

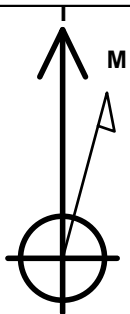
PETROLEUM DEVELOPMENT CORP DJ Basin

Well Name: **High Pointe LLC 10F-232**

Surface Location: High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W
 North American Datum 1983 , US State Plane 1983, Colorado Northern Zone
 Ground Elevation: 4924.0
 +N/-S+E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1396065.083170733.38 40.418980 -104.886800
 Original Well Elev WELL @ 4937.0ft (Original Well Elev)

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 829'FNL & 425'FWL	1.0	0.0	0.0	Point
BHL 1840'FNL & 500'FEL	7000.0	-990.6	4218.6	Point



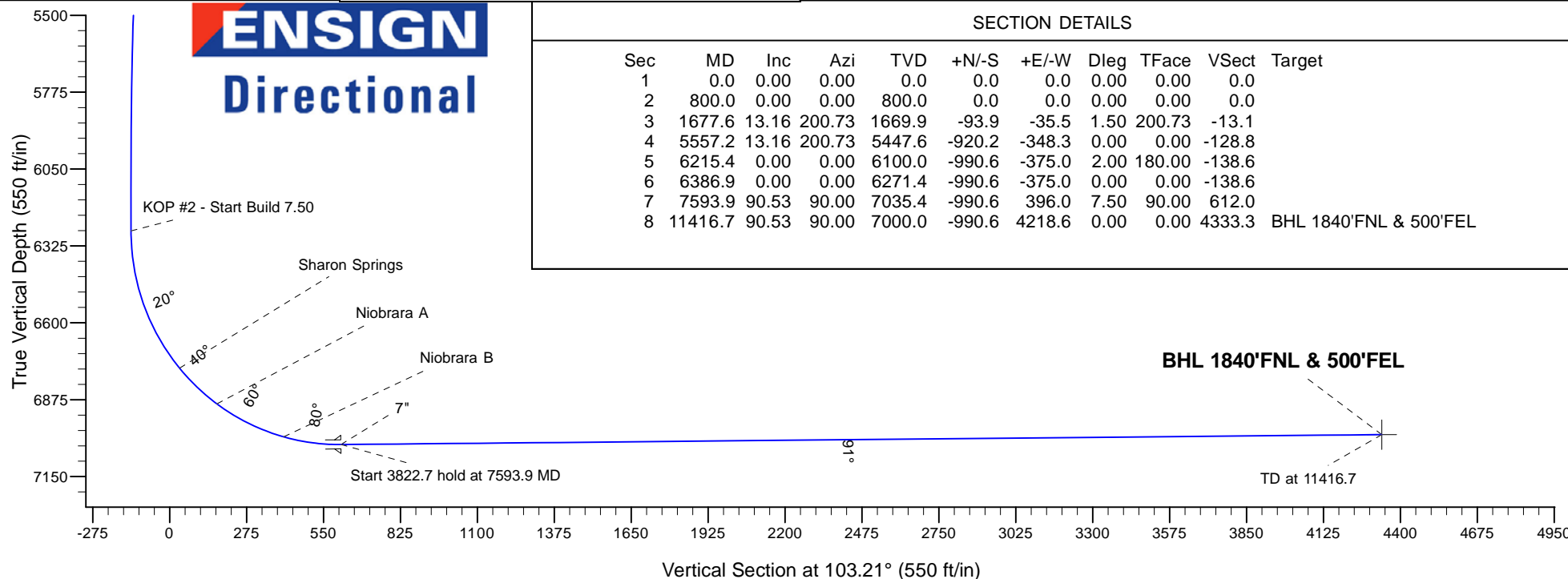
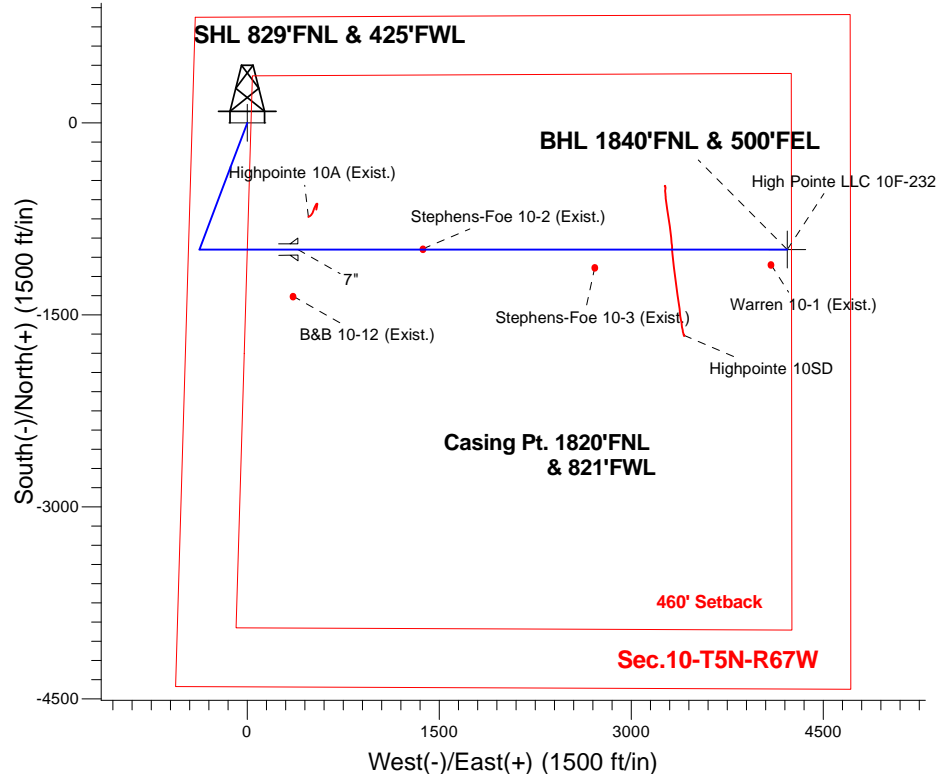
Azimuths to True North
 Magnetic North: 9.09°

Magnetic Field
 Strength: 53300.1snT
 Dip Angle: 67.10°
 Date: 12/31/2009
 Model: IGRF200510

High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W
 High Pointe LLC 10F-232
 Plan #1 (1-18-16)
 13:03, February 01 2016

ANNOTATIONS

TVD	MD	Annotation
800.0	800.0	KOP - Start Build 1.50
5447.5	5557.2	Start Drop -2.00
6271.5	6386.9	KOP #2 - Start Build 7.50
7035.4	7593.9	Start 3822.7 hold at 7593.9 MD
7000.0	11416.7	TD at 11416.7





Directional

PETROLEUM DEVELOPMENT CORP DJ Basin

SEC.10-T5N-R67W

High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W

High Pointe LLC 10F-232

Wellbore #1

Plan: Plan #1 (1-18-16)

Standard Planning Report

01 February, 2016

Database:	US_EDM	Local Co-ordinate Reference:	Well High Pointe LLC 10F-232
Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Project:	SEC.10-T5N-R67W	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site:	High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W	North Reference:	True
Well:	High Pointe LLC 10F-232	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (1-18-16)		

Project	SEC.10-T5N-R67W, 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	High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W				
Site Position:		Northing:	1,396,156.18 usft	Latitude:	40.419230
From:	Lat/Long	Easting:	3,170,735.53 usft	Longitude:	-104.886790
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.40

Well	High Pointe LLC 10F-232					
Well Position	+N/-S	-91.1 ft	Northing:	1,396,065.08 usft	Latitude:	40.418980
	+E/-W	-2.8 ft	Easting:	3,170,733.38 usft	Longitude:	-104.886800
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	4,924.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	12/31/2009	9.09	67.10	53,300

Design	Plan #1 (1-18-16)			
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	103.21

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	
800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,677.6	13.16	200.73	1,669.9	-93.9	-35.5	1.50	1.50	0.00	200.73	
5,557.2	13.16	200.73	5,447.6	-920.2	-348.3	0.00	0.00	0.00	0.00	
6,215.4	0.00	0.00	6,100.0	-990.6	-375.0	2.00	-2.00	0.00	180.00	
6,386.9	0.00	0.00	6,271.4	-990.6	-375.0	0.00	0.00	0.00	0.00	
7,593.9	90.53	90.00	7,035.4	-990.6	396.0	7.50	7.50	0.00	90.00	
11,416.7	90.53	90.00	7,000.0	-990.6	4,218.6	0.00	0.00	0.00	0.00	BHL 1840'FNL & 500'

Database:	US_EDM	Local Co-ordinate Reference:	Well High Pointe LLC 10F-232
Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Project:	SEC.10-T5N-R67W	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site:	High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W	North Reference:	True
Well:	High Pointe LLC 10F-232	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (1-18-16)		

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 829'FNL & 425'FWL									
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
KOP - Start Build 1.50									
900.0	1.50	200.73	900.0	-1.2	-0.5	-0.2	1.50	1.50	0.00
1,000.0	3.00	200.73	999.9	-4.9	-1.9	-0.7	1.50	1.50	0.00
1,100.0	4.50	200.73	1,099.7	-11.0	-4.2	-1.5	1.50	1.50	0.00
1,200.0	6.00	200.73	1,199.3	-19.6	-7.4	-2.7	1.50	1.50	0.00
1,300.0	7.50	200.73	1,298.6	-30.6	-11.6	-4.3	1.50	1.50	0.00
1,400.0	9.00	200.73	1,397.5	-44.0	-16.6	-6.2	1.50	1.50	0.00
1,500.0	10.50	200.73	1,496.1	-59.8	-22.6	-8.4	1.50	1.50	0.00
1,600.0	12.00	200.73	1,594.2	-78.1	-29.6	-10.9	1.50	1.50	0.00
1,677.6	13.16	200.73	1,669.9	-93.9	-35.5	-13.1	1.50	1.50	0.00
1,700.0	13.16	200.73	1,691.7	-98.6	-37.3	-13.8	0.00	0.00	0.00
1,800.0	13.16	200.73	1,789.1	-119.9	-45.4	-16.8	0.00	0.00	0.00
1,900.0	13.16	200.73	1,886.5	-141.2	-53.5	-19.8	0.00	0.00	0.00
2,000.0	13.16	200.73	1,983.8	-162.5	-61.5	-22.7	0.00	0.00	0.00
2,100.0	13.16	200.73	2,081.2	-183.8	-69.6	-25.7	0.00	0.00	0.00
2,200.0	13.16	200.73	2,178.6	-205.1	-77.7	-28.7	0.00	0.00	0.00
2,300.0	13.16	200.73	2,275.9	-226.4	-85.7	-31.7	0.00	0.00	0.00
2,400.0	13.16	200.73	2,373.3	-247.7	-93.8	-34.7	0.00	0.00	0.00
2,500.0	13.16	200.73	2,470.7	-269.0	-101.8	-37.6	0.00	0.00	0.00
2,600.0	13.16	200.73	2,568.1	-290.3	-109.9	-40.6	0.00	0.00	0.00
2,700.0	13.16	200.73	2,665.4	-311.6	-118.0	-43.6	0.00	0.00	0.00
2,800.0	13.16	200.73	2,762.8	-332.9	-126.0	-46.6	0.00	0.00	0.00
2,900.0	13.16	200.73	2,860.2	-354.2	-134.1	-49.6	0.00	0.00	0.00
3,000.0	13.16	200.73	2,957.5	-375.5	-142.2	-52.6	0.00	0.00	0.00
3,100.0	13.16	200.73	3,054.9	-396.8	-150.2	-55.5	0.00	0.00	0.00
3,200.0	13.16	200.73	3,152.3	-418.1	-158.3	-58.5	0.00	0.00	0.00
3,300.0	13.16	200.73	3,249.7	-439.4	-166.3	-61.5	0.00	0.00	0.00
3,400.0	13.16	200.73	3,347.0	-460.7	-174.4	-64.5	0.00	0.00	0.00
3,500.0	13.16	200.73	3,444.4	-482.0	-182.5	-67.5	0.00	0.00	0.00
3,582.8	13.16	200.73	3,525.0	-499.7	-189.1	-69.9	0.00	0.00	0.00
Parkman									
3,600.0	13.16	200.73	3,541.8	-503.3	-190.5	-70.4	0.00	0.00	0.00
3,700.0	13.16	200.73	3,639.2	-524.6	-198.6	-73.4	0.00	0.00	0.00
3,800.0	13.16	200.73	3,736.5	-545.9	-206.7	-76.4	0.00	0.00	0.00
3,900.0	13.16	200.73	3,833.9	-567.2	-214.7	-79.4	0.00	0.00	0.00
4,000.0	13.16	200.73	3,931.3	-588.5	-222.8	-82.4	0.00	0.00	0.00
4,100.0	13.16	200.73	4,028.6	-609.8	-230.9	-85.3	0.00	0.00	0.00
4,200.0	13.16	200.73	4,126.0	-631.1	-238.9	-88.3	0.00	0.00	0.00
4,291.4	13.16	200.73	4,215.0	-650.6	-246.3	-91.0	0.00	0.00	0.00
Sussex									
4,300.0	13.16	200.73	4,223.4	-652.4	-247.0	-91.3	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well High Pointe LLC 10F-232
Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Project:	SEC.10-T5N-R67W	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site:	High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W	North Reference:	True
Well:	High Pointe LLC 10F-232	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (1-18-16)		

