

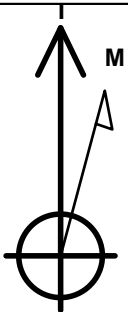
PETROLEUM DEVELOPMENT CORP DJ Basin

Well Name: **Klein 7T-301**

Surface Location: Klein 5N64W7 Pad Sec.7-T5N-R64W
 North American Datum 1983 , US State Plane 1983, Colorado Northern Zone
 Ground Elevation: 4624.0
 +N/-S+E/-W Northing Easting Latitude Longitude Slot
 0.0 0.01392729.68253348.99 40.407877 -104.590221
 Original Well Elev WELL @ 4637.0ft (Original Well Elev)

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 536'FSL & 1863'FEL, Sec.7	1.0	0.0	0.0	Point
BHL 200'FNL & 1396'FEL, Sec.6	6783.0	9742.9	489.4	Point



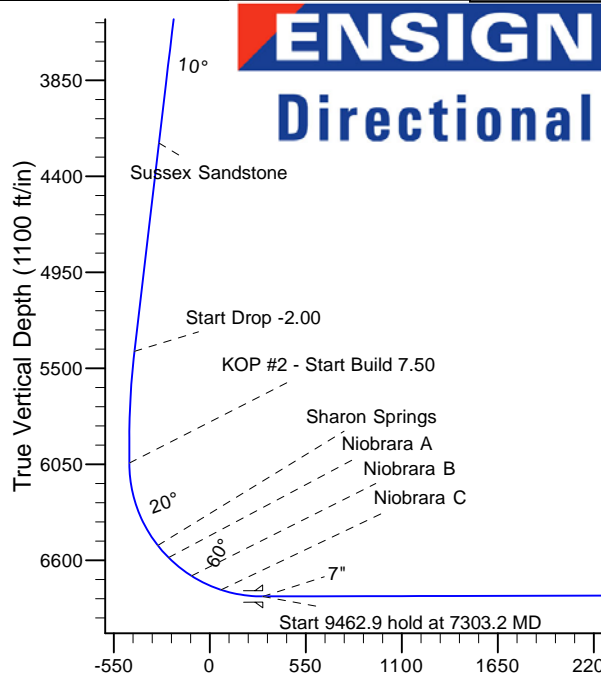
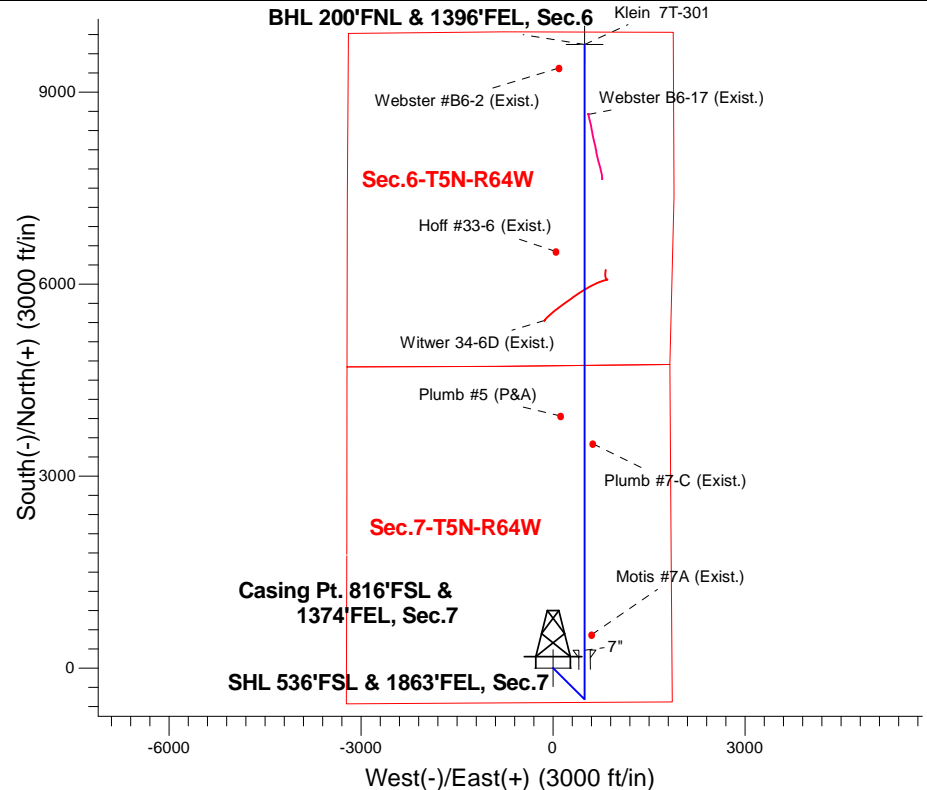
Azimuths to True North
 Magnetic North: 8.19°

Magnetic Field
 Strength: 52698.7nT
 Dip Angle: 66.93°
 Date: 10/14/2015
 Model: IGRF2010

Klein 5N64W7 Pad Sec.7-T5N-R64W
 Klein 7T-301
 Plan #1 (10-14-15)
 17:24, October 19 2015

ANNOTATIONS

TVD	MD	Annotation
1400.0	1400.0	KOP - Start Build 1.50
5403.1	5457.8	Start Drop -2.00
6043.8	6101.1	KOP #2 - Start Build 7.50
6807.8	7303.2	Start 9462.9 hold at 7303.2 MD
6783.0	16766.1	TD at 16766.1



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1400.0	0.00	0.00	1400.0	0.0	0.0	0.00	0.00	0.0	
3	2066.0	9.99	134.80	2062.6	-40.8	41.1	1.50	134.80	-38.7	
4	5457.8	9.99	134.80	5403.1	-455.4	458.6	0.00	0.00	-431.8	
5	5957.3	0.00	0.00	5900.0	-486.0	489.4	2.00	180.00	-460.8	
6	6101.1	0.00	0.00	6043.8	-486.0	489.4	0.00	0.00	-460.8	
7	7303.2	90.15	360.00	6807.8	279.9	489.4	7.50	360.00	304.1	
8	16766.1	90.15	360.00	6783.0	9742.9	489.4	0.00	0.00	9755.1	BHL 200'FNL & 1396'FEL, Sec.6

BHL 200'FNL & 1396'FEL, Sec.6

TD at 16766.1

Vertical Section at 2.88° (1100 ft/in)



Directional

PETROLEUM DEVELOPMENT CORP DJ Basin

SEC.7-T5N-R64W

Klein 5N64W7 Pad Sec.7-T5N-R64W

Klein 7T-301

Wellbore #1

Plan: Plan #1 (10-14-15)

Standard Planning Report

19 October, 2015

Database:	US_EDM	Local Co-ordinate Reference:	Well Klein 7T-301
Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Project:	SEC.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site:	Klein 5N64W7 Pad Sec.7-T5N-R64W	North Reference:	True
Well:	Klein 7T-301	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (10-14-15)		

Project	SEC.7-T5N-R64W, Weld County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	Klein 5N64W7 Pad Sec.7-T5N-R64W		
Site Position:		Northing:	1,392,729.68 usft
From:	Lat/Long	Easting:	3,253,319.19 usft
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "
		Latitude:	40.407878
		Longitude:	-104.590328
		Grid Convergence:	0.59 °

Well	Klein 7T-301		
Well Position	+N/-S	-0.4 ft	Northing:
	+E/-W	29.8 ft	Easting:
Position Uncertainty		0.0 ft	Wellhead Elevation:
			Latitude:
			Longitude:
			Ground Level:

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/14/2015	8.19	66.93	52,699

Design	Plan #1 (10-14-15)			
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	2.88

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,066.0	9.99	134.80	2,062.6	-40.8	41.1	1.50	1.50	0.00	134.80	
5,457.8	9.99	134.80	5,403.1	-455.4	458.6	0.00	0.00	0.00	0.00	
5,957.3	0.00	0.00	5,900.0	-486.0	489.4	2.00	-2.00	0.00	180.00	
6,101.1	0.00	0.00	6,043.8	-486.0	489.4	0.00	0.00	0.00	0.00	
7,303.2	90.15	360.00	6,807.8	279.9	489.4	7.50	7.50	0.00	360.00	
16,766.1	90.15	360.00	6,783.0	9,742.9	489.4	0.00	0.00	0.00	0.00	BHL 200'FNL & 1396'

Database:	US_EDM	Local Co-ordinate Reference:	Well Klein 7T-301
Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Project:	SEC.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site:	Klein 5N64W7 Pad Sec.7-T5N-R64W	North Reference:	True
Well:	Klein 7T-301	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (10-14-15)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
1.0	0.00	0.00	1.0	0.0	0.0	0.0	0.00	0.00	0.00
SHL 536'FSL & 1863'FEL, Sec.7									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 1.50									
1,500.0	1.50	134.80	1,500.0	-0.9	0.9	-0.9	1.50	1.50	0.00
1,600.0	3.00	134.80	1,599.9	-3.7	3.7	-3.5	1.50	1.50	0.00
1,700.0	4.50	134.80	1,699.7	-8.3	8.4	-7.9	1.50	1.50	0.00
1,800.0	6.00	134.80	1,799.3	-14.7	14.8	-14.0	1.50	1.50	0.00
1,900.0	7.50	134.80	1,898.6	-23.0	23.2	-21.8	1.50	1.50	0.00
2,000.0	9.00	134.80	1,997.5	-33.1	33.4	-31.4	1.50	1.50	0.00
2,066.0	9.99	134.80	2,062.6	-40.8	41.1	-38.7	1.50	1.50	0.00
2,100.0	9.99	134.80	2,096.1	-45.0	45.3	-42.6	0.00	0.00	0.00
2,200.0	9.99	134.80	2,194.6	-57.2	57.6	-54.2	0.00	0.00	0.00
2,300.0	9.99	134.80	2,293.1	-69.4	69.9	-65.8	0.00	0.00	0.00
2,400.0	9.99	134.80	2,391.6	-81.6	82.2	-77.4	0.00	0.00	0.00
2,500.0	9.99	134.80	2,490.1	-93.9	94.5	-89.0	0.00	0.00	0.00
2,600.0	9.99	134.80	2,588.5	-106.1	106.8	-100.6	0.00	0.00	0.00
2,700.0	9.99	134.80	2,687.0	-118.3	119.1	-112.2	0.00	0.00	0.00
2,800.0	9.99	134.80	2,785.5	-130.5	131.4	-123.8	0.00	0.00	0.00
2,900.0	9.99	134.80	2,884.0	-142.7	143.7	-135.4	0.00	0.00	0.00
3,000.0	9.99	134.80	2,982.5	-155.0	156.1	-146.9	0.00	0.00	0.00
3,100.0	9.99	134.80	3,081.0	-167.2	168.4	-158.5	0.00	0.00	0.00
3,200.0	9.99	134.80	3,179.4	-179.4	180.7	-170.1	0.00	0.00	0.00
3,300.0	9.99	134.80	3,277.9	-191.6	193.0	-181.7	0.00	0.00	0.00
3,400.0	9.99	134.80	3,376.4	-203.9	205.3	-193.3	0.00	0.00	0.00
3,500.0	9.99	134.80	3,474.9	-216.1	217.6	-204.9	0.00	0.00	0.00
3,515.3	9.99	134.80	3,490.0	-218.0	219.5	-206.7	0.00	0.00	0.00
Parkman Sandstone									
3,600.0	9.99	134.80	3,573.4	-228.3	229.9	-216.5	0.00	0.00	0.00
3,700.0	9.99	134.80	3,671.9	-240.5	242.2	-228.1	0.00	0.00	0.00
3,800.0	9.99	134.80	3,770.3	-252.8	254.5	-239.7	0.00	0.00	0.00
3,900.0	9.99	134.80	3,868.8	-265.0	266.8	-251.3	0.00	0.00	0.00
4,000.0	9.99	134.80	3,967.3	-277.2	279.1	-262.9	0.00	0.00	0.00
4,100.0	9.99	134.80	4,065.8	-289.4	291.5	-274.4	0.00	0.00	0.00
4,200.0	9.99	134.80	4,164.3	-301.6	303.8	-286.0	0.00	0.00	0.00
4,246.4	9.99	134.80	4,210.0	-307.3	309.5	-291.4	0.00	0.00	0.00
Sussex Sandstone									
4,300.0	9.99	134.80	4,262.8	-313.9	316.1	-297.6	0.00	0.00	0.00
4,400.0	9.99	134.80	4,361.2	-326.1	328.4	-309.2	0.00	0.00	0.00

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Project:	SEC.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site:	Klein 5N64W7 Pad Sec.7-T5N-R64W	North Reference:	True
Well:	Klein 7T-301	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (10-14-15)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,500.0	9.99	134.80	4,459.7	-338.3	340.7	-320.8	0.00	0.00	0.00
4,600.0	9.99	134.80	4,558.2	-350.5	353.0	-332.4	0.00	0.00	0.00
4,700.0	9.99	134.80	4,656.7	-362.8	365.3	-344.0	0.00	0.00	0.00
4,800.0	9.99	134.80	4,755.2	-375.0	377.6	-355.6	0.00	0.00	0.00
4,900.0	9.99	134.80	4,853.7	-387.2	389.9	-367.2	0.00	0.00	0.00
5,000.0	9.99	134.80	4,952.2	-399.4	402.2	-378.8	0.00	0.00	0.00
5,100.0	9.99	134.80	5,050.6	-411.7	414.5	-390.3	0.00	0.00	0.00
5,200.0	9.99	134.80	5,149.1	-423.9	426.8	-401.9	0.00	0.00	0.00
5,300.0	9.99	134.80	5,247.6	-436.1	439.2	-413.5	0.00	0.00	0.00
5,400.0	9.99	134.80	5,346.1	-448.3	451.5	-425.1	0.00	0.00	0.00
5,457.8	9.99	134.80	5,403.0	-455.4	458.6	-431.8	0.00	0.00	0.00
Start Drop -2.00									
5,500.0	9.15	134.80	5,444.6	-460.3	463.6	-436.5	2.00	-2.00	0.00
5,600.0	7.15	134.80	5,543.6	-470.3	473.6	-446.0	2.00	-2.00	0.00
5,700.0	5.15	134.80	5,643.0	-477.9	481.2	-453.1	2.00	-2.00	0.00
5,800.0	3.15	134.80	5,742.8	-483.0	486.3	-458.0	2.00	-2.00	0.00
5,900.0	1.15	134.80	5,842.7	-485.6	489.0	-460.5	2.00	-2.00	0.00
5,957.3	0.00	0.00	5,900.0	-486.0	489.4	-460.8	2.00	-2.00	0.00
6,000.0	0.00	0.00	5,942.7	-486.0	489.4	-460.8	0.00	0.00	0.00
6,100.0	0.00	0.00	6,042.7	-486.0	489.4	-460.8	0.00	0.00	0.00
6,101.1	0.00	0.00	6,043.8	-486.0	489.4	-460.8	0.00	0.00	0.00
KOP #2 - Start Build 7.50									
6,200.0	7.41	360.00	6,142.4	-479.6	489.4	-454.5	7.50	7.50	0.00
6,300.0	14.91	360.00	6,240.4	-460.3	489.4	-435.1	7.50	7.50	0.00
6,400.0	22.41	360.00	6,335.1	-428.3	489.4	-403.2	7.50	7.50	0.00
6,500.0	29.91	360.00	6,424.8	-384.2	489.4	-359.2	7.50	7.50	0.00
6,600.0	37.41	360.00	6,508.0	-328.8	489.4	-303.9	7.50	7.50	0.00
6,610.1	38.18	360.00	6,516.0	-322.6	489.4	-297.7	7.50	7.50	0.00
Sharon Springs									
6,700.0	44.91	360.00	6,583.2	-263.1	489.4	-238.2	7.50	7.50	0.00
6,702.5	45.10	360.00	6,585.0	-261.3	489.4	-236.4	7.50	7.50	0.00
Niobrara A									
6,800.0	52.41	360.00	6,649.2	-188.0	489.4	-163.2	7.50	7.50	0.00
6,871.3	57.76	360.00	6,690.0	-129.6	489.4	-104.9	7.50	7.50	0.00
Niobrara B									
6,900.0	59.91	360.00	6,704.9	-105.0	489.4	-80.3	7.50	7.50	0.00
7,000.0	67.41	360.00	6,749.2	-15.5	489.4	9.1	7.50	7.50	0.00
7,059.9	71.91	360.00	6,770.0	40.7	489.4	65.2	7.50	7.50	0.00
Niobrara C									
7,100.0	74.91	360.00	6,781.4	79.1	489.4	103.6	7.50	7.50	0.00
7,200.0	82.41	360.00	6,801.1	177.1	489.4	201.4	7.50	7.50	0.00
7,300.0	89.91	360.00	6,807.8	276.8	489.4	301.0	7.50	7.50	0.00
7,303.2	90.15	360.00	6,807.8	280.0	489.4	304.2	7.38	7.38	0.00
Start 9462.9 hold at 7303.2 MD - 7"									
7,400.0	90.15	360.00	6,807.5	376.8	489.4	400.9	0.00	0.00	0.00
7,500.0	90.15	360.00	6,807.3	476.8	489.4	500.7	0.00	0.00	0.00
7,600.0	90.15	360.00	6,807.0	576.8	489.4	600.6	0.00	0.00	0.00
7,700.0	90.15	360.00	6,806.7	676.8	489.4	700.5	0.00	0.00	0.00
7,800.0	90.15	360.00	6,806.5	776.8	489.4	800.4	0.00	0.00	0.00
7,900.0	90.15	360.00	6,806.2	876.8	489.4	900.2	0.00	0.00	0.00
8,000.0	90.15	360.00	6,805.9	976.8	489.4	1,000.1	0.00	0.00	0.00
8,100.0	90.15	360.00	6,805.7	1,076.8	489.4	1,100.0	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well Klein 7T-301
Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Project:	SEC.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site:	Klein 5N64W7 Pad Sec.7-T5N-R64W	North Reference:	True
Well:	Klein 7T-301	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (10-14-15)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,200.0	90.15	360.00	6,805.4	1,176.8	489.4	1,199.9	0.00	0.00	0.00
8,300.0	90.15	360.00	6,805.2	1,276.8	489.4	1,299.7	0.00	0.00	0.00
8,400.0	90.15	360.00	6,804.9	1,376.8	489.4	1,399.6	0.00	0.00	0.00
8,500.0	90.15	360.00	6,804.6	1,476.8	489.4	1,499.5	0.00	0.00	0.00
8,600.0	90.15	360.00	6,804.4	1,576.8	489.4	1,599.4	0.00	0.00	0.00
8,700.0	90.15	360.00	6,804.1	1,676.8	489.4	1,699.2	0.00	0.00	0.00
8,800.0	90.15	360.00	6,803.9	1,776.8	489.4	1,799.1	0.00	0.00	0.00
8,900.0	90.15	360.00	6,803.6	1,876.8	489.4	1,899.0	0.00	0.00	0.00
9,000.0	90.15	360.00	6,803.3	1,976.8	489.4	1,998.9	0.00	0.00	0.00
9,100.0	90.15	360.00	6,803.1	2,076.8	489.4	2,098.7	0.00	0.00	0.00
9,200.0	90.15	360.00	6,802.8	2,176.8	489.4	2,198.6	0.00	0.00	0.00
9,300.0	90.15	360.00	6,802.5	2,276.8	489.4	2,298.5	0.00	0.00	0.00
9,400.0	90.15	360.00	6,802.3	2,376.8	489.4	2,398.3	0.00	0.00	0.00
9,500.0	90.15	360.00	6,802.0	2,476.8	489.4	2,498.2	0.00	0.00	0.00
9,600.0	90.15	360.00	6,801.8	2,576.8	489.4	2,598.1	0.00	0.00	0.00
9,700.0	90.15	360.00	6,801.5	2,676.8	489.4	2,698.0	0.00	0.00	0.00
9,800.0	90.15	360.00	6,801.2	2,776.8	489.4	2,797.8	0.00	0.00	0.00
9,900.0	90.15	360.00	6,801.0	2,876.8	489.4	2,897.7	0.00	0.00	0.00
10,000.0	90.15	360.00	6,800.7	2,976.8	489.4	2,997.6	0.00	0.00	0.00
10,100.0	90.15	360.00	6,800.5	3,076.8	489.4	3,097.5	0.00	0.00	0.00
10,200.0	90.15	360.00	6,800.2	3,176.8	489.4	3,197.3	0.00	0.00	0.00
10,300.0	90.15	360.00	6,799.9	3,276.8	489.4	3,297.2	0.00	0.00	0.00
10,400.0	90.15	360.00	6,799.7	3,376.8	489.4	3,397.1	0.00	0.00	0.00
10,500.0	90.15	360.00	6,799.4	3,476.8	489.4	3,497.0	0.00	0.00	0.00
10,600.0	90.15	360.00	6,799.1	3,576.8	489.4	3,596.8	0.00	0.00	0.00
10,700.0	90.15	360.00	6,798.9	3,676.8	489.4	3,696.7	0.00	0.00	0.00
10,800.0	90.15	360.00	6,798.6	3,776.8	489.4	3,796.6	0.00	0.00	0.00
10,900.0	90.15	360.00	6,798.4	3,876.8	489.4	3,896.5	0.00	0.00	0.00
11,000.0	90.15	360.00	6,798.1	3,976.8	489.4	3,996.3	0.00	0.00	0.00
11,100.0	90.15	360.00	6,797.8	4,076.8	489.4	4,096.2	0.00	0.00	0.00
11,200.0	90.15	360.00	6,797.6	4,176.8	489.4	4,196.1	0.00	0.00	0.00
11,300.0	90.15	360.00	6,797.3	4,276.8	489.4	4,295.9	0.00	0.00	0.00
11,400.0	90.15	360.00	6,797.0	4,376.8	489.4	4,395.8	0.00	0.00	0.00
11,500.0	90.15	360.00	6,796.8	4,476.8	489.4	4,495.7	0.00	0.00	0.00
11,600.0	90.15	360.00	6,796.5	4,576.8	489.4	4,595.6	0.00	0.00	0.00
11,700.0	90.15	360.00	6,796.3	4,676.8	489.4	4,695.4	0.00	0.00	0.00
11,800.0	90.15	360.00	6,796.0	4,776.8	489.4	4,795.3	0.00	0.00	0.00
11,900.0	90.15	360.00	6,795.7	4,876.8	489.4	4,895.2	0.00	0.00	0.00
12,000.0	90.15	360.00	6,795.5	4,976.8	489.4	4,995.1	0.00	0.00	0.00
12,100.0	90.15	360.00	6,795.2	5,076.8	489.4	5,094.9	0.00	0.00	0.00
12,200.0	90.15	360.00	6,795.0	5,176.8	489.4	5,194.8	0.00	0.00	0.00
12,300.0	90.15	360.00	6,794.7	5,276.8	489.4	5,294.7	0.00	0.00	0.00
12,400.0	90.15	360.00	6,794.4	5,376.8	489.4	5,394.6	0.00	0.00	0.00
12,500.0	90.15	360.00	6,794.2	5,476.8	489.4	5,494.4	0.00	0.00	0.00
12,600.0	90.15	360.00	6,793.9	5,576.8	489.4	5,594.3	0.00	0.00	0.00
12,700.0	90.15	360.00	6,793.6	5,676.8	489.4	5,694.2	0.00	0.00	0.00
12,800.0	90.15	360.00	6,793.4	5,776.8	489.4	5,794.1	0.00	0.00	0.00
12,900.0	90.15	360.00	6,793.1	5,876.8	489.4	5,893.9	0.00	0.00	0.00
13,000.0	90.15	360.00	6,792.9	5,976.8	489.4	5,993.8	0.00	0.00	0.00
13,100.0	90.15	360.00	6,792.6	6,076.8	489.4	6,093.7	0.00	0.00	0.00
13,200.0	90.15	360.00	6,792.3	6,176.8	489.4	6,193.5	0.00	0.00	0.00
13,300.0	90.15	360.00	6,792.1	6,276.8	489.4	6,293.4	0.00	0.00	0.00
13,400.0	90.15	360.00	6,791.8	6,376.8	489.4	6,393.3	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well Klein 7T-301
Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Project:	SEC.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site:	Klein 5N64W7 Pad Sec.7-T5N-R64W	North Reference:	True
Well:	Klein 7T-301	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (10-14-15)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
13,500.0	90.15	360.00	6,791.6	6,476.8	489.4	6,493.2	0.00	0.00	0.00
13,600.0	90.15	360.00	6,791.3	6,576.8	489.4	6,593.0	0.00	0.00	0.00
13,700.0	90.15	360.00	6,791.0	6,676.8	489.4	6,692.9	0.00	0.00	0.00
13,800.0	90.15	360.00	6,790.8	6,776.8	489.4	6,792.8	0.00	0.00	0.00
13,900.0	90.15	360.00	6,790.5	6,876.8	489.4	6,892.7	0.00	0.00	0.00
14,000.0	90.15	360.00	6,790.2	6,976.8	489.4	6,992.5	0.00	0.00	0.00
14,100.0	90.15	360.00	6,790.0	7,076.8	489.4	7,092.4	0.00	0.00	0.00
14,200.0	90.15	360.00	6,789.7	7,176.8	489.4	7,192.3	0.00	0.00	0.00
14,300.0	90.15	360.00	6,789.5	7,276.8	489.4	7,292.2	0.00	0.00	0.00
14,400.0	90.15	360.00	6,789.2	7,376.8	489.4	7,392.0	0.00	0.00	0.00
14,500.0	90.15	360.00	6,788.9	7,476.8	489.4	7,491.9	0.00	0.00	0.00
14,600.0	90.15	360.00	6,788.7	7,576.8	489.4	7,591.8	0.00	0.00	0.00
14,700.0	90.15	360.00	6,788.4	7,676.8	489.4	7,691.7	0.00	0.00	0.00
14,800.0	90.15	360.00	6,788.1	7,776.8	489.4	7,791.5	0.00	0.00	0.00
14,900.0	90.15	360.00	6,787.9	7,876.8	489.4	7,891.4	0.00	0.00	0.00
15,000.0	90.15	360.00	6,787.6	7,976.8	489.4	7,991.3	0.00	0.00	0.00
15,100.0	90.15	360.00	6,787.4	8,076.8	489.4	8,091.1	0.00	0.00	0.00
15,200.0	90.15	360.00	6,787.1	8,176.8	489.4	8,191.0	0.00	0.00	0.00
15,300.0	90.15	360.00	6,786.8	8,276.8	489.4	8,290.9	0.00	0.00	0.00
15,400.0	90.15	360.00	6,786.6	8,376.8	489.4	8,390.8	0.00	0.00	0.00
15,500.0	90.15	360.00	6,786.3	8,476.8	489.4	8,490.6	0.00	0.00	0.00
15,600.0	90.15	360.00	6,786.1	8,576.8	489.4	8,590.5	0.00	0.00	0.00
15,700.0	90.15	360.00	6,785.8	8,676.8	489.4	8,690.4	0.00	0.00	0.00
15,800.0	90.15	360.00	6,785.5	8,776.8	489.4	8,790.3	0.00	0.00	0.00
15,900.0	90.15	360.00	6,785.3	8,876.8	489.4	8,890.1	0.00	0.00	0.00
16,000.0	90.15	360.00	6,785.0	8,976.8	489.4	8,990.0	0.00	0.00	0.00
16,100.0	90.15	360.00	6,784.7	9,076.8	489.4	9,089.9	0.00	0.00	0.00
16,200.0	90.15	360.00	6,784.5	9,176.8	489.4	9,189.8	0.00	0.00	0.00
16,300.0	90.15	360.00	6,784.2	9,276.8	489.4	9,289.6	0.00	0.00	0.00
16,400.0	90.15	360.00	6,784.0	9,376.8	489.4	9,389.5	0.00	0.00	0.00
16,500.0	90.15	360.00	6,783.7	9,476.8	489.4	9,489.4	0.00	0.00	0.00
16,600.0	90.15	360.00	6,783.4	9,576.8	489.4	9,589.3	0.00	0.00	0.00
16,700.0	90.15	360.00	6,783.2	9,676.8	489.4	9,689.1	0.00	0.00	0.00
16,766.1	90.15	360.00	6,783.0	9,742.9	489.4	9,755.1	0.00	0.00	0.00
TD at 16766.1 - BHL 200°FNL & 1396°FEL, Sec.6									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL 536'FSL & 1863'FE - plan hits target center - Point	0.00	0.00	1.0	0.0	0.0	1,392,729.62	3,253,348.99	40.407877	-104.590221
BHL 200°FNL & 1396'FE - plan hits target center - Point	0.00	0.00	6,783.0	9,742.9	489.4	1,402,476.57	3,253,738.38	40.434620	-104.588463

