289.9	215.0	177.2	37.80	5.688				
7,200.0	6,781.2	7,251.4	6,821.7	21.2	21.7	-100.86	-629.2	-394.3	215.1	173.8	41.32	5.207				
7,300.0	6,782.5	7,354.4	6,823.2	23.2	23.8	-100.92	-629.2	-497.4	215.2	170.0	45.21	4.759				
7,400.0	6,781.6	7,454.4	6,822.6	25.3	25.9	-100.99	-629.2	-597.4	215.2	165.9	49.39	4.358				
7,500.0	6,780.7	7,554.4	6,822.0	27.6	28.1	-101.06	-629.2	-697.4	215.3	161.5	53.80	4.002				
7,600.0	6,779.8	7,654.4	6,821.4	29.9	30.5	-101.13	-629.2	-797.4	215.3	156.9	58.40	3.688				
7,700.0	6,779.0	7,754.4	6,820.8	32.4	32.9	-101.20	-629.2	-897.4	215.4	152.3	63.14	3.412				
7,800.0	6,778.1	7,854.4	6,820.2	34.8	35.3	-101.26	-629.2	-997.4	215.4	147.5	67.99	3.169				
7,900.0	6,777.2	7,954.4	6,819.6	37.4	37.8	-101.33	-629.2	-1,097.4	215.5	142.6	72.94	2.954				
8,000.0	6,776.4	8,054.4	6,819.0	39.9	40.4	-101.40	-629.2	-1,197.4	215.5	137.6	77.96	2.765				
8,100.0	6,775.5	8,154.4	6,818.4	42.5	43.0	-101.47	-629.2	-1,297.4	215.6	132.6	83.04	2.596				
8,200.0	6,774.6	8,254.4	6,817.7	45.1	45.6	-101.54	-629.2	-1,397.4	215.7	127.5	88.16	2.446				
8,300.0	6,773.7	8,354.4	6,817.1	47.8	48.2	-101.61	-629.2	-1,497.4	215.7	122.4	93.33	2.311				
8,400.0	6,772.9	8,454.4	6,816.5	50.4	50.8	-101.67	-629.2	-1,597.4	215.8	117.2	98.53	2.190				
8,500.0	6,772.0	8,554.4	6,815.9	53.1	53.5	-101.74	-629.2	-1,697.4	215.8	112.1	103.76	2.080				
8,600.0	6,771.1	8,654.4	6,815.3	55.8	56.2	-101.81	-629.2	-1,797.4	215.9	106.9	109.01	1.980				
8,700.0	6,770.2	8,754.4	6,814.7	58.5	58.9	-101.88	-629.2	-1,897.4	215.9	101.6	114.28	1.889				
8,800.0	6,769.4	8,854.4	6,814.1	61.2	61.6	-101.95	-629.2	-1,997.4	216.0	96.4	119.56	1.806				
8,900.0	6,768.5	8,954.4	6,813.5	63.9	64.3	-102.01	-629.2	-2,097.4	216.0	91.2	124.86	1.730				
9,000.0	6,767.6	9,054.4	6,812.9	66.7	67.0	-102.08	-629.2	-2,197.3	216.1	85.9	130.18	1.660				
9,100.0	6,766.8	9,154.4	6,812.2	69.4	69.7	-102.15	-629.2	-2,297.3	216.1	80.6	135.50	1.595				
9,200.0	6,765.9	9,254.4	6,811.6	72.1	72.5	-102.22	-629.2	-2,397.3	216.2	75.4	140.83	1.535				
9,300.0	6,765.0	9,354.4	6,811.0	74.9	75.2	-102.29	-629.2	-2,497.3	216.2	70.1	146.17	1.479 Level 3				
9,400.0	6,764.1	9,454.4	6,810.4	77.6	77.9	-102.35	-629.2	-2,597.3	216.3	64.8	151.52	1.428 Level 3				
9,500.0	6,763.3	9,554.4	6,809.8	80.4	80.7	-102.42	-629.2	-2,697.3	216.4	59.5	156.87	1.379 Level 3				
9,600.0	6,762.4	9,654.4	6,809.2	83.1	83.4	-102.49	-629.2	-2,797.3	216.4	54.2	162.23	1.334 Level 3				
9,700.0	6,761.5	9,754.4	6,808.6	85.9	86.2	-102.56	-629.2	-2,897.3	216.5	48.9	167.59	1.292 Level 3				
9,800.0	6,760.7	9,854.4	6,808.0	88.6	88.9	-102.62	-629.2	-2,997.3	216.5	43.6	172.95	1.252 Level 3				
9,900.0	6,759.8	9,954.4	6,807.4	91.4	91.7	-102.69	-629.2	-3,097.3	216.6	38.3	178.32	1.215 Level 2				
10,000.0	6,758.9	10,054.4	6,806.7	94.2	94.5	-102.76	-629.2	-3,197.3	216.6	33.0	183.68	1.179 Level 2				