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)
4,400.0	13.16	200.73	4,320.8	-673.7	-255.0	-94.3	0.00	0.00	0.00
4,500.0	13.16	200.73	4,418.1	-695.0	-263.1	-97.3	0.00	0.00	0.00
4,600.0	13.16	200.73	4,515.5	-716.3	-271.2	-100.2	0.00	0.00	0.00
4,689.9	13.16	200.73	4,603.0	-735.5	-278.4	-102.9	0.00	0.00	0.00
Shannon									
4,700.0	13.16	200.73	4,612.9	-737.6	-279.2	-103.2	0.00	0.00	0.00
4,800.0	13.16	200.73	4,710.2	-758.9	-287.3	-106.2	0.00	0.00	0.00
4,900.0	13.16	200.73	4,807.6	-780.2	-295.4	-109.2	0.00	0.00	0.00
5,000.0	13.16	200.73	4,905.0	-801.5	-303.4	-112.2	0.00	0.00	0.00
5,100.0	13.16	200.73	5,002.4	-822.8	-311.5	-115.1	0.00	0.00	0.00
5,200.0	13.16	200.73	5,099.7	-844.1	-319.5	-118.1	0.00	0.00	0.00
5,300.0	13.16	200.73	5,197.1	-865.4	-327.6	-121.1	0.00	0.00	0.00
5,400.0	13.16	200.73	5,294.5	-886.7	-335.7	-124.1	0.00	0.00	0.00
5,500.0	13.16	200.73	5,391.9	-908.0	-343.7	-127.1	0.00	0.00	0.00
5,557.2	13.16	200.73	5,447.5	-920.2	-348.3	-128.8	0.00	0.00	0.00
Start Drop -2.00									
5,600.0	12.31	200.73	5,489.3	-929.0	-351.7	-130.0	2.00	-2.00	0.00
5,700.0	10.31	200.73	5,587.3	-947.4	-358.6	-132.6	2.00	-2.00	0.00
5,800.0	8.31	200.73	5,686.0	-962.5	-364.4	-134.7	2.00	-2.00	0.00
5,900.0	6.31	200.73	5,785.2	-974.4	-368.9	-136.4	2.00	-2.00	0.00
6,000.0	4.31	200.73	5,884.8	-983.0	-372.1	-137.6	2.00	-2.00	0.00
6,100.0	2.31	200.73	5,984.6	-988.4	-374.2	-138.3	2.00	-2.00	0.00
6,200.0	0.31	200.73	6,084.6	-990.6	-375.0	-138.6	2.00	-2.00	0.00
6,215.4	0.00	0.00	6,100.0	-990.6	-375.0	-138.6	2.00	-2.00	0.00
6,300.0	0.00	0.00	6,184.6	-990.6	-375.0	-138.6	0.00	0.00	0.00
6,386.9	0.00	0.00	6,271.5	-990.6	-375.0	-138.6	0.00	0.00	0.00
KOP #2 - Start Build 7.50									
6,400.0	0.98	90.00	6,284.6	-990.6	-374.9	-138.5	7.51	7.51	0.00
6,500.0	8.48	90.00	6,384.2	-990.6	-366.6	-130.5	7.50	7.50	0.00
6,600.0	15.98	90.00	6,481.8	-990.6	-345.5	-109.9	7.50	7.50	0.00
6,700.0	23.48	90.00	6,575.9	-990.6	-311.7	-77.0	7.50	7.50	0.00
6,800.0	30.98	90.00	6,664.7	-990.6	-266.0	-32.5	7.50	7.50	0.00
6,900.0	38.48	90.00	6,746.9	-990.6	-209.1	22.9	7.50	7.50	0.00
6,919.6	39.95	90.00	6,762.0	-990.6	-196.7	35.0	7.50	7.50	0.00
Sharon Springs									
7,000.0	45.98	90.00	6,820.8	-990.6	-141.9	88.3	7.50	7.50	0.00
7,100.0	53.48	90.00	6,885.4	-990.6	-65.6	162.5	7.50	7.50	0.00
7,107.7	54.06	90.00	6,890.0	-990.6	-59.4	168.6	7.50	7.50	0.00
Niobrara A									
7,200.0	60.98	90.00	6,939.5	-990.6	18.4	244.4	7.50	7.50	0.00
7,300.0	68.48	90.00	6,982.2	-990.6	108.8	332.3	7.50	7.50	0.00
7,381.7	74.61	90.00	7,008.0	-990.6	186.2	407.7	7.50	7.50	0.00
Niobrara B									
7,400.0	75.98	90.00	7,012.7	-990.6	203.9	425.0	7.50	7.50	0.00
7,500.0	83.48	90.00	7,030.5	-990.6	302.3	520.7	7.50	7.50	0.00
7,593.9	90.53	90.00	7,035.4	-990.6	396.0	611.9	7.50	7.50	0.00
Start 3822.7 hold at 7593.9 MD - 7"									
7,600.0	90.53	90.00	7,035.3	-990.6	402.1	617.9	0.05	0.05	0.00
7,700.0	90.53	90.00	7,034.4	-990.6	502.1	715.2	0.00	0.00	0.00
7,800.0	90.53	90.00	7,033.5	-990.6	602.1	812.6	0.00	0.00	0.00
7,900.0	90.53	90.00	7,032.5	-990.6	702.1	909.9	0.00	0.00	0.00

Database:	US_EDM	Local Co-ordinate Reference:	Well High Pointe LLC 10F-232
Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Project:	SEC.10-T5N-R67W	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site:	High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W	North Reference:	True
Well:	High Pointe LLC 10F-232	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (1-18-16)		

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)	
8,000.0	90.53	90.00	7,031.6	-990.6	802.1	1,007.3	0.00	0.00	0.00	
8,100.0	90.53	90.00	7,030.7	-990.6	902.0	1,104.6	0.00	0.00	0.00	
8,200.0	90.53	90.00	7,029.8	-990.6	1,002.0	1,202.0	0.00	0.00	0.00	
8,300.0	90.53	90.00	7,028.8	-990.6	1,102.0	1,299.3	0.00	0.00	0.00	
8,400.0	90.53	90.00	7,027.9	-990.6	1,202.0	1,396.6	0.00	0.00	0.00	
8,500.0	90.53	90.00	7,027.0	-990.6	1,302.0	1,494.0	0.00	0.00	0.00	
8,600.0	90.53	90.00	7,026.1	-990.6	1,402.0	1,591.3	0.00	0.00	0.00	
8,700.0	90.53	90.00	7,025.1	-990.6	1,502.0	1,688.7	0.00	0.00	0.00	
8,800.0	90.53	90.00	7,024.2	-990.6	1,602.0	1,786.0	0.00	0.00	0.00	
8,900.0	90.53	90.00	7,023.3	-990.6	1,702.0	1,883.4	0.00	0.00	0.00	
9,000.0	90.53	90.00	7,022.4	-990.6	1,802.0	1,980.7	0.00	0.00	0.00	
9,100.0	90.53	90.00	7,021.4	-990.6	1,902.0	2,078.1	0.00	0.00	0.00	
9,200.0	90.53	90.00	7,020.5	-990.6	2,002.0	2,175.4	0.00	0.00	0.00	
9,300.0	90.53	90.00	7,019.6	-990.6	2,102.0	2,272.8	0.00	0.00	0.00	
9,400.0	90.53	90.00	7,018.7	-990.6	2,202.0	2,370.1	0.00	0.00	0.00	
9,500.0	90.53	90.00	7,017.7	-990.6	2,302.0	2,467.5	0.00	0.00	0.00	
9,600.0	90.53	90.00	7,016.8	-990.6	2,402.0	2,564.8	0.00	0.00	0.00	
9,700.0	90.53	90.00	7,015.9	-990.6	2,502.0	2,662.2	0.00	0.00	0.00	
9,800.0	90.53	90.00	7,015.0	-990.6	2,602.0	2,759.5	0.00	0.00	0.00	
9,900.0	90.53	90.00	7,014.0	-990.6	2,702.0	2,856.9	0.00	0.00	0.00	
10,000.0	90.53	90.00	7,013.1	-990.6	2,802.0	2,954.2	0.00	0.00	0.00	
10,100.0	90.53	90.00	7,012.2	-990.6	2,902.0	3,051.6	0.00	0.00	0.00	
10,200.0	90.53	90.00	7,011.3	-990.6	3,002.0	3,148.9	0.00	0.00	0.00	
10,300.0	90.53	90.00	7,010.3	-990.6	3,102.0	3,246.3	0.00	0.00	0.00	
10,400.0	90.53	90.00	7,009.4	-990.6	3,201.9	3,343.6	0.00	0.00	0.00	
10,500.0	90.53	90.00	7,008.5	-990.6	3,301.9	3,441.0	0.00	0.00	0.00	
10,600.0	90.53	90.00	7,007.6	-990.6	3,401.9	3,538.3	0.00	0.00	0.00	
10,700.0	90.53	90.00	7,006.6	-990.6	3,501.9	3,635.6	0.00	0.00	0.00	
10,800.0	90.53	90.00	7,005.7	-990.6	3,601.9	3,733.0	0.00	0.00	0.00	
10,900.0	90.53	90.00	7,004.8	-990.6	3,701.9	3,830.3	0.00	0.00	0.00	
11,000.0	90.53	90.00	7,003.9	-990.6	3,801.9	3,927.7	0.00	0.00	0.00	
11,100.0	90.53	90.00	7,002.9	-990.6	3,901.9	4,025.0	0.00	0.00	0.00	
11,200.0	90.53	90.00	7,002.0	-990.6	4,001.9	4,122.4	0.00	0.00	0.00	
11,300.0	90.53	90.00	7,001.1	-990.6	4,101.9	4,219.7	0.00	0.00	0.00	
11,400.0	90.53	90.00	7,000.2	-990.6	4,201.9	4,317.1	0.00	0.00	0.00	
11,416.7	90.53	90.00	7,000.0	-990.6	4,218.6	4,333.3	0.00	0.00	0.00	
TD at 11416.7 - BHL 1840'FNL & 500'FEL										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude Longitude		
- hit/miss target										
- Shape										
SHL 829'FNL & 425'FWI	0.00	0.00	1.0	0.0	0.0	1,396,065.09	3,170,733.38	40.418980 -104.886800		
- plan hits target center										
- Point										
BHL 1840'FNL & 500'FE	0.00	0.00	7,000.0	-990.6	4,218.6	1,395,103.75	3,174,958.55	40.416260 -104.871650		
- plan hits target center										
- Point										

Database:	US_EDM	Local Co-ordinate Reference:	Well High Pointe LLC 10F-232
Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Project:	SEC.10-T5N-R67W	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site:	High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W	North Reference:	True
Well:	High Pointe LLC 10F-232	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (1-18-16)		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
7,593.9	7,035.4	7"	7	8-3/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,582.8	3,525.0	Parkman		0.00		
4,291.4	4,215.0	Sussex		0.00		
4,689.9	4,603.0	Shannon		0.00		
6,919.6	6,762.0	Sharon Springs		0.00		
7,107.7	6,890.0	Niobrara A		0.00		
7,381.7	7,008.0	Niobrara B		0.00		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
800.0	800.0	0.0	0.0	KOP - Start Build 1.50	
5,557.2	5,447.5	-920.2	-348.3	Start Drop -2.00	
6,386.9	6,271.5	-990.6	-375.0	KOP #2 - Start Build 7.50	
7,593.9	7,035.4	-990.6	396.0	Start 3822.7 hold at 7593.9 MD	
11,416.7	7,000.0	-990.6	4,218.6	TD at 11416.7	



Directional

PETROLEUM DEVELOPMENT CORP DJ Basin

SEC.10-T5N-R67W

High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W

High Pointe LLC 10F-232

Wellbore #1

Plan #1 (1-18-16)

Anticollision Report

01 February, 2016



Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well High Pointe LLC 10F-232
Project:	SEC.10-T5N-R67W	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Reference Site:	High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	High Pointe LLC 10F-232	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 (1-18-16)	Offset TVD Reference:	Offset Datum

Reference	Plan #1 (1-18-16)		
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	1/29/2016		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	11,416.7	Plan #1 (1-18-16) (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 Pad Sec.10-T5N-R67W						
B&B 10-12 (Exist.) - Wellbore #1 - Wellbore #1	7,554.3	7,037.7	364.7	201.8	2.239	CC, ES, SF
Highpointe 10A (Exist.) - Wellbore #1 - Wellbore #1	7,679.1	7,030.9	256.6	216.8	6.439	CC, ES
Highpointe 10A (Exist.) - Wellbore #1 - Wellbore #1	7,700.0	7,030.5	257.5	217.2	6.396	SF
Stephens-Foe 10-2 (Exist.) - Wellbore #1 - Wellbore #1	8,570.7	7,025.3	7.0	-179.3	0.037	Level 1, CC, ES, SF
Stephens-Foe 10-3 (Exist.) - Wellbore #1 - Wellbore #1	9,913.0	7,029.9	138.7	-83.9	0.623	Level 1, CC, ES, SF
Warren 10-1 (Exist.) - Wellbore #1 - Wellbore #1	11,288.6	7,009.2	116.6	-143.5	0.448	Level 1, CC, ES, SF
High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W						
High Pointe LLC 10F-202 - Wellbore #1 - Plan #1 (1-18-1	800.0	800.0	29.3	25.9	8.684	CC, ES
High Pointe LLC 10F-202 - Wellbore #1 - Plan #1 (1-18-1	11,416.7	11,338.1	597.5	350.9	2.423	SF
High Pointe LLC 10F-212 - Wellbore #1 - Plan #1 (1-18-1	800.0	799.0	62.0	58.6	18.400	CC, ES
High Pointe LLC 10F-212 - Wellbore #1 - Plan #1 (1-18-1	1,100.0	1,098.7	73.3	68.7	15.884	SF
High Pointe LLC 10F-302 - Wellbore #1 - Plan #1 (1-18-1	800.0	800.0	14.6	11.2	4.321	CC, ES
High Pointe LLC 10F-302 - Wellbore #1 - Plan #1 (1-18-1	11,416.7	11,422.4	326.2	82.5	1.338	Level 3, SF
High Pointe LLC 10F-312 - Wellbore #1 - Plan #1 (1-18-1	800.0	800.0	43.8	40.4	12.993	CC, ES
High Pointe LLC 10F-312 - Wellbore #1 - Plan #1 (1-18-1	11,416.7	11,396.0	833.8	587.3	3.383	SF
High Pointe LLC 10G-202 - Wellbore #1 - Plan #1 (1-18-1	200.0	200.0	29.1	28.5	43.224	CC, ES
High Pointe LLC 10G-202 - Wellbore #1 - Plan #1 (1-18-1	11,416.7	11,541.0	601.1	354.1	2.433	SF
High Pointe LLC 10G-312 - Wellbore #1 - Plan #1 (1-18-1	400.0	400.0	14.6	13.0	9.262	CC, ES
High Pointe LLC 10G-312 - Wellbore #1 - Plan #1 (1-18-1	11,416.7	11,519.0	274.6	32.6	1.135	Level 2, SF
Highpointe 10ND Pad Sec.10-T5N-R67W						
Highpointe 10SD - Wellbore #1 - Wellbore #1	10,611.3	7,198.2	670.7	552.8	5.688	CC, ES
Highpointe 10SD - Wellbore #1 - Wellbore #1	10,700.0	7,197.2	676.5	556.2	5.621	SF

Offset Design	Existing Wells Pad Sec.10-T5N-R67W - B&B 10-12 (Exist.) - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 ft
Survey Program:	7870-UNKNOWN												Offset Well Error:	0.0 ft
Reference	Offset	Semi Major Axis		Distance		Minimum Separation		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		
3,700.0	3,639.2	3,642.1	3,642.1	13.3	72.8	-55.20	-1,355.2	356.4	999.0	914.8	84.21	11.863		
3,800.0	3,736.5	3,739.5	3,739.5	13.8	74.8	-56.27	-1,355.2	356.4	985.9	899.3	86.68	11.375		
3,900.0	3,833.9	3,836.9	3,836.9	14.3	76.7	-57.37	-1,355.2	356.4	973.2	884.1	89.15	10.917		

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 High Pointe LLC 10F-232
Project:	SEC.10-T5N-R67W	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Reference Site:	High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	High Pointe LLC 10F-232	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 (1-18-16)	Offset TVD Reference:	Offset Datum