Database:	US_EDM	Local Co-ordinate Reference:	Well Klein 7T-301
Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Project:	SEC.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site:	Klein 5N64W7 Pad Sec.7-T5N-R64W	North Reference:	True
Well:	Klein 7T-301	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (10-14-15)		

Casing Points				
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,303.2	6,807.8	7"	7	8-3/4

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,515.3	3,490.0	Parkman Sandstone		0.00	
4,246.4	4,210.0	Sussex Sandstone		0.00	
6,610.1	6,516.0	Sharon Springs		0.00	
6,702.5	6,585.0	Niobrara A		0.00	
6,871.3	6,690.0	Niobrara B		0.00	
7,059.9	6,770.0	Niobrara C		0.00	

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,400.0	1,400.0	0.0	0.0	KOP - Start Build 1.50
5,457.8	5,403.1	-40.8	41.1	Start Drop -2.00
6,101.1	6,043.8	-455.4	458.6	KOP #2 - Start Build 7.50
7,303.2	6,807.8	-486.0	489.4	Start 9462.9 hold at 7303.2 MD
16,766.1	6,783.0	-486.0	489.4	TD at 16766.1



Directional

PETROLEUM DEVELOPMENT CORP DJ Basin

SEC.7-T5N-R64W

Klein 5N64W7 Pad Sec.7-T5N-R64W

Klein 7T-301

Wellbore #1

Plan #1 (10-14-15)

Anticollision Report

19 October, 2015



Company:	PETROLEUM DEVELOPMENT CORP DJ	Local Co-ordinate Reference:	Well Klein 7T-301
Project:	Basin	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Reference Site:	SEC.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site Error:	Klein 5N64W7 Pad Sec.7-T5N-R64W	North Reference:	True
Reference Well:	0.0 ft	Survey Calculation Method:	Minimum Curvature
Well Error:	Klein 7T-301	Output errors are at	2.00 sigma
Reference Wellbore	0.0 ft	Database:	US_EDM
Reference Design:	Wellbore #1	Offset TVD Reference:	Offset Datum
	Plan #1 (10-14-15)		

Reference	Plan #1 (10-14-15)		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	Stations	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,000.0 ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program	Date	10/19/2015		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	16,766.1	Plan #1 (10-14-15) (Wellbore #1)	MWD	MWD - Standard

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Existing Wells - Sec.7-T5N-R64W						
Hoff #33-6 (Exist.) - Wellbore #1 - Wellbore #1	13,534.6	6,753.5	446.0	182.5	1.693	CC, ES, SF
Motis #7A (Exist.) - Wellbore #1 - Wellbore #1	7,544.5	6,770.1	112.7	-43.0	0.724	Level 1, CC, ES, SF
Plumb #5 (P&A) - Wellbore #1 - Wellbore #1	10,962.5	6,756.2	375.0	160.2	1.746	CC, ES, SF
Plumb #7-C (Exist.) - Wellbore #1 - Wellbore #1	10,529.4	6,759.3	131.0	-75.7	0.634	Level 1, CC, ES, SF
Webster #B6-2 (Exist.) - Wellbore #1 - Wellbore #1	16,401.8	6,764.0	397.2	78.8	1.248	Level 2, CC, ES, SF
Webster B6-17 (Exist.) - Wellbore #1 - Wellbore #1	15,678.7	6,895.2	61.0	-126.0	0.326	Level 1, CC, ES, SF
Witwer 34-6D (Exist.) - Wellbore #1 - Wellbore #1	12,471.1	6,948.9	616.4	492.3	4.966	CC, ES
Witwer 34-6D (Exist.) - Wellbore #1 - Wellbore #1	12,500.0	6,945.0	617.1	492.5	4.952	SF
Klein 5N64W7 Pad Sec.7-T5N-R64W						
Klein 7Q-321 - Wellbore #1 - Plan #1 (10-14-15)	1,400.0	1,400.0	29.8	23.7	4.911	CC, ES
Klein 7Q-321 - Wellbore #1 - Plan #1 (10-14-15)	16,766.1	16,753.9	679.0	298.7	1.785	SF
Klein 7T-121 - Wellbore #1 - Plan #1 (10-14-15)	800.0	800.0	30.1	26.7	8.922	CC, ES
Klein 7T-121 - Wellbore #1 - Plan #1 (10-14-15)	16,766.1	16,617.0	594.9	231.0	1.635	SF
Klein 7T-201 - Wellbore #1 - Plan #1 (10-14-15)	1,200.0	1,200.0	15.0	9.9	2.909	CC
Klein 7T-201 - Wellbore #1 - Plan #1 (10-14-15)	16,766.1	16,724.0	291.0	-79.3	0.786	Level 1, ES, SF
Klein 7T-241 - Wellbore #1 - Plan #1 (10-14-15)	1,400.0	1,400.0	15.0	9.0	2.478	CC
Klein 7T-241 - Wellbore #1 - Plan #1 (10-14-15)	16,766.1	16,669.1	250.3	-114.5	0.686	Level 1, ES, SF

Offset Design	Existing Wells - Sec.7-T5N-R64W - Hoff #33-6 (Exist.) - Wellbore #1 - Wellbore #1										Offset Site Error:	0.0 ft
Survey Program:	7275-UNKNOWN										Offset Well Error:	0.0 ft
Reference	Offset	Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor
12,700.0	6,793.6	6,755.6	6,755.6	112.7	135.1	-90.28	6,511.4	43.4	946.3	698.7	247.62	3.822
12,800.0	6,793.4	6,755.4	6,755.4	114.6	135.1	-90.25	6,511.4	43.4	859.4	609.9	249.51	3.444
12,900.0	6,793.1	6,755.1	6,755.1	116.5	135.1	-90.21	6,511.4	43.4	775.6	524.2	251.41	3.085
13,000.0	6,792.9	6,754.9	6,754.9	118.4	135.1	-90.18	6,511.4	43.4	696.2	442.9	253.30	2.748
13,100.0	6,792.6	6,754.6	6,754.6	120.3	135.1	-90.15	6,511.4	43.4	622.7	367.5	255.20	2.440
13,200.0	6,792.3	6,754.3	6,754.3	122.2	135.1	-90.11	6,511.4	43.4	557.5	300.4	257.10	2.169
13,300.0	6,792.1	6,754.1	6,754.1	124.1	135.1	-90.08	6,511.4	43.4	503.9	244.9	259.00	1.946
13,400.0	6,791.8	6,753.8	6,753.8	126.0	135.1	-90.05	6,511.4	43.4	465.8	204.9	260.90	1.785
13,500.0	6,791.6	6,753.6	6,753.6	127.9	135.1	-90.01	6,511.4	43.4	447.3	184.5	262.80	1.702

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

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Klein 7T-301
Project:	SEC.7-T5N-R64W	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Reference Site:	Klein 5N64W7 Pad Sec.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Klein 7T-301	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (10-14-15)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells - Sec.7-T5N-R64W - Hoff #33-6 (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 7275-UNKNOWN													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
13,534.6	6,791.5	6,753.5	6,753.5	128.5	135.1	-90.00	6,511.4	43.4	446.0	182.5	263.45	1.693	CC, ES, SF	
13,600.0	6,791.3	6,753.3	6,753.3	129.8	135.1	-89.98	6,511.4	43.4	450.7	186.0	264.69	1.703		
13,700.0	6,791.0	6,753.0	6,753.0	131.7	135.1	-89.94	6,511.4	43.4	475.6	209.1	266.59	1.784		
13,800.0	6,790.8	6,752.8	6,752.8	133.6	135.1	-89.91	6,511.4	43.4	519.0	250.5	268.49	1.933		
13,900.0	6,790.5	6,752.5	6,752.5	135.5	135.1	-89.88	6,511.4	43.4	576.5	306.1	270.39	2.132		
14,000.0	6,790.2	6,752.2	6,752.2	137.4	135.0	-89.84	6,511.4	43.4	644.6	372.3	272.30	2.367		
14,100.0	6,790.0	6,752.0	6,752.0	139.3	135.0	-89.81	6,511.4	43.4	720.1	445.9	274.20	2.626		
14,200.0	6,789.7	6,751.7	6,751.7	141.2	135.0	-89.78	6,511.4	43.4	801.0	524.9	276.10	2.901		
14,300.0	6,789.5	6,751.5	6,751.5	143.1	135.0	-89.74	6,511.4	43.4	885.8	607.8	278.00	3.187		
14,400.0	6,789.2	6,751.2	6,751.2	145.0	135.0	-89.71	6,511.4	43.4	973.6	693.7	279.90	3.478		

Company:	PETROLEUM DEVELOPMENT CORP DJ	Local Co-ordinate Reference:	Well Klein 7T-301
Project:	Basin	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Reference Site:	SEC.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site Error:	Klein 5N64W7 Pad Sec.7-T5N-R64W	North Reference:	True
Reference Well:	0.0 ft	Survey Calculation Method:	Minimum Curvature
Well Error:	Klein 7T-301	Output errors are at	2.00 sigma
Reference Wellbore	0.0 ft	Database:	US_EDM
Reference Design:	Wellbore #1	Offset TVD Reference:	Offset Datum
	Plan #1 (10-14-15)		

Offset Design Existing Wells - Sec.7-T5N-R64W - Motis #7A (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 7054-UNKNOWN													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	49.11	521.3	602.1	797.3					
100.0	100.0	63.0	63.0	0.1	1.3	49.11	521.3	602.1	796.4	795.1	1.37	580.241		
200.0	200.0	163.0	163.0	0.3	3.3	49.11	521.3	602.1	796.4	792.8	3.60	221.393		
300.0	300.0	263.0	263.0	0.6	5.3	49.11	521.3	602.1	796.4	790.6	5.82	136.794		
400.0	400.0	363.0	363.0	0.8	7.3	49.11	521.3	602.1	796.4	788.4	8.05	98.974		
500.0	500.0	463.0	463.0	1.0	9.3	49.11	521.3	602.1	796.4	786.2	10.27	77.537		
600.0	600.0	563.0	563.0	1.2	11.3	49.11	521.3	602.1	796.4	783.9	12.50	63.733		
700.0	700.0	663.0	663.0	1.5	13.3	49.11	521.3	602.1	796.4	781.7	14.72	54.101		
800.0	800.0	763.0	763.0	1.7	15.3	49.11	521.3	602.1	796.4	779.5	16.95	46.998		
900.0	900.0	863.0	863.0	1.9	17.3	49.11	521.3	602.1	796.4	777.3	19.17	41.544		
1,000.0	1,000.0	963.0	963.0	2.1	19.3	49.11	521.3	602.1	796.4	775.0	21.40	37.224		
1,100.0	1,100.0	1,063.0	1,063.0	2.4	21.3	49.11	521.3	602.1	796.4	772.8	23.62	33.718		
1,200.0	1,200.0	1,163.0	1,163.0	2.6	23.3	49.11	521.3	602.1	796.4	770.6	25.84	30.816		
1,300.0	1,300.0	1,263.0	1,263.0	2.8	25.3	49.11	521.3	602.1	796.4	768.4	28.07	28.373		
1,400.0	1,400.0	1,363.0	1,363.0	3.0	27.3	49.11	521.3	602.1	796.4	766.1	30.29	26.289		
1,500.0	1,500.0	1,463.0	1,463.0	3.2	29.3	-85.78	521.3	602.1	796.3	763.8	32.49	24.506		
1,600.0	1,599.9	1,562.9	1,562.9	3.4	31.3	-86.07	521.3	602.1	796.1	761.4	34.67	22.958		
1,700.0	1,699.7	1,662.7	1,662.7	3.6	33.3	-86.55	521.3	602.1	795.6	758.8	36.86	21.584		
1,800.0	1,799.3	1,762.3	1,762.3	3.8	35.2	-87.21	521.3	602.1	795.1	756.1	39.06	20.358		
1,900.0	1,898.6	1,861.6	1,861.6	4.0	37.2	-88.06	521.3	602.1	794.6	753.4	41.27	19.257		
2,000.0	1,997.5	1,960.5	1,960.5	4.3	39.2	-89.09	521.3	602.1	794.3	750.8	43.49	18.263		
2,066.0	2,062.6	2,025.6	2,025.6	4.5	40.5	-89.86	521.3	602.1	794.2	749.2	44.97	17.661		
2,077.2	2,073.7	2,036.7	2,036.7	4.5	40.7	-90.00	521.3	602.1	794.2	749.0	45.22	17.561		
2,100.0	2,096.1	2,059.1	2,059.1	4.6	41.2	-90.28	521.3	602.1	794.2	748.4	45.74	17.365		
2,200.0	2,194.6	2,157.6	2,157.6	4.8	43.2	-91.51	521.3	602.1	794.5	746.5	48.00	16.552		
2,300.0	2,293.1	2,256.1	2,256.1	5.2	45.1	-92.74	521.3	602.1	795.1	744.8	50.28	15.815		
2,400.0	2,391.6	2,354.6	2,354.6	5.5	47.1	-93.97	521.3	602.1	796.1	743.6	52.56	15.146		
2,500.0	2,490.1	2,453.1	2,453.1	5.8	49.1	-95.20	521.3	602.1	797.6	742.7	54.86	14.537		
2,600.0	2,588.5	2,551.5	2,551.5	6.2	51.0	-96.42	521.3	602.1	799.3	742.2	57.17	13.983		
2,700.0	2,687.0	2,650.0	2,650.0	6.5	53.0	-97.63	521.3	602.1	801.5	742.0	59.48	13.476		
2,800.0	2,785.5	2,748.5	2,748.5	6.9	55.0	-98.84	521.3	602.1	804.0	742.2	61.79	13.012		
2,900.0	2,884.0	2,847.0	2,847.0	7.2	56.9	-100.04	521.3	602.1	806.9	742.8	64.10	12.588		
3,000.0	2,982.5	2,945.5	2,945.5	7.6	58.9	-101.23	521.3	602.1	810.1	743.7	66.42	12.198		
3,100.0	3,081.0	3,044.0	3,044.0	8.0	60.9	-102.41	521.3	602.1	813.8	745.0	68.73	11.839		
3,200.0	3,179.4	3,142.4	3,142.4	8.3	62.8	-103.58	521.3	602.1	817.7	746.7	71.05	11.509		
3,300.0	3,277.9	3,240.9	3,240.9	8.7	64.8	-104.74	521.3	602.1	822.0	748.7	73.36	11.205		
3,400.0	3,376.4	3,339.4	3,339.4	9.1	66.8	-105.88	521.3	602.1	826.7	751.0	75.67	10.924		
3,500.0	3,474.9	3,437.9	3,437.9	9.5	68.8	-107.02	521.3	602.1	831.6	753.7	77.98	10.665		
3,600.0	3,573.4	3,536.4	3,536.4	9.8	70.7	-108.14	521.3	602.1	837.0	756.7	80.29	10.425		
3,700.0	3,671.9	3,634.9	3,634.9	10.2	72.7	-109.24	521.3	602.1	842.6	760.0	82.59	10.202		
3,800.0	3,770.3	3,733.3	3,733.3	10.6	74.7	-110.33	521.3	602.1	848.5	763.7	84.89	9.996		
3,900.0	3,868.8	3,831.8	3,831.8	11.0	76.6	-111.41	521.3	602.1	854.8	767.6	87.18	9.805		
4,000.0	3,967.3	3,930.3	3,930.3	11.4	78.6	-112.47	521.3	602.1	861.4	771.9	89.47	9.627		
4,100.0	4,065.8	4,028.8	4,028.8	11.8	80.6	-113.51	521.3	602.1	868.2	776.5	91.76	9.462		
4,200.0	4,164.3	4,127.3	4,127.3	12.2	82.5	-114.54	521.3	602.1	875.4	781.3	94.04	9.308		
4,300.0	4,262.8	4,225.8	4,225.8	12.6	84.5	-115.55	521.3	602.1	882.8	786.5	96.32	9.166		
4,400.0	4,361.2	4,324.2	4,324.2	13.0	86.5	-116.55	521.3	602.1	890.5	791.9	98.59	9.032		
4,500.0	4,459.7	4,422.7	4,422.7	13.4	88.5	-117.53	521.3	602.1	898.5	797.7	100.86	8.908		
4,600.0	4,558.2	4,521.2	4,521.2	13.8	90.4	-118.49	521.3	602.1	906.8	803.6	103.13	8.793		
4,700.0	4,656.7	4,619.7	4,619.7	14.2	92.4	-119.43	521.3	602.1	915.3	809.9	105.39	8.685		
4,800.0	4,755.2	4,718.2	4,718.2	14.6	94.4	-120.36	521.3	602.1	924.0	816.4	107.65	8.584		

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

Company:	PETROLEUM DEVELOPMENT CORP DJ	Local Co-ordinate Reference:	Well Klein 7T-301
Project:	Basin	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Reference Site:	SEC.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site Error:	Klein 5N64W7 Pad Sec.7-T5N-R64W	North Reference:	True
Reference Well:	0.0 ft	Survey Calculation Method:	Minimum Curvature
Well Error:	Klein 7T-301	Output errors are at	2.00 sigma
Reference Wellbore	0.0 ft	Database:	US_EDM
Reference Wellbore	Wellbore #1	Offset TVD Reference:	Offset Datum
Reference Design:	Plan #1 (10-14-15)		

Offset Design Existing Wells - Sec.7-T5N-R64W - Motis #7A (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 7054-UNKNOWN													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Semi Major Axis Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
4,900.0	4,853.7	4,816.7	4,816.7	14.9	96.3	-121.27	521.3	602.1	933.0	823.1	109.90	8.490		
5,000.0	4,952.2	4,915.2	4,915.2	15.3	98.3	-122.16	521.3	602.1	942.2	830.1	112.15	8.402		
5,100.0	5,050.6	5,013.6	5,013.6	15.7	100.3	-123.03	521.3	602.1	951.7	837.3	114.39	8.319		
5,200.0	5,149.1	5,112.1	5,112.1	16.1	102.2	-123.89	521.3	602.1	961.3	844.7	116.63	8.242		
5,300.0	5,247.6	5,210.6	5,210.6	16.5	104.2	-124.73	521.3	602.1	971.2	852.3	118.87	8.170		
5,400.0	5,346.1	5,309.1	5,309.1	16.9	106.2	-125.56	521.3	602.1	981.3	860.2	121.10	8.103		
5,457.8	5,403.1	5,366.1	5,366.1	17.2	107.3	-126.03	521.3	602.1	987.2	864.8	122.39	8.066		
5,500.0	5,444.6	5,407.6	5,407.6	17.3	108.2	-126.42	521.3	602.1	991.4	868.0	123.40	8.034		
5,600.0	5,543.6	5,506.6	5,506.6	17.6	110.1	-127.20	521.3	602.1	999.9	874.2	125.75	7.952		
6,250.0	6,191.7	6,154.7	6,154.7	18.6	123.1	6.60	521.3	602.1	999.3	862.0	137.28	7.279		
6,300.0	6,240.4	6,203.4	6,203.4	18.6	124.1	6.77	521.3	602.1	988.1	851.8	136.22	7.254		
6,350.0	6,288.3	6,251.3	6,251.3	18.5	125.0	7.01	521.3	602.1	973.7	839.2	134.54	7.237		
6,400.0	6,335.1	6,298.1	6,298.1	18.5	126.0	7.31	521.3	602.1	956.3	824.0	132.25	7.231		
6,450.0	6,380.7	6,343.7	6,343.7	18.4	126.9	7.70	521.3	602.1	935.9	806.5	129.36	7.234		
6,500.0	6,424.8	6,387.8	6,387.8	18.4	127.8	8.17	521.3	602.1	912.5	786.7	125.89	7.249		
6,550.0	6,467.3	6,430.3	6,430.3	18.3	128.6	8.75	521.3	602.1	886.4	764.5	121.88	7.273		
6,600.0	6,508.0	6,471.0	6,471.0	18.2	129.4	9.47	521.3	602.1	857.6	740.3	117.36	7.308		
6,650.0	6,546.7	6,509.7	6,509.7	18.1	130.2	10.36	521.3	602.1	826.2	713.8	112.41	7.350		
6,700.0	6,583.2	6,546.2	6,546.2	18.0	130.9	11.47	521.3	602.1	792.4	685.3	107.14	7.397		
6,750.0	6,617.4	6,580.4	6,580.4	17.9	131.6	12.85	521.3	602.1	756.4	654.7	101.72	7.436		
6,800.0	6,649.2	6,612.2	6,612.2	17.8	132.2	14.60	521.3	602.1	718.3	621.8	96.42	7.449		
6,850.0	6,678.4	6,641.4	6,641.4	17.7	132.8	16.84	521.3	602.1	678.2	586.5	91.70	7.396		
6,900.0	6,704.9	6,667.9	6,667.9	17.6	133.4	19.74	521.3	602.1	636.4	548.1	88.27	7.210		
6,950.0	6,728.5	6,691.5	6,691.5	17.5	133.8	23.57	521.3	602.1	593.1	505.9	87.21	6.801		
7,000.0	6,749.2	6,712.2	6,712.2	17.4	134.2	28.66	521.3	602.1	548.5	458.5	89.98	6.096		
7,050.0	6,766.9	6,729.9	6,729.9	17.3	134.6	35.46	521.3	602.1	502.8	404.9	97.90	5.136		
7,100.0	6,781.4	6,744.4	6,744.4	17.2	134.9	44.39	521.3	602.1	456.4	345.2	111.17	4.105		
7,150.0	6,792.9	6,755.9	6,755.9	17.1	135.1	55.53	521.3	602.1	409.4	281.8	127.58	3.209		
7,200.0	6,801.1	6,764.1	6,764.1	17.1	135.3	68.03	521.3	602.1	362.2	220.0	142.27	2.546		
7,250.0	6,806.1	6,769.1	6,769.1	17.4	135.4	80.08	521.3	602.1	315.3	164.5	150.86	2.090		
7,303.2	6,807.8	6,770.8	6,770.8	17.9	135.4	90.32	521.3	602.1	266.4	113.2	153.22	1.739		
7,400.0	6,807.5	6,770.5	6,770.5	18.9	135.4	90.19	521.3	602.1	183.3	29.2	154.10	1.189 Level 2		
7,500.0	6,807.3	6,770.3	6,770.3	20.1	135.4	90.06	521.3	602.1	121.2	-34.0	155.15	0.781 Level 1		
7,544.5	6,807.1	6,770.1	6,770.1	20.6	135.4	90.00	521.3	602.1	112.7	-43.0	155.67	0.724 Level 1, CC, ES, SF		
7,600.0	6,807.0	6,770.0	6,770.0	21.3	135.4	89.93	521.3	602.1	125.6	-30.7	156.32	0.803 Level 1		
7,700.0	6,806.7	6,769.7	6,769.7	22.6	135.4	89.79	521.3	602.1	192.0	34.4	157.60	1.218 Level 2		
7,800.0	6,806.5	6,769.5	6,769.5	24.0	135.4	89.66	521.3	602.1	279.2	120.2	158.96	1.756		
7,900.0	6,806.2	6,769.2	6,769.2	25.4	135.4	89.53	521.3	602.1	372.9	212.5	160.40	2.325		
8,000.0	6,805.9	6,768.9	6,768.9	27.0	135.4	89.39	521.3	602.1	469.2	307.3	161.90	2.898		
8,100.0	6,805.7	6,768.7	6,768.7	28.5	135.4	89.26	521.3	602.1	566.8	403.3	163.44	3.468		
8,200.0	6,805.4	6,768.4	6,768.4	30.1	135.4	89.13	521.3	602.1	665.1	500.0	165.03	4.030		
8,300.0	6,805.2	6,768.2	6,768.2	31.7	135.4	88.99	521.3	602.1	763.8	597.2	166.65	4.583		
8,400.0	6,804.9	6,767.9	6,767.9	33.4	135.4	88.86	521.3	602.1	862.8	694.5	168.31	5.127		
8,500.0	6,804.6	6,767.6	6,767.6	35.1	135.4	88.73	521.3	602.1	962.1	792.1	169.99	5.660		