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	Offset Datum

Offset Design LDS 5N65W1U Pad Sec.1-T5N-R65W - LDS 1V-304 - Wellbore #1 - Plan #2 (4-13-15)													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
10,100.0	6,758.0	10,154.4	6,806.1	96.9	97.2	-102.83		-629.2	-3,297.3	216.7	27.6	189.05	1.146	Level 2
10,200.0	6,757.2	10,254.4	6,805.5	99.7	100.0	-102.89		-629.2	-3,397.3	216.8	22.3	194.42	1.115	Level 2
10,300.0	6,756.3	10,354.4	6,804.9	102.5	102.8	-102.96		-629.2	-3,497.3	216.8	17.0	199.80	1.085	Level 2
10,400.0	6,755.4	10,454.4	6,804.3	105.3	105.6	-103.03		-629.2	-3,597.3	216.9	11.7	205.17	1.057	Level 2
10,500.0	6,754.5	10,554.4	6,803.7	108.0	108.3	-103.10		-629.2	-3,697.3	216.9	6.4	210.54	1.030	Level 2
10,600.0	6,753.7	10,654.4	6,803.1	110.8	111.1	-103.16		-629.2	-3,797.3	217.0	1.1	215.92	1.005	Level 2
10,700.0	6,752.8	10,754.4	6,802.5	113.6	113.9	-103.23		-629.2	-3,897.3	217.1	-4.2	221.29	0.981	Level 1
10,800.0	6,751.9	10,854.4	6,801.9	116.4	116.7	-103.30		-629.2	-3,997.3	217.1	-9.5	226.66	0.958	Level 1
10,900.0	6,751.1	10,954.4	6,801.3	119.2	119.4	-103.36		-629.2	-4,097.3	217.2	-14.9	232.03	0.936	Level 1
11,000.0	6,750.2	11,054.4	6,800.6	122.0	122.2	-103.43		-629.2	-4,197.3	217.2	-20.2	237.40	0.915	Level 1
11,100.0	6,749.3	11,154.4	6,800.0	124.7	125.0	-103.50		-629.2	-4,297.3	217.3	-25.5	242.77	0.895	Level 1
11,200.0	6,748.4	11,254.4	6,799.4	127.5	127.8	-103.57		-629.2	-4,397.3	217.4	-30.8	248.14	0.876	Level 1
11,300.0	6,747.6	11,354.4	6,798.8	130.3	130.6	-103.63		-629.2	-4,497.3	217.4	-36.1	253.51	0.858	Level 1
11,400.0	6,746.7	11,454.4	6,798.2	133.1	133.4	-103.70		-629.2	-4,597.3	217.5	-41.4	258.88	0.840	Level 1
11,500.0	6,745.8	11,554.4	6,797.6	135.9	136.2	-103.77		-629.2	-4,697.3	217.5	-46.7	264.24	0.823	Level 1
11,600.0	6,744.9	11,654.4	6,797.0	138.7	138.9	-103.83		-629.2	-4,797.3	217.6	-52.0	269.61	0.807	Level 1
11,700.0	6,744.1	11,754.4	6,796.4	141.5	141.7	-103.90		-629.2	-4,897.3	217.7	-57.3	274.97	0.792	Level 1
11,800.0	6,743.2	11,854.4	6,795.8	144.3	144.5	-103.97		-629.2	-4,997.3	217.7	-62.6	280.33	0.777	Level 1
11,900.0	6,742.3	11,954.4	6,795.1	147.1	147.3	-104.03		-629.2	-5,097.3	217.8	-67.9	285.68	0.762	Level 1
12,000.0	6,741.5	12,054.4	6,794.5	149.9	150.1	-104.10		-629.2	-5,197.3	217.9	-73.2	291.04	0.749	Level 1
12,100.0	6,740.6	12,154.4	6,793.9	152.7	152.9	-104.17		-629.2	-5,297.3	217.9	-78.5	296.39	0.735	Level 1
12,200.0	6,739.7	12,254.4	6,793.3	155.4	155.7	-104.24		-629.2	-5,397.3	218.0	-83.8	301.74	0.722	Level 1
12,300.0	6,738.8	12,354.4	6,792.7	158.2	158.5	-104.30		-629.2	-5,497.3	218.1	-89.0	307.09	0.710	Level 1
12,400.0	6,738.0	12,454.4	6,792.1	161.0	161.3	-104.37		-629.2	-5,597.3	218.1	-94.3	312.44	0.698	Level 1
12,500.0	6,737.1	12,554.4	6,791.5	163.8	164.1	-104.44		-629.2	-5,697.3	218.2	-99.6	317.78	0.687	Level 1
12,600.0	6,736.2	12,654.4	6,790.9	166.6	166.9	-104.50		-629.2	-5,797.3	218.2	-104.9	323.13	0.675	Level 1
12,700.0	6,735.3	12,754.4	6,790.3	169.4	169.7	-104.57		-629.2	-5,897.3	218.3	-110.2	328.47	0.665	Level 1
12,800.0	6,734.5	12,854.4	6,789.6	172.2	172.5	-104.63		-629.2	-5,997.3	218.4	-115.4	333.80	0.654	Level 1
12,900.0	6,733.6	12,954.4	6,789.0	175.0	175.3	-104.70		-629.2	-6,097.3	218.4	-120.7	339.14	0.644	Level 1
13,000.0	6,732.7	13,054.4	6,788.4	177.8	178.1	-104.77		-629.2	-6,197.3	218.5	-126.0	344.47	0.634	Level 1
13,100.0	6,731.9	13,154.4	6,787.8	180.6	180.9	-104.83		-629.2	-6,297.3	218.6	-131.2	349.80	0.625	Level 1
13,200.0	6,731.0	13,254.4	6,787.2	183.4	183.7	-104.90		-629.2	-6,397.3	218.6	-136.5	355.12	0.616	Level 1
13,300.0	6,730.1	13,354.4	6,786.6	186.2	186.4	-104.97		-629.2	-6,497.3	218.7	-141.7	360.45	0.607	Level 1
13,400.0	6,729.2	13,454.4	6,786.0	189.0	189.2	-105.03		-629.2	-6,597.3	218.8	-147.0	365.77	0.598	Level 1
13,500.0	6,728.4	13,554.4	6,785.4	191.8	192.0	-105.10		-629.2	-6,697.3	218.9	-152.2	371.08	0.590	Level 1
13,600.0	6,727.5	13,654.4	6,784.8	194.6	194.8	-105.17		-629.2	-6,797.3	218.9	-157.5	376.40	0.582	Level 1
13,700.0	6,726.6	13,754.4	6,784.1	197.4	197.6	-105.23		-629.2	-6,897.3	219.0	-162.7	381.71	0.574	Level 1
13,800.0	6,725.7	13,854.4	6,783.5	200.2	200.4	-105.30		-629.2	-6,997.3	219.1	-168.0	387.02	0.566	Level 1
13,885.3	6,725.0	13,939.7	6,783.0	201.8	202.8	-105.35		-629.2	-7,082.5	219.1	-171.6	390.72	0.561	Level 1, ES, SF