Offset Design		Existing Wells Pad Sec.10-T5N-R67W - B&B 10-12 (Exist.) - Wellbore #1 - Wellbore #1											Offset Site Error:		0.0 ft
Survey Program:		7870-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)				
4,000.0	3,931.3	3,934.3	3,934.3	14.7	78.7	-58.49	-1,355.2	356.4	960.9	869.3	91.64	10.486			
4,100.0	4,028.6	4,031.6	4,031.6	15.2	80.6	-59.64	-1,355.2	356.4	949.0	854.8	94.13	10.082			
4,200.0	4,126.0	4,129.0	4,129.0	15.7	82.6	-60.81	-1,355.2	356.4	937.4	840.8	96.63	9.701			
4,300.0	4,223.4	4,226.4	4,226.4	16.2	84.5	-62.02	-1,355.2	356.4	926.3	827.2	99.14	9.343			
4,400.0	4,320.8	4,323.7	4,323.7	16.7	86.5	-63.25	-1,355.2	356.4	915.6	814.0	101.66	9.007			
4,500.0	4,418.1	4,421.1	4,421.1	17.2	88.4	-64.51	-1,355.2	356.4	905.4	801.2	104.18	8.691			
4,600.0	4,515.5	4,518.5	4,518.5	17.7	90.4	-65.80	-1,355.2	356.4	895.6	788.9	106.71	8.393			
4,700.0	4,612.9	4,615.9	4,615.9	18.1	92.3	-67.11	-1,355.2	356.4	886.3	777.1	109.24	8.113			
4,800.0	4,710.2	4,713.2	4,713.2	18.6	94.3	-68.45	-1,355.2	356.4	877.5	765.7	111.78	7.850			
4,900.0	4,807.6	4,810.6	4,810.6	19.1	96.2	-69.81	-1,355.2	356.4	869.2	754.9	114.32	7.603			
5,000.0	4,905.0	4,908.0	4,908.0	19.6	98.2	-71.20	-1,355.2	356.4	861.4	744.5	116.87	7.371			
5,100.0	5,002.4	5,005.4	5,005.4	20.1	100.1	-72.61	-1,355.2	356.4	854.2	734.8	119.41	7.153			
5,200.0	5,099.7	5,102.7	5,102.7	20.6	102.1	-74.05	-1,355.2	356.4	847.5	725.5	121.95	6.949			
5,300.0	5,197.1	5,200.1	5,200.1	21.1	104.0	-75.50	-1,355.2	356.4	841.3	716.8	124.49	6.758			
5,400.0	5,294.5	5,297.5	5,297.5	21.6	105.9	-76.98	-1,355.2	356.4	835.8	708.8	127.03	6.580			
5,500.0	5,391.9	5,394.8	5,394.8	22.1	107.9	-78.47	-1,355.2	356.4	830.8	701.3	129.56	6.413			
5,557.2	5,447.6	5,450.6	5,450.6	22.3	109.0	-79.33	-1,355.2	356.4	828.2	697.2	131.00	6.322			
5,600.0	5,489.3	5,492.3	5,492.3	22.5	109.8	-79.92	-1,355.2	356.4	826.5	694.4	132.06	6.259			
5,700.0	5,587.3	5,590.3	5,590.3	22.8	111.8	-81.18	-1,355.2	356.4	823.2	688.8	134.41	6.125			
5,800.0	5,686.0	5,689.0	5,689.0	23.1	113.8	-82.23	-1,355.2	356.4	820.8	684.1	136.72	6.004			
5,900.0	5,785.2	5,788.2	5,788.2	23.3	115.8	-83.07	-1,355.2	356.4	819.2	680.2	138.98	5.894			
6,000.0	5,884.8	5,887.8	5,887.8	23.5	117.8	-83.69	-1,355.2	356.4	818.1	676.9	141.19	5.794			
6,100.0	5,984.6	5,987.6	5,987.6	23.7	119.8	-84.08	-1,355.2	356.4	817.5	674.2	143.37	5.702			
6,200.0	6,084.6	6,087.6	6,087.6	23.8	121.8	-84.23	-1,355.2	356.4	817.3	671.8	145.49	5.617			
6,215.4	6,100.0	6,103.0	6,103.0	23.8	122.1	-116.50	-1,355.2	356.4	817.3	680.2	137.06	5.963			
6,300.0	6,184.6	6,187.6	6,187.6	23.9	123.8	-116.50	-1,355.2	356.4	817.3	678.4	138.89	5.884			
6,386.9	6,271.4	6,274.4	6,274.4	24.0	125.5	-116.50	-1,355.2	356.4	817.3	676.5	140.77	5.806			
6,400.0	6,284.6	6,287.6	6,287.6	24.0	125.8	-26.51	-1,355.2	356.4	817.2	667.5	149.69	5.459			
6,450.0	6,334.5	6,337.5	6,337.5	24.1	126.7	-26.66	-1,355.2	356.4	815.0	664.6	150.34	5.421			
6,500.0	6,384.2	6,387.2	6,387.2	24.1	127.7	-27.02	-1,355.2	356.4	809.8	659.4	150.45	5.383			
6,550.0	6,433.3	6,436.3	6,436.3	24.1	128.7	-27.59	-1,355.2	356.4	801.8	651.8	150.03	5.344			
6,600.0	6,481.8	6,484.8	6,484.8	24.1	129.7	-28.39	-1,355.2	356.4	791.0	641.9	149.11	5.305			
6,650.0	6,529.4	6,532.4	6,532.4	24.1	130.6	-29.43	-1,355.2	356.4	777.4	629.6	147.74	5.262			
6,700.0	6,575.9	6,578.9	6,578.9	24.1	131.6	-30.75	-1,355.2	356.4	761.2	615.2	146.00	5.214			
6,750.0	6,621.1	6,624.0	6,624.0	24.1	132.5	-32.38	-1,355.2	356.4	742.5	598.5	144.00	5.156			
6,800.0	6,664.7	6,667.7	6,667.7	24.0	133.4	-34.35	-1,355.2	356.4	721.4	579.5	141.90	5.083			
6,850.0	6,706.7	6,709.7	6,709.7	24.0	134.2	-36.70	-1,355.2	356.4	698.1	558.2	139.91	4.990			
6,900.0	6,746.9	6,749.8	6,749.8	24.0	135.0	-39.48	-1,355.2	356.4	672.9	534.6	138.27	4.866			
6,950.0	6,784.9	6,787.9	6,787.9	23.9	135.8	-42.73	-1,355.2	356.4	645.9	508.6	137.27	4.705			
7,000.0	6,820.8	6,823.8	6,823.8	23.9	136.5	-46.48	-1,355.2	356.4	617.5	480.3	137.20	4.500			
7,050.0	6,854.4	6,857.4	6,857.4	23.8	137.1	-50.73	-1,355.2	356.4	588.0	449.7	138.27	4.252			
7,100.0	6,885.4	6,888.4	6,888.4	23.8	137.8	-55.44	-1,355.2	356.4	557.8	417.3	140.51	3.970			
7,150.0	6,913.8	6,916.8	6,916.8	23.8	138.3	-60.52	-1,355.2	356.4	527.3	383.6	143.74	3.669			
7,200.0	6,939.5	6,942.5	6,942.5	23.7	138.8	-65.79	-1,355.2	356.4	497.2	349.7	147.55	3.370			
7,250.0	6,962.3	6,965.3	6,965.3	23.7	139.3	-71.04	-1,355.2	356.4	468.1	316.7	151.41	3.092			
7,300.0	6,982.2	6,985.1	6,985.1	23.7	139.7	-76.01	-1,355.2	356.4	440.8	286.0	154.82	2.847			
7,350.0	6,999.0	7,002.0	7,002.0	23.8	140.0	-80.47	-1,355.2	356.4	416.2	258.7	157.53	2.642			
7,400.0	7,012.7	7,015.6	7,015.6	23.8	140.3	-84.22	-1,355.2	356.4	395.3	235.8	159.48	2.478			
7,450.0	7,023.2	7,026.2	7,026.2	24.0	140.5	-87.10	-1,355.2	356.4	379.1	218.2	160.85	2.357			
7,500.0	7,030.5	7,033.4	7,033.4	24.2	140.7	-89.03	-1,355.2	356.4	368.7	206.8	161.88	2.277			
7,550.0	7,034.5	7,037.5	7,037.5	24.5	140.7	-89.97	-1,355.2	356.4	364.7	201.9	162.80	2.240			

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 High Pointe LLC 10F-232
Project:	SEC.10-T5N-R67W	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Reference Site:	High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	High Pointe LLC 10F-232	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 (1-18-16)	Offset TVD Reference:	Offset Datum

Offset Design		Existing Wells Pad Sec.10-T5N-R67W - B&B 10-12 (Exist.) - Wellbore #1 - Wellbore #1											Offset Site Error:		0.0 ft
Survey Program:		7870-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)				
7,554.3	7,034.7	7,037.7	7,037.7	24.6	140.8	90.00	-1,355.2	356.4	364.7	201.8	162.88	2.239	CC, ES, SF		
7,593.9	7,035.4	7,038.4	7,038.4	25.0	140.8	89.94	-1,355.2	356.4	366.8	203.2	163.61	2.242			
7,600.0	7,035.3	7,038.3	7,038.3	25.1	140.8	89.93	-1,355.2	356.4	367.5	203.8	163.72	2.245			
7,700.0	7,034.4	7,037.4	7,037.4	26.5	140.7	89.79	-1,355.2	356.4	392.7	227.0	165.66	2.370			
7,800.0	7,033.5	7,036.4	7,036.4	28.4	140.7	89.64	-1,355.2	356.4	439.7	271.9	167.75	2.621			
7,900.0	7,032.5	7,035.5	7,035.5	30.5	140.7	89.50	-1,355.2	356.4	502.4	332.5	169.95	2.956			
8,000.0	7,031.6	7,034.6	7,034.6	32.7	140.7	89.35	-1,355.2	356.4	575.8	403.6	172.25	3.343			
8,100.0	7,030.7	7,033.7	7,033.7	35.0	140.7	89.21	-1,355.2	356.4	656.3	481.6	174.62	3.758			
8,200.0	7,029.8	7,032.7	7,032.7	37.4	140.7	89.06	-1,355.2	356.4	741.5	564.4	177.04	4.188			
8,300.0	7,028.8	7,031.8	7,031.8	39.8	140.6	88.92	-1,355.2	356.4	830.0	650.5	179.52	4.624			
8,400.0	7,027.9	7,030.9	7,030.9	42.3	140.6	88.77	-1,355.2	356.4	920.9	738.9	182.03	5.059			

Company:	PETROLEUM DEVELOPMENT CORP DJ	Local Co-ordinate Reference:	Well High Pointe LLC 10F-232
Project:	SEC.10-T5N-R67W	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Reference Site:	High Pointe LLC 5N67W10A Pad	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	High Pointe LLC 10F-232	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 (1-18-16)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Pad Sec.10-T5N-R67W - Highpointe 10A (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 270-NS-GYRO-MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
0.0	0.0	0.0	0.0	0.0	0.0	141.44	-677.6	540.2	866.6					
100.0	100.0	98.5	98.5	0.1	0.1	141.42	-677.2	540.2	866.2	866.0	0.24	3,556.433		
200.0	200.0	205.5	205.5	0.3	0.3	141.35	-675.6	540.2	865.1	864.5	0.61	1,416.525		
300.0	300.0	311.5	311.5	0.6	0.5	141.24	-672.9	540.2	863.2	862.1	1.03	836.452		
400.0	400.0	416.1	416.0	0.8	0.7	141.08	-669.3	540.5	860.6	859.1	1.54	560.548		
500.0	500.0	520.8	520.5	1.0	1.0	140.85	-664.7	541.1	857.6	855.5	2.04	420.587		
600.0	600.0	627.3	626.9	1.2	1.3	140.54	-658.7	542.2	853.9	851.3	2.55	334.851		
700.0	700.0	733.6	733.0	1.5	1.6	140.15	-651.4	543.6	849.4	846.4	3.06	277.526		
800.0	800.0	828.4	827.4	1.7	1.9	139.75	-644.2	545.3	844.7	841.2	3.54	238.556		
900.0	900.0	921.6	920.5	1.9	2.1	-61.46	-638.3	546.9	840.3	836.4	3.98	211.037		
1,000.0	999.9	1,016.3	1,015.0	2.1	2.4	-61.98	-633.8	547.6	835.4	831.0	4.41	189.540		
1,100.0	1,099.7	1,112.2	1,110.9	2.3	2.6	-62.48	-631.6	546.4	829.8	825.0	4.81	172.675		
1,200.0	1,199.3	1,201.2	1,199.9	2.5	2.7	-62.98	-631.2	544.4	823.8	818.7	5.13	160.527		
1,300.0	1,298.6	1,292.2	1,290.9	2.7	2.8	-63.63	-631.8	543.2	818.1	812.7	5.43	150.740		
1,400.0	1,397.5	1,392.2	1,390.9	3.0	2.8	-64.53	-632.7	542.2	811.7	805.9	5.75	141.224		
1,500.0	1,496.1	1,489.8	1,488.4	3.3	2.9	-65.56	-633.9	540.7	804.3	798.2	6.12	131.497		
1,600.0	1,594.2	1,587.5	1,586.1	3.6	3.0	-66.75	-635.6	539.0	796.3	789.8	6.54	121.816		
1,677.6	1,669.9	1,662.8	1,661.4	3.9	3.1	-67.82	-636.9	537.8	789.7	782.7	6.91	114.234		
1,700.0	1,691.7	1,684.4	1,683.0	4.0	3.1	-68.12	-637.2	537.5	787.7	780.7	7.03	112.094		
1,800.0	1,789.1	1,781.1	1,779.7	4.4	3.2	-69.48	-638.8	536.2	779.4	771.9	7.55	103.188		
1,900.0	1,886.5	1,877.7	1,876.3	4.8	3.4	-70.88	-640.3	535.2	771.8	763.7	8.10	95.293		
2,000.0	1,983.8	1,974.3	1,972.9	5.3	3.5	-72.32	-641.8	534.4	764.7	756.1	8.66	88.309		
2,100.0	2,081.2	2,070.9	2,069.4	5.7	3.6	-73.79	-643.3	533.8	758.4	749.1	9.23	82.134		
2,200.0	2,178.6	2,168.8	2,167.3	6.2	3.8	-75.32	-644.8	533.3	752.7	742.8	9.86	76.351		
2,300.0	2,275.9	2,267.5	2,266.0	6.6	4.0	-76.86	-646.3	532.6	747.4	736.9	10.51	71.125		
2,400.0	2,373.3	2,366.2	2,364.6	7.1	4.2	-78.42	-647.9	531.8	742.6	731.4	11.17	66.507		
2,500.0	2,470.7	2,464.9	2,463.4	7.5	4.3	-79.99	-649.5	530.8	738.2	726.4	11.83	62.412		
2,600.0	2,568.1	2,563.7	2,562.1	8.0	4.5	-81.56	-651.2	529.6	734.3	721.8	12.49	58.769		
2,700.0	2,665.4	2,660.3	2,658.7	8.5	4.7	-83.10	-653.0	528.3	730.9	717.7	13.17	55.485		
2,800.0	2,762.8	2,755.6	2,754.0	9.0	4.9	-84.62	-655.0	527.2	728.3	714.5	13.86	52.560		
2,900.0	2,860.2	2,851.0	2,849.3	9.4	5.1	-86.14	-657.2	526.4	726.7	712.2	14.54	49.972		
3,000.0	2,957.5	2,946.5	2,944.8	9.9	5.3	-87.66	-659.8	525.8	726.0	710.8	15.23	47.678		
3,032.3	2,989.0	2,977.3	2,975.6	10.1	5.4	-88.14	-660.7	525.7	725.9	710.5	15.45	46.993		
3,100.0	3,054.9	3,042.0	3,040.3	10.4	5.5	-89.16	-662.7	525.5	726.1	710.2	15.91	45.640		
3,200.0	3,152.3	3,139.7	3,137.9	10.9	5.7	-90.68	-665.8	525.3	727.1	710.5	16.60	43.797		
3,300.0	3,249.7	3,240.5	3,238.7	11.4	6.0	-92.25	-669.0	524.9	728.4	711.1	17.31	42.084		
3,400.0	3,347.0	3,341.3	3,339.4	11.8	6.2	-93.82	-671.9	524.1	729.8	711.8	18.01	40.525		
3,500.0	3,444.4	3,442.1	3,440.2	12.3	6.4	-95.39	-674.7	523.1	731.4	712.7	18.70	39.104		
3,600.0	3,541.8	3,542.8	3,540.9	12.8	6.6	-96.96	-677.2	521.6	733.1	713.7	19.39	37.805		
3,700.0	3,639.2	3,641.8	3,639.8	13.3	6.9	-98.50	-679.5	519.9	735.1	715.0	20.08	36.613		
3,800.0	3,736.5	3,738.7	3,736.7	13.8	7.1	-99.98	-682.0	518.3	737.7	716.9	20.76	35.530		
3,900.0	3,833.9	3,835.7	3,833.6	14.3	7.3	-101.44	-684.8	516.8	740.9	719.5	21.44	34.558		
4,000.0	3,931.3	3,932.8	3,930.7	14.7	7.6	-102.86	-687.9	515.3	744.8	722.7	22.11	33.685		
4,100.0	4,028.6	4,030.0	4,027.8	15.2	7.8	-104.25	-691.3	513.9	749.3	726.5	22.77	32.900		
4,200.0	4,126.0	4,127.6	4,125.3	15.7	8.1	-105.60	-695.0	512.7	754.3	730.9	23.43	32.190		
4,300.0	4,223.4	4,225.7	4,223.4	16.2	8.3	-106.97	-698.4	511.4	759.8	735.7	24.09	31.544		
4,400.0	4,320.8	4,323.8	4,321.3	16.7	8.6	-108.33	-701.5	510.2	765.8	741.1	24.73	30.963		
4,500.0	4,418.1	4,421.7	4,419.2	17.2	8.8	-109.71	-704.2	509.0	772.2	746.8	25.37	30.442		
4,600.0	4,515.5	4,519.4	4,516.9	17.7	9.0	-111.09	-706.6	507.8	779.1	753.1	25.99	29.978		
4,700.0	4,612.9	4,617.0	4,614.4	18.1	9.3	-112.46	-708.5	506.7	786.5	759.9	26.60	29.566		
4,800.0	4,710.2	4,714.6	4,712.0	18.6	9.5	-113.82	-710.3	505.6	794.4	767.2	27.21	29.196		