Company:	PETROLEUM DEVELOPMENT CORP DJ	Local Co-ordinate Reference:	Well Klein 7T-301
Project:	Basin	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Reference Site:	SEC.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site Error:	Klein 5N64W7 Pad Sec.7-T5N-R64W	North Reference:	True
Reference Well:	0.0 ft	Survey Calculation Method:	Minimum Curvature
Well Error:	Klein 7T-301	Output errors are at	2.00 sigma
Reference Wellbore	0.0 ft	Database:	US_EDM
Reference Design:	Wellbore #1	Offset TVD Reference:	Offset Datum
	Plan #1 (10-14-15)		

Offset Design Existing Wells - Sec.7-T5N-R64W - Plumb #5 (P&A) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 6982-UNKNOWN													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
10,100.0	6,800.5	6,758.5	6,758.5	63.8	135.2	-90.35	3,939.3	114.4	940.5	741.9	198.65	4.734		
10,200.0	6,800.2	6,758.2	6,758.2	65.6	135.2	-90.31	3,939.3	114.4	849.7	649.2	200.51	4.238		
10,300.0	6,799.9	6,757.9	6,757.9	67.5	135.2	-90.27	3,939.3	114.4	761.3	558.9	202.36	3.762		
10,400.0	6,799.7	6,757.7	6,757.7	69.3	135.2	-90.23	3,939.3	114.4	676.0	471.8	204.22	3.310		
10,500.0	6,799.4	6,757.4	6,757.4	71.2	135.1	-90.19	3,939.3	114.4	595.4	389.3	206.09	2.889		
10,600.0	6,799.1	6,757.1	6,757.1	73.1	135.1	-90.15	3,939.3	114.4	521.6	313.6	207.95	2.508		
10,700.0	6,798.9	6,756.9	6,756.9	74.9	135.1	-90.11	3,939.3	114.4	457.7	247.9	209.82	2.182		
10,800.0	6,798.6	6,756.6	6,756.6	76.8	135.1	-90.07	3,939.3	114.4	408.7	197.0	211.69	1.930		
10,900.0	6,798.4	6,756.4	6,756.4	78.7	135.1	-90.03	3,939.3	114.4	380.1	166.6	213.57	1.780		
10,962.5	6,798.2	6,756.2	6,756.2	79.9	135.1	-90.00	3,939.3	114.4	375.0	160.2	214.74	1.746 CC, ES, SF		
11,000.0	6,798.1	6,756.1	6,756.1	80.6	135.1	-89.99	3,939.3	114.4	376.8	161.4	215.44	1.749		
11,100.0	6,797.8	6,755.8	6,755.8	82.4	135.1	-89.95	3,939.3	114.4	399.4	182.0	217.32	1.838		
11,200.0	6,797.6	6,755.6	6,755.6	84.3	135.1	-89.91	3,939.3	114.4	443.8	224.6	219.19	2.025		
11,300.0	6,797.3	6,755.3	6,755.3	86.2	135.1	-89.87	3,939.3	114.4	504.5	283.4	221.07	2.282		
11,400.0	6,797.0	6,755.0	6,755.0	88.1	135.1	-89.82	3,939.3	114.4	576.2	353.2	222.95	2.584		
11,500.0	6,796.8	6,754.8	6,754.8	90.0	135.1	-89.78	3,939.3	114.4	655.3	430.5	224.84	2.915		
11,600.0	6,796.5	6,754.5	6,754.5	91.9	135.1	-89.74	3,939.3	114.4	739.6	512.8	226.72	3.262		
11,700.0	6,796.3	6,754.3	6,754.3	93.7	135.1	-89.70	3,939.3	114.4	827.3	598.7	228.60	3.619		
11,800.0	6,796.0	6,754.0	6,754.0	95.6	135.1	-89.66	3,939.3	114.4	917.6	687.1	230.49	3.981		

Company:	PETROLEUM DEVELOPMENT CORP DJ	Local Co-ordinate Reference:	Well Klein 7T-301
Project:	Basin	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Reference Site:	SEC.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site Error:	Klein 5N64W7 Pad Sec.7-T5N-R64W	North Reference:	True
Reference Well:	0.0 ft	Survey Calculation Method:	Minimum Curvature
Well Error:	Klein 7T-301	Output errors are at	2.00 sigma
Reference Wellbore	0.0 ft	Database:	US_EDM
Reference Design:	Wellbore #1	Offset TVD Reference:	Offset Datum
	Plan #1 (10-14-15)		

Offset Design Existing Wells - Sec.7-T5N-R64W - Plumb #7-C (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 7026-UNKNOWN													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance								Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
9,600.0	6,801.8	6,761.8	6,761.8	54.6	135.2	91.06	3,506.2	620.4	938.6	749.1	189.41	4.955		
9,700.0	6,801.5	6,761.5	6,761.5	56.4	135.2	90.95	3,506.2	620.4	839.7	648.4	191.25	4.390		
9,800.0	6,801.2	6,761.2	6,761.2	58.2	135.2	90.84	3,506.2	620.4	741.0	547.9	193.10	3.838		
9,900.0	6,801.0	6,761.0	6,761.0	60.1	135.2	90.72	3,506.2	620.4	642.9	447.9	194.95	3.298		
10,000.0	6,800.7	6,760.7	6,760.7	61.9	135.2	90.61	3,506.2	620.4	545.3	348.5	196.81	2.771		
10,100.0	6,800.5	6,760.5	6,760.5	63.8	135.2	90.49	3,506.2	620.4	448.9	250.2	198.66	2.260		
10,200.0	6,800.2	6,760.2	6,760.2	65.6	135.2	90.38	3,506.2	620.4	354.5	153.9	200.52	1.768		
10,300.0	6,799.9	6,759.9	6,759.9	67.5	135.2	90.26	3,506.2	620.4	264.1	61.8	202.39	1.305	Level 3	
10,400.0	6,799.7	6,759.7	6,759.7	69.3	135.2	90.15	3,506.2	620.4	184.1	-20.1	204.25	0.901	Level 1	
10,500.0	6,799.4	6,759.4	6,759.4	71.2	135.2	90.03	3,506.2	620.4	134.2	-71.9	206.12	0.651	Level 1	
10,529.4	6,799.3	6,759.3	6,759.3	71.8	135.2	90.00	3,506.2	620.4	131.0	-75.7	206.67	0.634	Level 1, CC, ES, SF	
10,600.0	6,799.1	6,759.1	6,759.1	73.1	135.2	89.92	3,506.2	620.4	148.8	-59.2	207.99	0.715	Level 1	
10,700.0	6,798.9	6,758.9	6,758.9	74.9	135.2	89.80	3,506.2	620.4	215.1	5.2	209.86	1.025	Level 2	
10,800.0	6,798.6	6,758.6	6,758.6	76.8	135.2	89.69	3,506.2	620.4	300.7	88.9	211.74	1.420	Level 3	
10,900.0	6,798.4	6,758.4	6,758.4	78.7	135.2	89.58	3,506.2	620.4	393.1	179.5	213.61	1.840		
11,000.0	6,798.1	6,758.1	6,758.1	80.6	135.2	89.46	3,506.2	620.4	488.5	273.0	215.49	2.267		
11,100.0	6,797.8	6,757.8	6,757.8	82.4	135.2	89.35	3,506.2	620.4	585.5	368.1	217.36	2.693		
11,200.0	6,797.6	6,757.6	6,757.6	84.3	135.2	89.23	3,506.2	620.4	683.3	464.1	219.24	3.117		
11,300.0	6,797.3	6,757.3	6,757.3	86.2	135.1	89.12	3,506.2	620.4	781.7	560.6	221.12	3.535		
11,400.0	6,797.0	6,757.0	6,757.0	88.1	135.1	89.00	3,506.2	620.4	880.4	657.4	223.00	3.948		
11,500.0	6,796.8	6,756.8	6,756.8	90.0	135.1	88.89	3,506.2	620.4	979.4	754.5	224.88	4.355		

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Klein 7T-301
Project:	SEC.7-T5N-R64W	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Reference Site:	Klein 5N64W7 Pad Sec.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Klein 7T-301	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (10-14-15)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells - Sec.7-T5N-R64W - Webster #B6-2 (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 7020-UNKNOWN													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
15,500.0	6,786.3	6,766.3	6,766.3	166.0	135.3	-90.34	9,378.5	92.1	985.4	684.1	301.23	3.271		
15,600.0	6,786.1	6,766.1	6,766.1	167.9	135.3	-90.30	9,378.5	92.1	894.8	591.6	303.14	2.952		
15,700.0	6,785.8	6,765.8	6,765.8	169.9	135.3	-90.26	9,378.5	92.1	806.4	501.3	305.04	2.644		
15,800.0	6,785.5	6,765.5	6,765.5	171.8	135.3	-90.23	9,378.5	92.1	721.1	414.1	306.95	2.349		
15,900.0	6,785.3	6,765.3	6,765.3	173.7	135.3	-90.19	9,378.5	92.1	640.0	331.1	308.86	2.072		
16,000.0	6,785.0	6,765.0	6,765.0	175.6	135.3	-90.15	9,378.5	92.1	565.0	254.2	310.76	1.818		
16,100.0	6,784.7	6,764.7	6,764.7	177.5	135.3	-90.11	9,378.5	92.1	498.9	186.2	312.67	1.595		
16,200.0	6,784.5	6,764.5	6,764.5	179.4	135.3	-90.08	9,378.5	92.1	445.5	131.0	314.58	1.416	Level 3	
16,300.0	6,784.2	6,764.2	6,764.2	181.3	135.3	-90.04	9,378.5	92.1	410.1	93.6	316.48	1.296	Level 3	
16,400.0	6,784.0	6,764.0	6,764.0	183.2	135.3	-90.00	9,378.5	92.1	397.3	78.9	318.39	1.248	Level 2	
16,401.8	6,784.0	6,764.0	6,764.0	183.3	135.3	-90.00	9,378.5	92.1	397.2	78.8	318.42	1.248	Level 2, CC, ES, SF	
16,500.0	6,783.7	6,763.7	6,763.7	185.1	135.3	-89.96	9,378.5	92.1	409.2	88.9	320.30	1.278	Level 3	
16,600.0	6,783.4	6,763.4	6,763.4	187.1	135.3	-89.93	9,378.5	92.1	444.0	121.8	322.20	1.378	Level 3	
16,700.0	6,783.2	6,763.2	6,763.2	189.0	135.3	-89.89	9,378.5	92.1	496.7	172.6	324.11	1.533		
16,766.1	6,783.0	6,763.0	6,763.0	190.2	135.3	-89.86	9,378.5	92.1	539.0	213.6	325.37	1.657		

Company:	PETROLEUM DEVELOPMENT CORP DJ	Local Co-ordinate Reference:	Well Klein 7T-301
Project:	Basin	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Reference Site:	SEC.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site Error:	Klein 5N64W7 Pad Sec.7-T5N-R64W	North Reference:	True
Reference Well:	0.0 ft	Survey Calculation Method:	Minimum Curvature
Well Error:	Klein 7T-301	Output errors are at	2.00 sigma
Reference Wellbore	0.0 ft	Database:	US_EDM
Reference Design:	Wellbore #1	Offset TVD Reference:	Offset Datum
	Plan #1 (10-14-15)		

Offset Design Existing Wells - Sec.7-T5N-R64W - Webster B6-17 (Exist.) - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 ft
Survey Program: 16-NS-GYRO-MS												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
14,700.0	6,788.4	6,910.5	6,782.3	150.8	17.8	104.19	8,655.3	550.4	980.5	816.8	163.67	5.991	
14,800.0	6,788.1	6,908.9	6,780.7	152.7	17.8	102.79	8,655.3	550.4	880.7	714.3	166.39	5.293	
14,900.0	6,787.9	6,907.4	6,779.1	154.6	17.8	101.38	8,655.3	550.4	781.0	611.9	169.05	4.620	
15,000.0	6,787.6	6,905.8	6,777.5	156.5	17.8	99.95	8,655.3	550.4	681.4	509.7	171.64	3.970	
15,100.0	6,787.4	6,904.2	6,776.0	158.4	17.8	98.51	8,655.3	550.4	581.8	407.7	174.16	3.341	
15,200.0	6,787.1	6,902.6	6,774.4	160.3	17.8	97.07	8,655.4	550.4	482.5	305.9	176.61	2.732	
15,300.0	6,786.8	6,901.1	6,772.9	162.2	17.8	95.62	8,655.4	550.4	383.5	204.6	178.97	2.143	
15,400.0	6,786.6	6,899.5	6,771.3	164.1	17.8	94.17	8,655.4	550.4	285.3	104.0	181.24	1.574	
15,500.0	6,786.3	6,898.0	6,769.7	166.0	17.8	92.71	8,655.4	550.4	188.8	5.4	183.42	1.029	Level 2
15,600.0	6,786.1	6,896.4	6,768.2	167.9	17.8	91.25	8,655.4	550.4	99.6	-85.9	185.50	0.537	Level 1
15,678.7	6,785.8	6,895.2	6,767.0	169.4	17.8	90.11	8,655.5	550.4	61.0	-126.0	187.07	0.326	Level 1, CC, ES, SF
15,700.0	6,785.8	6,894.9	6,766.6	169.9	17.8	89.80	8,655.5	550.4	64.6	-122.8	187.48	0.345	Level 1
15,800.0	6,785.5	6,893.3	6,765.1	171.8	17.8	88.35	8,655.5	550.4	135.8	-53.6	189.36	0.717	Level 1
15,900.0	6,785.3	6,891.8	6,763.5	173.7	17.8	86.90	8,655.5	550.4	229.5	38.4	191.13	1.201	Level 2
16,000.0	6,785.0	6,890.2	6,762.0	175.6	17.8	85.46	8,655.5	550.4	327.0	134.2	192.79	1.696	
16,100.0	6,784.7	6,888.7	6,760.5	177.5	17.8	84.03	8,655.5	550.4	425.7	231.3	194.35	2.190	
16,200.0	6,784.5	6,887.2	6,758.9	179.4	17.8	82.61	8,655.6	550.4	524.8	329.0	195.80	2.680	
16,300.0	6,784.2	6,885.6	6,757.4	181.3	17.8	81.20	8,655.6	550.4	624.2	427.1	197.14	3.166	
16,400.0	6,784.0	6,884.1	6,755.9	183.2	17.8	79.81	8,655.6	550.4	723.8	525.4	198.38	3.649	
16,500.0	6,783.7	6,882.6	6,754.3	185.1	17.8	78.43	8,655.6	550.4	823.5	624.0	199.51	4.128	
16,600.0	6,783.4	6,881.0	6,752.8	187.1	17.8	77.06	8,655.6	550.5	923.2	722.7	200.53	4.604	

Company:	PETROLEUM DEVELOPMENT CORP DJ	Local Co-ordinate Reference:	Well Klein 7T-301
Project:	Basin	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Reference Site:	SEC.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site Error:	Klein 5N64W7 Pad Sec.7-T5N-R64W	North Reference:	True
Reference Well:	0.0 ft	Survey Calculation Method:	Minimum Curvature
Well Error:	Klein 7T-301	Output errors are at	2.00 sigma
Reference Wellbore	0.0 ft	Database:	US_EDM
Reference Design:	Wellbore #1	Offset TVD Reference:	Offset Datum
	Plan #1 (10-14-15)		

Offset Design Existing Wells - Sec.7-T5N-R64W - Witwer 34-6D (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 498-NS-GYRO-MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
11,700.0	6,796.3	7,041.8	6,806.6	93.7	18.4	-93.63	5,438.5	-131.2	983.2	873.3	109.91	8.945		
11,800.0	6,796.0	7,031.5	6,796.4	95.6	18.4	-92.69	5,439.5	-130.6	907.9	796.0	111.87	8.116		
11,900.0	6,795.7	7,020.8	6,785.8	97.5	18.4	-91.71	5,440.5	-130.0	837.7	723.9	113.80	7.361		
12,000.0	6,795.5	7,009.8	6,774.9	99.4	18.3	-90.70	5,441.6	-129.3	773.8	658.1	115.70	6.688		
12,100.0	6,795.2	6,997.8	6,762.9	101.3	18.3	-89.60	5,442.8	-128.5	718.2	600.6	117.58	6.108		
12,200.0	6,795.0	6,984.6	6,749.9	103.2	18.3	-88.39	5,444.1	-127.5	672.6	553.2	119.41	5.633		
12,300.0	6,794.7	6,971.5	6,736.8	105.1	18.2	-87.17	5,445.4	-126.6	639.4	518.2	121.19	5.276		
12,400.0	6,794.4	6,958.3	6,723.7	107.0	18.2	-85.95	5,446.8	-125.5	620.4	497.5	122.92	5.047		
12,471.1	6,794.2	6,948.9	6,714.4	108.3	18.2	-85.08	5,447.7	-124.7	616.4	492.3	124.12	4.966 CC, ES		
12,500.0	6,794.2	6,945.0	6,710.6	108.9	18.2	-84.73	5,448.1	-124.4	617.1	492.5	124.60	4.952 SF		
12,600.0	6,793.9	6,931.5	6,697.2	110.8	18.1	-83.48	5,449.5	-123.2	629.5	503.3	126.22	4.988		
12,700.0	6,793.6	6,917.3	6,683.1	112.7	18.1	-82.16	5,451.0	-121.9	657.0	529.2	127.76	5.142		
12,800.0	6,793.4	6,902.2	6,668.2	114.6	18.0	-80.77	5,452.6	-120.4	697.5	568.3	129.21	5.398		
12,900.0	6,793.1	6,886.2	6,652.4	116.5	18.0	-79.30	5,454.3	-118.7	749.1	618.6	130.56	5.738		
13,000.0	6,792.9	6,869.4	6,635.8	118.4	17.9	-77.77	5,456.3	-116.9	809.6	677.8	131.78	6.143		
13,100.0	6,792.6	6,851.5	6,618.1	120.3	17.9	-76.14	5,458.4	-114.8	877.1	744.2	132.86	6.601		
13,200.0	6,792.3	6,832.2	6,599.1	122.2	17.8	-74.39	5,460.8	-112.5	950.0	816.3	133.76	7.102		

Company:	PETROLEUM DEVELOPMENT CORP DJ	Local Co-ordinate Reference:	Well Klein 7T-301
Project:	Basin	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Reference Site:	SEC.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site Error:	Klein 5N64W7 Pad Sec.7-T5N-R64W	North Reference:	True
Reference Well:	0.0 ft	Survey Calculation Method:	Minimum Curvature
Well Error:	Klein 7T-301	Output errors are at	2.00 sigma
Reference Wellbore	0.0 ft	Database:	US_EDM
Reference Design:	Wellbore #1	Offset TVD Reference:	Offset Datum
	Plan #1 (10-14-15)		

Offset Design Klein 5N64W7 Pad Sec.7-T5N-R64W - Klein 7Q-321 - Wellbore #1 - Plan #1 (10-14-15)													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	Measured	Vertical	Reference	Offset	Highside	Offset Wellbore Centre		Between	Between	Minimum	Separation			
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	Toolface (°)	+N/-S (ft)	+E/-W (ft)	Centres (ft)	Ellipses (ft)	Separation (ft)	Factor			
0.0	0.0	0.0	0.0	0.0	0.0	-89.29	0.4	-29.8	29.8						
100.0	100.0	100.0	100.0	0.1	0.1	-89.29	0.4	-29.8	29.8	29.6	0.22	132.585			
200.0	200.0	200.0	200.0	0.3	0.3	-89.29	0.4	-29.8	29.8	29.1	0.67	44.195			
300.0	300.0	300.0	300.0	0.6	0.6	-89.29	0.4	-29.8	29.8	28.7	1.12	26.517			
400.0	400.0	400.0	400.0	0.8	0.8	-89.29	0.4	-29.8	29.8	28.2	1.57	18.941			
500.0	500.0	500.0	500.0	1.0	1.0	-89.29	0.4	-29.8	29.8	27.8	2.02	14.732			
600.0	600.0	600.0	600.0	1.2	1.2	-89.29	0.4	-29.8	29.8	27.3	2.47	12.053			
700.0	700.0	700.0	700.0	1.5	1.5	-89.29	0.4	-29.8	29.8	26.9	2.92	10.199			
800.0	800.0	800.0	800.0	1.7	1.7	-89.29	0.4	-29.8	29.8	26.4	3.37	8.839			
900.0	900.0	900.0	900.0	1.9	1.9	-89.29	0.4	-29.8	29.8	26.0	3.82	7.799			
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-89.29	0.4	-29.8	29.8	25.5	4.27	6.978			
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-89.29	0.4	-29.8	29.8	25.1	4.72	6.314			
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-89.29	0.4	-29.8	29.8	24.6	5.17	5.765			
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-89.29	0.4	-29.8	29.8	24.2	5.62	5.303			
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-89.29	0.4	-29.8	29.8	23.7	6.07	4.911 CC, ES			
1,500.0	1,500.0	1,500.0	1,500.0	3.2	3.3	137.60	0.4	-29.8	30.8	24.3	6.49	4.737			
1,600.0	1,599.9	1,599.9	1,599.9	3.4	3.5	142.06	0.4	-29.8	33.8	26.9	6.90	4.896			
1,700.0	1,699.7	1,699.7	1,699.7	3.6	3.7	147.92	0.4	-29.8	39.1	31.8	7.30	5.360			
1,800.0	1,799.3	1,799.3	1,799.3	3.8	3.9	153.78	0.4	-29.8	47.1	39.4	7.70	6.118			
1,900.0	1,898.6	1,898.7	1,898.7	4.0	4.1	157.60	-0.8	-30.2	57.8	49.7	8.08	7.153			
2,000.0	1,997.5	1,998.0	1,997.9	4.3	4.3	158.83	-4.5	-31.4	70.8	62.4	8.44	8.393			
2,066.0	2,062.6	2,063.4	2,063.1	4.5	4.4	158.75	-8.3	-32.6	80.6	71.9	8.68	9.286			
2,100.0	2,096.1	2,097.0	2,096.7	4.6	4.5	158.52	-10.6	-33.4	85.9	77.0	8.81	9.744			
2,200.0	2,194.6	2,196.0	2,195.3	4.8	4.7	157.01	-19.1	-36.2	101.2	92.0	9.22	10.974			
2,300.0	2,293.1	2,294.9	2,293.5	5.2	4.9	154.62	-30.0	-39.8	116.5	106.9	9.66	12.058			
2,400.0	2,391.6	2,393.5	2,391.2	5.5	5.1	151.87	-42.9	-44.0	132.0	121.9	10.14	13.023			
2,500.0	2,490.1	2,492.1	2,488.8	5.8	5.3	149.61	-56.0	-48.3	147.7	137.1	10.64	13.893			
2,600.0	2,588.5	2,590.7	2,586.5	6.2	5.6	147.78	-69.1	-52.6	163.7	152.5	11.15	14.674			
2,700.0	2,687.0	2,689.3	2,684.1	6.5	5.8	146.29	-82.2	-56.9	179.7	168.0	11.69	15.374			
2,800.0	2,785.5	2,787.9	2,781.7	6.9	6.1	145.03	-95.3	-61.2	195.9	183.6	12.24	16.001			
2,900.0	2,884.0	2,886.5	2,879.4	7.2	6.3	143.97	-108.4	-65.5	212.1	199.3	12.81	16.563			
3,000.0	2,982.5	2,985.1	2,977.0	7.6	6.6	143.06	-121.5	-69.8	228.4	215.0	13.38	17.068			
3,100.0	3,081.0	3,083.8	3,074.7	8.0	6.9	142.27	-134.6	-74.1	244.7	230.8	13.97	17.522			
3,200.0	3,179.4	3,182.4	3,172.3	8.3	7.2	141.58	-147.7	-78.4	261.1	246.5	14.56	17.931			
3,300.0	3,277.9	3,281.0	3,269.9	8.7	7.5	140.97	-160.8	-82.7	277.5	262.3	15.16	18.301			
3,400.0	3,376.4	3,379.6	3,367.6	9.1	7.8	140.43	-173.9	-87.0	293.9	278.2	15.77	18.637			
3,500.0	3,474.9	3,478.2	3,465.2	9.5	8.1	139.95	-187.0	-91.3	310.4	294.0	16.39	18.942			
3,600.0	3,573.4	3,576.8	3,562.8	9.8	8.4	139.51	-200.1	-95.6	326.9	309.9	17.01	19.220			
3,700.0	3,671.9	3,675.4	3,660.5	10.2	8.7	139.12	-213.2	-99.9	343.4	325.7	17.63	19.474			
3,800.0	3,770.3	3,774.0	3,758.1	10.6	9.0	138.76	-226.3	-104.2	359.9	341.6	18.26	19.707			
3,900.0	3,868.8	3,872.6	3,855.7	11.0	9.3	138.43	-239.4	-108.5	376.4	357.5	18.90	19.921			
4,000.0	3,967.3	3,971.2	3,953.4	11.4	9.6	138.13	-252.5	-112.8	392.9	373.4	19.53	20.118			
4,100.0	4,065.8	4,069.8	4,051.0	11.8	10.0	137.86	-265.6	-117.1	409.5	389.3	20.17	20.300			
4,200.0	4,164.3	4,168.4	4,148.6	12.2	10.3	137.61	-278.7	-121.4	426.0	405.2	20.81	20.468			
4,300.0	4,262.8	4,267.0	4,246.3	12.6	10.6	137.37	-291.8	-125.7	442.6	421.1	21.46	20.624			
4,400.0	4,361.2	4,365.6	4,343.9	13.0	10.9	137.16	-304.9	-130.0	459.2	437.0	22.11	20.769			
4,500.0	4,459.7	4,464.2	4,441.6	13.4	11.3	136.95	-318.0	-134.3	475.7	453.0	22.76	20.904			
4,600.0	4,558.2	4,562.8	4,539.2	13.8	11.6	136.77	-331.1	-138.6	492.3	468.9	23.41	21.030			
4,700.0	4,656.7	4,661.4	4,636.8	14.2	11.9	136.59	-344.2	-142.9	508.9	484.8	24.06	21.148			
4,800.0	4,755.2	4,760.0	4,734.5	14.6	12.2	136.42	-357.3	-147.2	525.5	500.8	24.72	21.258			
4,900.0	4,853.7	4,858.6	4,832.1	14.9	12.6	136.27	-370.4	-151.5	542.1	516.7	25.38	21.362			