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	Offset Datum

Offset Design LDS 5N65W1U Pad Sec.1-T5N-R65W - LDS 1V-314 - Wellbore #1 - Plan #2 (4-30-15)													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
0.0	0.0	0.0	0.0	0.0	0.0	-41.72	-41.72	21.9	-19.5	29.3				
100.0	100.0	100.0	100.0	0.1	0.1	-41.72	-41.72	21.9	-19.5	29.3	29.1	0.22	130.272	
200.0	200.0	200.0	200.0	0.3	0.3	-41.72	-41.72	21.9	-19.5	29.3	28.6	0.67	43.424	
300.0	300.0	300.0	300.0	0.6	0.6	-41.72	-41.72	21.9	-19.5	29.3	28.2	1.12	26.054	
400.0	400.0	400.0	400.0	0.8	0.8	-41.72	-41.72	21.9	-19.5	29.3	27.7	1.57	18.610	
500.0	500.0	500.0	500.0	1.0	1.0	-41.72	-41.72	21.9	-19.5	29.3	27.3	2.02	14.475	
600.0	600.0	600.0	600.0	1.2	1.2	-41.72	-41.72	21.9	-19.5	29.3	26.8	2.47	11.843	
700.0	700.0	700.0	700.0	1.5	1.5	-41.72	-41.72	21.9	-19.5	29.3	26.4	2.92	10.021	
800.0	800.0	800.0	800.0	1.7	1.7	-41.72	-41.72	21.9	-19.5	29.3	25.9	3.37	8.685	
900.0	900.0	900.0	900.0	1.9	1.9	-41.72	-41.72	21.9	-19.5	29.3	25.5	3.82	7.663	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-41.72	-41.72	21.9	-19.5	29.3	25.0	4.27	6.856 CC	
1,100.0	1,100.0	1,100.0	1,100.0	2.3	2.4	175.54	175.54	21.9	-19.5	30.2	25.5	4.69	6.423	
1,200.0	1,200.0	1,200.0	1,200.0	2.5	2.6	175.89	175.89	21.9	-19.5	32.8	27.7	5.10	6.426	
1,300.0	1,299.9	1,299.9	1,299.9	2.7	2.8	176.37	176.37	21.9	-19.5	37.1	31.6	5.51	6.739	
1,400.0	1,399.7	1,399.7	1,399.7	2.9	3.0	176.88	176.88	21.9	-19.5	43.2	37.3	5.92	7.298	
1,500.0	1,499.4	1,499.4	1,499.4	3.1	3.3	177.36	177.36	21.9	-19.5	51.0	44.7	6.34	8.055	
1,600.0	1,598.9	1,598.9	1,598.9	3.3	3.5	177.77	177.77	21.9	-19.5	60.6	53.9	6.76	8.973	
1,700.0	1,698.3	1,699.5	1,699.5	3.6	3.7	178.29	178.29	21.3	-18.8	71.1	64.0	7.16	9.937	
1,800.0	1,797.5	1,800.3	1,800.2	3.9	3.9	179.03	179.03	19.8	-16.7	81.1	73.5	7.55	10.741	
1,900.0	1,896.7	1,901.3	1,901.2	4.1	4.1	179.91	179.91	17.1	-13.1	89.4	81.4	7.95	11.242	
2,000.0	1,995.9	2,002.7	2,002.4	4.4	4.3	-179.05	-179.05	13.4	-8.1	96.0	87.6	8.36	11.483	
2,100.0	2,095.1	2,104.2	2,103.6	4.7	4.5	-177.82	-177.82	8.6	-1.7	101.0	92.2	8.78	11.501	
2,200.0	2,194.3	2,205.8	2,204.7	5.0	4.7	-176.39	-176.39	2.7	6.2	104.4	95.1	9.21	11.330	
2,300.0	2,293.6	2,307.5	2,305.7	5.3	4.9	-174.70	-174.70	-4.2	15.5	106.1	96.5	9.65	10.998	
2,400.0	2,392.8	2,407.5	2,404.9	5.6	5.2	-172.90	-172.90	-11.6	25.4	107.1	97.0	10.09	10.613	
2,500.0	2,492.0	2,507.4	2,504.1	5.9	5.4	-171.13	-171.13	-19.0	35.3	108.2	97.7	10.55	10.261	
2,600.0	2,591.2	2,607.4	2,603.3	6.2	5.7	-169.41	-169.41	-26.3	45.2	109.5	98.4	11.01	9.940	
2,700.0	2,690.4	2,707.3	2,702.5	6.5	6.0	-167.72	-167.72	-33.7	55.1	110.8	99.3	11.49	9.644	
2,800.0	2,789.6	2,807.2	2,801.6	6.8	6.2	-166.07	-166.07	-41.1	65.0	112.2	100.2	11.97	9.373	
2,900.0	2,888.9	2,907.2	2,900.8	7.1	6.5	-164.47	-164.47	-48.5	74.9	113.7	101.2	12.46	9.122	
3,000.0	2,988.1	3,007.1	3,000.0	7.4	6.8	-162.91	-162.91	-55.8	84.7	115.2	102.3	12.96	8.891	
3,100.0	3,087.3	3,107.1	3,099.2	7.8	7.1	-161.39	-161.39	-63.2	94.6	116.9	103.4	13.47	8.677	
3,200.0	3,186.5	3,207.0	3,198.3	8.1	7.4	-159.91	-159.91	-70.6	104.5	118.7	104.7	13.99	8.479	
3,300.0	3,285.7	3,306.9	3,297.5	8.4	7.7	-158.48	-158.48	-78.0	114.4	120.5	106.0	14.52	8.295	
3,400.0	3,384.9	3,406.9	3,396.7	8.7	8.0	-157.10	-157.10	-85.3	124.3	122.4	107.3	15.06	8.124	
3,500.0	3,484.1	3,506.8	3,495.8	9.0	8.3	-155.75	-155.75	-92.7	134.2	124.3	108.7	15.61	7.965	
3,600.0	3,583.4	3,606.8	3,595.0	9.4	8.6	-154.45	-154.45	-100.1	144.1	126.4	110.2	16.17	7.817	
3,700.0	3,682.6	3,706.7	3,694.2	9.7	8.9	-153.19	-153.19	-107.4	154.0	128.5	111.7	16.73	7.679	
3,800.0	3,781.8	3,806.6	3,793.4	10.0	9.2	-151.97	-151.97	-114.8	163.9	130.6	113.3	17.30	7.550	
3,900.0	3,881.0	3,906.6	3,892.5	10.3	9.5	-150.79	-150.79	-122.2	173.8	132.8	114.9	17.88	7.430	
4,000.0	3,980.2	4,006.5	3,991.7	10.7	9.8	-149.65	-149.65	-129.6	183.7	135.1	116.6	18.46	7.318	
4,100.0	4,079.4	4,106.5	4,090.9	11.0	10.1	-148.55	-148.55	-136.9	193.6	137.4	118.3	19.05	7.213	
4,200.0	4,178.7	4,206.4	4,190.1	11.3	10.4	-147.48	-147.48	-144.3	203.5	139.8	120.1	19.65	7.114	
4,300.0	4,277.9	4,306.3	4,289.2	11.6	10.7	-146.45	-146.45	-151.7	213.3	142.2	121.9	20.25	7.022	
4,400.0	4,377.1	4,406.3	4,388.4	12.0	11.0	-145.46	-145.46	-159.1	223.2	144.6	123.8	20.85	6.936	
4,500.0	4,476.3	4,506.2	4,487.6	12.3	11.3	-144.50	-144.50	-166.4	233.1	147.1	125.7	21.46	6.855	
4,600.0	4,575.5	4,606.1	4,586.8	12.6	11.7	-143.57	-143.57	-173.8	243.0	149.7	127.6	22.08	6.779	
4,700.0	4,674.7	4,706.1	4,685.9	12.9	12.0	-142.67	-142.67	-181.2	252.9	152.2	129.6	22.70	6.707	
4,800.0	4,774.0	4,806.0	4,785.1	13.3	12.3	-141.80	-141.80	-188.5	262.8	154.9	131.5	23.32	6.640	
4,900.0	4,873.2	4,906.0	4,884.3	13.6	12.6	-140.96	-140.96	-195.9	272.7	157.5	133.6	23.95	6.577	
5,000.0	4,972.4	5,005.9	4,983.5	13.9	12.9	-140.15	-140.15	-203.3	282.6	160.2	135.6	24.58	6.518	