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 High Pointe LLC 10F-232
Project:	SEC.10-T5N-R67W	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Reference Site:	High Pointe LLC 5N67W10A Pad	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	High Pointe LLC 10F-232	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 (1-18-16)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Pad Sec.10-T5N-R67W - Highpointe 10A (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 270-NS-GYRO-MS													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
4,900.0	4,807.6	4,812.1	4,809.5	19.1	9.8	-115.16	-712.1	504.5	802.8	775.0	27.81	28.870		
5,000.0	4,905.0	4,909.7	4,907.1	19.6	10.0	-116.47	-713.9	503.5	811.7	783.3	28.40	28.584		
5,100.0	5,002.4	5,007.2	5,004.6	20.1	10.3	-117.75	-715.6	502.5	821.0	792.1	28.98	28.333		
5,200.0	5,099.7	5,104.8	5,102.2	20.6	10.5	-119.00	-717.4	501.5	830.8	801.3	29.55	28.116		
5,300.0	5,197.1	5,203.3	5,200.7	21.1	10.8	-120.24	-719.1	500.4	841.0	810.8	30.12	27.924		
5,400.0	5,294.5	5,301.8	5,299.1	21.6	11.0	-121.46	-720.8	499.3	851.4	820.7	30.67	27.757		
5,500.0	5,391.9	5,400.3	5,397.6	22.1	11.3	-122.65	-722.4	498.1	862.2	830.9	31.22	27.613		
5,557.2	5,447.6	5,456.6	5,453.9	22.3	11.4	-123.32	-723.3	497.4	868.5	836.9	31.53	27.540		
5,600.0	5,489.3	5,498.8	5,496.1	22.5	11.5	-123.88	-723.9	496.8	873.0	841.3	31.74	27.507		
5,700.0	5,587.3	5,597.9	5,595.1	22.8	11.8	-125.02	-725.4	495.4	882.5	850.4	32.15	27.450		
5,800.0	5,686.0	5,696.6	5,693.9	23.1	12.0	-125.93	-726.7	493.9	890.2	857.7	32.55	27.353		
5,900.0	5,785.2	5,795.8	5,793.0	23.3	12.3	-126.63	-727.9	492.4	896.0	863.1	32.93	27.211		
6,000.0	5,884.8	5,895.3	5,892.5	23.5	12.5	-127.12	-728.9	490.9	899.8	866.5	33.30	27.023		
6,100.0	5,984.6	5,994.9	5,992.1	23.7	12.8	-127.42	-729.7	489.3	901.6	867.9	33.65	26.790		
6,200.0	6,084.6	6,094.6	6,091.8	23.8	13.0	-127.52	-730.4	487.8	901.3	867.3	34.00	26.511		
6,215.4	6,100.0	6,109.8	6,106.9	23.8	13.1	73.22	-730.5	487.5	901.0	869.3	31.76	28.371		
6,300.0	6,184.6	6,192.0	6,189.1	23.9	13.3	73.22	-730.9	486.3	899.7	867.7	32.08	28.048		
6,386.9	6,271.4	6,276.4	6,273.6	24.0	13.5	73.23	-731.3	485.3	898.6	866.2	32.40	27.737		
6,400.0	6,284.6	6,289.2	6,286.3	24.0	13.5	-16.78	-731.3	485.2	898.4	863.7	34.68	25.906		
6,450.0	6,334.5	6,337.7	6,334.8	24.1	13.6	-16.88	-731.5	484.8	895.5	860.8	34.65	25.846		
6,500.0	6,384.2	6,385.9	6,383.1	24.1	13.8	-17.12	-731.7	484.4	889.6	855.1	34.46	25.815		
6,550.0	6,433.3	6,433.7	6,430.8	24.1	13.9	-17.48	-731.9	484.1	880.6	846.5	34.11	25.815		
6,600.0	6,481.8	6,480.8	6,477.9	24.1	14.0	-17.99	-732.0	483.9	868.7	835.1	33.61	25.844		
6,650.0	6,529.4	6,527.1	6,524.2	24.1	14.1	-18.67	-732.1	483.7	853.9	820.9	32.96	25.904		
6,700.0	6,575.9	6,572.3	6,569.4	24.1	14.2	-19.52	-732.2	483.6	836.2	804.1	32.17	25.994		
6,750.0	6,621.1	6,617.1	6,614.2	24.1	14.3	-20.59	-732.3	483.6	815.8	784.6	31.25	26.109		
6,800.0	6,664.7	6,661.6	6,658.8	24.0	14.4	-21.92	-732.4	483.5	792.7	762.5	30.21	26.237		
6,850.0	6,706.7	6,704.4	6,701.6	24.0	14.5	-23.56	-732.5	483.4	767.0	737.9	29.09	26.363		
6,900.0	6,746.9	6,745.3	6,742.4	24.0	14.6	-25.54	-732.7	483.3	738.8	710.9	27.93	26.453		
6,950.0	6,784.9	6,783.9	6,781.1	23.9	14.7	-27.96	-732.8	483.1	708.4	681.6	26.78	26.448		
7,000.0	6,820.8	6,820.3	6,817.4	23.9	14.8	-30.88	-732.9	482.9	675.9	650.1	25.75	26.246		
7,050.0	6,854.4	6,854.2	6,851.3	23.8	14.9	-34.41	-733.1	482.7	641.5	616.5	24.96	25.698		
7,100.0	6,885.4	6,885.5	6,882.6	23.8	15.0	-38.64	-733.2	482.5	605.6	581.0	24.59	24.626		
7,150.0	6,913.8	6,914.0	6,911.1	23.8	15.1	-43.64	-733.3	482.3	568.3	543.5	24.81	22.909		
7,200.0	6,939.5	6,939.7	6,936.8	23.7	15.1	-49.42	-733.5	482.0	530.2	504.5	25.73	20.608		
7,250.0	6,962.3	6,962.4	6,959.5	23.7	15.2	-55.88	-733.6	481.8	491.5	464.2	27.30	18.004		
7,300.0	6,982.2	6,982.0	6,979.2	23.7	15.2	-62.79	-733.7	481.7	452.9	423.5	29.30	15.454		
7,350.0	6,999.0	6,998.5	6,995.7	23.8	15.3	-69.73	-733.8	481.5	414.8	383.4	31.41	13.206		
7,400.0	7,012.7	7,011.9	7,009.0	23.8	15.3	-76.22	-733.9	481.4	378.0	344.7	33.33	11.343		
7,450.0	7,023.2	7,021.9	7,019.1	24.0	15.3	-81.83	-733.9	481.2	343.6	308.7	34.93	9.837		
7,500.0	7,030.5	7,028.8	7,025.9	24.2	15.3	-86.24	-734.0	481.2	312.9	276.6	36.24	8.633		
7,550.0	7,034.5	7,032.3	7,029.4	24.5	15.4	-89.26	-734.0	481.1	287.3	249.9	37.35	7.692		
7,593.9	7,035.4	7,032.7	7,029.8	25.0	15.4	-90.72	-734.0	481.1	270.4	232.2	38.23	7.073		
7,600.0	7,035.3	7,032.5	7,029.7	25.1	15.4	-90.70	-734.0	481.1	268.5	230.2	38.34	7.004		
7,679.1	7,034.6	7,030.9	7,028.1	26.2	15.4	-90.34	-734.0	481.2	256.6	216.8	39.86	6.439 CC, ES		
7,700.0	7,034.4	7,030.5	7,027.7	26.5	15.4	-90.24	-734.0	481.2	257.5	217.2	40.26	6.396 SF		
7,800.0	7,033.5	7,028.5	7,025.7	28.4	15.3	-89.80	-734.0	481.2	283.7	241.4	42.33	6.702		
7,900.0	7,032.5	7,026.5	7,023.7	30.5	15.3	-89.35	-733.9	481.2	338.6	294.1	44.51	7.607		
8,000.0	7,031.6	7,024.5	7,021.7	32.7	15.3	-88.91	-733.9	481.2	410.9	364.1	46.79	8.781		
8,100.0	7,030.7	7,022.6	7,019.7	35.0	15.3	-88.47	-733.9	481.2	492.9	443.8	49.14	10.031		

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 High Pointe LLC 10F-232
Project:	SEC.10-T5N-R67W	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Reference Site:	High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	High Pointe LLC 10F-232	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 (1-18-16)	Offset TVD Reference:	Offset Datum

Offset Design													Existing Wells Pad Sec.10-T5N-R67W - Highpointe 10A (Exist.) - Wellbore #1 - Wellbore #1		Offset Site Error:		0.0 ft	
Survey Program: 270-NS-GYRO-MS															Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance											
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning					
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)							
8,200.0	7,029.8	7,020.6	7,017.7	37.4	15.3	-88.03	-733.9	481.3	580.6	529.1	51.55	11.264						
8,300.0	7,028.8	7,018.6	7,015.8	39.8	15.3	-87.59	-733.9	481.3	671.8	617.8	54.00	12.440						
8,400.0	7,027.9	7,016.7	7,013.8	42.3	15.3	-87.16	-733.9	481.3	765.1	708.6	56.49	13.545						
8,500.0	7,027.0	7,014.7	7,011.9	44.8	15.3	-86.72	-733.9	481.3	859.9	800.9	59.00	14.574						
8,600.0	7,026.1	7,012.8	7,009.9	47.4	15.3	-86.29	-733.9	481.3	955.8	894.3	61.55	15.531						