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

Company:	PETROLEUM DEVELOPMENT CORP DJ	Local Co-ordinate Reference:	Well Klein 7T-301
Project:	Basin	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Reference Site:	SEC.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site Error:	Klein 5N64W7 Pad Sec.7-T5N-R64W	North Reference:	True
Reference Well:	0.0 ft	Survey Calculation Method:	Minimum Curvature
Well Error:	Klein 7T-301	Output errors are at	2.00 sigma
Reference Wellbore	0.0 ft	Database:	US_EDM
Reference Design:	Wellbore #1	Offset TVD Reference:	Offset Datum
	Plan #1 (10-14-15)		

Offset Design Klein 5N64W7 Pad Sec.7-T5N-R64W - Klein 7Q-321 - Wellbore #1 - Plan #1 (10-14-15)													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 (ft)	Offset (ft)	Semi Major Axis (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.0	4,952.2	4,957.2	4,929.7	15.3	12.9	136.12		-383.5	-155.7	558.7	532.6	26.03	21.459	
5,100.0	5,050.6	5,055.8	5,027.4	15.7	13.2	135.99		-396.6	-160.0	575.3	548.6	26.69	21.550	
5,200.0	5,149.1	5,154.4	5,125.0	16.1	13.6	135.86		-409.7	-164.3	591.9	564.5	27.35	21.636	
5,300.0	5,247.6	5,253.0	5,222.6	16.5	13.9	135.73		-422.8	-168.6	608.5	580.4	28.02	21.718	
5,400.0	5,346.1	5,351.6	5,320.3	16.9	14.2	135.62		-435.9	-172.9	625.1	596.4	28.68	21.795	
5,457.8	5,403.1	5,408.7	5,376.8	17.2	14.4	135.55		-443.4	-175.4	634.7	605.6	29.06	21.837	
5,500.0	5,444.6	5,450.3	5,417.9	17.3	14.6	135.58		-449.0	-177.2	641.4	612.1	29.35	21.859	
5,600.0	5,543.6	5,550.4	5,517.1	17.6	14.9	135.48		-462.2	-181.6	655.8	625.8	29.96	21.891	
5,700.0	5,643.0	5,657.2	5,623.2	17.8	15.2	135.32		-473.9	-185.4	666.9	636.4	30.48	21.878	
5,800.0	5,742.8	5,764.7	5,730.4	18.0	15.4	135.21		-481.9	-188.0	674.5	643.6	30.93	21.809	
5,900.0	5,842.7	5,872.6	5,838.1	18.2	15.6	135.15		-486.0	-189.4	678.4	647.1	31.30	21.675	
5,957.3	5,900.0	5,934.5	5,900.0	18.3	15.7	-90.05		-486.6	-189.6	679.0	647.5	31.49	21.561	
6,000.0	5,942.7	5,977.1	5,942.7	18.3	15.8	-90.05		-486.6	-189.6	679.0	647.4	31.63	21.466	
6,101.1	6,043.8	6,078.3	6,043.8	18.5	15.9	-90.05		-486.6	-189.6	679.0	647.1	31.95	21.254	
6,150.0	6,092.6	6,127.2	6,092.7	18.5	16.0	-90.10		-485.6	-189.6	679.0	646.9	32.08	21.167	
6,200.0	6,142.4	6,177.3	6,142.6	18.6	16.1	-90.16		-481.5	-189.6	679.0	646.8	32.17	21.109	
6,250.0	6,191.7	6,227.4	6,192.2	18.6	16.1	-90.21		-474.0	-189.6	679.0	646.8	32.20	21.085	
6,300.0	6,240.4	6,277.6	6,241.2	18.6	16.1	-90.26		-463.3	-189.6	679.0	646.8	32.19	21.092	
6,350.0	6,288.3	6,327.8	6,289.5	18.5	16.1	-90.32		-449.4	-189.6	679.0	646.9	32.14	21.126	
6,400.0	6,335.1	6,378.1	6,336.7	18.5	16.0	-90.37		-432.3	-189.6	679.0	647.0	32.05	21.185	
6,450.0	6,380.7	6,428.4	6,382.8	18.4	16.0	-90.42		-412.2	-189.6	679.0	647.1	31.93	21.263	
6,500.0	6,424.8	6,478.7	6,427.5	18.4	15.9	-90.46		-389.0	-189.6	679.0	647.2	31.79	21.356	
6,550.0	6,467.3	6,529.1	6,470.6	18.3	15.8	-90.51		-362.9	-189.6	679.0	647.4	31.64	21.458	
6,600.0	6,508.0	6,579.5	6,511.9	18.2	15.7	-90.55		-334.1	-189.6	679.0	647.5	31.49	21.561	
6,650.0	6,546.7	6,630.0	6,551.2	18.1	15.6	-90.59		-302.5	-189.6	679.0	647.7	31.35	21.658	
6,700.0	6,583.2	6,680.4	6,588.4	18.0	15.6	-90.63		-268.4	-189.6	679.0	647.8	31.23	21.740	
6,750.0	6,617.4	6,731.0	6,623.3	17.9	15.5	-90.67		-231.9	-189.6	679.0	647.9	31.15	21.798	
6,800.0	6,649.2	6,781.5	6,655.7	17.8	15.5	-90.70		-193.1	-189.6	679.0	647.9	31.12	21.823	
6,850.0	6,678.4	6,832.0	6,685.5	17.7	15.5	-90.73		-152.3	-189.6	679.1	647.9	31.14	21.807	
6,900.0	6,704.9	6,882.6	6,712.6	17.6	15.5	-90.76		-109.6	-189.6	679.1	647.8	31.23	21.741	
6,950.0	6,728.5	6,933.2	6,736.7	17.5	15.5	-90.78		-65.1	-189.6	679.1	647.7	31.41	21.621	
7,000.0	6,749.2	6,983.9	6,757.9	17.4	15.6	-90.80		-19.1	-189.6	679.1	647.4	31.67	21.443	
7,050.0	6,766.9	7,034.5	6,776.0	17.3	15.8	-90.82		28.1	-189.6	679.1	647.0	32.02	21.207	
7,100.0	6,781.4	7,085.1	6,790.9	17.2	16.0	-90.83		76.5	-189.6	679.1	646.6	32.47	20.913	
7,150.0	6,792.9	7,135.8	6,802.6	17.1	16.3	-90.84		125.8	-189.6	679.1	646.1	33.02	20.568	
7,200.0	6,801.1	7,186.4	6,811.0	17.1	16.6	-90.84		175.8	-189.6	679.1	645.4	33.66	20.177	
7,250.0	6,806.1	7,237.1	6,816.1	17.4	17.0	-90.85		226.2	-189.6	679.1	644.7	34.39	19.749	
7,303.2	6,807.8	7,291.0	6,817.8	17.9	17.4	-90.84		280.0	-189.6	679.1	643.8	35.25	19.266	
7,400.0	6,807.5	7,387.8	6,817.5	18.9	18.4	-90.84		376.8	-189.6	679.1	642.0	37.05	18.327	
7,500.0	6,807.3	7,487.8	6,817.3	20.1	19.5	-90.84		476.8	-189.6	679.1	639.9	39.19	17.326	
7,600.0	6,807.0	7,587.8	6,817.0	21.3	20.7	-90.84		576.8	-189.6	679.1	637.5	41.58	16.332	
7,700.0	6,806.7	7,687.8	6,816.7	22.6	22.0	-90.84		676.8	-189.6	679.1	634.9	44.17	15.374	
7,800.0	6,806.5	7,787.8	6,816.5	24.0	23.4	-90.84		776.8	-189.6	679.1	632.1	46.93	14.469	
7,900.0	6,806.2	7,887.8	6,816.2	25.4	24.9	-90.84		876.8	-189.6	679.1	629.2	49.84	13.625	
8,000.0	6,805.9	7,987.8	6,816.0	27.0	26.4	-90.84		976.8	-189.6	679.1	626.2	52.87	12.845	
8,100.0	6,805.7	8,087.8	6,815.7	28.5	28.0	-90.84		1,076.8	-189.6	679.1	623.1	55.99	12.128	
8,200.0	6,805.4	8,187.8	6,815.4	30.1	29.6	-90.84		1,176.8	-189.6	679.1	619.9	59.20	11.471	
8,300.0	6,805.2	8,287.8	6,815.2	31.7	31.2	-90.84		1,276.8	-189.6	679.1	616.6	62.48	10.868	
8,400.0	6,804.9	8,387.8	6,814.9	33.4	32.9	-90.84		1,376.8	-189.6	679.1	613.2	65.82	10.316	
8,500.0	6,804.6	8,487.8	6,814.6	35.1	34.6	-90.84		1,476.8	-189.6	679.1	609.8	69.22	9.811	
8,600.0	6,804.4	8,587.8	6,814.4	36.8	36.3	-90.84		1,576.8	-189.6	679.1	606.4	72.65	9.346	

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

Company:	PETROLEUM DEVELOPMENT CORP DJ	Local Co-ordinate Reference:	Well Klein 7T-301
Project:	SEC.7-T5N-R64W	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Reference Site:	Klein 5N64W7 Pad Sec.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Klein 7T-301	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (10-14-15)	Offset TVD Reference:	Offset Datum

Offset Design Klein 5N64W7 Pad Sec.7-T5N-R64W - Klein 7Q-321 - Wellbore #1 - Plan #1 (10-14-15)												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
8,700.0	6,804.1	8,687.8	6,814.1	38.5	38.1	-90.84	1,676.8	-189.6	679.1	602.9	76.13	8.920	
8,800.0	6,803.9	8,787.8	6,813.9	40.2	39.8	-90.84	1,776.8	-189.6	679.1	599.4	79.64	8.527	
8,900.0	6,803.6	8,887.8	6,813.6	42.0	41.6	-90.84	1,876.8	-189.6	679.1	595.9	83.18	8.164	
9,000.0	6,803.3	8,987.8	6,813.3	43.8	43.4	-90.84	1,976.8	-189.6	679.1	592.3	86.75	7.828	
9,100.0	6,803.1	9,087.8	6,813.1	45.5	45.2	-90.84	2,076.8	-189.6	679.1	588.7	90.33	7.517	
9,200.0	6,802.8	9,187.8	6,812.8	47.3	47.0	-90.84	2,176.8	-189.6	679.1	585.1	93.94	7.229	
9,300.0	6,802.5	9,287.8	6,812.6	49.1	48.8	-90.84	2,276.8	-189.6	679.1	581.5	97.57	6.960	
9,400.0	6,802.3	9,387.8	6,812.3	50.9	50.6	-90.84	2,376.8	-189.6	679.1	577.9	101.21	6.710	
9,500.0	6,802.0	9,487.8	6,812.0	52.8	52.5	-90.84	2,476.8	-189.6	679.1	574.2	104.86	6.476	
9,600.0	6,801.8	9,587.8	6,811.8	54.6	54.3	-90.84	2,576.8	-189.6	679.1	570.5	108.53	6.257	
9,700.0	6,801.5	9,687.8	6,811.5	56.4	56.2	-90.84	2,676.8	-189.6	679.1	566.9	112.21	6.052	
9,800.0	6,801.2	9,787.8	6,811.2	58.2	58.0	-90.84	2,776.8	-189.6	679.1	563.2	115.90	5.859	
9,900.0	6,801.0	9,887.8	6,811.0	60.1	59.9	-90.84	2,876.8	-189.6	679.1	559.5	119.60	5.678	
10,000.0	6,800.7	9,987.8	6,810.7	61.9	61.7	-90.84	2,976.8	-189.6	679.1	555.8	123.31	5.507	
10,100.0	6,800.5	10,087.8	6,810.5	63.8	63.6	-90.84	3,076.8	-189.6	679.1	552.0	127.03	5.346	
10,200.0	6,800.2	10,187.8	6,810.2	65.6	65.4	-90.84	3,176.8	-189.6	679.1	548.3	130.75	5.194	
10,300.0	6,799.9	10,287.8	6,809.9	67.5	67.3	-90.84	3,276.8	-189.6	679.1	544.6	134.48	5.050	
10,400.0	6,799.7	10,387.8	6,809.7	69.3	69.2	-90.84	3,376.8	-189.6	679.1	540.8	138.22	4.913	
10,500.0	6,799.4	10,487.8	6,809.4	71.2	71.0	-90.84	3,476.8	-189.6	679.1	537.1	141.96	4.784	
10,600.0	6,799.1	10,587.8	6,809.1	73.1	72.9	-90.84	3,576.8	-189.6	679.1	533.4	145.70	4.661	
10,700.0	6,798.9	10,687.8	6,808.9	74.9	74.8	-90.84	3,676.8	-189.6	679.1	529.6	149.46	4.544	
10,800.0	6,798.6	10,787.8	6,808.6	76.8	76.7	-90.84	3,776.8	-189.6	679.1	525.8	153.21	4.432	
10,900.0	6,798.4	10,887.8	6,808.4	78.7	78.6	-90.84	3,876.8	-189.6	679.1	522.1	156.97	4.326	
11,000.0	6,798.1	10,987.8	6,808.1	80.6	80.4	-90.84	3,976.8	-189.6	679.1	518.3	160.74	4.225	
11,100.0	6,797.8	11,087.8	6,807.8	82.4	82.3	-90.84	4,076.8	-189.6	679.1	514.6	164.50	4.128	
11,200.0	6,797.6	11,187.8	6,807.6	84.3	84.2	-90.84	4,176.8	-189.6	679.1	510.8	168.28	4.035	
11,300.0	6,797.3	11,287.8	6,807.3	86.2	86.1	-90.84	4,276.8	-189.6	679.1	507.0	172.05	3.947	
11,400.0	6,797.0	11,387.8	6,807.1	88.1	88.0	-90.84	4,376.8	-189.6	679.1	503.2	175.83	3.862	
11,500.0	6,796.8	11,487.8	6,806.8	90.0	89.9	-90.84	4,476.8	-189.6	679.1	499.5	179.61	3.781	
11,600.0	6,796.5	11,587.8	6,806.5	91.9	91.8	-90.84	4,576.8	-189.6	679.1	495.7	183.39	3.703	
11,700.0	6,796.3	11,687.8	6,806.3	93.7	93.7	-90.84	4,676.8	-189.6	679.1	491.9	187.17	3.628	
11,800.0	6,796.0	11,787.8	6,806.0	95.6	95.6	-90.84	4,776.8	-189.6	679.1	488.1	190.96	3.556	
11,900.0	6,795.7	11,887.8	6,805.7	97.5	97.5	-90.84	4,876.8	-189.6	679.1	484.3	194.75	3.487	
12,000.0	6,795.5	11,987.8	6,805.5	99.4	99.3	-90.84	4,976.8	-189.6	679.1	480.5	198.54	3.420	
12,100.0	6,795.2	12,087.8	6,805.2	101.3	101.2	-90.84	5,076.8	-189.6	679.1	476.7	202.33	3.356	
12,200.0	6,795.0	12,187.8	6,805.0	103.2	103.1	-90.84	5,176.8	-189.6	679.1	472.9	206.13	3.294	
12,300.0	6,794.7	12,287.8	6,804.7	105.1	105.0	-90.84	5,276.8	-189.6	679.1	469.1	209.92	3.235	
12,400.0	6,794.4	12,387.8	6,804.4	107.0	106.9	-90.84	5,376.8	-189.6	679.1	465.3	213.72	3.177	
12,500.0	6,794.2	12,487.8	6,804.2	108.9	108.8	-90.84	5,476.8	-189.6	679.1	461.5	217.52	3.122	
12,600.0	6,793.9	12,587.8	6,803.9	110.8	110.7	-90.84	5,576.8	-189.6	679.1	457.7	221.32	3.068	
12,700.0	6,793.6	12,687.8	6,803.6	112.7	112.6	-90.84	5,676.8	-189.6	679.1	453.9	225.12	3.016	
12,800.0	6,793.4	12,787.8	6,803.4	114.6	114.5	-90.84	5,776.8	-189.6	679.1	450.1	228.93	2.966	
12,900.0	6,793.1	12,887.8	6,803.1	116.5	116.5	-90.84	5,876.8	-189.6	679.1	446.3	232.73	2.918	
13,000.0	6,792.9	12,987.8	6,802.9	118.4	118.4	-90.84	5,976.8	-189.6	679.1	442.5	236.54	2.871	
13,100.0	6,792.6	13,087.8	6,802.6	120.3	120.3	-90.84	6,076.8	-189.6	679.1	438.7	240.34	2.825	
13,200.0	6,792.3	13,187.8	6,802.3	122.2	122.2	-90.84	6,176.8	-189.6	679.1	434.9	244.15	2.781	
13,300.0	6,792.1	13,287.8	6,802.1	124.1	124.1	-90.84	6,276.8	-189.6	679.1	431.1	247.96	2.739	
13,400.0	6,791.8	13,387.8	6,801.8	126.0	126.0	-90.84	6,376.8	-189.6	679.1	427.3	251.77	2.697	
13,500.0	6,791.6	13,487.8	6,801.6	127.9	127.9	-90.84	6,476.8	-189.6	679.1	423.5	255.58	2.657	
13,600.0	6,791.3	13,587.8	6,801.3	129.8	129.8	-90.84	6,576.8	-189.6	679.1	419.7	259.39	2.618	
13,700.0	6,791.0	13,687.8	6,801.0	131.7	131.7	-90.84	6,676.8	-189.6	679.1	415.8	263.21	2.580	

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

Company:	PETROLEUM DEVELOPMENT CORP DJ	Local Co-ordinate Reference:	Well Klein 7T-301
Project:	Basin	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Reference Site:	SEC.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site Error:	Klein 5N64W7 Pad Sec.7-T5N-R64W	North Reference:	True
Reference Well:	0.0 ft	Survey Calculation Method:	Minimum Curvature
Well Error:	Klein 7T-301	Output errors are at	2.00 sigma
Reference Wellbore	0.0 ft	Database:	US_EDM
Reference Wellbore	Wellbore #1	Offset TVD Reference:	Offset Datum
Reference Design:	Plan #1 (10-14-15)		

Offset Design Klein 5N64W7 Pad Sec.7-T5N-R64W - Klein 7Q-321 - Wellbore #1 - Plan #1 (10-14-15)													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 (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	
13,800.0	6,790.8	13,787.8	6,800.8	133.6	133.6	-90.84	6,776.8	-189.6	679.1	412.0	267.02	2.543		
13,900.0	6,790.5	13,887.8	6,800.5	135.5	135.5	-90.84	6,876.8	-189.6	679.1	408.2	270.83	2.507		
14,000.0	6,790.2	13,987.8	6,800.2	137.4	137.4	-90.84	6,976.8	-189.6	679.1	404.4	274.65	2.472		
14,100.0	6,790.0	14,087.8	6,800.0	139.3	139.3	-90.84	7,076.8	-189.6	679.0	400.6	278.46	2.439		
14,200.0	6,789.7	14,187.8	6,799.7	141.2	141.2	-90.84	7,176.8	-189.6	679.0	396.8	282.28	2.406		
14,300.0	6,789.5	14,287.8	6,799.5	143.1	143.1	-90.84	7,276.8	-189.6	679.0	393.0	286.10	2.373		
14,400.0	6,789.2	14,387.8	6,799.2	145.0	145.1	-90.84	7,376.8	-189.6	679.0	389.1	289.91	2.342		
14,500.0	6,788.9	14,487.8	6,798.9	146.9	147.0	-90.84	7,476.8	-189.6	679.0	385.3	293.73	2.312		
14,600.0	6,788.7	14,587.8	6,798.7	148.8	148.9	-90.84	7,576.8	-189.6	679.0	381.5	297.55	2.282		
14,700.0	6,788.4	14,687.8	6,798.4	150.8	150.8	-90.84	7,676.8	-189.6	679.0	377.7	301.37	2.253		
14,800.0	6,788.1	14,787.8	6,798.2	152.7	152.7	-90.84	7,776.8	-189.6	679.0	373.9	305.19	2.225		
14,900.0	6,787.9	14,887.8	6,797.9	154.6	154.6	-90.84	7,876.8	-189.6	679.0	370.0	309.01	2.197		
15,000.0	6,787.6	14,987.8	6,797.6	156.5	156.5	-90.84	7,976.8	-189.6	679.0	366.2	312.83	2.171		
15,100.0	6,787.4	15,087.8	6,797.4	158.4	158.4	-90.84	8,076.8	-189.6	679.0	362.4	316.65	2.144		
15,200.0	6,787.1	15,187.8	6,797.1	160.3	160.3	-90.84	8,176.8	-189.6	679.0	358.6	320.48	2.119		
15,300.0	6,786.8	15,287.8	6,796.8	162.2	162.2	-90.84	8,276.8	-189.6	679.0	354.7	324.30	2.094		
15,400.0	6,786.6	15,387.8	6,796.6	164.1	164.2	-90.84	8,376.8	-189.6	679.0	350.9	328.12	2.069		
15,500.0	6,786.3	15,487.8	6,796.3	166.0	166.1	-90.84	8,476.8	-189.6	679.0	347.1	331.94	2.046		
15,600.0	6,786.1	15,587.8	6,796.1	167.9	168.0	-90.84	8,576.8	-189.6	679.0	343.3	335.77	2.022		
15,700.0	6,785.8	15,687.8	6,795.8	169.9	169.9	-90.84	8,676.8	-189.6	679.0	339.5	339.59	2.000		
15,800.0	6,785.5	15,787.8	6,795.5	171.8	171.8	-90.84	8,776.8	-189.6	679.0	335.6	343.42	1.977		
15,900.0	6,785.3	15,887.8	6,795.3	173.7	173.7	-90.84	8,876.8	-189.6	679.0	331.8	347.24	1.956		
16,000.0	6,785.0	15,987.8	6,795.0	175.6	175.6	-90.84	8,976.8	-189.6	679.0	328.0	351.07	1.934		
16,100.0	6,784.7	16,087.8	6,794.7	177.5	177.5	-90.84	9,076.8	-189.6	679.0	324.2	354.89	1.913		
16,200.0	6,784.5	16,187.8	6,794.5	179.4	179.5	-90.84	9,176.8	-189.6	679.0	320.3	358.72	1.893		
16,300.0	6,784.2	16,287.8	6,794.2	181.3	181.4	-90.84	9,276.8	-189.6	679.0	316.5	362.54	1.873		
16,400.0	6,784.0	16,387.8	6,794.0	183.2	183.3	-90.84	9,376.8	-189.6	679.0	312.7	366.37	1.853		
16,500.0	6,783.7	16,487.8	6,793.7	185.1	185.2	-90.84	9,476.8	-189.6	679.0	308.8	370.20	1.834		
16,600.0	6,783.4	16,587.8	6,793.4	187.1	187.1	-90.84	9,576.8	-189.6	679.0	305.0	374.02	1.816		
16,700.0	6,783.2	16,687.8	6,793.2	189.0	189.0	-90.84	9,676.8	-189.6	679.0	301.2	377.85	1.797		
16,766.1	6,783.0	16,753.9	6,793.0	190.2	190.3	-90.84	9,742.9	-189.6	679.0	298.7	380.38	1.785 SF		