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	Offset Datum

Offset Design LDS 5N65W1U Pad Sec.1-T5N-R65W - LDS 1V-314 - Wellbore #1 - Plan #2 (4-30-15)												Offset Site Error: 0.0 ft	
Survey Program: 0-MWD												Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
5,100.0	5,071.6	5,105.8	5,082.6	14.2	13.2	-139.37	-210.7	292.5	162.9	137.7	25.21	6.462	
5,200.0	5,170.8	5,204.7	5,180.8	14.6	13.5	-138.68	-217.8	302.1	165.8	139.9	25.82	6.419	
5,300.0	5,270.0	5,300.0	5,275.6	14.9	13.8	-138.76	-223.2	309.4	170.1	143.8	26.31	6.465	
5,400.0	5,369.3	5,398.1	5,373.6	15.2	14.0	-139.75	-226.8	314.2	176.1	149.4	26.69	6.598	
5,500.0	5,468.8	5,494.5	5,469.9	15.4	14.1	-141.06	-228.4	316.3	182.2	155.2	26.97	6.754	
5,600.0	5,568.6	5,593.2	5,568.6	15.6	14.3	-142.28	-228.5	316.4	187.0	159.8	27.23	6.869	
5,700.0	5,668.5	5,693.1	5,668.5	15.8	14.5	-142.84	-228.5	316.4	189.3	161.8	27.52	6.879	
5,800.0	5,768.5	5,793.1	5,768.5	15.9	14.6	0.00	-228.5	316.4	189.4	161.2	28.26	6.703	
5,900.0	5,868.5	5,893.1	5,868.5	16.1	14.8	0.00	-228.5	316.4	189.4	160.8	28.60	6.623	
6,000.0	5,968.5	5,993.1	5,968.5	16.2	15.0	0.00	-228.5	316.4	189.4	160.5	28.95	6.544	
6,050.0	6,018.5	6,043.1	6,018.5	16.3	15.1	90.25	-228.5	316.4	189.4	160.7	28.77	6.584	
6,100.0	6,068.5	6,093.1	6,068.5	16.4	15.2	90.49	-228.5	316.4	189.4	160.5	28.97	6.540	
6,200.0	6,167.6	6,193.3	6,168.6	16.5	15.3	93.56	-228.5	313.6	189.8	160.3	29.48	6.439	
6,300.0	6,264.1	6,295.0	6,269.0	16.5	15.4	96.80	-228.5	298.2	190.8	161.0	29.82	6.399	
6,400.0	6,356.4	6,398.2	6,368.0	16.5	15.4	99.91	-228.5	269.0	192.3	162.4	29.98	6.416	
6,500.0	6,443.0	6,503.0	6,463.5	16.5	15.4	102.82	-228.5	226.1	194.3	164.3	30.01	6.476	
6,600.0	6,522.3	6,609.2	6,553.4	16.4	15.4	105.47	-228.5	169.6	196.6	166.6	30.02	6.550	
6,700.0	6,593.0	6,716.9	6,635.6	16.4	15.5	107.81	-228.5	100.2	199.0	168.9	30.19	6.593	
6,800.0	6,653.9	6,825.9	6,708.1	16.4	15.7	109.81	-228.5	19.0	201.4	170.7	30.73	6.554	
6,900.0	6,703.9	6,936.0	6,768.8	16.6	16.3	111.43	-228.5	-72.8	203.5	171.7	31.86	6.390	
7,000.0	6,742.2	7,047.1	6,816.1	17.7	17.5	112.66	-228.5	-173.2	205.3	171.6	33.72	6.089	
7,100.0	6,768.1	7,158.8	6,848.5	19.3	19.1	113.49	-228.5	-280.1	206.6	170.2	36.37	5.679	
7,200.0	6,781.2	7,271.1	6,864.9	21.2	21.1	113.90	-228.5	-391.0	207.2	167.5	39.74	5.215	
7,300.0	6,782.5	7,378.2	6,866.5	23.2	23.2	113.93	-228.5	-498.1	207.3	163.7	43.52	4.763	
7,400.0	6,781.6	7,478.2	6,865.4	25.3	25.3	113.87	-228.5	-598.1	207.2	159.7	47.43	4.367	
7,500.0	6,780.7	7,578.2	6,864.3	27.6	27.6	113.80	-228.5	-698.1	207.1	155.5	51.57	4.015	
7,600.0	6,779.8	7,678.2	6,863.2	29.9	29.9	113.74	-228.5	-798.1	207.0	151.1	55.88	3.703	
7,700.0	6,779.0	7,778.2	6,862.0	32.4	32.3	113.68	-228.5	-898.1	206.9	146.5	60.34	3.428	
7,800.0	6,778.1	7,878.2	6,860.9	34.8	34.8	113.62	-228.5	-998.0	206.8	141.8	64.91	3.185	
7,900.0	6,777.2	7,978.2	6,859.8	37.4	37.3	113.56	-228.5	-1,098.0	206.7	137.1	69.58	2.970	
8,000.0	6,776.4	8,078.2	6,858.7	39.9	39.9	113.49	-228.5	-1,198.0	206.6	132.2	74.32	2.780	
8,100.0	6,775.5	8,178.2	6,857.6	42.5	42.5	113.43	-228.5	-1,298.0	206.5	127.3	79.12	2.610	
8,200.0	6,774.6	8,278.2	6,856.5	45.1	45.1	113.37	-228.5	-1,398.0	206.4	122.4	83.98	2.457	
8,300.0	6,773.7	8,378.2	6,855.3	47.8	47.7	113.31	-228.5	-1,498.0	206.3	117.4	88.88	2.321	
8,400.0	6,772.9	8,478.2	6,854.2	50.4	50.4	113.24	-228.5	-1,598.0	206.2	112.4	93.82	2.198	
8,500.0	6,772.0	8,578.2	6,853.1	53.1	53.1	113.18	-228.5	-1,698.0	206.1	107.3	98.79	2.086	
8,600.0	6,771.1	8,678.2	6,852.0	55.8	55.8	113.12	-228.5	-1,798.0	206.0	102.2	103.79	1.985	
8,700.0	6,770.2	8,778.2	6,850.9	58.5	58.4	113.06	-228.5	-1,898.0	205.9	97.1	108.82	1.892	
8,800.0	6,769.4	8,878.2	6,849.8	61.2	61.2	112.99	-228.5	-1,998.0	205.8	91.9	113.88	1.807	
8,900.0	6,768.5	8,978.2	6,848.6	63.9	63.9	112.93	-228.5	-2,098.0	205.7	86.7	118.95	1.729	
9,000.0	6,767.6	9,078.2	6,847.5	66.7	66.6	112.87	-228.5	-2,198.0	205.6	81.6	124.04	1.658	
9,100.0	6,766.8	9,178.2	6,846.4	69.4	69.3	112.81	-228.5	-2,298.0	205.5	76.4	129.15	1.591	
9,200.0	6,765.9	9,278.2	6,845.3	72.1	72.1	112.74	-228.5	-2,398.0	205.4	71.1	134.28	1.530	
9,300.0	6,765.0	9,378.2	6,844.2	74.9	74.8	112.68	-228.5	-2,497.9	205.3	65.9	139.42	1.473 Level 3	
9,400.0	6,764.1	9,478.2	6,843.1	77.6	77.6	112.62	-228.5	-2,597.9	205.2	60.7	144.57	1.420 Level 3	
9,500.0	6,763.3	9,578.2	6,841.9	80.4	80.3	112.55	-228.5	-2,697.9	205.1	55.4	149.73	1.370 Level 3	
9,600.0	6,762.4	9,678.2	6,840.8	83.1	83.1	112.49	-228.5	-2,797.9	205.0	50.1	154.91	1.324 Level 3	
9,700.0	6,761.5	9,778.2	6,839.7	85.9	85.8	112.43	-228.5	-2,897.9	204.9	44.8	160.10	1.280 Level 3	
9,800.0	6,760.7	9,878.2	6,838.6	88.6	88.6	112.37	-228.5	-2,997.9	204.8	39.6	165.30	1.239 Level 2	
9,900.0	6,759.8	9,978.2	6,837.5	91.4	91.4	112.30	-228.5	-3,097.9	204.8	34.3	170.50	1.201 Level 2	
10,000.0	6,758.9	10,078.2	6,836.4	94.2	94.1	112.24	-228.5	-3,197.9	204.7	28.9	175.72	1.165 Level 2	