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well High Pointe LLC 10F-232
Project:	SEC.10-T5N-R67W	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Reference Site:	High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	High Pointe LLC 10F-232	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 (1-18-16)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Pad Sec.10-T5N-R67W - Stephens-Foe 10-2 (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 7780-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	Warning	
7,593.9	7,035.4	7,034.4	7,034.4	25.0	140.7	-142.33	-983.6	1,372.8	976.8	873.6	103.19	9.466		
7,600.0	7,035.3	7,034.3	7,034.3	25.1	140.7	-142.16	-983.6	1,372.8	970.7	867.1	103.65	9.366		
7,700.0	7,034.4	7,033.4	7,033.4	26.5	140.7	-139.10	-983.6	1,372.8	870.7	759.2	111.52	7.808		
7,800.0	7,033.5	7,032.4	7,032.4	28.4	140.6	-135.62	-983.6	1,372.8	770.8	650.6	120.19	6.413		
7,900.0	7,032.5	7,031.5	7,031.5	30.5	140.6	-131.65	-983.6	1,372.8	670.8	541.2	129.60	5.176		
8,000.0	7,031.6	7,030.6	7,030.6	32.7	140.6	-127.12	-983.6	1,372.8	570.8	431.1	139.64	4.087		
8,100.0	7,030.7	7,029.7	7,029.7	35.0	140.6	-121.97	-983.6	1,372.8	470.8	320.7	150.05	3.138		
8,200.0	7,029.8	7,028.7	7,028.7	37.4	140.6	-116.18	-983.6	1,372.8	370.8	210.4	160.38	2.312		
8,300.0	7,028.8	7,027.8	7,027.8	39.8	140.6	-109.75	-983.6	1,372.8	270.8	100.8	170.01	1.593		
8,400.0	7,027.9	7,026.9	7,026.9	42.3	140.5	-102.76	-983.6	1,372.8	170.9	-7.2	178.14	0.959 Level 1		
8,500.0	7,027.0	7,026.0	7,026.0	44.8	140.5	-95.36	-983.6	1,372.8	71.1	-112.8	183.94	0.387 Level 1		
8,570.7	7,026.3	7,025.3	7,025.3	46.6	140.5	-90.01	-983.6	1,372.8	7.0	-179.3	186.30	0.037 Level 1, CC, ES, SF		
8,600.0	7,026.1	7,025.0	7,025.0	47.4	140.5	-87.78	-983.6	1,372.8	30.1	-156.8	186.81	0.161 Level 1		
8,700.0	7,025.1	7,024.1	7,024.1	50.0	140.5	-80.28	-983.6	1,372.8	129.4	-57.1	186.55	0.694 Level 1		
8,800.0	7,024.2	7,023.2	7,023.2	52.6	140.5	-73.09	-983.6	1,372.8	229.3	45.9	183.41	1.250 Level 3		
8,900.0	7,023.3	7,022.3	7,022.3	55.2	140.4	-66.42	-983.6	1,372.8	329.3	151.3	178.02	1.850		
9,000.0	7,022.4	7,021.3	7,021.3	57.8	140.4	-60.35	-983.6	1,372.8	429.3	258.1	171.14	2.508		
9,100.0	7,021.4	7,020.4	7,020.4	60.5	140.4	-54.94	-983.6	1,372.8	529.3	365.8	163.50	3.237		
9,200.0	7,020.5	7,019.5	7,019.5	63.1	140.4	-50.16	-983.6	1,372.8	629.3	473.6	155.64	4.043		
9,300.0	7,019.6	7,018.6	7,018.6	65.8	140.4	-45.96	-983.6	1,372.8	729.2	581.3	147.95	4.929		
9,400.0	7,018.7	7,017.6	7,017.6	68.5	140.4	-42.29	-983.6	1,372.8	829.2	688.6	140.67	5.895		
9,500.0	7,017.7	7,016.7	7,016.7	71.2	140.3	-39.06	-983.6	1,372.8	929.2	795.3	133.91	6.939		

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well High Pointe LLC 10F-232
Project:	SEC.10-T5N-R67W	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Reference Site:	High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	High Pointe LLC 10F-232	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 (1-18-16)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Pad Sec.10-T5N-R67W - Stephens-Foe 10-3 (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:		0.0 ft
Survey Program: 7330-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	Centre	Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
9,000.0	7,022.4	7,038.3	7,038.3	57.8	140.8	93.49	-1,129.2	2,715.0	923.4	726.0	197.39	4.678			
9,100.0	7,021.4	7,037.4	7,037.4	60.5	140.7	93.10	-1,129.2	2,715.0	824.7	624.5	200.14	4.121			
9,200.0	7,020.5	7,036.5	7,036.5	63.1	140.7	92.72	-1,129.2	2,715.0	726.3	523.4	202.89	3.580			
9,300.0	7,019.6	7,035.6	7,035.6	65.8	140.7	92.34	-1,129.2	2,715.0	628.4	422.8	205.65	3.056			
9,400.0	7,018.7	7,034.6	7,034.6	68.5	140.7	91.96	-1,129.2	2,715.0	531.4	323.0	208.41	2.550			
9,500.0	7,017.7	7,033.7	7,033.7	71.2	140.7	91.58	-1,129.2	2,715.0	435.6	224.5	211.16	2.063			
9,600.0	7,016.8	7,032.8	7,032.8	73.9	140.7	91.20	-1,129.2	2,715.0	342.3	128.4	213.92	1.600			
9,700.0	7,015.9	7,031.9	7,031.9	76.6	140.6	90.81	-1,129.2	2,715.0	254.1	37.5	216.67	1.173	Level 2		
9,800.0	7,015.0	7,030.9	7,030.9	79.4	140.6	90.43	-1,129.2	2,715.0	178.9	-40.6	219.42	0.815	Level 1		
9,900.0	7,014.0	7,030.0	7,030.0	82.1	140.6	90.05	-1,129.2	2,715.0	139.3	-82.9	222.16	0.627	Level 1		
9,913.0	7,013.9	7,029.9	7,029.9	82.4	140.6	90.00	-1,129.2	2,715.0	138.7	-83.9	222.51	0.623	Level 1, CC, ES, SF		
10,000.0	7,013.1	7,029.1	7,029.1	84.8	140.6	89.67	-1,129.2	2,715.0	163.7	-61.2	224.90	0.728	Level 1		
10,100.0	7,012.2	7,028.2	7,028.2	87.5	140.6	89.29	-1,129.2	2,715.0	232.8	5.2	227.63	1.023	Level 2		
10,200.0	7,011.3	7,027.2	7,027.2	90.3	140.5	88.90	-1,129.2	2,715.0	318.7	88.4	230.35	1.384	Level 3		
10,300.0	7,010.3	7,026.3	7,026.3	93.0	140.5	88.52	-1,129.2	2,715.0	411.1	178.0	233.07	1.764			
10,400.0	7,009.4	7,025.4	7,025.4	95.8	140.5	88.14	-1,129.2	2,715.0	506.4	270.6	235.77	2.148			
10,500.0	7,008.5	7,024.5	7,024.5	98.5	140.5	87.76	-1,129.2	2,715.0	603.1	364.7	238.47	2.529			
10,600.0	7,007.6	7,023.5	7,023.5	101.3	140.5	87.38	-1,129.2	2,715.0	700.8	459.7	241.16	2.906			
10,700.0	7,006.6	7,022.6	7,022.6	104.0	140.5	86.99	-1,129.2	2,715.0	799.1	555.3	243.84	3.277			
10,800.0	7,005.7	7,021.7	7,021.7	106.8	140.4	86.61	-1,129.2	2,715.0	897.8	651.2	246.51	3.642			
10,900.0	7,004.8	7,020.8	7,020.8	109.5	140.4	86.23	-1,129.2	2,715.0	996.7	747.5	249.17	4.000			

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well High Pointe LLC 10F-232
Project:	SEC.10-T5N-R67W	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Reference Site:	High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	High Pointe LLC 10F-232	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 (1-18-16)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Pad Sec.10-T5N-R67W - Warren 10-1 (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 7322-UNKNOWN													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
10,300.0	7,010.3	7,018.3	7,018.3	93.0	140.4	94.48	-1,107.2	4,090.5	995.4	763.4	232.06	4.289		
10,400.0	7,009.4	7,017.4	7,017.4	95.8	140.3	94.03	-1,107.2	4,090.5	896.2	661.2	234.94	3.814		
10,500.0	7,008.5	7,016.5	7,016.5	98.5	140.3	93.58	-1,107.2	4,090.5	797.2	559.3	237.82	3.352		
10,600.0	7,007.6	7,015.5	7,015.5	101.3	140.3	93.13	-1,107.2	4,090.5	698.4	457.7	240.68	2.902		
10,700.0	7,006.6	7,014.6	7,014.6	104.0	140.3	92.67	-1,107.2	4,090.5	600.0	356.5	243.54	2.464		
10,800.0	7,005.7	7,013.7	7,013.7	106.8	140.3	92.22	-1,107.2	4,090.5	502.3	255.9	246.38	2.039		
10,900.0	7,004.8	7,012.8	7,012.8	109.5	140.3	91.77	-1,107.2	4,090.5	405.7	156.5	249.21	1.628		
11,000.0	7,003.9	7,011.8	7,011.8	112.3	140.2	91.31	-1,107.2	4,090.5	311.3	59.2	252.03	1.235	Level 2	
11,100.0	7,002.9	7,010.9	7,010.9	115.1	140.2	90.86	-1,107.2	4,090.5	221.7	-33.1	254.84	0.870	Level 1	
11,200.0	7,002.0	7,010.0	7,010.0	117.8	140.2	90.40	-1,107.2	4,090.5	146.5	-111.2	257.63	0.568	Level 1	
11,288.6	7,001.2	7,009.2	7,009.2	120.3	140.2	90.00	-1,107.2	4,090.5	116.6	-143.5	260.10	0.448	Level 1, CC, ES, SF	
11,300.0	7,001.1	7,009.1	7,009.1	120.6	140.2	89.95	-1,107.2	4,090.5	117.2	-143.2	260.41	0.450	Level 1	
11,400.0	7,000.2	7,008.1	7,008.1	123.4	140.2	89.49	-1,107.2	4,090.5	161.3	-101.9	263.18	0.613	Level 1	
11,416.7	7,000.0	7,008.0	7,008.0	123.8	140.2	89.42	-1,107.2	4,090.5	173.2	-90.4	263.64	0.657	Level 1	

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well High Pointe LLC 10F-232
Project:	SEC.10-T5N-R67W	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Reference Site:	High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	High Pointe LLC 10F-232	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 (1-18-16)	Offset TVD Reference:	Offset Datum

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	5.46	29.1	2.8	29.3	29.3	0.00	N/A		
100.0	100.0	100.0	100.0	0.1	0.1	5.46	29.1	2.8	29.3	29.1	0.22	130.272		
200.0	200.0	200.0	200.0	0.3	0.3	5.46	29.1	2.8	29.3	28.6	0.67	43.421		
300.0	300.0	300.0	300.0	0.6	0.6	5.46	29.1	2.8	29.3	28.2	1.12	26.052		
400.0	400.0	400.0	400.0	0.8	0.8	5.46	29.1	2.8	29.3	27.7	1.57	18.609		
500.0	500.0	500.0	500.0	1.0	1.0	5.46	29.1	2.8	29.3	27.3	2.02	14.473		
600.0	600.0	600.0	600.0	1.2	1.2	5.46	29.1	2.8	29.3	26.8	2.47	11.842		
700.0	700.0	700.0	700.0	1.5	1.5	5.46	29.1	2.8	29.3	26.4	2.92	10.020		
800.0	800.0	800.0	800.0	1.7	1.7	5.46	29.1	2.8	29.3	25.9	3.37	8.684 CC, ES		
900.0	900.0	900.0	900.0	1.9	1.9	165.36	29.1	2.8	30.5	26.7	3.80	8.047		
1,000.0	999.9	999.9	999.9	2.1	2.1	167.01	29.1	2.8	34.4	30.2	4.20	8.177		
1,100.0	1,099.7	1,099.7	1,099.7	2.3	2.4	169.06	29.1	2.8	40.8	36.1	4.62	8.830		
1,200.0	1,199.3	1,199.3	1,199.3	2.5	2.6	171.03	29.1	2.8	49.8	44.7	5.03	9.886		
1,300.0	1,298.6	1,300.0	1,300.0	2.7	2.8	172.15	28.2	1.9	60.3	54.8	5.43	11.093		
1,400.0	1,397.5	1,400.9	1,400.8	3.0	3.0	172.19	25.2	-0.7	71.1	65.2	5.82	12.218		
1,500.0	1,496.1	1,502.1	1,501.8	3.3	3.2	171.57	20.2	-5.1	82.1	75.9	6.21	13.221		
1,600.0	1,594.2	1,603.4	1,602.7	3.6	3.4	170.52	13.2	-11.3	93.5	86.9	6.62	14.117		
1,677.6	1,669.9	1,682.2	1,681.0	3.9	3.5	169.50	6.4	-17.4	102.5	95.6	6.95	14.743		
1,700.0	1,691.7	1,705.0	1,703.5	4.0	3.6	169.19	4.2	-19.4	105.1	98.0	7.05	14.898		
1,800.0	1,789.1	1,805.0	1,802.6	4.4	3.8	167.72	-6.1	-28.5	115.9	108.4	7.52	15.408		
1,900.0	1,886.5	1,904.4	1,901.0	4.8	4.1	166.50	-16.4	-37.6	126.7	118.7	8.01	15.819		
2,000.0	1,983.8	2,003.8	1,999.4	5.3	4.4	165.46	-26.7	-46.8	137.5	129.0	8.51	16.158		
2,100.0	2,081.2	2,103.1	2,097.8	5.7	4.7	164.58	-37.0	-55.9	148.4	139.4	9.03	16.439		
2,200.0	2,178.6	2,202.5	2,196.3	6.2	5.0	163.82	-47.3	-65.1	159.3	149.8	9.56	16.671		
2,300.0	2,275.9	2,301.9	2,294.7	6.6	5.3	163.16	-57.6	-74.2	170.3	160.2	10.10	16.864		
2,400.0	2,373.3	2,401.3	2,393.1	7.1	5.6	162.57	-67.9	-83.4	181.2	170.6	10.65	17.025		
2,500.0	2,470.7	2,500.7	2,491.5	7.5	5.9	162.06	-78.2	-92.5	192.2	181.0	11.20	17.159		
2,600.0	2,568.1	2,600.0	2,589.9	8.0	6.2	161.59	-88.5	-101.7	203.2	191.4	11.77	17.272		
2,700.0	2,665.4	2,699.4	2,688.4	8.5	6.5	161.18	-98.8	-110.8	214.2	201.9	12.33	17.366		
2,800.0	2,762.8	2,798.8	2,786.8	9.0	6.8	160.81	-109.1	-120.0	225.2	212.3	12.91	17.446		
2,900.0	2,860.2	2,898.2	2,885.2	9.4	7.2	160.47	-119.4	-129.1	236.2	222.8	13.49	17.514		
3,000.0	2,957.5	2,997.6	2,983.6	9.9	7.5	160.16	-129.7	-138.3	247.3	233.2	14.07	17.572		
3,100.0	3,054.9	3,097.0	3,082.1	10.4	7.8	159.88	-140.0	-147.4	258.3	243.6	14.66	17.620		
3,200.0	3,152.3	3,196.3	3,180.5	10.9	8.1	159.62	-150.3	-156.6	269.3	254.1	15.25	17.662		
3,300.0	3,249.7	3,295.7	3,278.9	11.4	8.5	159.38	-160.6	-165.7	280.4	264.5	15.84	17.698		
3,400.0	3,347.0	3,395.1	3,377.3	11.8	8.8	159.16	-170.9	-174.9	291.4	275.0	16.44	17.728		
3,500.0	3,444.4	3,494.5	3,475.8	12.3	9.1	158.96	-181.2	-184.0	302.5	285.5	17.04	17.754		
3,600.0	3,541.8	3,593.9	3,574.2	12.8	9.5	158.77	-191.5	-193.2	313.5	295.9	17.64	17.776		
3,700.0	3,639.2	3,693.2	3,672.6	13.3	9.8	158.59	-201.8	-202.3	324.6	306.4	18.24	17.795		
3,800.0	3,736.5	3,792.6	3,771.0	13.8	10.1	158.42	-212.1	-211.5	335.7	316.8	18.85	17.812		
3,900.0	3,833.9	3,892.0	3,869.4	14.3	10.5	158.27	-222.4	-220.6	346.7	327.3	19.45	17.826		
4,000.0	3,931.3	3,991.4	3,967.9	14.7	10.8	158.12	-232.7	-229.8	357.8	337.7	20.06	17.838		
4,100.0	4,028.6	4,090.8	4,066.3	15.2	11.2	157.99	-243.0	-238.9	368.9	348.2	20.67	17.848		
4,200.0	4,126.0	4,190.2	4,164.7	15.7	11.5	157.86	-253.3	-248.1	379.9	358.7	21.28	17.856		
4,300.0	4,223.4	4,289.5	4,263.1	16.2	11.8	157.74	-263.6	-257.2	391.0	369.1	21.89	17.864		
4,400.0	4,320.8	4,388.9	4,361.6	16.7	12.2	157.62	-273.9	-266.4	402.1	379.6	22.50	17.870		
4,500.0	4,418.1	4,488.3	4,460.0	17.2	12.5	157.51	-284.2	-275.5	413.2	390.0	23.11	17.875		
4,600.0	4,515.5	4,587.7	4,558.4	17.7	12.9	157.41	-294.5	-284.6	424.2	400.5	23.73	17.879		
4,700.0	4,612.9	4,687.1	4,656.8	18.1	13.2	157.31	-304.8	-293.8	435.3	411.0	24.34	17.882		
4,800.0	4,710.2	4,786.4	4,755.2	18.6	13.6	157.22	-315.1	-302.9	446.4	421.4	24.96	17.885		
4,900.0	4,807.6	4,885.8	4,853.7	19.1	13.9	157.13	-325.4	-312.1	457.5	431.9	25.58	17.887		