Company:	PETROLEUM DEVELOPMENT CORP DJ	Local Co-ordinate Reference:	Well Klein 7T-301
Project:	Basin	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Reference Site:	SEC.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site Error:	Klein 5N64W7 Pad Sec.7-T5N-R64W	North Reference:	True
Reference Well:	0.0 ft	Survey Calculation Method:	Minimum Curvature
Well Error:	Klein 7T-301	Output errors are at	2.00 sigma
Reference Wellbore	0.0 ft	Database:	US_EDM
Reference Design:	Wellbore #1	Offset TVD Reference:	Offset Datum
	Plan #1 (10-14-15)		

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.69	-0.4	30.1	30.1				
100.0	100.0	100.0	100.0	0.1	0.1	90.69	-0.4	30.1	30.1	29.9	0.22	133.824	
200.0	200.0	200.0	200.0	0.3	0.3	90.69	-0.4	30.1	30.1	29.4	0.67	44.608	
300.0	300.0	300.0	300.0	0.6	0.6	90.69	-0.4	30.1	30.1	29.0	1.12	26.765	
400.0	400.0	400.0	400.0	0.8	0.8	90.69	-0.4	30.1	30.1	28.5	1.57	19.118	
500.0	500.0	500.0	500.0	1.0	1.0	90.69	-0.4	30.1	30.1	28.1	2.02	14.869	
600.0	600.0	600.0	600.0	1.2	1.2	90.69	-0.4	30.1	30.1	27.6	2.47	12.166	
700.0	700.0	700.0	700.0	1.5	1.5	90.69	-0.4	30.1	30.1	27.2	2.92	10.294	
800.0	800.0	800.0	800.0	1.7	1.7	90.69	-0.4	30.1	30.1	26.7	3.37	8.922 CC, ES	
900.0	900.0	899.3	899.3	1.9	1.9	91.82	-1.0	31.2	31.2	27.4	3.80	8.219	
1,000.0	1,000.0	998.4	998.4	2.1	2.1	94.76	-2.9	34.6	34.7	30.5	4.22	8.241	
1,100.0	1,100.0	1,097.3	1,097.0	2.4	2.3	98.50	-6.0	40.2	40.7	36.1	4.64	8.780	
1,200.0	1,200.0	1,195.8	1,195.1	2.6	2.5	102.18	-10.4	48.0	49.3	44.2	5.07	9.723	
1,300.0	1,300.0	1,293.8	1,292.4	2.8	2.7	105.36	-15.9	57.9	60.5	55.0	5.52	10.974	
1,400.0	1,400.0	1,391.1	1,388.8	3.0	3.0	107.92	-22.6	69.9	74.4	68.4	5.97	12.451	
1,500.0	1,500.0	1,487.9	1,484.2	3.2	3.3	-25.11	-30.5	84.0	89.6	83.2	6.35	14.100	
1,600.0	1,599.9	1,584.2	1,578.7	3.4	3.6	-24.21	-39.5	100.1	105.0	98.2	6.75	15.547	
1,700.0	1,699.7	1,682.2	1,674.5	3.6	4.0	-23.88	-49.5	118.2	120.0	112.8	7.17	16.740	
1,800.0	1,799.3	1,781.4	1,771.4	3.8	4.4	-24.07	-59.8	136.5	132.7	125.1	7.59	17.486	
1,900.0	1,898.6	1,880.8	1,868.6	4.0	4.8	-24.66	-70.1	154.9	143.1	135.1	8.03	17.825	
2,000.0	1,997.5	1,980.5	1,966.0	4.3	5.2	-25.60	-80.4	173.4	151.1	142.6	8.48	17.818	
2,066.0	2,062.6	2,046.3	2,030.3	4.5	5.5	-26.40	-87.2	185.6	155.2	146.4	8.79	17.648	
2,100.0	2,096.1	2,080.2	2,063.5	4.6	5.7	-26.86	-90.7	191.9	157.0	148.0	8.96	17.519	
2,200.0	2,194.6	2,180.0	2,161.0	4.8	6.1	-28.15	-101.0	210.4	162.4	153.0	9.47	17.151	
2,300.0	2,293.1	2,279.8	2,258.5	5.2	6.5	-29.36	-111.4	228.8	168.0	158.0	10.00	16.798	
2,400.0	2,391.6	2,379.6	2,356.0	5.5	7.0	-30.49	-121.7	247.3	173.6	163.0	10.54	16.461	
2,500.0	2,490.1	2,479.4	2,453.5	5.8	7.4	-31.55	-132.0	265.8	179.2	168.1	11.11	16.140	
2,600.0	2,588.5	2,579.2	2,551.1	6.2	7.9	-32.54	-142.3	284.3	185.0	173.3	11.68	15.835	
2,700.0	2,687.0	2,679.0	2,648.6	6.5	8.3	-33.48	-152.6	302.8	190.7	178.5	12.27	15.546	
2,800.0	2,785.5	2,778.8	2,746.1	6.9	8.8	-34.35	-163.0	321.2	196.6	183.7	12.87	15.272	
2,900.0	2,884.0	2,878.5	2,843.6	7.2	9.3	-35.18	-173.3	339.7	202.4	188.9	13.48	15.013	
3,000.0	2,982.5	2,978.3	2,941.1	7.6	9.7	-35.96	-183.6	358.2	208.3	194.2	14.11	14.768	
3,100.0	3,081.0	3,078.1	3,038.6	8.0	10.2	-36.70	-193.9	376.7	214.3	199.5	14.74	14.537	
3,200.0	3,179.4	3,177.9	3,136.2	8.3	10.6	-37.40	-204.3	395.2	220.2	204.9	15.38	14.318	
3,300.0	3,277.9	3,277.7	3,233.7	8.7	11.1	-38.06	-214.6	413.7	226.2	210.2	16.03	14.112	
3,400.0	3,376.4	3,377.5	3,331.2	9.1	11.6	-38.69	-224.9	432.1	232.3	215.6	16.69	13.917	
3,500.0	3,474.9	3,477.3	3,428.7	9.5	12.0	-39.29	-235.2	450.6	238.3	221.0	17.35	13.733	
3,600.0	3,573.4	3,577.0	3,526.2	9.8	12.5	-39.85	-245.5	469.1	244.4	226.4	18.03	13.559	
3,700.0	3,671.9	3,676.8	3,623.7	10.2	13.0	-40.39	-255.9	487.6	250.5	231.8	18.70	13.394	
3,800.0	3,770.3	3,776.6	3,721.2	10.6	13.4	-40.90	-266.2	506.1	256.6	237.3	19.39	13.238	
3,900.0	3,868.8	3,876.4	3,818.8	11.0	13.9	-41.39	-276.5	524.6	262.8	242.7	20.07	13.091	
4,000.0	3,967.3	3,976.2	3,916.3	11.4	14.4	-41.86	-286.8	543.0	269.0	248.2	20.77	12.951	
4,100.0	4,065.8	4,076.0	4,013.8	11.8	14.8	-42.30	-297.1	561.5	275.1	253.7	21.46	12.818	
4,200.0	4,164.3	4,175.8	4,111.3	12.2	15.3	-42.73	-307.5	580.0	281.3	259.2	22.17	12.692	
4,300.0	4,262.8	4,275.5	4,208.8	12.6	15.8	-43.14	-317.8	598.5	287.5	264.7	22.87	12.573	
4,400.0	4,361.2	4,375.3	4,306.3	13.0	16.2	-43.53	-328.1	617.0	293.8	270.2	23.58	12.459	
4,500.0	4,459.7	4,475.1	4,403.9	13.4	16.7	-43.90	-338.4	635.4	300.0	275.7	24.29	12.351	
4,600.0	4,558.2	4,574.9	4,501.4	13.8	17.2	-44.26	-348.7	653.9	306.3	281.3	25.00	12.248	
4,700.0	4,656.7	4,674.7	4,598.9	14.2	17.6	-44.60	-359.1	672.4	312.5	286.8	25.72	12.150	
4,800.0	4,755.2	4,774.5	4,696.4	14.6	18.1	-44.93	-369.4	690.9	318.8	292.4	26.44	12.057	
4,900.0	4,853.7	4,874.3	4,793.9	14.9	18.6	-45.25	-379.7	709.4	325.1	297.9	27.16	11.967	

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

Company:	PETROLEUM DEVELOPMENT CORP DJ	Local Co-ordinate Reference:	Well Klein 7T-301
Project:	Basin	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Reference Site:	SEC.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site Error:	Klein 5N64W7 Pad Sec.7-T5N-R64W	North Reference:	True
Reference Well:	0.0 ft	Survey Calculation Method:	Minimum Curvature
Well Error:	Klein 7T-301	Output errors are at	2.00 sigma
Reference Wellbore	0.0 ft	Database:	US_EDM
Reference Wellbore	Wellbore #1	Offset TVD Reference:	Offset Datum
Reference Design:	Plan #1 (10-14-15)		

Offset Design Klein 5N64W7 Pad Sec.7-T5N-R64W - Klein 7T-121 - Wellbore #1 - Plan #1 (10-14-15)													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 (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	
5,000.0	4,952.2	4,974.1	4,891.4	15.3	19.0	-45.56	-390.0	727.9	331.4	303.5	27.89	11.882		
5,100.0	5,050.6	5,073.8	4,988.9	15.7	19.5	-45.85	-400.4	746.3	337.7	309.1	28.62	11.801		
5,200.0	5,149.1	5,173.6	5,086.5	16.1	20.0	-46.14	-410.7	764.8	344.0	314.6	29.34	11.723		
5,300.0	5,247.6	5,273.4	5,184.0	16.5	20.5	-46.41	-421.0	783.3	350.3	320.2	30.07	11.648		
5,400.0	5,346.1	5,373.2	5,281.5	16.9	20.9	-46.67	-431.3	801.8	356.6	325.8	30.81	11.576		
5,457.8	5,403.1	5,430.9	5,337.9	17.2	21.2	-46.82	-437.3	812.5	360.3	329.1	31.23	11.536		
5,500.0	5,444.6	5,473.0	5,379.0	17.3	21.4	-46.94	-441.6	820.3	363.2	331.7	31.52	11.523		
5,600.0	5,543.6	5,572.6	5,476.4	17.6	21.9	-46.94	-451.9	838.7	371.7	339.6	32.07	11.589		
5,700.0	5,643.0	5,671.9	5,573.4	17.8	22.3	-46.61	-462.2	857.1	382.6	350.1	32.52	11.767		
5,800.0	5,742.8	5,770.9	5,670.1	18.0	22.8	-45.97	-472.5	875.4	396.0	363.1	32.85	12.054		
5,900.0	5,842.7	5,869.3	5,766.3	18.2	23.3	-45.07	-482.6	893.7	411.8	378.8	33.08	12.449		
5,957.3	5,900.0	5,925.5	5,821.4	18.3	23.5	90.09	-486.6	904.1	422.1	388.9	33.19	12.717		
6,000.0	5,942.7	5,967.5	5,862.6	18.3	23.6	90.13	-486.9	911.9	430.1	396.7	33.33	12.902		
6,101.1	6,043.8	6,066.1	5,959.1	18.5	23.9	89.04	-478.6	930.2	449.0	415.1	33.86	13.260		
6,150.0	6,092.6	6,112.9	6,004.4	18.5	24.0	87.47	-470.2	938.8	458.2	423.9	34.31	13.354		
6,200.0	6,142.4	6,160.4	6,049.7	18.6	24.0	85.93	-458.9	947.4	467.7	433.0	34.72	13.473		
6,250.0	6,191.7	6,207.6	6,093.8	18.6	24.1	84.46	-444.8	955.8	477.3	442.2	35.05	13.616		
6,300.0	6,240.4	6,254.4	6,136.8	18.6	24.1	83.06	-428.1	963.9	486.8	451.5	35.31	13.785		
6,350.0	6,288.3	6,300.0	6,177.6	18.5	24.2	81.73	-409.2	971.7	496.1	460.7	35.49	13.980		
6,400.0	6,335.1	6,347.0	6,218.4	18.5	24.2	80.45	-387.3	979.4	505.4	469.8	35.59	14.199		
6,450.0	6,380.7	6,392.9	6,257.0	18.4	24.2	79.26	-363.4	986.7	514.4	478.8	35.62	14.442		
6,500.0	6,424.8	6,438.6	6,293.8	18.4	24.2	78.13	-337.3	993.7	523.1	487.6	35.57	14.708		
6,550.0	6,467.3	6,484.1	6,328.9	18.3	24.2	77.08	-309.2	1,000.4	531.6	496.1	35.46	14.992		
6,600.0	6,508.0	6,529.4	6,362.2	18.2	24.2	76.10	-279.2	1,006.7	539.7	504.4	35.29	15.292		
6,650.0	6,546.7	6,574.5	6,393.5	18.1	24.1	75.19	-247.3	1,012.6	547.4	512.4	35.09	15.602		
6,700.0	6,583.2	6,619.4	6,422.8	18.0	24.1	74.35	-213.7	1,018.2	554.8	519.9	34.86	15.915		
6,750.0	6,617.4	6,664.2	6,450.1	17.9	24.1	73.57	-178.5	1,023.4	561.6	527.0	34.62	16.224		
6,800.0	6,649.2	6,708.9	6,475.2	17.8	24.0	72.87	-141.9	1,028.1	568.0	533.6	34.39	16.518		
6,850.0	6,678.4	6,753.5	6,498.2	17.7	24.0	72.24	-103.9	1,032.5	573.9	539.7	34.19	16.786		
6,900.0	6,704.9	6,800.0	6,519.7	17.6	24.0	71.67	-62.9	1,036.6	579.2	545.1	34.04	17.016		
6,950.0	6,728.5	6,842.4	6,537.2	17.5	23.9	71.18	-24.4	1,039.9	583.9	550.0	33.96	17.195		
7,000.0	6,749.2	6,886.7	6,553.2	17.4	23.9	70.74	16.8	1,042.9	588.1	554.1	33.97	17.311		
7,050.0	6,766.9	6,931.0	6,566.8	17.3	23.9	70.38	58.9	1,045.5	591.7	557.6	34.09	17.355		
7,100.0	6,781.4	6,975.2	6,578.0	17.2	23.9	70.08	101.6	1,047.6	594.6	560.3	34.33	17.321		
7,150.0	6,792.9	7,019.4	6,586.7	17.1	23.9	69.85	144.9	1,049.3	596.9	562.2	34.70	17.204		
7,200.0	6,801.1	7,063.6	6,593.0	17.1	23.9	69.68	188.6	1,050.5	598.6	563.4	35.20	17.005		
7,250.0	6,806.1	7,107.8	6,596.7	17.4	24.0	69.57	232.6	1,051.2	599.6	563.8	35.83	16.734		
7,303.2	6,807.8	7,154.9	6,598.0	17.9	24.1	69.53	279.7	1,051.5	599.9	563.3	36.64	16.372		
7,400.0	6,807.5	7,251.8	6,597.9	18.9	24.3	69.55	376.6	1,051.5	599.9	561.6	38.33	15.649		
7,500.0	6,807.3	7,351.8	6,597.8	20.1	24.8	69.56	476.6	1,051.5	599.8	559.5	40.30	14.883		
7,600.0	6,807.0	7,451.8	6,597.7	21.3	25.6	69.58	576.6	1,051.5	599.8	557.3	42.49	14.115		
7,700.0	6,806.7	7,551.8	6,597.6	22.6	26.5	69.59	676.6	1,051.5	599.7	554.9	44.87	13.366		
7,800.0	6,806.5	7,651.8	6,597.5	24.0	27.6	69.60	776.6	1,051.5	599.7	552.3	47.41	12.649		
7,900.0	6,806.2	7,751.8	6,597.4	25.4	28.7	69.62	876.6	1,051.5	599.6	549.5	50.08	11.972		
8,000.0	6,805.9	7,851.8	6,597.3	27.0	30.0	69.63	976.6	1,051.5	599.6	546.7	52.87	11.339		
8,100.0	6,805.7	7,951.8	6,597.2	28.5	31.4	69.64	1,076.6	1,051.5	599.5	543.7	55.76	10.751		
8,200.0	6,805.4	8,051.8	6,597.1	30.1	32.8	69.66	1,176.6	1,051.5	599.5	540.7	58.74	10.206		
8,300.0	6,805.2	8,151.8	6,596.9	31.7	34.3	69.67	1,276.6	1,051.5	599.4	537.6	61.78	9.702		
8,400.0	6,804.9	8,251.8	6,596.8	33.4	35.8	69.69	1,376.6	1,051.5	599.3	534.5	64.89	9.237		
8,500.0	6,804.6	8,351.8	6,596.7	35.1	37.4	69.70	1,476.6	1,051.5	599.3	531.2	68.05	8.807		
8,600.0	6,804.4	8,451.8	6,596.6	36.8	39.0	69.71	1,576.6	1,051.5	599.2	528.0	71.25	8.410		

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

Company:	PETROLEUM DEVELOPMENT CORP DJ	Local Co-ordinate Reference:	Well Klein 7T-301
Project:	Basin	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Reference Site:	SEC.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site Error:	Klein 5N64W7 Pad Sec.7-T5N-R64W	North Reference:	True
Reference Well:	0.0 ft	Survey Calculation Method:	Minimum Curvature
Well Error:	Klein 7T-301	Output errors are at	2.00 sigma
Reference Wellbore	0.0 ft	Database:	US_EDM
Reference Design:	Wellbore #1	Offset TVD Reference:	Offset Datum
	Plan #1 (10-14-15)		

Offset Design Klein 5N64W7 Pad Sec.7-T5N-R64W - Klein 7T-121 - Wellbore #1 - Plan #1 (10-14-15)												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
8,700.0	6,804.1	8,551.8	6,596.5	38.5	40.6	69.73	1,676.6	1,051.5	599.2	524.7	74.50	8.043	
8,800.0	6,803.9	8,651.8	6,596.4	40.2	42.2	69.74	1,776.6	1,051.5	599.1	521.3	77.78	7.703	
8,900.0	6,803.6	8,751.8	6,596.3	42.0	43.9	69.76	1,876.6	1,051.5	599.1	518.0	81.10	7.387	
9,000.0	6,803.3	8,851.8	6,596.2	43.8	45.6	69.77	1,976.6	1,051.5	599.0	514.6	84.44	7.094	
9,100.0	6,803.1	8,951.8	6,596.1	45.5	47.3	69.78	2,076.6	1,051.5	599.0	511.2	87.80	6.822	
9,200.0	6,802.8	9,051.8	6,596.0	47.3	49.0	69.80	2,176.6	1,051.5	598.9	507.7	91.19	6.568	
9,300.0	6,802.5	9,151.8	6,595.9	49.1	50.8	69.81	2,276.6	1,051.5	598.9	504.3	94.60	6.330	
9,400.0	6,802.3	9,251.8	6,595.8	50.9	52.5	69.83	2,376.6	1,051.5	598.8	500.8	98.02	6.109	
9,500.0	6,802.0	9,351.8	6,595.7	52.8	54.3	69.84	2,476.6	1,051.5	598.8	497.3	101.47	5.901	
9,600.0	6,801.8	9,451.8	6,595.6	54.6	56.0	69.85	2,576.6	1,051.5	598.7	493.8	104.92	5.706	
9,700.0	6,801.5	9,551.8	6,595.5	56.4	57.8	69.87	2,676.6	1,051.5	598.6	490.3	108.39	5.523	
9,800.0	6,801.2	9,651.8	6,595.4	58.2	59.6	69.88	2,776.6	1,051.5	598.6	486.7	111.87	5.351	
9,900.0	6,801.0	9,751.8	6,595.3	60.1	61.4	69.90	2,876.6	1,051.5	598.5	483.2	115.36	5.188	
10,000.0	6,800.7	9,851.8	6,595.1	61.9	63.2	69.91	2,976.6	1,051.5	598.5	479.6	118.87	5.035	
10,100.0	6,800.5	9,951.8	6,595.0	63.8	65.0	69.93	3,076.6	1,051.5	598.4	476.1	122.38	4.890	
10,200.0	6,800.2	10,051.8	6,594.9	65.6	66.8	69.94	3,176.6	1,051.5	598.4	472.5	125.90	4.753	
10,300.0	6,799.9	10,151.8	6,594.8	67.5	68.6	69.95	3,276.6	1,051.5	598.3	468.9	129.42	4.623	
10,400.0	6,799.7	10,251.8	6,594.7	69.3	70.4	69.97	3,376.6	1,051.5	598.3	465.3	132.96	4.500	
10,500.0	6,799.4	10,351.8	6,594.6	71.2	72.3	69.98	3,476.6	1,051.5	598.2	461.7	136.50	4.383	
10,600.0	6,799.1	10,451.8	6,594.5	73.1	74.1	70.00	3,576.6	1,051.5	598.2	458.1	140.05	4.271	
10,700.0	6,798.9	10,551.8	6,594.4	74.9	75.9	70.01	3,676.6	1,051.5	598.1	454.5	143.60	4.165	
10,800.0	6,798.6	10,651.8	6,594.3	76.8	77.8	70.02	3,776.6	1,051.5	598.1	450.9	147.16	4.064	
10,900.0	6,798.4	10,751.8	6,594.2	78.7	79.6	70.04	3,876.6	1,051.5	598.0	447.3	150.72	3.968	
11,000.0	6,798.1	10,851.8	6,594.1	80.6	81.5	70.05	3,976.6	1,051.5	597.9	443.7	154.29	3.875	
11,100.0	6,797.8	10,951.8	6,594.0	82.4	83.3	70.07	4,076.6	1,051.5	597.9	440.0	157.86	3.787	
11,200.0	6,797.6	11,051.8	6,593.9	84.3	85.2	70.08	4,176.6	1,051.5	597.8	436.4	161.44	3.703	
11,300.0	6,797.3	11,151.8	6,593.8	86.2	87.0	70.09	4,276.6	1,051.5	597.8	432.8	165.02	3.622	
11,400.0	6,797.0	11,251.8	6,593.7	88.1	88.9	70.11	4,376.6	1,051.5	597.7	429.1	168.61	3.545	
11,500.0	6,796.8	11,351.8	6,593.6	90.0	90.8	70.12	4,476.6	1,051.5	597.7	425.5	172.20	3.471	
11,600.0	6,796.5	11,451.8	6,593.5	91.9	92.6	70.14	4,576.6	1,051.5	597.6	421.8	175.79	3.400	
11,700.0	6,796.3	11,551.8	6,593.4	93.7	94.5	70.15	4,676.6	1,051.5	597.6	418.2	179.38	3.331	
11,800.0	6,796.0	11,651.8	6,593.2	95.6	96.4	70.16	4,776.6	1,051.5	597.5	414.5	182.98	3.265	
11,900.0	6,795.7	11,751.8	6,593.1	97.5	98.2	70.18	4,876.6	1,051.5	597.5	410.9	186.58	3.202	
12,000.0	6,795.5	11,851.8	6,593.0	99.4	100.1	70.19	4,976.6	1,051.5	597.4	407.2	190.19	3.141	
12,100.0	6,795.2	11,951.8	6,592.9	101.3	102.0	70.21	5,076.6	1,051.5	597.4	403.6	193.79	3.082	
12,200.0	6,795.0	12,051.8	6,592.8	103.2	103.8	70.22	5,176.6	1,051.5	597.3	399.9	197.40	3.026	
12,300.0	6,794.7	12,151.8	6,592.7	105.1	105.7	70.23	5,276.6	1,051.5	597.2	396.2	201.01	2.971	
12,400.0	6,794.4	12,251.8	6,592.6	107.0	107.6	70.25	5,376.6	1,051.5	597.2	392.6	204.63	2.918	
12,500.0	6,794.2	12,351.8	6,592.5	108.9	109.5	70.26	5,476.6	1,051.5	597.1	388.9	208.25	2.868	
12,600.0	6,793.9	12,451.8	6,592.4	110.8	111.4	70.28	5,576.6	1,051.5	597.1	385.2	211.86	2.818	
12,700.0	6,793.6	12,551.8	6,592.3	112.7	113.2	70.29	5,676.6	1,051.5	597.0	381.6	215.48	2.771	
12,800.0	6,793.4	12,651.8	6,592.2	114.6	115.1	70.30	5,776.6	1,051.5	597.0	377.9	219.11	2.725	
12,900.0	6,793.1	12,751.8	6,592.1	116.5	117.0	70.32	5,876.6	1,051.5	596.9	374.2	222.73	2.680	
13,000.0	6,792.9	12,851.8	6,592.0	118.4	118.9	70.33	5,976.6	1,051.5	596.9	370.5	226.36	2.637	
13,100.0	6,792.6	12,951.8	6,591.9	120.3	120.8	70.35	6,076.6	1,051.5	596.8	366.8	229.99	2.595	
13,200.0	6,792.3	13,051.8	6,591.8	122.2	122.7	70.36	6,176.6	1,051.5	596.8	363.2	233.61	2.555	
13,300.0	6,792.1	13,151.8	6,591.7	124.1	124.6	70.38	6,276.6	1,051.5	596.7	359.5	237.25	2.515	
13,400.0	6,791.8	13,251.8	6,591.6	126.0	126.5	70.39	6,376.6	1,051.5	596.7	355.8	240.88	2.477	
13,500.0	6,791.6	13,351.8	6,591.4	127.9	128.3	70.40	6,476.6	1,051.5	596.6	352.1	244.51	2.440	
13,600.0	6,791.3	13,451.8	6,591.3	129.8	130.2	70.42	6,576.6	1,051.5	596.6	348.4	248.15	2.404	
13,700.0	6,791.0	13,551.8	6,591.2	131.7	132.1	70.43	6,676.6	1,051.5	596.5	344.7	251.79	2.369	