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

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	Offset Datum

Offset Design LDS 5N65W1U Pad Sec.1-T5N-R65W - LDS 1V-314 - Wellbore #1 - Plan #2 (4-30-15)													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
10,100.0	6,758.0	10,178.2	6,835.2	96.9	96.9	112.18		-228.5	-3,297.9	204.6	23.6	180.95	1.131	Level 2
10,200.0	6,757.2	10,278.2	6,834.1	99.7	99.7	112.11		-228.5	-3,397.9	204.5	18.3	186.18	1.098	Level 2
10,300.0	6,756.3	10,378.2	6,833.0	102.5	102.4	112.05		-228.5	-3,497.9	204.4	13.0	191.42	1.068	Level 2
10,400.0	6,755.4	10,478.2	6,831.9	105.3	105.2	111.98		-228.5	-3,597.9	204.3	7.6	196.67	1.039	Level 2
10,500.0	6,754.5	10,578.2	6,830.8	108.0	108.0	111.92		-228.5	-3,697.9	204.2	2.3	201.93	1.011	Level 2
10,600.0	6,753.7	10,678.2	6,829.7	110.8	110.8	111.86		-228.5	-3,797.9	204.1	-3.1	207.19	0.985	Level 1
10,700.0	6,752.8	10,778.2	6,828.5	113.6	113.6	111.79		-228.5	-3,897.9	204.0	-8.4	212.46	0.960	Level 1
10,800.0	6,751.9	10,878.2	6,827.4	116.4	116.3	111.73		-228.5	-3,997.8	203.9	-13.8	217.74	0.937	Level 1
10,900.0	6,751.1	10,978.2	6,826.3	119.2	119.1	111.67		-228.5	-4,097.8	203.8	-19.2	223.03	0.914	Level 1
11,000.0	6,750.2	11,078.2	6,825.2	122.0	121.9	111.60		-228.5	-4,197.8	203.8	-24.6	228.32	0.892	Level 1
11,100.0	6,749.3	11,178.2	6,824.1	124.7	124.7	111.54		-228.5	-4,297.8	203.7	-30.0	233.61	0.872	Level 1
11,200.0	6,748.4	11,278.2	6,823.0	127.5	127.5	111.47		-228.5	-4,397.8	203.6	-35.3	238.92	0.852	Level 1
11,300.0	6,747.6	11,378.2	6,821.8	130.3	130.3	111.41		-228.5	-4,497.8	203.5	-40.7	244.23	0.833	Level 1
11,400.0	6,746.7	11,478.2	6,820.7	133.1	133.1	111.35		-228.5	-4,597.8	203.4	-46.1	249.54	0.815	Level 1
11,500.0	6,745.8	11,578.2	6,819.6	135.9	135.8	111.28		-228.5	-4,697.8	203.3	-51.6	254.86	0.798	Level 1
11,600.0	6,744.9	11,678.2	6,818.5	138.7	138.6	111.22		-228.5	-4,797.8	203.2	-57.0	260.19	0.781	Level 1
11,700.0	6,744.1	11,778.2	6,817.4	141.5	141.4	111.15		-228.5	-4,897.8	203.1	-62.4	265.52	0.765	Level 1
11,800.0	6,743.2	11,878.2	6,816.3	144.3	144.2	111.09		-228.5	-4,997.8	203.0	-67.8	270.86	0.750	Level 1
11,900.0	6,742.3	11,978.2	6,815.1	147.1	147.0	111.03		-228.5	-5,097.8	203.0	-73.2	276.20	0.735	Level 1
12,000.0	6,741.5	12,078.2	6,814.0	149.9	149.8	110.96		-228.5	-5,197.8	202.9	-78.7	281.55	0.721	Level 1
12,100.0	6,740.6	12,178.2	6,812.9	152.7	152.6	110.90		-228.5	-5,297.8	202.8	-84.1	286.90	0.707	Level 1
12,200.0	6,739.7	12,278.2	6,811.8	155.4	155.4	110.83		-228.5	-5,397.8	202.7	-89.6	292.26	0.694	Level 1
12,300.0	6,738.8	12,378.2	6,810.7	158.2	158.2	110.77		-228.5	-5,497.7	202.6	-95.0	297.62	0.681	Level 1
12,400.0	6,738.0	12,478.2	6,809.6	161.0	161.0	110.70		-228.5	-5,597.7	202.5	-100.5	302.99	0.668	Level 1
12,500.0	6,737.1	12,578.2	6,808.4	163.8	163.8	110.64		-228.5	-5,697.7	202.4	-105.9	308.36	0.656	Level 1
12,600.0	6,736.2	12,678.2	6,807.3	166.6	166.6	110.57		-228.5	-5,797.7	202.3	-111.4	313.74	0.645	Level 1
12,700.0	6,735.3	12,778.2	6,806.2	169.4	169.4	110.51		-228.5	-5,897.7	202.3	-116.9	319.12	0.634	Level 1
12,800.0	6,734.5	12,878.2	6,805.1	172.2	172.2	110.44		-228.5	-5,997.7	202.2	-122.3	324.51	0.623	Level 1
12,900.0	6,733.6	12,978.2	6,804.0	175.0	175.0	110.38		-228.5	-6,097.7	202.1	-127.8	329.90	0.613	Level 1
13,000.0	6,732.7	13,078.2	6,802.8	177.8	177.8	110.31		-228.5	-6,197.7	202.0	-133.3	335.29	0.602	Level 1
13,100.0	6,731.9	13,178.2	6,801.7	180.6	180.6	110.25		-228.5	-6,297.7	201.9	-138.8	340.69	0.593	Level 1
13,200.0	6,731.0	13,278.2	6,800.6	183.4	183.4	110.18		-228.5	-6,397.7	201.8	-144.3	346.10	0.583	Level 1
13,300.0	6,730.1	13,378.2	6,799.5	186.2	186.2	110.12		-228.5	-6,497.7	201.7	-149.8	351.51	0.574	Level 1
13,400.0	6,729.2	13,478.2	6,798.4	189.0	189.0	110.05		-228.5	-6,597.7	201.7	-155.3	356.92	0.565	Level 1
13,500.0	6,728.4	13,578.2	6,797.3	191.8	191.8	109.99		-228.5	-6,697.7	201.6	-160.8	362.34	0.556	Level 1
13,600.0	6,727.5	13,678.2	6,796.1	194.6	194.6	109.92		-228.5	-6,797.7	201.5	-166.3	367.76	0.548	Level 1
13,700.0	6,726.6	13,778.2	6,795.0	197.4	197.4	109.86		-228.5	-6,897.7	201.4	-171.8	373.19	0.540	Level 1
13,800.0	6,725.7	13,878.2	6,793.9	200.2	200.2	109.79		-228.5	-6,997.7	201.3	-177.3	378.62	0.532	Level 1
13,862.6	6,725.2	13,940.9	6,793.2	201.4	201.9	109.75		-228.5	-7,060.3	201.3	-180.2	381.43	0.528	Level 1
13,885.3	6,725.0	13,959.9	6,793.0	201.8	202.5	109.74		-228.5	-7,079.3	201.3	-181.1	382.35	0.526	Level 1, ES, SF