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 High Pointe LLC 10F-232
Project:	SEC.10-T5N-R67W	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Reference Site:	High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	High Pointe LLC 10F-232	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 (1-18-16)	Offset TVD Reference:	Offset Datum

Offset Design High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W - High Pointe LLC 10F-202 - Wellbore #1 - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
5,000.0	4,905.0	4,985.2	4,952.1	19.6	14.2	157.05	-335.7	-321.2	468.6	442.4	26.19	17.889		
5,100.0	5,002.4	5,084.6	5,050.5	20.1	14.6	156.97	-346.0	-330.4	479.6	452.8	26.81	17.890		
5,200.0	5,099.7	5,184.0	5,148.9	20.6	14.9	156.89	-356.3	-339.5	490.7	463.3	27.43	17.891		
5,300.0	5,197.1	5,283.4	5,247.4	21.1	15.3	156.82	-366.6	-348.7	501.8	473.8	28.05	17.891		
5,400.0	5,294.5	5,377.8	5,340.9	21.6	15.6	156.77	-376.2	-357.2	513.1	484.5	28.63	17.919		
5,500.0	5,391.9	5,465.4	5,428.0	22.1	15.8	156.90	-383.4	-363.6	526.2	497.1	29.12	18.070		
5,557.2	5,447.6	5,515.3	5,477.7	22.3	15.9	157.06	-386.6	-366.5	534.8	505.4	29.38	18.204		
5,600.0	5,489.3	5,552.5	5,514.8	22.5	16.0	157.26	-388.6	-368.2	541.3	511.7	29.56	18.313		
5,700.0	5,587.3	5,639.2	5,601.4	22.8	16.1	157.75	-391.8	-371.1	555.9	526.0	29.92	18.581		
5,800.0	5,686.0	5,725.6	5,687.8	23.1	16.3	158.28	-393.0	-372.2	569.5	539.3	30.22	18.847		
5,900.0	5,785.2	5,823.0	5,785.2	23.3	16.4	158.82	-393.1	-372.2	581.3	550.8	30.49	19.067		
6,000.0	5,884.8	5,922.6	5,884.8	23.5	16.6	159.20	-393.1	-372.2	590.0	559.2	30.75	19.189		
6,100.0	5,984.6	6,022.4	5,984.6	23.7	16.7	159.44	-393.1	-372.2	595.4	564.4	30.99	19.213		
6,200.0	6,084.6	6,122.4	6,084.6	23.8	16.9	159.53	-393.1	-372.2	597.5	566.3	31.21	19.142		
6,215.4	6,100.0	6,137.8	6,100.0	23.8	16.9	0.27	-393.1	-372.2	597.6	559.1	38.43	15.548		
6,300.0	6,184.6	6,222.4	6,184.6	23.9	17.0	0.27	-393.1	-372.2	597.6	558.9	38.67	15.453		
6,386.9	6,271.4	6,309.3	6,271.4	24.0	17.1	0.27	-393.1	-372.2	597.6	558.7	38.90	15.361		
6,400.0	6,284.6	6,322.4	6,284.5	24.0	17.2	-89.74	-393.1	-372.1	597.6	565.7	31.86	18.758		
6,450.0	6,334.5	6,372.2	6,334.3	24.1	17.2	-89.75	-393.1	-369.8	597.6	565.6	31.98	18.683		
6,500.0	6,384.2	6,422.0	6,383.8	24.1	17.3	-89.76	-393.1	-364.2	597.5	565.5	32.07	18.633		
6,550.0	6,433.3	6,471.9	6,432.9	24.1	17.3	-89.78	-393.1	-355.4	597.5	565.4	32.12	18.606		
6,600.0	6,481.8	6,521.7	6,481.2	24.1	17.3	-89.79	-393.1	-343.4	597.5	565.4	32.13	18.598		
6,650.0	6,529.4	6,571.6	6,528.7	24.1	17.3	-89.81	-393.1	-328.3	597.5	565.4	32.11	18.607		
6,700.0	6,575.9	6,621.5	6,575.2	24.1	17.3	-89.83	-393.1	-310.1	597.5	565.5	32.08	18.626		
6,750.0	6,621.1	6,671.4	6,620.3	24.1	17.2	-89.85	-393.1	-288.9	597.5	565.5	32.04	18.651		
6,800.0	6,664.7	6,721.3	6,664.0	24.0	17.2	-89.87	-393.1	-264.8	597.5	565.5	32.00	18.673		
6,850.0	6,706.7	6,771.2	6,706.1	24.0	17.2	-89.89	-393.1	-237.9	597.5	565.6	31.98	18.682		
6,900.0	6,746.9	6,821.1	6,746.3	24.0	17.1	-89.91	-393.1	-208.3	597.5	565.5	32.01	18.668		
6,950.0	6,784.9	6,871.0	6,784.5	23.9	17.1	-89.93	-393.1	-176.1	597.5	565.4	32.09	18.619		
7,000.0	6,820.8	6,921.0	6,820.5	23.9	17.1	-89.95	-393.1	-141.5	597.5	565.3	32.26	18.524		
7,050.0	6,854.4	6,971.0	6,854.2	23.8	17.1	-89.97	-393.1	-104.6	597.5	565.0	32.53	18.370		
7,100.0	6,885.4	7,021.0	6,885.4	23.8	17.0	-89.99	-393.1	-65.6	597.5	564.6	32.92	18.149		
7,150.0	6,913.8	7,071.0	6,914.0	23.8	17.1	-90.01	-393.1	-24.6	597.5	564.1	33.46	17.857		
7,200.0	6,939.5	7,121.0	6,939.8	23.7	17.1	-90.03	-393.1	18.2	597.5	563.4	34.16	17.493		
7,250.0	6,962.3	7,171.0	6,962.8	23.7	17.3	-90.06	-393.1	62.6	597.5	562.5	35.02	17.061		
7,300.0	6,982.2	7,221.1	6,982.9	23.7	17.7	-90.08	-393.1	108.5	597.5	561.5	36.06	16.571		
7,350.0	6,999.0	7,271.1	6,999.9	23.8	18.3	-90.10	-393.1	155.5	597.5	560.3	37.27	16.035		
7,400.0	7,012.7	7,321.2	7,013.8	23.8	19.0	-90.12	-393.1	203.6	597.5	558.9	38.63	15.468		
7,450.0	7,023.2	7,371.3	7,024.6	24.0	19.8	-90.14	-393.1	252.5	597.5	557.4	40.15	14.884		
7,500.0	7,030.5	7,421.4	7,032.1	24.2	20.6	-90.16	-393.1	302.1	597.5	555.7	41.79	14.298		
7,550.0	7,034.5	7,471.5	7,036.3	24.5	21.5	-90.18	-393.1	352.0	597.5	554.0	43.55	13.720		
7,593.9	7,035.4	7,515.5	7,037.4	25.0	22.4	-90.19	-393.1	396.0	597.5	552.4	45.17	13.229		
7,600.0	7,035.3	7,521.6	7,037.3	25.1	22.5	-90.19	-393.1	402.1	597.5	552.1	45.40	13.161		
7,700.0	7,034.4	7,621.6	7,036.5	26.5	24.5	-90.20	-393.1	502.1	597.5	548.2	49.36	12.105		
7,800.0	7,033.5	7,721.6	7,035.7	28.4	26.7	-90.21	-393.1	602.1	597.5	543.9	53.61	11.145		
7,900.0	7,032.5	7,821.6	7,034.8	30.5	29.0	-90.22	-393.1	702.1	597.5	539.4	58.09	10.286		
8,000.0	7,031.6	7,921.6	7,034.0	32.7	31.3	-90.23	-393.1	802.1	597.5	534.8	62.75	9.522		
8,100.0	7,030.7	8,021.6	7,033.2	35.0	33.7	-90.24	-393.1	902.1	597.5	530.0	67.56	8.844		
8,200.0	7,029.8	8,121.6	7,032.4	37.4	36.2	-90.25	-393.1	1,002.1	597.5	525.0	72.48	8.244		
8,300.0	7,028.8	8,221.6	7,031.6	39.8	38.7	-90.26	-393.1	1,102.1	597.5	520.0	77.50	7.710		

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 High Pointe LLC 10F-232
Project:	SEC.10-T5N-R67W	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Reference Site:	High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	High Pointe LLC 10F-232	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 (1-18-16)	Offset TVD Reference:	Offset Datum

Offset Design		High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W - High Pointe LLC 10F-202 - Wellbore #1 - Plan #1										Offset Site Error:		0.0 ft
Survey Program: 0-MWD												Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
8,400.0	7,027.9	8,321.6	7,030.7	42.3	41.3	-90.27	-393.1	1,202.1	597.5	514.9	82.59	7.235		
8,500.0	7,027.0	8,421.6	7,029.9	44.8	43.9	-90.28	-393.1	1,302.1	597.5	509.8	87.75	6.810		
8,600.0	7,026.1	8,521.6	7,029.1	47.4	46.5	-90.29	-393.1	1,402.1	597.5	504.6	92.95	6.428		
8,700.0	7,025.1	8,621.6	7,028.3	50.0	49.1	-90.30	-393.1	1,502.1	597.5	499.3	98.21	6.084		
8,800.0	7,024.2	8,721.6	7,027.5	52.6	51.8	-90.31	-393.1	1,602.0	597.5	494.0	103.50	5.773		
8,900.0	7,023.3	8,821.6	7,026.6	55.2	54.4	-90.32	-393.1	1,702.0	597.5	488.7	108.82	5.491		
9,000.0	7,022.4	8,921.6	7,025.8	57.8	57.1	-90.33	-393.1	1,802.0	597.5	483.4	114.17	5.234		
9,100.0	7,021.4	9,021.6	7,025.0	60.5	59.8	-90.34	-393.1	1,902.0	597.5	478.0	119.54	4.999		
9,200.0	7,020.5	9,121.6	7,024.2	63.1	62.5	-90.35	-393.1	2,002.0	597.5	472.6	124.93	4.783		
9,300.0	7,019.6	9,221.6	7,023.4	65.8	65.2	-90.36	-393.1	2,102.0	597.5	467.2	130.35	4.584		
9,400.0	7,018.7	9,321.6	7,022.5	68.5	67.9	-90.37	-393.1	2,202.0	597.5	461.7	135.77	4.401		
9,500.0	7,017.7	9,421.6	7,021.7	71.2	70.7	-90.38	-393.1	2,302.0	597.5	456.3	141.22	4.231		
9,600.0	7,016.8	9,521.6	7,020.9	73.9	73.4	-90.39	-393.1	2,402.0	597.5	450.8	146.67	4.074		
9,700.0	7,015.9	9,621.6	7,020.1	76.6	76.1	-90.40	-393.1	2,502.0	597.5	445.4	152.14	3.927		
9,800.0	7,015.0	9,721.6	7,019.3	79.4	78.9	-90.41	-393.1	2,602.0	597.5	439.9	157.61	3.791		
9,900.0	7,014.0	9,821.6	7,018.4	82.1	81.6	-90.42	-393.1	2,702.0	597.5	434.4	163.10	3.664		
10,000.0	7,013.1	9,921.6	7,017.6	84.8	84.3	-90.43	-393.1	2,802.0	597.5	428.9	168.59	3.544		
10,100.0	7,012.2	10,021.6	7,016.8	87.5	87.1	-90.44	-393.1	2,902.0	597.5	423.4	174.09	3.432		
10,200.0	7,011.3	10,121.6	7,016.0	90.3	89.9	-90.45	-393.1	3,002.0	597.5	417.9	179.60	3.327		
10,300.0	7,010.3	10,221.6	7,015.2	93.0	92.6	-90.46	-393.1	3,102.0	597.5	412.4	185.11	3.228		
10,400.0	7,009.4	10,321.6	7,014.3	95.8	95.4	-90.47	-393.1	3,202.0	597.5	406.9	190.63	3.134		
10,500.0	7,008.5	10,421.6	7,013.5	98.5	98.1	-90.48	-393.1	3,302.0	597.5	401.4	196.16	3.046		
10,600.0	7,007.6	10,521.6	7,012.7	101.3	100.9	-90.49	-393.1	3,402.0	597.5	395.8	201.69	2.963		
10,700.0	7,006.6	10,621.6	7,011.9	104.0	103.7	-90.50	-393.1	3,502.0	597.5	390.3	207.22	2.883		
10,800.0	7,005.7	10,721.6	7,011.1	106.8	106.4	-90.51	-393.1	3,602.0	597.5	384.8	212.76	2.808		
10,900.0	7,004.8	10,821.6	7,010.2	109.5	109.2	-90.52	-393.1	3,702.0	597.5	379.2	218.30	2.737		
11,000.0	7,003.9	10,921.6	7,009.4	112.3	112.0	-90.53	-393.1	3,802.0	597.5	373.7	223.84	2.669		
11,100.0	7,002.9	11,021.6	7,008.6	115.1	114.8	-90.54	-393.1	3,902.0	597.5	368.1	229.39	2.605		
11,200.0	7,002.0	11,121.6	7,007.8	117.8	117.5	-90.55	-393.1	4,002.0	597.5	362.6	234.94	2.543		
11,300.0	7,001.1	11,221.6	7,007.0	120.6	120.3	-90.56	-393.1	4,102.0	597.5	357.0	240.49	2.485		
11,400.0	7,000.2	11,321.6	7,006.1	123.4	122.9	-90.57	-393.1	4,202.0	597.5	351.7	245.83	2.431		
11,416.3	7,000.0	11,337.9	7,006.0	123.8	123.2	-90.58	-393.1	4,218.2	597.5	350.9	246.57	2.423		
11,416.7	7,000.0	11,338.1	7,006.0	123.8	123.2	-90.58	-393.1	4,218.5	597.5	350.9	246.59	2.423 SF		