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

Company:	PETROLEUM DEVELOPMENT CORP DJ	Local Co-ordinate Reference:	Well Klein 7T-301
Project:	Basin	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Reference Site:	SEC.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site Error:	Klein 5N64W7 Pad Sec.7-T5N-R64W	North Reference:	True
Reference Well:	0.0 ft	Survey Calculation Method:	Minimum Curvature
Well Error:	Klein 7T-301	Output errors are at	2.00 sigma
Reference Wellbore	0.0 ft	Database:	US_EDM
Reference Wellbore	Wellbore #1	Offset TVD Reference:	Offset Datum
Reference Design:	Plan #1 (10-14-15)		

Offset Design Klein 5N64W7 Pad Sec.7-T5N-R64W - Klein 7T-121 - Wellbore #1 - Plan #1 (10-14-15)													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 (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		
13,800.0	6,790.8	13,651.8	6,591.1	133.6	134.0	70.45	6,776.6	1,051.5	596.5	341.0	255.43	2.335		
13,900.0	6,790.5	13,751.8	6,591.0	135.5	135.9	70.46	6,876.6	1,051.5	596.4	337.3	259.07	2.302		
14,000.0	6,790.2	13,851.8	6,590.9	137.4	137.8	70.47	6,976.6	1,051.5	596.4	333.6	262.71	2.270		
14,100.0	6,790.0	13,951.8	6,590.8	139.3	139.7	70.49	7,076.6	1,051.5	596.3	329.9	266.35	2.239		
14,200.0	6,789.7	14,051.8	6,590.7	141.2	141.6	70.50	7,176.6	1,051.4	596.2	326.3	270.00	2.208		
14,300.0	6,789.5	14,151.8	6,590.6	143.1	143.5	70.52	7,276.6	1,051.4	596.2	322.6	273.64	2.179		
14,400.0	6,789.2	14,251.8	6,590.5	145.0	145.4	70.53	7,376.6	1,051.4	596.1	318.9	277.29	2.150		
14,500.0	6,788.9	14,351.8	6,590.4	146.9	147.3	70.54	7,476.6	1,051.4	596.1	315.2	280.94	2.122		
14,600.0	6,788.7	14,451.8	6,590.3	148.8	149.2	70.56	7,576.6	1,051.4	596.0	311.5	284.59	2.094		
14,700.0	6,788.4	14,551.8	6,590.2	150.8	151.1	70.57	7,676.6	1,051.4	596.0	307.7	288.24	2.068		
14,800.0	6,788.1	14,651.8	6,590.1	152.7	153.0	70.59	7,776.6	1,051.4	595.9	304.0	291.89	2.042		
14,900.0	6,787.9	14,751.8	6,590.0	154.6	154.9	70.60	7,876.6	1,051.4	595.9	300.3	295.54	2.016		
15,000.0	6,787.6	14,851.8	6,589.9	156.5	156.8	70.62	7,976.6	1,051.4	595.8	296.6	299.20	1.991		
15,100.0	6,787.4	14,951.8	6,589.8	158.4	158.7	70.63	8,076.6	1,051.4	595.8	292.9	302.85	1.967		
15,200.0	6,787.1	15,051.8	6,589.7	160.3	160.6	70.64	8,176.6	1,051.4	595.7	289.2	306.51	1.944		
15,300.0	6,786.8	15,151.8	6,589.5	162.2	162.5	70.66	8,276.6	1,051.4	595.7	285.5	310.16	1.921		
15,400.0	6,786.6	15,251.8	6,589.4	164.1	164.4	70.67	8,376.6	1,051.4	595.6	281.8	313.82	1.898		
15,500.0	6,786.3	15,351.8	6,589.3	166.0	166.3	70.69	8,476.6	1,051.4	595.6	278.1	317.48	1.876		
15,600.0	6,786.1	15,451.8	6,589.2	167.9	168.2	70.70	8,576.6	1,051.4	595.5	274.4	321.14	1.854		
15,700.0	6,785.8	15,551.8	6,589.1	169.9	170.1	70.71	8,676.6	1,051.4	595.5	270.7	324.80	1.833		
15,800.0	6,785.5	15,651.8	6,589.0	171.8	172.0	70.73	8,776.6	1,051.4	595.4	266.9	328.46	1.813		
15,900.0	6,785.3	15,751.8	6,588.9	173.7	173.9	70.74	8,876.6	1,051.4	595.4	263.2	332.13	1.793		
16,000.0	6,785.0	15,851.8	6,588.8	175.6	175.8	70.76	8,976.6	1,051.4	595.3	259.5	335.79	1.773		
16,100.0	6,784.7	15,951.8	6,588.7	177.5	177.7	70.77	9,076.6	1,051.4	595.3	255.8	339.46	1.754		
16,200.0	6,784.5	16,051.8	6,588.6	179.4	179.6	70.79	9,176.6	1,051.4	595.2	252.1	343.12	1.735		
16,300.0	6,784.2	16,151.8	6,588.5	181.3	181.5	70.80	9,276.6	1,051.4	595.2	248.4	346.79	1.716		
16,400.0	6,784.0	16,251.8	6,588.4	183.2	183.4	70.81	9,376.6	1,051.4	595.1	244.6	350.46	1.698		
16,500.0	6,783.7	16,351.8	6,588.3	185.1	185.3	70.83	9,476.6	1,051.4	595.1	240.9	354.12	1.680		
16,600.0	6,783.4	16,451.8	6,588.2	187.1	187.3	70.84	9,576.6	1,051.4	595.0	237.2	357.79	1.663		
16,700.0	6,783.2	16,551.8	6,588.1	189.0	189.2	70.86	9,676.6	1,051.4	594.9	233.5	361.46	1.646		
16,753.5	6,783.0	16,605.2	6,588.0	190.0	190.2	70.86	9,730.0	1,051.4	594.9	231.5	363.42	1.637		
16,766.1	6,783.0	16,617.0	6,588.0	190.2	190.4	70.87	9,741.8	1,051.4	594.9	231.0	363.87	1.635 SF		

Company:	PETROLEUM DEVELOPMENT CORP DJ	Local Co-ordinate Reference:	Well Klein 7T-301
Project:	Basin	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Reference Site:	SEC.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site Error:	Klein 5N64W7 Pad Sec.7-T5N-R64W	North Reference:	True
Reference Well:	0.0 ft	Survey Calculation Method:	Minimum Curvature
Well Error:	Klein 7T-301	Output errors are at	2.00 sigma
Reference Wellbore	0.0 ft	Database:	US_EDM
Reference Design:	Wellbore #1	Offset TVD Reference:	Offset Datum
	Plan #1 (10-14-15)		

Offset Design Klein 5N64W7 Pad Sec.7-T5N-R64W - Klein 7T-201 - Wellbore #1 - Plan #1 (10-14-15)													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 (ft)	Offset (ft)	Semi Major Axis (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	90.03	90.03	0.0	15.0	15.0	15.0	0.00	N/A	
100.0	100.0	100.0	100.0	0.1	0.1	90.03	90.03	0.0	15.0	15.0	14.8	0.22	66.907	
200.0	200.0	200.0	200.0	0.3	0.3	90.03	90.03	0.0	15.0	15.0	14.4	0.67	22.302	
300.0	300.0	300.0	300.0	0.6	0.6	90.03	90.03	0.0	15.0	15.0	13.9	1.12	13.381	
400.0	400.0	400.0	400.0	0.8	0.8	90.03	90.03	0.0	15.0	15.0	13.5	1.57	9.558	
500.0	500.0	500.0	500.0	1.0	1.0	90.03	90.03	0.0	15.0	15.0	13.0	2.02	7.434	
600.0	600.0	600.0	600.0	1.2	1.2	90.03	90.03	0.0	15.0	15.0	12.6	2.47	6.082	
700.0	700.0	700.0	700.0	1.5	1.5	90.03	90.03	0.0	15.0	15.0	12.1	2.92	5.147	
800.0	800.0	800.0	800.0	1.7	1.7	90.03	90.03	0.0	15.0	15.0	11.7	3.37	4.460	
900.0	900.0	900.0	900.0	1.9	1.9	90.03	90.03	0.0	15.0	15.0	11.2	3.82	3.936	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	90.03	90.03	0.0	15.0	15.0	10.8	4.27	3.521	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	90.03	90.03	0.0	15.0	15.0	10.3	4.72	3.186	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	90.03	90.03	0.0	15.0	15.0	9.9	5.17	2.909 CC	
1,300.0	1,300.0	1,299.6	1,299.6	2.8	2.8	92.52	92.52	-0.7	16.1	16.2	10.6	5.60	2.886	
1,400.0	1,400.0	1,399.2	1,399.1	3.0	3.0	98.26	98.26	-2.8	19.4	19.6	13.6	6.01	3.267	
1,500.0	1,500.0	1,498.5	1,498.2	3.2	3.2	-32.04	-32.04	-6.3	24.8	24.6	18.2	6.40	3.843	
1,600.0	1,599.9	1,597.7	1,597.0	3.4	3.4	-30.03	-30.03	-11.2	32.4	29.8	23.1	6.77	4.407	
1,700.0	1,699.7	1,696.7	1,695.3	3.6	3.6	-29.44	-29.44	-17.5	42.2	35.3	28.1	7.15	4.936	
1,800.0	1,799.3	1,795.6	1,793.2	3.8	3.9	-29.71	-29.71	-25.1	54.0	41.0	33.4	7.55	5.429	
1,900.0	1,898.6	1,894.4	1,890.6	4.0	4.1	-30.51	-30.51	-34.1	68.0	46.8	38.9	7.95	5.886	
2,000.0	1,997.5	1,993.0	1,987.3	4.3	4.5	-31.67	-31.67	-44.4	84.0	52.9	44.5	8.38	6.307	
2,066.0	2,062.6	2,057.9	2,050.7	4.5	4.7	-32.56	-32.56	-51.9	95.7	57.0	48.3	8.68	6.565	
2,100.0	2,096.1	2,091.7	2,083.7	4.6	4.8	-33.02	-33.02	-56.0	102.1	59.2	50.4	8.85	6.692	
2,200.0	2,194.6	2,191.5	2,180.9	4.8	5.2	-34.18	-34.18	-68.2	121.0	65.8	56.5	9.35	7.036	
2,300.0	2,293.1	2,291.3	2,278.1	5.2	5.6	-35.13	-35.13	-80.3	139.9	72.4	62.5	9.88	7.330	
2,400.0	2,391.6	2,391.1	2,375.3	5.5	6.0	-35.92	-35.92	-92.5	158.8	79.0	68.6	10.42	7.582	
2,500.0	2,490.1	2,490.8	2,472.5	5.8	6.4	-36.59	-36.59	-104.6	177.7	85.7	74.7	10.99	7.799	
2,600.0	2,588.5	2,590.6	2,569.8	6.2	6.9	-37.16	-37.16	-116.8	196.6	92.3	80.8	11.56	7.986	
2,700.0	2,687.0	2,690.4	2,667.0	6.5	7.3	-37.66	-37.66	-128.9	215.5	99.0	86.8	12.15	8.147	
2,800.0	2,785.5	2,790.2	2,764.2	6.9	7.8	-38.09	-38.09	-141.1	234.4	105.6	92.9	12.75	8.287	
2,900.0	2,884.0	2,889.9	2,861.4	7.2	8.2	-38.47	-38.47	-153.2	253.3	112.3	98.9	13.36	8.409	
3,000.0	2,982.5	2,989.7	2,958.6	7.6	8.7	-38.81	-38.81	-165.4	272.1	119.0	105.0	13.97	8.515	
3,100.0	3,081.0	3,089.5	3,055.8	8.0	9.2	-39.11	-39.11	-177.6	291.0	125.6	111.0	14.60	8.608	
3,200.0	3,179.4	3,189.3	3,153.0	8.3	9.6	-39.39	-39.39	-189.7	309.9	132.3	117.1	15.23	8.690	
3,300.0	3,277.9	3,289.0	3,250.2	8.7	10.1	-39.63	-39.63	-201.9	328.8	139.0	123.1	15.86	8.763	
3,400.0	3,376.4	3,388.8	3,347.5	9.1	10.6	-39.86	-39.86	-214.0	347.7	145.7	129.2	16.50	8.827	
3,500.0	3,474.9	3,488.6	3,444.7	9.5	11.1	-40.06	-40.06	-226.2	366.6	152.4	135.2	17.15	8.884	
3,600.0	3,573.4	3,588.4	3,541.9	9.8	11.5	-40.25	-40.25	-238.3	385.5	159.1	141.3	17.80	8.935	
3,700.0	3,671.9	3,688.1	3,639.1	10.2	12.0	-40.42	-40.42	-250.5	404.4	165.7	147.3	18.45	8.981	
3,800.0	3,770.3	3,787.9	3,736.3	10.6	12.5	-40.58	-40.58	-262.6	423.3	172.4	153.3	19.11	9.023	
3,900.0	3,868.8	3,887.7	3,833.5	11.0	13.0	-40.72	-40.72	-274.8	442.2	179.1	159.3	19.77	9.060	
4,000.0	3,967.3	3,987.5	3,930.7	11.4	13.5	-40.86	-40.86	-286.9	461.1	185.8	165.4	20.43	9.094	
4,100.0	4,065.8	4,087.2	4,028.0	11.8	13.9	-40.99	-40.99	-299.1	479.9	192.5	171.4	21.10	9.124	
4,200.0	4,164.3	4,187.0	4,125.2	12.2	14.4	-41.11	-41.11	-311.2	498.8	199.2	177.4	21.76	9.152	
4,300.0	4,262.8	4,286.8	4,222.4	12.6	14.9	-41.22	-41.22	-323.4	517.7	205.9	183.4	22.43	9.177	
4,400.0	4,361.2	4,386.6	4,319.6	13.0	15.4	-41.32	-41.32	-335.5	536.6	212.6	189.5	23.11	9.200	
4,500.0	4,459.7	4,486.3	4,416.8	13.4	15.9	-41.42	-41.42	-347.7	555.5	219.3	195.5	23.78	9.222	
4,600.0	4,558.2	4,586.1	4,514.0	13.8	16.4	-41.51	-41.51	-359.8	574.4	226.0	201.5	24.45	9.241	
4,700.0	4,656.7	4,685.9	4,611.2	14.2	16.9	-41.59	-41.59	-372.0	593.3	232.7	207.5	25.13	9.259	
4,800.0	4,755.2	4,785.7	4,708.5	14.6	17.3	-41.68	-41.68	-384.1	612.2	239.4	213.6	25.80	9.276	
4,900.0	4,853.7	4,885.4	4,805.7	14.9	17.8	-41.75	-41.75	-396.3	631.1	246.1	219.6	26.48	9.291	

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

Company:	PETROLEUM DEVELOPMENT CORP DJ	Local Co-ordinate Reference:	Well Klein 7T-301
Project:	Basin	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Reference Site:	SEC.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site Error:	Klein 5N64W7 Pad Sec.7-T5N-R64W	North Reference:	True
Reference Well:	0.0 ft	Survey Calculation Method:	Minimum Curvature
Well Error:	Klein 7T-301	Output errors are at	2.00 sigma
Reference Wellbore	0.0 ft	Database:	US_EDM
Reference Design:	Wellbore #1	Offset TVD Reference:	Offset Datum
	Plan #1 (10-14-15)		

Offset Design Klein 5N64W7 Pad Sec.7-T5N-R64W - Klein 7T-201 - Wellbore #1 - Plan #1 (10-14-15)													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 (ft)	Offset (ft)	Semi Major Axis (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,000.0	4,952.2	4,985.2	4,902.9	15.3	18.3	-41.83	-408.4	650.0	252.8	225.6	27.16	9.305		
5,100.0	5,050.6	5,085.0	5,000.1	15.7	18.8	-41.89	-420.6	668.9	259.4	231.6	27.84	9.318		
5,200.0	5,149.1	5,184.8	5,097.3	16.1	19.3	-41.96	-432.8	687.8	266.1	237.6	28.52	9.330		
5,300.0	5,247.6	5,284.5	5,194.5	16.5	19.8	-42.02	-444.9	706.6	272.8	243.6	29.21	9.342		
5,400.0	5,346.1	5,392.5	5,300.0	16.9	20.2	-42.26	-457.2	725.7	278.2	248.4	29.87	9.314		
5,457.8	5,403.1	5,455.6	5,362.1	17.2	20.4	-42.58	-463.4	735.3	279.9	249.6	30.28	9.242		
5,500.0	5,444.6	5,501.6	5,407.5	17.3	20.5	-42.88	-467.4	741.6	280.6	250.1	30.57	9.179		
5,600.0	5,543.6	5,610.7	5,515.6	17.6	20.8	-43.49	-475.4	754.1	281.9	250.7	31.16	9.048		
5,700.0	5,643.0	5,719.8	5,624.1	17.8	21.0	-44.00	-481.2	763.0	282.5	250.8	31.66	8.922		
5,800.0	5,742.8	5,828.9	5,733.0	18.0	21.2	-44.41	-484.7	768.5	282.4	250.3	32.09	8.800		
5,900.0	5,842.7	5,937.9	5,842.0	18.2	21.4	-44.72	-486.0	770.5	281.5	249.1	32.44	8.679		
5,957.3	5,900.0	5,995.9	5,900.0	18.3	21.5	90.00	-486.0	770.5	281.1	248.5	32.60	8.624		
6,000.0	5,942.7	6,038.6	5,942.7	18.3	21.5	90.00	-486.0	770.5	281.1	248.4	32.73	8.589		
6,039.8	5,982.5	6,078.4	5,982.5	18.4	21.5	89.96	-485.8	770.5	281.1	248.3	32.86	8.556		
6,101.1	6,043.8	6,139.4	6,043.4	18.5	21.6	89.16	-481.9	770.5	281.2	248.0	33.18	8.474		
6,150.0	6,092.6	6,187.6	6,091.1	18.5	21.6	88.13	-475.3	770.5	281.3	247.8	33.48	8.401		
6,200.0	6,142.4	6,236.6	6,139.1	18.6	21.6	87.09	-465.6	770.5	281.5	247.8	33.74	8.345		
6,250.0	6,191.7	6,285.2	6,186.1	18.6	21.6	86.07	-453.0	770.5	281.8	247.9	33.93	8.305		
6,300.0	6,240.4	6,333.6	6,231.9	18.6	21.6	85.07	-437.4	770.5	282.2	248.1	34.07	8.283		
6,350.0	6,288.3	6,381.7	6,276.4	18.5	21.5	84.10	-419.2	770.5	282.7	248.5	34.15	8.278		
6,400.0	6,335.1	6,429.5	6,319.3	18.5	21.5	83.15	-398.3	770.5	283.2	249.0	34.17	8.288		
6,450.0	6,380.7	6,477.0	6,360.7	18.4	21.4	82.24	-374.9	770.5	283.8	249.6	34.13	8.313		
6,500.0	6,424.8	6,524.3	6,400.3	18.4	21.3	81.37	-349.1	770.5	284.4	250.3	34.05	8.351		
6,550.0	6,467.3	6,571.4	6,438.1	18.3	21.2	80.53	-321.0	770.5	285.0	251.1	33.93	8.400		
6,600.0	6,508.0	6,618.2	6,473.9	18.2	21.1	79.74	-290.8	770.5	285.7	252.0	33.78	8.458		
6,650.0	6,546.7	6,664.8	6,507.6	18.1	21.1	78.99	-258.7	770.5	286.4	252.8	33.61	8.521		
6,700.0	6,583.2	6,711.3	6,539.2	18.0	21.0	78.29	-224.6	770.5	287.1	253.7	33.44	8.588		
6,750.0	6,617.4	6,757.5	6,568.6	17.9	20.9	77.64	-188.9	770.5	287.8	254.6	33.27	8.652		
6,800.0	6,649.2	6,803.6	6,595.6	17.8	20.8	77.04	-151.6	770.5	288.5	255.4	33.12	8.710		
6,850.0	6,678.4	6,850.0	6,620.5	17.7	20.7	76.49	-112.5	770.5	289.2	256.1	33.02	8.758		
6,900.0	6,704.9	6,895.3	6,642.5	17.6	20.6	76.01	-72.8	770.5	289.8	256.8	32.97	8.789		
6,950.0	6,728.5	6,941.0	6,662.3	17.5	20.5	75.57	-31.6	770.5	290.3	257.3	32.99	8.800		
7,000.0	6,749.2	6,986.6	6,679.5	17.4	20.4	75.19	10.6	770.5	290.8	257.7	33.10	8.786		
7,050.0	6,766.9	7,032.1	6,694.1	17.3	20.4	74.87	53.6	770.5	291.2	257.9	33.30	8.745		
7,100.0	6,781.4	7,077.5	6,706.2	17.2	20.3	74.60	97.4	770.5	291.6	258.0	33.61	8.675		
7,150.0	6,792.9	7,122.9	6,715.6	17.1	20.3	74.39	141.8	770.5	291.9	257.9	34.04	8.576		
7,200.0	6,801.1	7,168.2	6,722.3	17.1	20.3	74.25	186.6	770.5	292.1	257.5	34.58	8.449		
7,250.0	6,806.1	7,213.5	6,726.4	17.4	20.3	74.16	231.7	770.5	292.2	257.0	35.22	8.297		
7,303.2	6,807.8	7,261.6	6,727.8	17.9	20.4	74.12	279.8	770.5	292.3	256.3	36.03	8.113		
7,400.0	6,807.5	7,358.4	6,727.6	18.9	20.8	74.13	376.6	770.5	292.3	254.5	37.77	7.739		
7,500.0	6,807.3	7,458.4	6,727.4	20.1	21.6	74.14	476.6	770.5	292.3	252.5	39.81	7.342		
7,600.0	6,807.0	7,558.4	6,727.2	21.3	22.6	74.15	576.6	770.5	292.2	250.2	42.08	6.945		
7,700.0	6,806.7	7,658.4	6,727.0	22.6	23.8	74.16	676.6	770.5	292.2	247.7	44.55	6.560		
7,800.0	6,806.5	7,758.4	6,726.8	24.0	25.1	74.17	776.6	770.5	292.2	245.0	47.18	6.194		
7,900.0	6,806.2	7,858.4	6,726.6	25.4	26.5	74.18	876.6	770.5	292.2	242.3	49.95	5.850		
8,000.0	6,805.9	7,958.4	6,726.4	27.0	27.9	74.19	976.6	770.5	292.2	239.4	52.84	5.530		
8,100.0	6,805.7	8,058.4	6,726.1	28.5	29.4	74.20	1,076.6	770.5	292.2	236.4	55.82	5.234		
8,200.0	6,805.4	8,158.4	6,725.9	30.1	31.0	74.21	1,176.6	770.5	292.2	233.3	58.89	4.961		
8,300.0	6,805.2	8,258.4	6,725.7	31.7	32.6	74.22	1,276.6	770.5	292.1	230.1	62.03	4.710		
8,400.0	6,804.9	8,358.4	6,725.5	33.4	34.2	74.23	1,376.6	770.5	292.1	226.9	65.24	4.478		
8,500.0	6,804.6	8,458.4	6,725.3	35.1	35.8	74.24	1,476.6	770.5	292.1	223.6	68.49	4.265		

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

Company:	PETROLEUM DEVELOPMENT CORP DJ	Local Co-ordinate Reference:	Well Klein 7T-301
Project:	SEC.7-T5N-R64W	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Reference Site:	Klein 5N64W7 Pad Sec.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Klein 7T-301	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (10-14-15)	Offset TVD Reference:	Offset Datum