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Noffsinger Pad Sec.2-T5N-R65W - Noffsinger 2C (Vert.) - Wellbore #1 - Design #1												Offset Well Error:	0.0 ft
Survey Program: 0-MWD													
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
11,900.0	6,742.3	6,751.3	6,751.3	147.1	15.1	-94.89	-516.6	-6,065.0	973.0	811.5	161.49	6.025	
12,000.0	6,741.5	6,750.5	6,750.5	149.9	15.1	-94.39	-516.6	-6,065.0	873.6	709.2	164.38	5.314	
12,100.0	6,740.6	6,749.6	6,749.6	152.7	15.1	-93.89	-516.6	-6,065.0	774.3	607.1	167.27	4.629	
12,200.0	6,739.7	6,748.7	6,748.7	155.4	15.1	-93.38	-516.6	-6,065.0	675.3	505.1	170.15	3.969	
12,300.0	6,738.8	6,747.8	6,747.8	158.2	15.1	-92.88	-516.6	-6,065.0	576.5	403.5	173.02	3.332	
12,400.0	6,738.0	6,747.0	6,747.0	161.0	15.1	-92.37	-516.6	-6,065.0	478.3	302.4	175.88	2.720	
12,500.0	6,737.1	6,746.1	6,746.1	163.8	15.1	-91.86	-516.6	-6,065.0	381.0	202.3	178.74	2.132	
12,600.0	6,736.2	6,745.2	6,745.2	166.6	15.0	-91.36	-516.6	-6,065.0	285.6	104.0	181.58	1.573	
12,700.0	6,735.3	6,744.3	6,744.3	169.4	15.0	-90.85	-516.6	-6,065.0	194.9	10.5	184.40	1.057 Level 2	
12,800.0	6,734.5	6,743.5	6,743.5	172.2	15.0	-90.34	-516.6	-6,065.0	119.8	-67.4	187.22	0.640 Level 1	
12,868.1	6,733.9	6,742.9	6,742.9	174.1	15.0	-90.00	-516.6	-6,065.0	98.6	-90.5	189.13	0.522 Level 1, CC, ES, SF	
12,900.0	6,733.6	6,742.6	6,742.6	175.0	15.0	-89.84	-516.6	-6,065.0	103.7	-86.3	190.03	0.546 Level 1	
13,000.0	6,732.7	6,741.7	6,741.7	177.8	15.0	-89.33	-516.6	-6,065.0	164.7	-28.1	192.82	0.854 Level 1	
13,100.0	6,731.9	6,740.9	6,740.9	180.6	15.0	-88.82	-516.6	-6,065.0	252.0	56.5	195.59	1.289 Level 3	
13,200.0	6,731.0	6,740.0	6,740.0	183.4	15.0	-88.32	-516.6	-6,065.0	346.3	147.9	198.35	1.746	
13,300.0	6,730.1	6,739.1	6,739.1	186.2	15.0	-87.81	-516.6	-6,065.0	443.1	242.0	201.10	2.203	
13,400.0	6,729.2	6,738.2	6,738.2	189.0	15.0	-87.31	-516.6	-6,065.0	541.0	337.2	203.83	2.654	
13,500.0	6,728.4	6,737.4	6,737.4	191.8	15.0	-86.80	-516.6	-6,065.0	639.6	433.0	206.54	3.097	
13,600.0	6,727.5	6,736.5	6,736.5	194.6	15.0	-86.30	-516.6	-6,065.0	738.5	529.3	209.24	3.530	
13,700.0	6,726.6	6,735.6	6,735.6	197.4	15.0	-85.79	-516.6	-6,065.0	837.7	625.8	211.92	3.953	
13,800.0	6,725.7	6,734.7	6,734.7	200.2	15.0	-85.29	-516.6	-6,065.0	937.1	722.5	214.58	4.367	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 699-MWD												Offset Well Error:	0.0 ft
Noffsinger Pad Sec.2-T5N-R65W - Noffsinger 2RD - Wellbore #1 - Wellbore #1													
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
12,600.0	6,736.2	6,880.4	6,744.6	166.6	22.3	90.20	467.6	-6,221.2	981.9	800.1	181.88	5.399	
12,700.0	6,735.3	6,873.5	6,737.8	169.4	22.3	89.76	467.4	-6,221.6	943.0	758.4	184.67	5.106	
12,800.0	6,734.5	6,866.8	6,731.1	172.2	22.2	89.32	467.2	-6,222.0	913.4	726.0	187.46	4.873	
12,900.0	6,733.6	6,860.1	6,724.4	175.0	22.2	88.89	467.0	-6,222.4	894.0	703.8	190.24	4.699	
13,000.0	6,732.7	6,853.5	6,717.8	177.8	22.2	88.47	466.9	-6,222.7	885.5	692.5	193.01	4.588	
13,026.1	6,732.5	6,851.8	6,716.1	178.6	22.2	88.35	466.8	-6,222.8	885.1	691.4	193.73	4.569	CC, ES
13,100.0	6,731.9	6,849.0	6,713.3	180.6	22.2	88.18	466.7	-6,223.0	888.2	692.4	195.78	4.536	SF
13,200.0	6,731.0	6,849.0	6,713.3	183.4	22.2	88.18	466.7	-6,223.0	902.0	703.4	198.58	4.542	
13,300.0	6,730.1	6,836.3	6,700.7	186.2	22.2	87.36	466.4	-6,223.7	926.4	725.1	201.28	4.602	
13,400.0	6,729.2	6,831.0	6,695.4	189.0	22.2	87.01	466.3	-6,224.0	960.6	756.5	204.03	4.708	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 700-MWD												Offset Well Error:	0.0 ft
Noffsinger Pad Sec.2-T5N-R65W - Noffsinger 2VD - Wellbore #1 - Wellbore #1													
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
10,900.0	6,751.1	6,906.4	6,772.6	119.2	23.2	-93.38	-766.0	-5,015.6	982.4	840.8	141.66	6.935	
11,000.0	6,750.2	6,903.6	6,769.8	122.0	23.2	-92.91	-766.0	-5,015.7	889.6	745.1	144.51	6.156	
11,100.0	6,749.3	6,900.8	6,767.0	124.7	23.2	-92.46	-766.0	-5,015.7	798.6	651.2	147.35	5.420	