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well High Pointe LLC 10F-232
Project:	SEC.10-T5N-R67W	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Reference Site:	High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	High Pointe LLC 10F-232	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 (1-18-16)	Offset TVD Reference:	Offset Datum

Offset Design High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W - High Pointe LLC 10F-212 - Wellbore #1 - Plan #1													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	2.57	61.9	2.8	62.0						
100.0	100.0	99.0	99.0	0.1	0.1	2.57	61.9	2.8	62.0	61.8	0.22	277.235			
200.0	200.0	199.0	199.0	0.3	0.3	2.57	61.9	2.8	62.0	61.3	0.67	92.253			
300.0	300.0	299.0	299.0	0.6	0.6	2.57	61.9	2.8	62.0	60.9	1.12	55.277			
400.0	400.0	399.0	399.0	0.8	0.8	2.57	61.9	2.8	62.0	60.4	1.57	39.461			
500.0	500.0	499.0	499.0	1.0	1.0	2.57	61.9	2.8	62.0	60.0	2.02	30.682			
600.0	600.0	599.0	599.0	1.2	1.2	2.57	61.9	2.8	62.0	59.5	2.47	25.098			
700.0	700.0	699.0	699.0	1.5	1.5	2.57	61.9	2.8	62.0	59.1	2.92	21.234			
800.0	800.0	799.0	799.0	1.7	1.7	2.57	61.9	2.8	62.0	58.6	3.37	18.400 CC, ES			
900.0	900.0	899.0	899.0	1.9	1.9	162.20	61.9	2.8	63.2	59.4	3.79	16.673			
1,000.0	999.9	998.9	998.9	2.1	2.1	163.21	61.9	2.8	67.0	62.8	4.20	15.953			
1,100.0	1,099.7	1,098.7	1,098.7	2.3	2.4	164.67	61.9	2.8	73.3	68.7	4.61	15.884 SF			
1,200.0	1,199.3	1,198.3	1,198.3	2.5	2.6	166.32	61.9	2.8	82.1	77.1	5.03	16.319			
1,300.0	1,298.6	1,297.6	1,297.6	2.7	2.8	167.99	61.9	2.8	93.6	88.1	5.46	17.154			
1,400.0	1,397.5	1,396.5	1,396.5	3.0	3.0	169.54	61.9	2.8	107.7	101.8	5.88	18.306			
1,500.0	1,496.1	1,495.1	1,495.1	3.3	3.2	170.91	61.9	2.8	124.4	118.1	6.31	19.714			
1,600.0	1,594.2	1,593.2	1,593.2	3.6	3.5	172.10	61.9	2.8	143.7	136.9	6.74	21.328			
1,677.6	1,669.9	1,668.9	1,668.9	3.9	3.6	172.90	61.9	2.8	160.5	153.4	7.07	22.699			
1,700.0	1,691.7	1,690.7	1,690.7	4.0	3.7	173.12	61.9	2.8	165.5	158.3	7.17	23.090			
1,800.0	1,789.1	1,788.1	1,788.1	4.4	3.9	173.95	61.9	2.8	188.1	180.5	7.62	24.702			
1,900.0	1,886.5	1,885.4	1,885.4	4.8	4.1	174.60	61.9	2.8	210.8	202.7	8.07	26.122			
2,000.0	1,983.8	1,982.8	1,982.8	5.3	4.3	175.13	61.9	2.8	233.5	225.0	8.53	27.379			
2,100.0	2,081.2	2,081.1	2,081.1	5.7	4.6	175.44	61.9	2.2	256.1	247.1	8.98	28.509			
2,200.0	2,178.6	2,179.9	2,179.8	6.2	4.8	175.35	62.0	0.0	278.2	268.8	9.43	29.503			
2,300.0	2,275.9	2,278.7	2,278.6	6.6	5.0	174.96	62.1	-4.0	299.9	290.0	9.88	30.344			
2,400.0	2,373.3	2,377.7	2,377.4	7.1	5.2	174.32	62.2	-9.7	321.2	310.8	10.35	31.042			
2,500.0	2,470.7	2,476.7	2,476.2	7.5	5.4	173.48	62.3	-17.0	342.1	331.3	10.82	31.612			
2,600.0	2,568.1	2,575.7	2,574.8	8.0	5.6	172.47	62.5	-26.1	362.8	351.4	11.31	32.066			
2,700.0	2,665.4	2,674.7	2,673.1	8.5	5.8	171.31	62.7	-36.9	383.2	371.3	11.82	32.414			
2,800.0	2,762.8	2,772.8	2,770.5	9.0	6.1	170.06	63.0	-49.0	403.4	391.1	12.35	32.680			
2,900.0	2,860.2	2,870.4	2,867.3	9.4	6.3	168.92	63.2	-61.3	423.9	411.0	12.88	32.899			
3,000.0	2,957.5	2,968.0	2,964.1	9.9	6.6	167.88	63.5	-73.6	444.4	431.0	13.43	33.085			
3,100.0	3,054.9	3,065.5	3,060.9	10.4	6.8	166.93	63.8	-85.9	465.1	451.1	13.99	33.243			
3,200.0	3,152.3	3,163.1	3,157.7	10.9	7.1	166.07	64.0	-98.1	485.9	471.4	14.56	33.375			
3,300.0	3,249.7	3,260.6	3,254.4	11.4	7.4	165.27	64.3	-110.4	506.8	491.7	15.13	33.486			
3,400.0	3,347.0	3,358.2	3,351.2	11.8	7.6	164.54	64.5	-122.7	527.8	512.1	15.72	33.580			
3,500.0	3,444.4	3,455.7	3,448.0	12.3	7.9	163.86	64.8	-134.9	548.9	532.6	16.31	33.658			
3,600.0	3,541.8	3,553.3	3,544.8	12.8	8.2	163.23	65.0	-147.2	570.0	553.1	16.90	33.724			
3,700.0	3,639.2	3,650.9	3,641.6	13.3	8.5	162.65	65.3	-159.5	591.2	573.7	17.50	33.778			
3,800.0	3,736.5	3,748.4	3,738.3	13.8	8.8	162.11	65.5	-171.8	612.4	594.3	18.11	33.823			
3,900.0	3,833.9	3,846.0	3,835.1	14.3	9.0	161.60	65.8	-184.0	633.7	615.0	18.72	33.861			
4,000.0	3,931.3	3,943.5	3,931.9	14.7	9.3	161.13	66.0	-196.3	655.1	635.8	19.33	33.892			
4,100.0	4,028.6	4,041.1	4,028.7	15.2	9.6	160.69	66.3	-208.6	676.5	656.5	19.94	33.916			
4,200.0	4,126.0	4,138.6	4,125.5	15.7	9.9	160.27	66.5	-220.9	697.9	677.3	20.56	33.937			
4,300.0	4,223.4	4,236.2	4,222.3	16.2	10.2	159.88	66.8	-233.1	719.3	698.1	21.19	33.952			
4,400.0	4,320.8	4,333.8	4,319.0	16.7	10.5	159.51	67.0	-245.4	740.8	719.0	21.81	33.965			
4,500.0	4,418.1	4,431.3	4,415.8	17.2	10.8	159.16	67.3	-257.7	762.3	739.9	22.44	33.974			
4,600.0	4,515.5	4,528.9	4,512.6	17.7	11.1	158.83	67.5	-269.9	783.9	760.8	23.07	33.981			
4,700.0	4,612.9	4,626.4	4,609.4	18.1	11.4	158.52	67.8	-282.2	805.4	781.7	23.70	33.985			
4,800.0	4,710.2	4,724.0	4,706.2	18.6	11.7	158.23	68.0	-294.5	827.0	802.7	24.33	33.987			
4,900.0	4,807.6	4,821.6	4,803.0	19.1	12.0	157.95	68.3	-306.8	848.6	823.6	24.97	33.988			

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 High Pointe LLC 10F-232
Project:	SEC.10-T5N-R67W	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Reference Site:	High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	High Pointe LLC 10F-232	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 (1-18-16)	Offset TVD Reference:	Offset Datum

Offset Design		High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W - High Pointe LLC 10F-212 - Wellbore #1 - Plan #1											Offset Site Error:		0.0 ft	
Survey Program:		0-MWD											Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor				
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)					
5,000.0	4,905.0	4,919.1	4,899.7	19.6	12.3	157.68	68.5	-319.0	870.2	844.6	25.60	33.988				
5,100.0	5,002.4	5,016.7	4,996.5	20.1	12.6	157.43	68.8	-331.3	891.8	865.6	26.24	33.986				
5,200.0	5,099.7	5,114.2	5,093.3	20.6	12.9	157.19	69.0	-343.6	913.5	886.6	26.88	33.983				
5,300.0	5,197.1	5,212.6	5,191.0	21.1	13.2	156.98	69.3	-355.5	935.1	907.6	27.49	34.013				
5,400.0	5,294.5	5,312.0	5,289.9	21.6	13.4	156.98	69.5	-364.5	956.6	928.6	28.02	34.139				
5,500.0	5,391.9	5,411.3	5,389.0	22.1	13.6	157.17	69.6	-370.1	978.0	949.4	28.50	34.311				
5,557.2	5,447.6	5,468.0	5,445.7	22.3	13.7	157.37	69.6	-371.7	990.1	961.3	28.76	34.431				
5,600.0	5,489.3	5,510.4	5,488.1	22.5	13.8	157.62	69.6	-372.2	998.9	969.9	28.96	34.491				

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well High Pointe LLC 10F-232
Project:	SEC.10-T5N-R67W	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Reference Site:	High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	High Pointe LLC 10F-232	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 (1-18-16)	Offset TVD Reference:	Offset Datum

Offset Design		High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W - High Pointe LLC 10F-302 - Wellbore #1 - Plan #1											Offset Site Error:		0.0 ft
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
0.0	0.0	0.0	0.0	0.0	0.0	0.00	14.6	0.0	14.6	14.6	0.00	N/A			
100.0	100.0	100.0	100.0	0.1	0.1	0.00	14.6	0.0	14.6	14.3	0.22	64.822			
200.0	200.0	200.0	200.0	0.3	0.3	0.00	14.6	0.0	14.6	13.9	0.67	21.606			
300.0	300.0	300.0	300.0	0.6	0.6	0.00	14.6	0.0	14.6	13.4	1.12	12.963			
400.0	400.0	400.0	400.0	0.8	0.8	0.00	14.6	0.0	14.6	13.0	1.57	9.260			
500.0	500.0	500.0	500.0	1.0	1.0	0.00	14.6	0.0	14.6	12.5	2.02	7.202			
600.0	600.0	600.0	600.0	1.2	1.2	0.00	14.6	0.0	14.6	12.1	2.47	5.892			
700.0	700.0	700.0	700.0	1.5	1.5	0.00	14.6	0.0	14.6	11.6	2.92	4.986			
800.0	800.0	800.0	800.0	1.7	1.7	0.00	14.6	0.0	14.6	11.2	3.37	4.321 CC, ES			
900.0	900.0	900.0	900.0	1.9	1.9	160.94	14.6	0.0	15.8	12.0	3.80	4.163			
1,000.0	999.9	999.9	999.9	2.1	2.1	164.68	14.6	0.0	19.6	15.4	4.20	4.654			
1,100.0	1,099.7	1,100.3	1,100.3	2.3	2.3	167.49	13.4	-0.6	24.7	20.1	4.59	5.380			
1,200.0	1,199.3	1,200.8	1,200.8	2.5	2.5	168.64	9.9	-2.5	29.9	25.0	4.96	6.035			
1,300.0	1,298.6	1,301.5	1,301.2	2.7	2.7	168.86	4.1	-5.7	35.3	29.9	5.35	6.598			
1,400.0	1,397.5	1,402.3	1,401.6	3.0	2.9	168.51	-4.0	-10.2	40.7	35.0	5.75	7.082			
1,500.0	1,496.1	1,503.2	1,501.8	3.3	3.1	167.79	-14.5	-15.9	46.2	40.0	6.16	7.497			
1,600.0	1,594.2	1,604.3	1,601.8	3.6	3.4	166.83	-27.3	-22.9	51.8	45.2	6.60	7.852			
1,677.6	1,669.9	1,682.2	1,678.6	3.9	3.6	166.07	-38.5	-29.1	56.4	49.5	6.95	8.127			
1,700.0	1,691.7	1,704.5	1,700.6	4.0	3.7	165.92	-41.7	-30.8	58.0	50.9	7.05	8.222			
1,800.0	1,789.1	1,804.3	1,799.0	4.4	4.0	165.34	-56.2	-38.8	64.8	57.3	7.54	8.600			
1,900.0	1,886.5	1,904.0	1,897.4	4.8	4.3	164.87	-70.7	-46.7	71.7	63.6	8.03	8.919			
2,000.0	1,983.8	2,003.8	1,995.8	5.3	4.6	164.48	-85.2	-54.7	78.5	70.0	8.55	9.188			
2,100.0	2,081.2	2,103.6	2,094.2	5.7	5.0	164.15	-99.8	-62.6	85.4	76.3	9.07	9.417			
2,200.0	2,178.6	2,203.3	2,192.5	6.2	5.3	163.87	-114.3	-70.6	92.2	82.6	9.59	9.613			
2,300.0	2,275.9	2,303.1	2,290.9	6.6	5.7	163.63	-128.8	-78.5	99.1	88.9	10.13	9.781			
2,400.0	2,373.3	2,402.9	2,389.3	7.1	6.0	163.42	-143.3	-86.5	105.9	95.3	10.67	9.928			
2,500.0	2,470.7	2,502.6	2,487.7	7.5	6.4	163.24	-157.8	-94.4	112.8	101.6	11.22	10.056			
2,600.0	2,568.1	2,602.4	2,586.1	8.0	6.8	163.08	-172.3	-102.4	119.6	107.9	11.77	10.168			
2,700.0	2,665.4	2,702.2	2,684.5	8.5	7.1	162.93	-186.8	-110.3	126.5	114.2	12.32	10.266			
2,800.0	2,762.8	2,801.9	2,782.8	9.0	7.5	162.80	-201.3	-118.3	133.4	120.5	12.88	10.354			
2,900.0	2,860.2	2,901.7	2,881.2	9.4	7.9	162.69	-215.8	-126.2	140.2	126.8	13.44	10.432			
3,000.0	2,957.5	3,001.4	2,979.6	9.9	8.2	162.58	-230.3	-134.2	147.1	133.1	14.01	10.502			
3,100.0	3,054.9	3,101.2	3,078.0	10.4	8.6	162.48	-244.8	-142.1	154.0	139.4	14.57	10.565			
3,200.0	3,152.3	3,201.0	3,176.4	10.9	9.0	162.40	-259.3	-150.1	160.8	145.7	15.14	10.622			
3,300.0	3,249.7	3,300.7	3,274.8	11.4	9.4	162.31	-273.8	-158.0	167.7	152.0	15.71	10.673			
3,400.0	3,347.0	3,400.5	3,373.1	11.8	9.7	162.24	-288.4	-166.0	174.5	158.3	16.28	10.720			
3,500.0	3,444.4	3,500.3	3,471.5	12.3	10.1	162.17	-302.9	-173.9	181.4	164.6	16.86	10.762			
3,600.0	3,541.8	3,600.0	3,569.9	12.8	10.5	162.11	-317.4	-181.8	188.3	170.8	17.43	10.801			
3,700.0	3,639.2	3,699.8	3,668.3	13.3	10.9	162.05	-331.9	-189.8	195.1	177.1	18.01	10.837			
3,800.0	3,736.5	3,799.6	3,766.7	13.8	11.3	161.99	-346.4	-197.7	202.0	183.4	18.58	10.870			
3,900.0	3,833.9	3,899.3	3,865.1	14.3	11.6	161.94	-360.9	-205.7	208.9	189.7	19.16	10.900			
4,000.0	3,931.3	3,999.1	3,963.4	14.7	12.0	161.89	-375.4	-213.6	215.7	196.0	19.74	10.928			
4,100.0	4,028.6	4,098.8	4,061.8	15.2	12.4	161.85	-389.9	-221.6	222.6	202.3	20.32	10.954			
4,200.0	4,126.0	4,198.6	4,160.2	15.7	12.8	161.80	-404.4	-229.5	229.5	208.6	20.90	10.978			
4,300.0	4,223.4	4,298.4	4,258.6	16.2	13.2	161.76	-418.9	-237.5	236.3	214.8	21.48	11.001			
4,400.0	4,320.8	4,398.1	4,357.0	16.7	13.6	161.72	-433.4	-245.4	243.2	221.1	22.07	11.021			
4,500.0	4,418.1	4,497.9	4,455.4	17.2	14.0	161.69	-447.9	-253.4	250.1	227.4	22.65	11.041			
4,600.0	4,515.5	4,597.7	4,553.7	17.7	14.3	161.65	-462.4	-261.3	256.9	233.7	23.23	11.059			
4,700.0	4,612.9	4,697.4	4,652.1	18.1	14.7	161.62	-476.9	-269.3	263.8	240.0	23.82	11.077			
4,800.0	4,710.2	4,797.2	4,750.5	18.6	15.1	161.59	-491.5	-277.2	270.7	246.3	24.40	11.093			
4,900.0	4,807.6	4,897.0	4,848.9	19.1	15.5	161.56	-506.0	-285.2	277.5	252.5	24.98	11.108			