Offset Design Klein 5N64W7 Pad Sec.7-T5N-R64W - Klein 7T-201 - Wellbore #1 - Plan #1 (10-14-15)												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 (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
8,600.0	6,804.4	8,558.4	6,725.1	36.8	37.5	74.25	1,576.6	770.5	292.1	220.3	71.79	4.069	
8,700.0	6,804.1	8,658.4	6,724.9	38.5	39.2	74.26	1,676.6	770.5	292.1	217.0	75.13	3.888	
8,800.0	6,803.9	8,758.4	6,724.7	40.2	40.9	74.27	1,776.6	770.5	292.1	213.6	78.51	3.720	
8,900.0	6,803.6	8,858.4	6,724.5	42.0	42.6	74.28	1,876.6	770.5	292.1	210.2	81.91	3.566	
9,000.0	6,803.3	8,958.4	6,724.3	43.8	44.4	74.29	1,976.6	770.5	292.1	206.7	85.34	3.422	
9,100.0	6,803.1	9,058.4	6,724.1	45.5	46.1	74.30	2,076.6	770.5	292.0	203.2	88.80	3.289	
9,200.0	6,802.8	9,158.4	6,723.8	47.3	47.9	74.31	2,176.6	770.5	292.0	199.7	92.27	3.165	
9,300.0	6,802.5	9,258.4	6,723.6	49.1	49.7	74.32	2,276.6	770.5	292.0	196.2	95.77	3.049	
9,400.0	6,802.3	9,358.4	6,723.4	50.9	51.5	74.33	2,376.6	770.5	292.0	192.7	99.28	2.941	
9,500.0	6,802.0	9,458.4	6,723.2	52.8	53.3	74.34	2,476.6	770.5	292.0	189.2	102.81	2.840	
9,600.0	6,801.8	9,558.4	6,723.0	54.6	55.1	74.35	2,576.6	770.5	292.0	185.6	106.35	2.745	
9,700.0	6,801.5	9,658.4	6,722.8	56.4	56.9	74.36	2,676.6	770.5	292.0	182.1	109.90	2.656	
9,800.0	6,801.2	9,758.4	6,722.6	58.2	58.7	74.37	2,776.6	770.5	291.9	178.5	113.47	2.573	
9,900.0	6,801.0	9,858.4	6,722.4	60.1	60.5	74.38	2,876.6	770.5	291.9	174.9	117.04	2.494	
10,000.0	6,800.7	9,958.4	6,722.2	61.9	62.3	74.39	2,976.6	770.5	291.9	171.3	120.63	2.420	
10,100.0	6,800.5	10,058.4	6,722.0	63.8	64.2	74.40	3,076.6	770.5	291.9	167.7	124.22	2.350	
10,200.0	6,800.2	10,158.4	6,721.8	65.6	66.0	74.41	3,176.6	770.5	291.9	164.1	127.82	2.284	
10,300.0	6,799.9	10,258.4	6,721.5	67.5	67.9	74.42	3,276.6	770.5	291.9	160.4	131.43	2.221	
10,400.0	6,799.7	10,358.4	6,721.3	69.3	69.7	74.43	3,376.6	770.5	291.9	156.8	135.04	2.161	
10,500.0	6,799.4	10,458.4	6,721.1	71.2	71.6	74.44	3,476.6	770.5	291.8	153.2	138.66	2.105	
10,600.0	6,799.1	10,558.4	6,720.9	73.1	73.4	74.45	3,576.6	770.5	291.8	149.5	142.29	2.051	
10,700.0	6,798.9	10,658.4	6,720.7	74.9	75.3	74.46	3,676.6	770.5	291.8	145.9	145.92	2.000	
10,800.0	6,798.6	10,758.4	6,720.5	76.8	77.1	74.47	3,776.6	770.5	291.8	142.2	149.56	1.951	
10,900.0	6,798.4	10,858.4	6,720.3	78.7	79.0	74.48	3,876.6	770.5	291.8	138.6	153.20	1.905	
11,000.0	6,798.1	10,958.4	6,720.1	80.6	80.9	74.49	3,976.6	770.5	291.8	134.9	156.85	1.860	
11,100.0	6,797.8	11,058.4	6,719.9	82.4	82.7	74.50	4,076.6	770.5	291.8	131.3	160.50	1.818	
11,200.0	6,797.6	11,158.4	6,719.7	84.3	84.6	74.51	4,176.6	770.5	291.7	127.6	164.15	1.777	
11,300.0	6,797.3	11,258.4	6,719.4	86.2	86.5	74.52	4,276.6	770.5	291.7	123.9	167.81	1.739	
11,400.0	6,797.0	11,358.4	6,719.2	88.1	88.4	74.53	4,376.6	770.5	291.7	120.3	171.47	1.701	
11,500.0	6,796.8	11,458.4	6,719.0	90.0	90.2	74.54	4,476.6	770.5	291.7	116.6	175.13	1.666	
11,600.0	6,796.5	11,558.4	6,718.8	91.9	92.1	74.55	4,576.6	770.5	291.7	112.9	178.80	1.631	
11,700.0	6,796.3	11,658.4	6,718.6	93.7	94.0	74.56	4,676.6	770.5	291.7	109.2	182.47	1.599	
11,800.0	6,796.0	11,758.4	6,718.4	95.6	95.9	74.57	4,776.6	770.5	291.7	105.5	186.14	1.567	
11,900.0	6,795.7	11,858.4	6,718.2	97.5	97.8	74.58	4,876.6	770.5	291.7	101.8	189.81	1.537	
12,000.0	6,795.5	11,958.4	6,718.0	99.4	99.6	74.59	4,976.6	770.5	291.6	98.1	193.49	1.507	
12,100.0	6,795.2	12,058.4	6,717.8	101.3	101.5	74.60	5,076.6	770.5	291.6	94.5	197.17	1.479 Level 3	
12,200.0	6,795.0	12,158.4	6,717.6	103.2	103.4	74.61	5,176.6	770.5	291.6	90.8	200.85	1.452 Level 3	
12,300.0	6,794.7	12,258.4	6,717.4	105.1	105.3	74.62	5,276.6	770.5	291.6	87.1	204.54	1.426 Level 3	
12,400.0	6,794.4	12,358.4	6,717.1	107.0	107.2	74.63	5,376.6	770.5	291.6	83.4	208.22	1.400 Level 3	
12,500.0	6,794.2	12,458.4	6,716.9	108.9	109.1	74.64	5,476.6	770.5	291.6	79.7	211.91	1.376 Level 3	
12,600.0	6,793.9	12,558.4	6,716.7	110.8	111.0	74.65	5,576.6	770.5	291.6	76.0	215.60	1.352 Level 3	
12,700.0	6,793.6	12,658.4	6,716.5	112.7	112.9	74.66	5,676.6	770.5	291.5	72.3	219.29	1.329 Level 3	
12,800.0	6,793.4	12,758.4	6,716.3	114.6	114.8	74.67	5,776.6	770.5	291.5	68.5	222.98	1.307 Level 3	
12,900.0	6,793.1	12,858.4	6,716.1	116.5	116.7	74.68	5,876.6	770.5	291.5	64.8	226.68	1.286 Level 3	
13,000.0	6,792.9	12,958.4	6,715.9	118.4	118.5	74.69	5,976.6	770.5	291.5	61.1	230.38	1.265 Level 3	
13,100.0	6,792.6	13,058.4	6,715.7	120.3	120.4	74.70	6,076.6	770.5	291.5	57.4	234.07	1.245 Level 2	
13,200.0	6,792.3	13,158.4	6,715.5	122.2	122.3	74.71	6,176.6	770.5	291.5	53.7	237.77	1.226 Level 2	
13,300.0	6,792.1	13,258.4	6,715.3	124.1	124.2	74.72	6,276.6	770.5	291.5	50.0	241.47	1.207 Level 2	
13,400.0	6,791.8	13,358.4	6,715.0	126.0	126.1	74.73	6,376.6	770.5	291.4	46.3	245.17	1.189 Level 2	
13,500.0	6,791.6	13,458.4	6,714.8	127.9	128.0	74.74	6,476.6	770.5	291.4	42.6	248.88	1.171 Level 2	
13,600.0	6,791.3	13,558.4	6,714.6	129.8	129.9	74.75	6,576.6	770.5	291.4	38.8	252.58	1.154 Level 2	

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

Company:	PETROLEUM DEVELOPMENT CORP DJ	Local Co-ordinate Reference:	Well Klein 7T-301
Project:	Basin	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Reference Site:	SEC.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site Error:	Klein 5N64W7 Pad Sec.7-T5N-R64W	North Reference:	True
Reference Well:	0.0 ft	Survey Calculation Method:	Minimum Curvature
Well Error:	Klein 7T-301	Output errors are at	2.00 sigma
Reference Wellbore	0.0 ft	Database:	US_EDM
Reference Design:	Wellbore #1	Offset TVD Reference:	Offset Datum
	Plan #1 (10-14-15)		

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
13,700.0	6,791.0	13,658.4	6,714.4	131.7	131.8	74.76	6,676.6	770.6	291.4	35.1	256.29	1.137	Level 2
13,800.0	6,790.8	13,758.4	6,714.2	133.6	133.7	74.77	6,776.6	770.6	291.4	31.4	259.99	1.121	Level 2
13,900.0	6,790.5	13,858.4	6,714.0	135.5	135.6	74.78	6,876.6	770.6	291.4	27.7	263.70	1.105	Level 2
14,000.0	6,790.2	13,958.4	6,713.8	137.4	137.5	74.79	6,976.6	770.6	291.4	24.0	267.41	1.090	Level 2
14,100.0	6,790.0	14,058.4	6,713.6	139.3	139.4	74.80	7,076.6	770.6	291.4	20.2	271.12	1.075	Level 2
14,200.0	6,789.7	14,158.4	6,713.4	141.2	141.3	74.81	7,176.6	770.6	291.3	16.5	274.83	1.060	Level 2
14,300.0	6,789.5	14,258.4	6,713.2	143.1	143.2	74.82	7,276.6	770.6	291.3	12.8	278.54	1.046	Level 2
14,400.0	6,789.2	14,358.4	6,713.0	145.0	145.1	74.83	7,376.6	770.6	291.3	9.1	282.26	1.032	Level 2
14,500.0	6,788.9	14,458.4	6,712.7	146.9	147.1	74.84	7,476.6	770.6	291.3	5.3	285.97	1.019	Level 2
14,600.0	6,788.7	14,558.4	6,712.5	148.8	149.0	74.85	7,576.6	770.6	291.3	1.6	289.68	1.006	Level 2
14,700.0	6,788.4	14,658.4	6,712.3	150.8	150.9	74.86	7,676.6	770.6	291.3	-2.1	293.40	0.993	Level 1
14,800.0	6,788.1	14,758.4	6,712.1	152.7	152.8	74.87	7,776.6	770.6	291.3	-5.9	297.12	0.980	Level 1
14,900.0	6,787.9	14,858.4	6,711.9	154.6	154.7	74.88	7,876.6	770.6	291.2	-9.6	300.83	0.968	Level 1
15,000.0	6,787.6	14,958.4	6,711.7	156.5	156.6	74.89	7,976.6	770.6	291.2	-13.3	304.55	0.956	Level 1
15,100.0	6,787.4	15,058.4	6,711.5	158.4	158.5	74.90	8,076.6	770.6	291.2	-17.1	308.27	0.945	Level 1
15,200.0	6,787.1	15,158.4	6,711.3	160.3	160.4	74.91	8,176.6	770.6	291.2	-20.8	311.99	0.933	Level 1
15,300.0	6,786.8	15,258.4	6,711.1	162.2	162.3	74.92	8,276.6	770.6	291.2	-24.5	315.71	0.922	Level 1
15,400.0	6,786.6	15,358.4	6,710.9	164.1	164.2	74.93	8,376.6	770.6	291.2	-28.3	319.43	0.912	Level 1
15,500.0	6,786.3	15,458.4	6,710.7	166.0	166.1	74.94	8,476.6	770.6	291.2	-32.0	323.15	0.901	Level 1
15,600.0	6,786.1	15,558.4	6,710.4	167.9	168.0	74.95	8,576.6	770.6	291.2	-35.7	326.88	0.891	Level 1
15,700.0	6,785.8	15,658.4	6,710.2	169.9	169.9	74.96	8,676.6	770.6	291.1	-39.5	330.60	0.881	Level 1
15,800.0	6,785.5	15,758.4	6,710.0	171.8	171.8	74.97	8,776.6	770.6	291.1	-43.2	334.33	0.871	Level 1
15,900.0	6,785.3	15,858.4	6,709.8	173.7	173.7	74.98	8,876.6	770.6	291.1	-46.9	338.05	0.861	Level 1
16,000.0	6,785.0	15,958.4	6,709.6	175.6	175.7	74.99	8,976.6	770.6	291.1	-50.7	341.78	0.852	Level 1
16,100.0	6,784.7	16,058.4	6,709.4	177.5	177.6	75.00	9,076.6	770.6	291.1	-54.4	345.50	0.842	Level 1
16,200.0	6,784.5	16,158.4	6,709.2	179.4	179.5	75.01	9,176.6	770.6	291.1	-58.2	349.23	0.833	Level 1
16,300.0	6,784.2	16,258.4	6,709.0	181.3	181.4	75.02	9,276.6	770.6	291.1	-61.9	352.96	0.825	Level 1
16,400.0	6,784.0	16,358.4	6,708.8	183.2	183.3	75.03	9,376.6	770.6	291.0	-65.6	356.68	0.816	Level 1
16,500.0	6,783.7	16,458.4	6,708.6	185.1	185.2	75.04	9,476.6	770.6	291.0	-69.4	360.41	0.807	Level 1
16,600.0	6,783.4	16,558.4	6,708.3	187.1	187.1	75.05	9,576.6	770.6	291.0	-73.1	364.14	0.799	Level 1
16,700.0	6,783.2	16,658.4	6,708.1	189.0	189.0	75.06	9,676.6	770.6	291.0	-76.9	367.87	0.791	Level 1
16,746.1	6,783.1	16,704.5	6,708.0	189.8	189.9	75.06	9,722.7	770.6	291.0	-78.6	369.59	0.787	Level 1
16,766.1	6,783.0	16,724.0	6,708.0	190.2	190.3	75.06	9,742.1	770.6	291.0	-79.3	370.33	0.786	Level 1, ES, SF

Company:	PETROLEUM DEVELOPMENT CORP DJ	Local Co-ordinate Reference:	Well Klein 7T-301
Project:	Basin	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Reference Site:	SEC.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site Error:	Klein 5N64W7 Pad Sec.7-T5N-R64W	North Reference:	True
Reference Well:	0.0 ft	Survey Calculation Method:	Minimum Curvature
Well Error:	Klein 7T-301	Output errors are at	2.00 sigma
Reference Wellbore	0.0 ft	Database:	US_EDM
Reference Design:	Wellbore #1	Offset TVD Reference:	Offset Datum
	Plan #1 (10-14-15)		

Offset Design Klein 5N64W7 Pad Sec.7-T5N-R64W - Klein 7T-241 - Wellbore #1 - Plan #1 (10-14-15)													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 (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-90.00	0.0	-15.0	15.0	15.0	0.00	N/A		
100.0	100.0	100.0	100.0	0.1	0.1	-90.00	0.0	-15.0	15.0	14.8	0.22	66.907		
200.0	200.0	200.0	200.0	0.3	0.3	-90.00	0.0	-15.0	15.0	14.4	0.67	22.302		
300.0	300.0	300.0	300.0	0.6	0.6	-90.00	0.0	-15.0	15.0	13.9	1.12	13.381		
400.0	400.0	400.0	400.0	0.8	0.8	-90.00	0.0	-15.0	15.0	13.5	1.57	9.558		
500.0	500.0	500.0	500.0	1.0	1.0	-90.00	0.0	-15.0	15.0	13.0	2.02	7.434		
600.0	600.0	600.0	600.0	1.2	1.2	-90.00	0.0	-15.0	15.0	12.6	2.47	6.082		
700.0	700.0	700.0	700.0	1.5	1.5	-90.00	0.0	-15.0	15.0	12.1	2.92	5.147		
800.0	800.0	800.0	800.0	1.7	1.7	-90.00	0.0	-15.0	15.0	11.7	3.37	4.460		
900.0	900.0	900.0	900.0	1.9	1.9	-90.00	0.0	-15.0	15.0	11.2	3.82	3.936		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-90.00	0.0	-15.0	15.0	10.8	4.27	3.521		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-90.00	0.0	-15.0	15.0	10.3	4.72	3.186		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-90.00	0.0	-15.0	15.0	9.9	5.17	2.909		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-90.00	0.0	-15.0	15.0	9.4	5.62	2.676		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-90.00	0.0	-15.0	15.0	9.0	6.07	2.478 CC		
1,500.0	1,500.0	1,500.0	1,500.0	3.2	3.3	138.50	0.0	-15.0	16.0	9.5	6.49	2.463		
1,600.0	1,599.9	1,599.9	1,599.9	3.4	3.5	146.29	0.0	-15.0	19.1	12.2	6.89	2.772		
1,700.0	1,699.7	1,700.2	1,700.1	3.6	3.7	152.59	-1.2	-14.4	23.9	16.6	7.27	3.282		
1,800.0	1,799.3	1,800.5	1,800.4	3.8	3.9	155.48	-4.6	-12.5	29.2	21.6	7.63	3.829		
1,900.0	1,898.6	1,901.0	1,900.7	4.0	4.0	156.39	-10.4	-9.4	35.0	27.0	7.99	4.377		
2,000.0	1,997.5	2,001.6	2,000.8	4.3	4.2	156.12	-18.5	-4.9	41.1	32.8	8.37	4.917		
2,066.0	2,062.6	2,068.0	2,066.8	4.5	4.4	155.53	-25.1	-1.3	45.4	36.8	8.63	5.265		
2,100.0	2,096.1	2,102.2	2,100.8	4.6	4.5	155.07	-28.9	0.7	47.6	38.8	8.77	5.422		
2,200.0	2,194.6	2,202.7	2,200.2	4.8	4.7	152.74	-41.5	7.6	52.7	43.5	9.22	5.714		
2,300.0	2,293.1	2,302.6	2,299.0	5.2	4.9	150.43	-54.5	14.7	57.5	47.8	9.70	5.927		
2,400.0	2,391.6	2,402.4	2,397.8	5.5	5.2	148.49	-67.5	21.8	62.4	52.2	10.20	6.114		
2,500.0	2,490.1	2,502.3	2,496.5	5.8	5.5	146.83	-80.5	28.9	67.3	56.6	10.73	6.275		
2,600.0	2,588.5	2,602.2	2,595.3	6.2	5.8	145.39	-93.5	35.9	72.3	61.0	11.27	6.415		
2,700.0	2,687.0	2,702.0	2,694.0	6.5	6.1	144.15	-106.5	43.0	77.3	65.5	11.83	6.535		
2,800.0	2,785.5	2,801.9	2,792.8	6.9	6.4	143.05	-119.5	50.1	82.4	70.0	12.41	6.639		
2,900.0	2,884.0	2,901.7	2,891.5	7.2	6.7	142.08	-132.5	57.2	87.5	74.5	13.00	6.729		
3,000.0	2,982.5	3,001.6	2,990.3	7.6	7.0	141.22	-145.5	64.3	92.6	79.0	13.60	6.806		
3,100.0	3,081.0	3,101.5	3,089.1	8.0	7.3	140.45	-158.5	71.4	97.7	83.5	14.22	6.873		
3,200.0	3,179.4	3,201.3	3,187.8	8.3	7.6	139.76	-171.4	78.5	102.9	88.0	14.84	6.931		
3,300.0	3,277.9	3,301.2	3,286.6	8.7	7.9	139.13	-184.4	85.5	108.0	92.6	15.47	6.982		
3,400.0	3,376.4	3,401.0	3,385.3	9.1	8.3	138.56	-197.4	92.6	113.2	97.1	16.11	7.026		
3,500.0	3,474.9	3,500.9	3,484.1	9.5	8.6	138.04	-210.4	99.7	118.4	101.6	16.75	7.065		
3,600.0	3,573.4	3,600.8	3,582.9	9.8	8.9	137.56	-223.4	106.8	123.6	106.2	17.40	7.100		
3,700.0	3,671.9	3,700.6	3,681.6	10.2	9.3	137.13	-236.4	113.9	128.8	110.7	18.06	7.130		
3,800.0	3,770.3	3,800.5	3,780.4	10.6	9.6	136.72	-249.4	121.0	134.0	115.2	18.72	7.156		
3,900.0	3,868.8	3,900.3	3,879.1	11.0	10.0	136.35	-262.4	128.1	139.2	119.8	19.38	7.180		
4,000.0	3,967.3	4,000.2	3,977.9	11.4	10.3	136.00	-275.4	135.1	144.4	124.3	20.05	7.201		
4,100.0	4,065.8	4,100.1	4,076.6	11.8	10.7	135.68	-288.4	142.2	149.6	128.9	20.72	7.219		
4,200.0	4,164.3	4,199.9	4,175.4	12.2	11.0	135.38	-301.4	149.3	154.8	133.4	21.40	7.236		
4,300.0	4,262.8	4,299.8	4,274.2	12.6	11.3	135.09	-314.4	156.4	160.1	138.0	22.08	7.251		
4,400.0	4,361.2	4,399.6	4,372.9	13.0	11.7	134.83	-327.3	163.5	165.3	142.6	22.76	7.264		
4,500.0	4,459.7	4,499.5	4,471.7	13.4	12.0	134.58	-340.3	170.6	170.5	147.1	23.44	7.277		
4,600.0	4,558.2	4,599.4	4,570.4	13.8	12.4	134.35	-353.3	177.7	175.8	151.7	24.12	7.287		
4,700.0	4,656.7	4,699.2	4,669.2	14.2	12.7	134.13	-366.3	184.7	181.0	156.2	24.81	7.297		
4,800.0	4,755.2	4,799.1	4,767.9	14.6	13.1	133.92	-379.3	191.8	186.3	160.8	25.50	7.306		
4,900.0	4,853.7	4,898.9	4,866.7	14.9	13.5	133.73	-392.3	198.9	191.5	165.3	26.19	7.314		

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

Company:	PETROLEUM DEVELOPMENT CORP DJ	Local Co-ordinate Reference:	Well Klein 7T-301
Project:	Basin	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Reference Site:	SEC.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site Error:	Klein 5N64W7 Pad Sec.7-T5N-R64W	North Reference:	True
Reference Well:	0.0 ft	Survey Calculation Method:	Minimum Curvature
Well Error:	Klein 7T-301	Output errors are at	2.00 sigma
Reference Wellbore	0.0 ft	Database:	US_EDM
Reference Design:	Wellbore #1	Offset TVD Reference:	Offset Datum
	Plan #1 (10-14-15)		