11,200.0	6,748.4	6,898.1	6,764.3	127.5	23.2	-92.02	-765.9	-5,015.7	709.9	559.8	150.18	4.727	
11,300.0	6,747.6	6,895.5	6,761.7	130.3	23.2	-91.59	-765.9	-5,015.8	624.7	471.7	153.00	4.083	
11,400.0	6,746.7	6,892.9	6,759.1	133.1	23.2	-91.17	-765.9	-5,015.8	544.5	388.7	155.82	3.495	
11,500.0	6,745.8	6,890.5	6,756.6	135.9	23.2	-90.76	-765.9	-5,015.9	472.0	313.3	158.63	2.975	
11,600.0	6,744.9	6,888.0	6,754.2	138.7	23.2	-90.36	-765.9	-5,015.9	411.1	249.6	161.44	2.546	
11,700.0	6,744.1	6,885.7	6,751.9	141.5	23.2	-89.97	-765.9	-5,015.9	367.7	203.5	164.24	2.239	
11,800.0	6,743.2	6,883.4	6,749.6	144.3	23.2	-89.60	-765.8	-5,016.0	348.4	181.4	167.03	2.086	
11,819.0	6,743.0	6,883.0	6,749.2	144.8	23.2	-89.53	-765.8	-5,016.0	347.9	180.4	167.56	2.076	CC, ES, SF
11,900.0	6,742.3	6,881.2	6,747.4	147.1	23.2	-89.23	-765.8	-5,016.0	357.2	187.4	169.81	2.104	
12,000.0	6,741.5	6,879.0	6,745.2	149.9	23.2	-88.87	-765.8	-5,016.0	392.1	219.6	172.59	2.272	
12,100.0	6,740.6	6,876.9	6,743.1	152.7	23.2	-88.52	-765.8	-5,016.0	447.2	271.8	175.37	2.550	
12,200.0	6,739.7	6,874.8	6,741.0	155.4	23.2	-88.18	-765.8	-5,016.1	515.9	337.7	178.14	2.896	
12,300.0	6,738.8	6,872.8	6,739.0	158.2	23.2	-87.85	-765.7	-5,016.1	593.5	412.6	180.90	3.281	
12,400.0	6,738.0	6,870.8	6,737.0	161.0	23.2	-87.53	-765.7	-5,016.1	677.1	493.4	183.66	3.687	
12,500.0	6,737.1	6,868.9	6,735.1	163.8	23.2	-87.21	-765.7	-5,016.1	764.6	578.2	186.41	4.101	
12,600.0	6,736.2	6,867.0	6,733.2	166.6	23.2	-86.90	-765.7	-5,016.2	854.8	665.7	189.16	4.519	
12,700.0	6,735.3	6,865.2	6,731.4	169.4	23.2	-86.60	-765.7	-5,016.2	947.0	755.1	191.90	4.935	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Noffsinger Pad Sec.2-T5N-R65W - Noffsinger 31-2D - Wellbore #1 - Wellbore #1												Offset Well Error:	0.0 ft
Survey Program: 700-MWD													
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
12,800.0	6,734.5	6,889.5	6,782.5	172.2	21.3	99.14	-125.8	-6,911.5	960.8	770.7	190.10	5.054	
12,900.0	6,733.6	6,884.0	6,777.0	175.0	21.3	98.08	-125.7	-6,911.6	866.2	672.9	193.36	4.480	
13,000.0	6,732.7	6,881.2	6,774.2	177.8	21.2	97.54	-125.6	-6,911.7	773.0	576.6	196.37	3.936	
13,100.0	6,731.9	6,876.8	6,769.8	180.6	21.2	96.69	-125.5	-6,911.9	681.6	482.1	199.48	3.417	
13,200.0	6,731.0	6,872.5	6,765.5	183.4	21.2	95.85	-125.4	-6,912.0	592.9	390.4	202.56	2.927	
13,300.0	6,730.1	6,868.2	6,761.2	186.2	21.2	95.03	-125.3	-6,912.2	508.5	302.9	205.60	2.473	
13,400.0	6,729.2	6,864.1	6,757.0	189.0	21.2	94.21	-125.2	-6,912.3	430.8	222.2	208.61	2.065	
13,500.0	6,728.4	6,860.0	6,752.9	191.8	21.2	93.41	-125.0	-6,912.4	364.0	152.4	211.58	1.720	
13,600.0	6,727.5	6,855.9	6,748.9	194.6	21.2	92.62	-124.9	-6,912.6	315.3	100.8	214.52	1.470 Level 3	
13,700.0	6,726.6	6,851.9	6,744.9	197.4	21.2	91.85	-124.8	-6,912.7	293.7	76.3	217.42	1.351 Level 3	
13,715.8	6,726.5	6,851.3	6,744.3	197.9	21.2	91.73	-124.8	-6,912.7	293.3	75.4	217.88	1.346 Level 3, CC, ES, SF	
13,800.0	6,725.7	6,848.0	6,741.0	200.2	21.2	91.08	-124.7	-6,912.8	305.1	84.8	220.29	1.385 Level 3	
13,885.3	6,725.0	6,844.7	6,737.7	201.8	21.2	90.44	-124.6	-6,912.9	338.7	116.8	221.86	1.527	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 668-MWD												Offset Well Error:	0.0 ft
Noffsinger Pad Sec.2-T5N-R65W - Noffsinger 32-2D - Wellbore #1 - Wellbore #1													
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
13,500.0	6,728.4	6,869.9	6,704.8	191.8	25.6	-88.19	-1,383.9	-6,933.1	995.0	782.1	212.86	4.674	
13,600.0	6,727.5	6,869.4	6,704.3	194.6	25.6	-88.16	-1,383.9	-6,933.1	976.0	760.4	215.65	4.526	
13,700.0	6,726.6	6,869.0	6,703.9	197.4	25.6	-88.14	-1,383.9	-6,933.1	967.1	748.7	218.45	4.427	
13,736.5	6,726.3	6,868.9	6,703.8	198.4	25.6	-88.13	-1,383.9	-6,933.1	966.5	747.0	219.47	4.404 CC, ES	
13,800.0	6,725.7	6,868.6	6,703.5	200.2	25.6	-88.11	-1,383.9	-6,933.1	968.5	747.3	221.25	4.378 SF	
13,885.3	6,725.0	6,868.2	6,703.1	201.8	25.6	-88.09	-1,383.8	-6,933.1	977.8	755.1	222.79	4.389	

Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4651.0ft (RKB - 13')

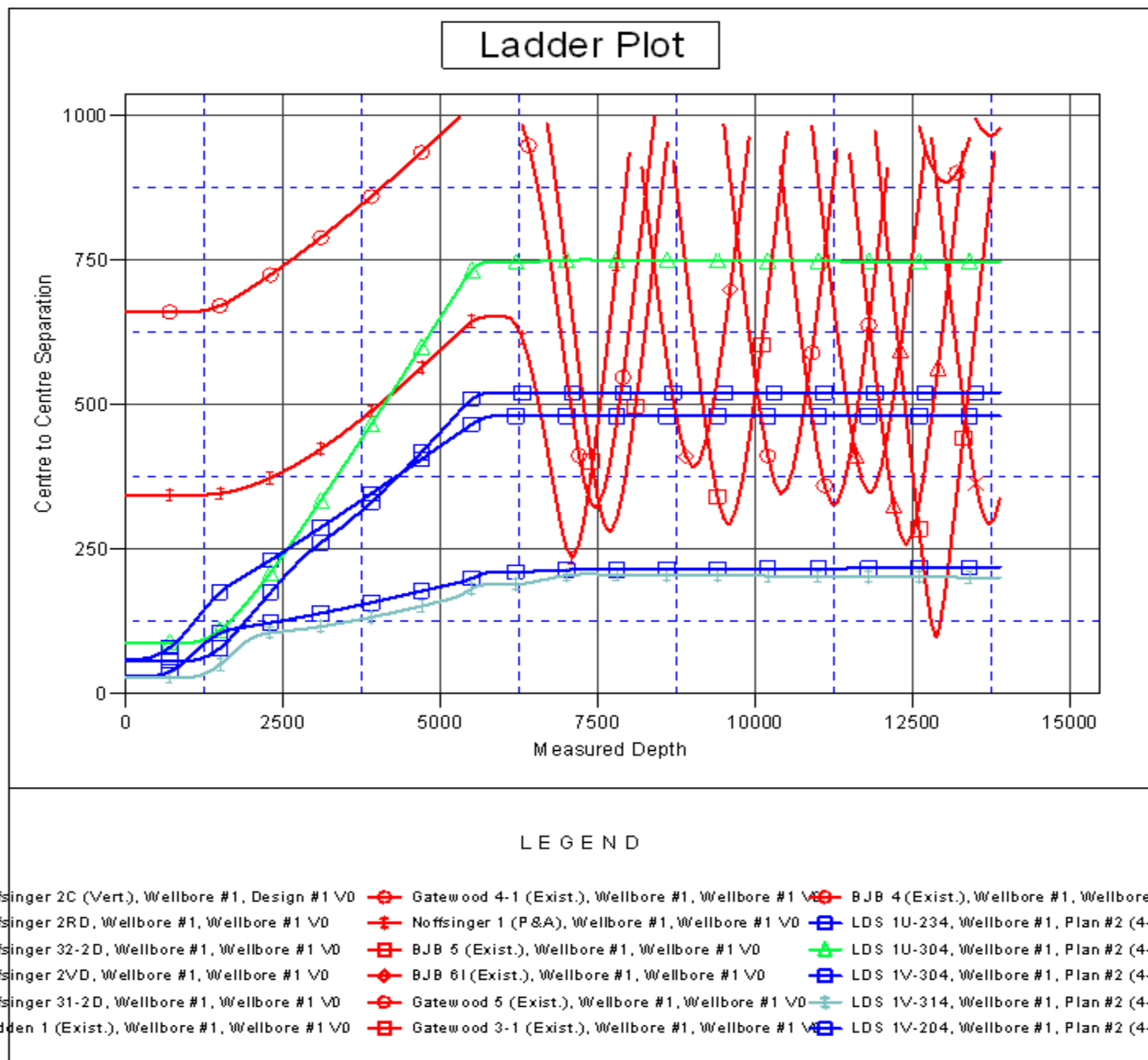
Offset Depths are relative to Offset Datum

Central Meridian is -105.500000 °

Coordinates are relative to: LDS 1V-214

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.58°



Company:	PETROLEUM DEVELOPMENT CORP Weld County CO	Local Co-ordinate Reference:	Well LDS 1V-214
Project:	SEC.1-T5N-R65W	TVD Reference:	WELL @ 4651.0ft (RKB - 13')
Reference Site:	LDS 5N65W1U Pad Sec.1-T5N-R65W	MD Reference:	WELL @ 4651.0ft (RKB - 13')
Site Error:	0.0ft	North Reference:	True
Reference Well:	LDS 1V-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #2 (4-30-15)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4651.0ft (RKB - 13')

Offset Depths are relative to Offset Datum

Central Meridian is -105.500000 °

Coordinates are relative to: LDS 1V-214

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.58°