Offset Design Klein 5N64W7 Pad Sec.7-T5N-R64W - Klein 7T-241 - Wellbore #1 - Plan #1 (10-14-15)													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 (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor				
5,000.0	4,952.2	4,998.8	4,965.5	15.3	13.8	133.54	-405.3	206.0	196.8	169.9	26.88	7.321				
5,100.0	5,050.6	5,098.7	5,064.2	15.7	14.2	133.37	-418.3	213.1	202.0	174.4	27.57	7.328				
5,200.0	5,149.1	5,198.5	5,163.0	16.1	14.5	133.20	-431.3	220.2	207.3	179.0	28.26	7.334				
5,300.0	5,247.6	5,298.4	5,261.7	16.5	14.9	133.04	-444.3	227.3	212.5	183.6	28.96	7.339				
5,400.0	5,346.1	5,398.2	5,360.5	16.9	15.2	132.89	-457.3	234.3	217.8	188.1	29.65	7.344				
5,457.8	5,403.1	5,454.6	5,416.3	17.2	15.4	132.88	-464.3	238.2	221.0	190.9	30.02	7.360				
5,500.0	5,444.6	5,495.3	5,456.6	17.3	15.5	133.00	-468.9	240.7	223.4	193.1	30.26	7.382				
5,600.0	5,543.6	5,591.7	5,552.5	17.6	15.8	133.35	-477.6	245.4	228.5	197.8	30.69	7.444				
5,700.0	5,643.0	5,688.1	5,648.7	17.8	15.9	133.79	-483.5	248.6	232.7	201.6	31.05	7.494				
5,800.0	5,742.8	5,784.4	5,744.9	18.0	16.1	134.31	-486.5	250.3	236.1	204.7	31.34	7.533				
5,900.0	5,842.7	5,882.2	5,842.7	18.2	16.3	134.86	-487.0	250.6	238.4	206.9	31.57	7.552				
5,957.3	5,900.0	5,939.5	5,900.0	18.3	16.4	-90.24	-487.0	250.6	238.8	207.1	31.72	7.529				
6,000.0	5,942.7	5,982.2	5,942.7	18.3	16.4	-90.24	-487.0	250.6	238.8	207.0	31.86	7.497				
6,059.9	6,002.6	6,042.1	6,002.6	18.4	16.5	-90.00	-486.0	250.6	238.8	206.8	32.00	7.464				
6,101.1	6,043.8	6,083.1	6,043.5	18.5	16.5	-89.24	-482.8	250.6	238.9	206.9	32.00	7.464				
6,150.0	6,092.6	6,131.4	6,091.3	18.5	16.6	-88.03	-476.3	250.6	239.0	207.1	31.93	7.485				
6,200.0	6,142.4	6,180.4	6,139.3	18.6	16.6	-86.81	-466.6	250.6	239.2	207.4	31.80	7.522				
6,250.0	6,191.7	6,229.1	6,186.4	18.6	16.5	-85.60	-453.9	250.6	239.6	207.9	31.64	7.572				
6,300.0	6,240.4	6,277.6	6,232.2	18.6	16.5	-84.42	-438.3	250.6	240.0	208.5	31.44	7.634				
6,350.0	6,288.3	6,325.7	6,276.7	18.5	16.5	-83.27	-420.0	250.6	240.5	209.3	31.21	7.706				
6,400.0	6,335.1	6,373.5	6,319.7	18.5	16.4	-82.16	-399.1	250.6	241.1	210.1	30.96	7.787				
6,450.0	6,380.7	6,421.1	6,361.1	18.4	16.3	-81.09	-375.6	250.6	241.8	211.1	30.71	7.874				
6,500.0	6,424.8	6,468.5	6,400.8	18.4	16.2	-80.06	-349.7	250.6	242.5	212.1	30.45	7.965				
6,550.0	6,467.3	6,515.6	6,438.6	18.3	16.2	-79.07	-321.6	250.6	243.3	213.1	30.19	8.058				
6,600.0	6,508.0	6,562.4	6,474.4	18.2	16.1	-78.14	-291.4	250.6	244.1	214.1	29.95	8.149				
6,650.0	6,546.7	6,609.1	6,508.1	18.1	16.0	-77.26	-259.2	250.6	244.9	215.2	29.74	8.235				
6,700.0	6,583.2	6,655.6	6,539.7	18.0	15.9	-76.44	-225.1	250.6	245.7	216.2	29.56	8.314				
6,750.0	6,617.4	6,700.0	6,567.9	17.9	15.9	-75.70	-190.8	250.6	246.5	217.1	29.42	8.381				
6,800.0	6,649.2	6,748.0	6,596.1	17.8	15.8	-74.97	-152.0	250.6	247.3	218.0	29.33	8.433				
6,850.0	6,678.4	6,793.9	6,620.7	17.7	15.8	-74.33	-113.2	250.6	248.1	218.8	29.30	8.467				
6,900.0	6,704.9	6,839.8	6,642.9	17.6	15.8	-73.75	-73.1	250.6	248.8	219.5	29.34	8.479				
6,950.0	6,728.5	6,885.5	6,662.6	17.5	15.8	-73.24	-31.9	250.6	249.5	220.0	29.46	8.468				
7,000.0	6,749.2	6,931.1	6,679.8	17.4	15.9	-72.79	10.4	250.6	250.0	220.4	29.66	8.431				
7,050.0	6,766.9	6,976.6	6,694.4	17.3	16.0	-72.41	53.5	250.6	250.6	220.6	29.94	8.369				
7,100.0	6,781.4	7,022.0	6,706.4	17.2	16.2	-72.09	97.3	250.6	251.0	220.7	30.31	8.282				
7,150.0	6,792.9	7,067.4	6,715.8	17.1	16.4	-71.84	141.7	250.6	251.4	220.6	30.76	8.171				
7,200.0	6,801.1	7,112.7	6,722.4	17.1	16.7	-71.66	186.5	250.6	251.6	220.3	31.31	8.037				
7,250.0	6,806.1	7,158.0	6,726.5	17.4	17.1	-71.54	231.6	250.6	251.8	219.9	31.93	7.885				
7,303.2	6,807.8	7,206.2	6,727.8	17.9	17.5	-71.49	279.8	250.6	251.9	219.2	32.69	7.705				
7,400.0	6,807.5	7,303.1	6,727.6	18.9	18.4	-71.50	376.6	250.6	251.9	217.4	34.41	7.320				
7,500.0	6,807.3	7,403.1	6,727.4	20.1	19.5	-71.51	476.6	250.6	251.8	215.4	36.46	6.907				
7,600.0	6,807.0	7,503.1	6,727.2	21.3	20.8	-71.53	576.6	250.6	251.8	213.1	38.75	6.498				
7,700.0	6,806.7	7,603.1	6,727.0	22.6	22.1	-71.54	676.6	250.6	251.8	210.6	41.24	6.105				
7,800.0	6,806.5	7,703.1	6,726.8	24.0	23.5	-71.55	776.6	250.6	251.8	207.9	43.90	5.735				
7,900.0	6,806.2	7,803.1	6,726.6	25.4	25.0	-71.56	876.6	250.6	251.8	205.1	46.70	5.391				
8,000.0	6,805.9	7,903.1	6,726.4	27.0	26.5	-71.57	976.6	250.6	251.8	202.1	49.61	5.074				
8,100.0	6,805.7	8,003.1	6,726.2	28.5	28.1	-71.58	1,076.6	250.6	251.7	199.1	52.62	4.784				
8,200.0	6,805.4	8,103.1	6,725.9	30.1	29.7	-71.59	1,176.6	250.6	251.7	196.0	55.71	4.518				
8,300.0	6,805.2	8,203.1	6,725.7	31.7	31.3	-71.60	1,276.6	250.6	251.7	192.8	58.87	4.276				
8,400.0	6,804.9	8,303.1	6,725.5	33.4	33.0	-71.62	1,376.6	250.6	251.7	189.6	62.08	4.054				
8,500.0	6,804.6	8,403.1	6,725.3	35.1	34.7	-71.63	1,476.6	250.6	251.7	186.3	65.35	3.851				

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

Company:	PETROLEUM DEVELOPMENT CORP DJ	Local Co-ordinate Reference:	Well Klein 7T-301
Project:	Basin	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Reference Site:	SEC.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site Error:	Klein 5N64W7 Pad Sec.7-T5N-R64W	North Reference:	True
Reference Well:	0.0 ft	Survey Calculation Method:	Minimum Curvature
Well Error:	Klein 7T-301	Output errors are at	2.00 sigma
Reference Wellbore	0.0 ft	Database:	US_EDM
Reference Design:	Wellbore #1	Offset TVD Reference:	Offset Datum
	Plan #1 (10-14-15)		

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
8,600.0	6,804.4	8,503.1	6,725.1	36.8	36.4	-71.64	1,576.6	250.6	251.7	183.0	68.65	3.666	
8,700.0	6,804.1	8,603.1	6,724.9	38.5	38.2	-71.65	1,676.6	250.6	251.6	179.6	71.99	3.495	
8,800.0	6,803.9	8,703.1	6,724.7	40.2	39.9	-71.66	1,776.6	250.6	251.6	176.3	75.37	3.339	
8,900.0	6,803.6	8,803.1	6,724.5	42.0	41.7	-71.67	1,876.6	250.6	251.6	172.8	78.77	3.194	
9,000.0	6,803.3	8,903.1	6,724.3	43.8	43.5	-71.68	1,976.6	250.6	251.6	169.4	82.19	3.061	
9,100.0	6,803.1	9,003.1	6,724.1	45.5	45.3	-71.70	2,076.6	250.6	251.6	165.9	85.64	2.938	
9,200.0	6,802.8	9,103.1	6,723.8	47.3	47.1	-71.71	2,176.6	250.6	251.6	162.4	89.11	2.823	
9,300.0	6,802.5	9,203.1	6,723.6	49.1	48.9	-71.72	2,276.6	250.6	251.5	158.9	92.59	2.717	
9,400.0	6,802.3	9,303.1	6,723.4	50.9	50.7	-71.73	2,376.6	250.6	251.5	155.4	96.09	2.618	
9,500.0	6,802.0	9,403.1	6,723.2	52.8	52.5	-71.74	2,476.6	250.6	251.5	151.9	99.60	2.525	
9,600.0	6,801.8	9,503.1	6,723.0	54.6	54.4	-71.75	2,576.6	250.6	251.5	148.4	103.12	2.439	
9,700.0	6,801.5	9,603.1	6,722.8	56.4	56.2	-71.76	2,676.6	250.6	251.5	144.8	106.66	2.358	
9,800.0	6,801.2	9,703.1	6,722.6	58.2	58.1	-71.77	2,776.6	250.6	251.5	141.3	110.20	2.282	
9,900.0	6,801.0	9,803.1	6,722.4	60.1	59.9	-71.79	2,876.6	250.6	251.4	137.7	113.76	2.210	
10,000.0	6,800.7	9,903.1	6,722.2	61.9	61.8	-71.80	2,976.6	250.6	251.4	134.1	117.32	2.143	
10,100.0	6,800.5	10,003.1	6,722.0	63.8	63.6	-71.81	3,076.6	250.6	251.4	130.5	120.89	2.080	
10,200.0	6,800.2	10,103.1	6,721.8	65.6	65.5	-71.82	3,176.6	250.6	251.4	126.9	124.47	2.020	
10,300.0	6,799.9	10,203.1	6,721.5	67.5	67.3	-71.83	3,276.6	250.6	251.4	123.3	128.05	1.963	
10,400.0	6,799.7	10,303.1	6,721.3	69.3	69.2	-71.84	3,376.6	250.6	251.4	119.7	131.64	1.909	
10,500.0	6,799.4	10,403.1	6,721.1	71.2	71.1	-71.85	3,476.6	250.6	251.3	116.1	135.23	1.859	
10,600.0	6,799.1	10,503.1	6,720.9	73.1	73.0	-71.87	3,576.6	250.6	251.3	112.5	138.83	1.810	
10,700.0	6,798.9	10,603.1	6,720.7	74.9	74.8	-71.88	3,676.6	250.6	251.3	108.9	142.44	1.764	
10,800.0	6,798.6	10,703.1	6,720.5	76.8	76.7	-71.89	3,776.6	250.6	251.3	105.2	146.05	1.721	
10,900.0	6,798.4	10,803.1	6,720.3	78.7	78.6	-71.90	3,876.6	250.6	251.3	101.6	149.66	1.679	
11,000.0	6,798.1	10,903.1	6,720.1	80.6	80.5	-71.91	3,976.6	250.6	251.3	98.0	153.28	1.639	
11,100.0	6,797.8	11,003.1	6,719.9	82.4	82.4	-71.92	4,076.6	250.6	251.2	94.3	156.90	1.601	
11,200.0	6,797.6	11,103.1	6,719.7	84.3	84.2	-71.93	4,176.6	250.6	251.2	90.7	160.52	1.565	
11,300.0	6,797.3	11,203.1	6,719.4	86.2	86.1	-71.94	4,276.6	250.6	251.2	87.1	164.15	1.530	
11,400.0	6,797.0	11,303.1	6,719.2	88.1	88.0	-71.96	4,376.6	250.6	251.2	83.4	167.78	1.497 Level 3	
11,500.0	6,796.8	11,403.1	6,719.0	90.0	89.9	-71.97	4,476.6	250.6	251.2	79.8	171.41	1.465 Level 3	
11,600.0	6,796.5	11,503.1	6,718.8	91.9	91.8	-71.98	4,576.6	250.6	251.2	76.1	175.05	1.435 Level 3	
11,700.0	6,796.3	11,603.1	6,718.6	93.7	93.7	-71.99	4,676.6	250.6	251.1	72.5	178.69	1.406 Level 3	
11,800.0	6,796.0	11,703.1	6,718.4	95.6	95.6	-72.00	4,776.6	250.6	251.1	68.8	182.33	1.377 Level 3	
11,900.0	6,795.7	11,803.1	6,718.2	97.5	97.5	-72.01	4,876.6	250.6	251.1	65.1	185.97	1.350 Level 3	
12,000.0	6,795.5	11,903.1	6,718.0	99.4	99.4	-72.02	4,976.6	250.6	251.1	61.5	189.62	1.324 Level 3	
12,100.0	6,795.2	12,003.1	6,717.8	101.3	101.3	-72.04	5,076.6	250.6	251.1	57.8	193.27	1.299 Level 3	
12,200.0	6,795.0	12,103.1	6,717.6	103.2	103.2	-72.05	5,176.6	250.6	251.1	54.2	196.92	1.275 Level 3	
12,300.0	6,794.7	12,203.1	6,717.4	105.1	105.1	-72.06	5,276.6	250.6	251.1	50.5	200.57	1.252 Level 3	
12,400.0	6,794.4	12,303.1	6,717.1	107.0	107.0	-72.07	5,376.6	250.6	251.0	46.8	204.22	1.229 Level 2	
12,500.0	6,794.2	12,403.1	6,716.9	108.9	108.9	-72.08	5,476.6	250.5	251.0	43.1	207.88	1.208 Level 2	
12,600.0	6,793.9	12,503.1	6,716.7	110.8	110.8	-72.09	5,576.6	250.5	251.0	39.5	211.54	1.187 Level 2	
12,700.0	6,793.6	12,603.1	6,716.5	112.7	112.7	-72.10	5,676.6	250.5	251.0	35.8	215.19	1.166 Level 2	
12,800.0	6,793.4	12,703.1	6,716.3	114.6	114.6	-72.12	5,776.6	250.5	251.0	32.1	218.85	1.147 Level 2	
12,900.0	6,793.1	12,803.1	6,716.1	116.5	116.5	-72.13	5,876.6	250.5	251.0	28.4	222.52	1.128 Level 2	
13,000.0	6,792.9	12,903.1	6,715.9	118.4	118.4	-72.14	5,976.6	250.5	250.9	24.8	226.18	1.109 Level 2	
13,100.0	6,792.6	13,003.1	6,715.7	120.3	120.3	-72.15	6,076.6	250.5	250.9	21.1	229.84	1.092 Level 2	
13,200.0	6,792.3	13,103.1	6,715.5	122.2	122.2	-72.16	6,176.6	250.5	250.9	17.4	233.51	1.075 Level 2	
13,300.0	6,792.1	13,203.1	6,715.3	124.1	124.1	-72.17	6,276.6	250.5	250.9	13.7	237.18	1.058 Level 2	
13,400.0	6,791.8	13,303.1	6,715.1	126.0	126.0	-72.18	6,376.6	250.5	250.9	10.0	240.85	1.042 Level 2	
13,500.0	6,791.6	13,403.1	6,714.8	127.9	127.9	-72.19	6,476.6	250.5	250.9	6.3	244.52	1.026 Level 2	
13,600.0	6,791.3	13,503.1	6,714.6	129.8	129.8	-72.21	6,576.6	250.5	250.8	2.7	248.19	1.011 Level 2	

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

Company:	PETROLEUM DEVELOPMENT CORP DJ	Local Co-ordinate Reference:	Well Klein 7T-301
Project:	Basin	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Reference Site:	SEC.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site Error:	Klein 5N64W7 Pad Sec.7-T5N-R64W	North Reference:	True
Reference Well:	0.0 ft	Survey Calculation Method:	Minimum Curvature
Well Error:	Klein 7T-301	Output errors are at	2.00 sigma
Reference Wellbore	0.0 ft	Database:	US_EDM
Reference Design:	Wellbore #1	Offset TVD Reference:	Offset Datum
	Plan #1 (10-14-15)		

Offset Design Klein 5N64W7 Pad Sec.7-T5N-R64W - Klein 7T-241 - Wellbore #1 - Plan #1 (10-14-15)												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 (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
13,700.0	6,791.0	13,603.1	6,714.4	131.7	131.7	-72.22	6,676.6	250.5	250.8	-1.0	251.86	0.996	Level 1
13,800.0	6,790.8	13,703.1	6,714.2	133.6	133.6	-72.23	6,776.6	250.5	250.8	-4.7	255.53	0.982	Level 1
13,900.0	6,790.5	13,803.1	6,714.0	135.5	135.5	-72.24	6,876.6	250.5	250.8	-8.4	259.21	0.968	Level 1
14,000.0	6,790.2	13,903.1	6,713.8	137.4	137.4	-72.25	6,976.6	250.5	250.8	-12.1	262.88	0.954	Level 1
14,100.0	6,790.0	14,003.1	6,713.6	139.3	139.3	-72.26	7,076.6	250.5	250.8	-15.8	266.56	0.941	Level 1
14,200.0	6,789.7	14,103.1	6,713.4	141.2	141.2	-72.27	7,176.6	250.5	250.8	-19.5	270.24	0.928	Level 1
14,300.0	6,789.5	14,203.1	6,713.2	143.1	143.2	-72.29	7,276.6	250.5	250.7	-23.2	273.91	0.915	Level 1
14,400.0	6,789.2	14,303.1	6,713.0	145.0	145.1	-72.30	7,376.6	250.5	250.7	-26.9	277.59	0.903	Level 1
14,500.0	6,788.9	14,403.1	6,712.7	146.9	147.0	-72.31	7,476.6	250.5	250.7	-30.6	281.27	0.891	Level 1
14,600.0	6,788.7	14,503.1	6,712.5	148.8	148.9	-72.32	7,576.6	250.5	250.7	-34.3	284.96	0.880	Level 1
14,700.0	6,788.4	14,603.1	6,712.3	150.8	150.8	-72.33	7,676.6	250.5	250.7	-38.0	288.64	0.868	Level 1
14,800.0	6,788.1	14,703.1	6,712.1	152.7	152.7	-72.34	7,776.6	250.5	250.7	-41.7	292.32	0.857	Level 1
14,900.0	6,787.9	14,803.1	6,711.9	154.6	154.6	-72.35	7,876.6	250.5	250.6	-45.4	296.00	0.847	Level 1
15,000.0	6,787.6	14,903.1	6,711.7	156.5	156.5	-72.37	7,976.6	250.5	250.6	-49.1	299.69	0.836	Level 1
15,100.0	6,787.4	15,003.1	6,711.5	158.4	158.4	-72.38	8,076.6	250.5	250.6	-52.8	303.38	0.826	Level 1
15,200.0	6,787.1	15,103.1	6,711.3	160.3	160.3	-72.39	8,176.6	250.5	250.6	-56.5	307.06	0.816	Level 1
15,300.0	6,786.8	15,203.1	6,711.1	162.2	162.3	-72.40	8,276.6	250.5	250.6	-60.2	310.75	0.806	Level 1
15,400.0	6,786.6	15,303.1	6,710.9	164.1	164.2	-72.41	8,376.6	250.5	250.6	-63.9	314.44	0.797	Level 1
15,500.0	6,786.3	15,403.1	6,710.7	166.0	166.1	-72.42	8,476.6	250.5	250.5	-67.6	318.13	0.788	Level 1
15,600.0	6,786.1	15,503.1	6,710.4	167.9	168.0	-72.43	8,576.6	250.5	250.5	-71.3	321.82	0.778	Level 1
15,700.0	6,785.8	15,603.1	6,710.2	169.9	169.9	-72.45	8,676.6	250.5	250.5	-75.0	325.51	0.770	Level 1
15,800.0	6,785.5	15,703.1	6,710.0	171.8	171.8	-72.46	8,776.6	250.5	250.5	-78.7	329.20	0.761	Level 1
15,900.0	6,785.3	15,803.1	6,709.8	173.7	173.7	-72.47	8,876.6	250.5	250.5	-82.4	332.89	0.752	Level 1
16,000.0	6,785.0	15,903.1	6,709.6	175.6	175.6	-72.48	8,976.6	250.5	250.5	-86.1	336.58	0.744	Level 1
16,100.0	6,784.7	16,003.1	6,709.4	177.5	177.5	-72.49	9,076.6	250.5	250.5	-89.8	340.27	0.736	Level 1
16,200.0	6,784.5	16,103.1	6,709.2	179.4	179.5	-72.50	9,176.6	250.5	250.4	-93.5	343.97	0.728	Level 1
16,300.0	6,784.2	16,203.1	6,709.0	181.3	181.4	-72.51	9,276.6	250.5	250.4	-97.2	347.66	0.720	Level 1
16,400.0	6,784.0	16,303.1	6,708.8	183.2	183.3	-72.53	9,376.6	250.5	250.4	-101.0	351.36	0.713	Level 1
16,500.0	6,783.7	16,403.1	6,708.6	185.1	185.2	-72.54	9,476.6	250.5	250.4	-104.7	355.05	0.705	Level 1
16,600.0	6,783.4	16,503.1	6,708.3	187.1	187.1	-72.55	9,576.6	250.5	250.4	-108.4	358.75	0.698	Level 1
16,700.0	6,783.2	16,603.1	6,708.1	189.0	189.0	-72.56	9,676.6	250.5	250.4	-112.1	362.45	0.691	Level 1
16,766.1	6,783.0	16,669.1	6,708.0	190.2	190.3	-72.57	9,742.7	250.5	250.3	-114.5	364.89	0.686	Level 1, ES, SF

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Klein 7T-301
Project:	SEC.7-T5N-R64W	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Reference Site:	Klein 5N64W7 Pad Sec.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Klein 7T-301	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #1 (10-14-15)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4637.0ft (Original Well Elev)

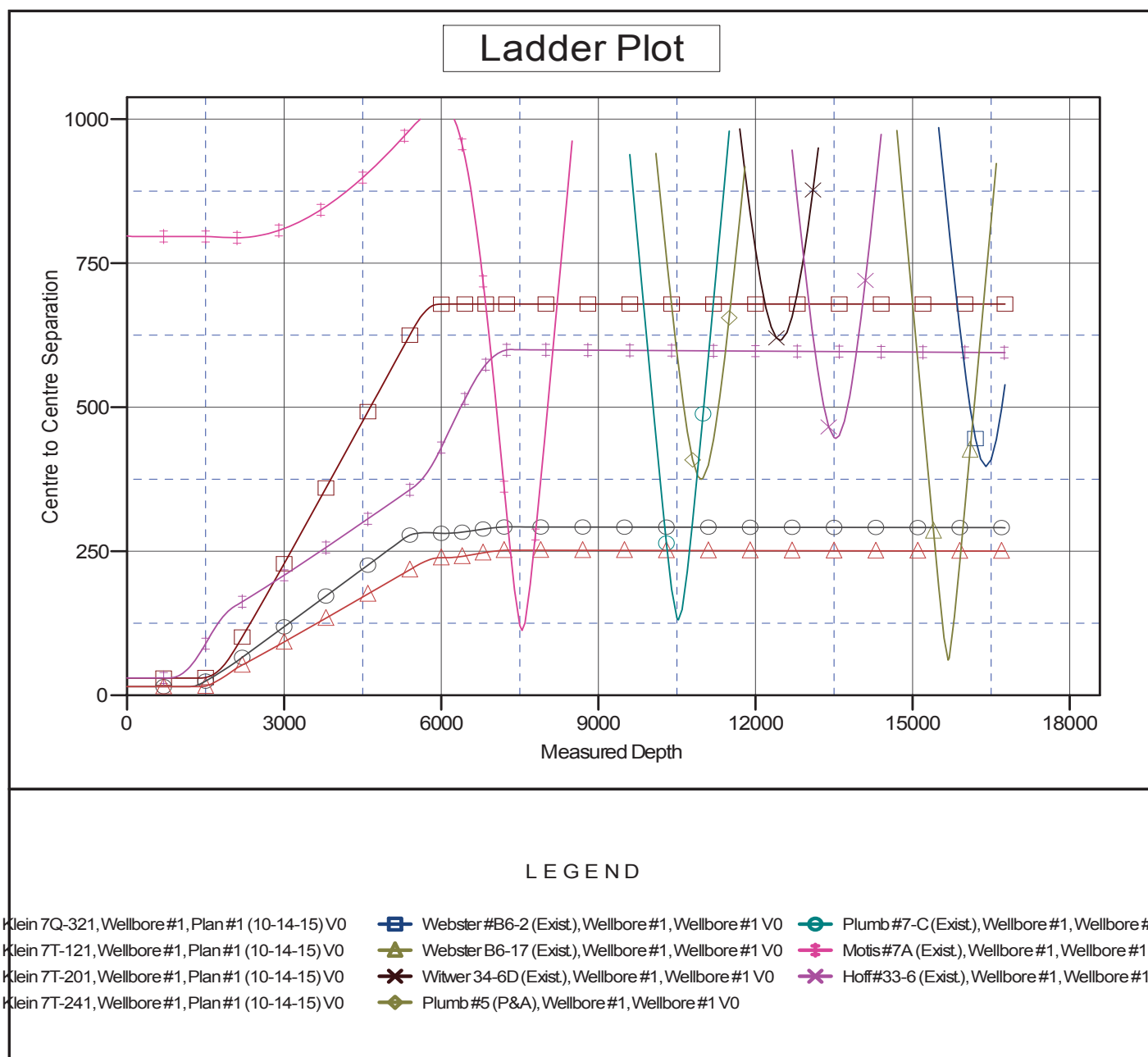
Offset Depths are relative to Offset Datum

Central Meridian is -105.500000

Coordinates are relative to: Klein 7T-301

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.59°



Company:	PETROLEUM DEVELOPMENT CORP DJ	Local Co-ordinate Reference:	Well Klein 7T-301
Project:	Basin	TVD Reference:	WELL @ 4637.0ft (Original Well Elev)
Reference Site:	SEC.7-T5N-R64W	MD Reference:	WELL @ 4637.0ft (Original Well Elev)
Site Error:	Klein 5N64W7 Pad Sec.7-T5N-R64W	North Reference:	True
Reference Well:	0.0 ft	Survey Calculation Method:	Minimum Curvature
Well Error:	Klein 7T-301	Output errors are at	2.00 sigma
Reference Wellbore	0.0 ft	Database:	US_EDM
Reference Wellbore	Wellbore #1	Offset TVD Reference:	Offset Datum
Reference Design:	Plan #1 (10-14-15)		

Reference Depths are relative to WELL @ 4637.0ft (Original Well Elev)

Offset Depths are relative to Offset Datum

Central Meridian is -105.500000

Coordinates are relative to: Klein 7T-301

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.59°