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 High Pointe LLC 10F-232
Project:	SEC.10-T5N-R67W	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Reference Site:	High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	High Pointe LLC 10F-232	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 (1-18-16)	Offset TVD Reference:	Offset Datum

Offset Design		High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W - High Pointe LLC 10F-302 - Wellbore #1 - Plan #1											Offset Site Error:		0.0 ft
Survey Program:		0-MWD											Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
5,000.0	4,905.0	4,996.7	4,947.3	19.6	15.9	161.53	-520.5	-293.1	284.4	258.8	25.57	11.122			
5,100.0	5,002.4	5,096.5	5,045.6	20.1	16.3	161.51	-535.0	-301.1	291.3	265.1	26.16	11.136			
5,200.0	5,099.7	5,196.2	5,144.0	20.6	16.7	161.48	-549.5	-309.0	298.1	271.4	26.74	11.148			
5,300.0	5,197.1	5,296.0	5,242.4	21.1	17.0	161.46	-564.0	-317.0	305.0	277.7	27.33	11.161			
5,400.0	5,294.5	5,395.8	5,340.8	21.6	17.4	161.43	-578.5	-324.9	311.9	283.9	27.91	11.172			
5,500.0	5,391.9	5,495.5	5,439.2	22.1	17.8	161.41	-593.0	-332.9	318.7	290.2	28.50	11.183			
5,557.2	5,447.6	5,552.6	5,495.5	22.3	18.0	161.40	-601.3	-337.4	322.6	293.8	28.84	11.189			
5,600.0	5,489.3	5,595.3	5,537.6	22.5	18.2	161.39	-607.5	-340.8	325.3	296.2	29.10	11.179			
5,700.0	5,587.3	5,695.2	5,636.1	22.8	18.6	161.21	-622.0	-348.8	329.1	299.4	29.68	11.087			
5,800.0	5,686.0	5,794.3	5,733.8	23.1	19.0	160.83	-636.4	-356.7	329.6	299.3	30.26	10.891			
5,900.0	5,785.2	5,885.0	5,823.5	23.3	19.2	160.42	-648.1	-363.1	328.5	297.8	30.73	10.690			
6,000.0	5,884.8	5,975.8	5,913.7	23.5	19.4	160.05	-657.4	-368.1	327.0	295.8	31.14	10.501			
6,100.0	5,984.6	6,066.6	6,004.2	23.7	19.6	159.72	-664.1	-371.8	325.0	293.5	31.48	10.323			
6,200.0	6,084.6	6,157.5	6,095.0	23.8	19.8	159.43	-668.2	-374.1	322.5	290.7	31.76	10.155			
6,215.4	6,100.0	6,171.5	6,109.0	23.8	19.8	0.12	-668.7	-374.3	322.1	280.5	41.58	7.746			
6,300.0	6,184.6	6,248.5	6,186.0	23.9	19.9	0.00	-669.9	-375.0	320.7	278.9	41.78	7.677			
6,335.2	6,219.8	6,282.4	6,219.8	24.0	19.9	0.00	-669.9	-375.0	320.7	278.8	41.86	7.660			
6,386.9	6,271.4	6,334.0	6,271.4	24.0	20.0	0.00	-669.9	-375.0	320.7	278.7	41.98	7.638			
6,388.7	6,273.3	6,335.9	6,273.3	24.0	20.0	-90.00	-669.9	-375.0	320.7	288.3	32.37	9.906			
6,400.0	6,284.6	6,347.1	6,284.6	24.0	20.0	-90.02	-669.9	-375.0	320.7	288.3	32.41	9.894			
6,450.0	6,334.5	6,397.1	6,334.5	24.1	20.1	-90.46	-669.9	-375.0	320.7	288.0	32.64	9.823			
6,500.0	6,384.2	6,447.2	6,384.6	24.1	20.1	-91.14	-669.9	-373.1	320.7	287.8	32.90	9.749			
6,550.0	6,433.3	6,497.6	6,434.7	24.1	20.2	-91.82	-669.9	-367.8	320.8	287.7	33.11	9.690			
6,600.0	6,481.8	6,548.3	6,484.7	24.1	20.2	-92.50	-669.9	-359.2	321.0	287.7	33.27	9.647			
6,650.0	6,529.4	6,599.2	6,534.1	24.1	20.2	-93.16	-669.9	-347.2	321.2	287.8	33.39	9.618			
6,700.0	6,575.9	6,650.4	6,583.0	24.1	20.2	-93.81	-669.9	-331.9	321.4	287.9	33.47	9.603			
6,750.0	6,621.1	6,701.8	6,630.9	24.1	20.2	-94.45	-669.9	-313.3	321.6	288.1	33.51	9.599			
6,800.0	6,664.7	6,753.5	6,677.7	24.0	20.2	-95.06	-669.9	-291.4	321.9	288.4	33.52	9.604			
6,850.0	6,706.7	6,805.5	6,723.1	24.0	20.1	-95.66	-669.9	-266.2	322.2	288.7	33.52	9.614			
6,900.0	6,746.9	6,857.7	6,766.9	24.0	20.1	-96.23	-669.9	-237.8	322.6	289.1	33.52	9.623			
6,950.0	6,784.9	6,910.1	6,808.8	23.9	20.0	-96.77	-669.9	-206.4	322.9	289.4	33.55	9.626			
7,000.0	6,820.8	6,962.7	6,848.7	23.9	20.0	-97.28	-669.9	-172.0	323.3	289.7	33.62	9.615			
7,050.0	6,854.4	7,015.6	6,886.2	23.8	19.9	-97.76	-669.9	-134.8	323.6	289.9	33.77	9.582			
7,100.0	6,885.4	7,068.6	6,921.3	23.8	19.9	-98.21	-669.9	-95.0	324.0	290.0	34.03	9.520			
7,150.0	6,913.8	7,121.9	6,953.5	23.8	19.8	-98.61	-669.9	-52.6	324.3	289.9	34.42	9.422			
7,200.0	6,939.5	7,175.3	6,982.9	23.7	19.8	-98.98	-669.9	-8.0	324.7	289.7	34.97	9.285			
7,250.0	6,962.3	7,228.9	7,009.1	23.7	19.8	-99.31	-669.9	38.8	324.9	289.3	35.69	9.105			
7,300.0	6,982.2	7,282.7	7,032.0	23.7	19.7	-99.60	-669.9	87.3	325.2	288.6	36.60	8.885			
7,350.0	6,999.0	7,336.5	7,051.5	23.8	19.7	-99.84	-669.9	137.5	325.5	287.7	37.72	8.629			
7,400.0	7,012.7	7,390.5	7,067.4	23.8	19.8	-100.04	-669.9	189.1	325.6	286.6	39.02	8.345			
7,450.0	7,023.2	7,444.5	7,079.7	24.0	20.3	-100.19	-669.9	241.7	325.8	285.3	40.51	8.042			
7,500.0	7,030.5	7,498.6	7,088.3	24.2	21.1	-100.30	-669.9	295.1	325.9	283.7	42.17	7.728			
7,550.0	7,034.5	7,552.8	7,093.0	24.5	22.0	-100.35	-669.9	349.0	326.0	282.0	43.99	7.411			
7,593.9	7,035.4	7,600.3	7,094.0	25.0	22.9	-100.37	-669.9	396.5	326.0	280.3	45.68	7.136			
7,600.0	7,035.3	7,606.3	7,094.0	25.1	23.1	-100.37	-669.9	402.6	326.0	280.1	45.91	7.101			
7,700.0	7,034.4	7,706.3	7,093.1	26.5	25.1	-100.37	-669.9	502.6	326.0	276.2	49.77	6.550			
7,800.0	7,033.5	7,806.3	7,092.2	28.4	27.2	-100.38	-669.9	602.6	326.0	272.1	53.92	6.046			
7,900.0	7,032.5	7,906.3	7,091.3	30.5	29.4	-100.39	-669.9	702.6	326.0	267.7	58.29	5.592			
8,000.0	7,031.6	8,006.3	7,090.4	32.7	31.8	-100.39	-669.9	802.6	326.0	263.1	62.85	5.187			
8,100.0	7,030.7	8,106.3	7,089.5	35.0	34.2	-100.40	-669.9	902.6	326.0	258.4	67.55	4.826			

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 High Pointe LLC 10F-232
Project:	SEC.10-T5N-R67W	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Reference Site:	High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	High Pointe LLC 10F-232	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 (1-18-16)	Offset TVD Reference:	Offset Datum

Offset Design													High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W - High Pointe LLC 10F-302 - Wellbore #1 - Plan #1		Offset Site Error:		0.0 ft
Survey Program: 0-MWD													Offset Well Error:		0.0 ft		
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor					
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)						
8,200.0	7,029.8	8,206.3	7,088.6	37.4	36.6	-100.40	-669.9	1,002.6	326.0	253.6	72.37	4.505					
8,300.0	7,028.8	8,306.3	7,087.7	39.8	39.1	-100.41	-669.9	1,102.6	326.0	248.7	77.28	4.218					
8,400.0	7,027.9	8,406.3	7,086.8	42.3	41.7	-100.42	-669.9	1,202.6	326.0	243.7	82.27	3.963					
8,500.0	7,027.0	8,506.3	7,086.0	44.8	44.2	-100.42	-669.9	1,302.6	326.0	238.7	87.33	3.733					
8,600.0	7,026.1	8,606.3	7,085.1	47.4	46.8	-100.43	-669.9	1,402.6	326.0	233.6	92.43	3.527					
8,700.0	7,025.1	8,706.3	7,084.2	50.0	49.4	-100.43	-669.9	1,502.5	326.0	228.4	97.58	3.341					
8,800.0	7,024.2	8,806.3	7,083.3	52.6	52.1	-100.44	-669.9	1,602.5	326.0	223.3	102.77	3.172					
8,900.0	7,023.3	8,906.3	7,082.4	55.2	54.7	-100.45	-669.9	1,702.5	326.0	218.0	107.99	3.019					
9,000.0	7,022.4	9,006.3	7,081.5	57.8	57.4	-100.45	-670.0	1,802.5	326.0	212.8	113.24	2.879					
9,100.0	7,021.4	9,106.3	7,080.6	60.5	60.1	-100.46	-670.0	1,902.5	326.0	207.5	118.52	2.751					
9,200.0	7,020.5	9,206.3	7,079.7	63.1	62.8	-100.47	-670.0	2,002.5	326.1	202.2	123.81	2.633					
9,300.0	7,019.6	9,306.3	7,078.8	65.8	65.5	-100.47	-670.0	2,102.5	326.1	196.9	129.12	2.525					
9,400.0	7,018.7	9,406.3	7,077.9	68.5	68.2	-100.48	-670.0	2,202.5	326.1	191.6	134.45	2.425					
9,500.0	7,017.7	9,506.3	7,077.1	71.2	70.9	-100.48	-670.0	2,302.5	326.1	186.3	139.80	2.332					
9,600.0	7,016.8	9,606.3	7,076.2	73.9	73.6	-100.49	-670.0	2,402.5	326.1	180.9	145.16	2.246					
9,700.0	7,015.9	9,706.3	7,075.3	76.6	76.3	-100.50	-670.0	2,502.5	326.1	175.6	150.53	2.166					
9,800.0	7,015.0	9,806.3	7,074.4	79.4	79.1	-100.50	-670.0	2,602.5	326.1	170.2	155.90	2.092					
9,900.0	7,014.0	9,906.3	7,073.5	82.1	81.8	-100.51	-670.0	2,702.5	326.1	164.8	161.29	2.022					
10,000.0	7,013.1	10,006.3	7,072.6	84.8	84.5	-100.51	-670.0	2,802.5	326.1	159.4	166.69	1.956					
10,100.0	7,012.2	10,106.3	7,071.7	87.5	87.3	-100.52	-670.0	2,902.5	326.1	154.0	172.09	1.895					
10,200.0	7,011.3	10,206.3	7,070.8	90.3	90.0	-100.53	-670.0	3,002.5	326.1	148.6	177.50	1.837					
10,300.0	7,010.3	10,306.3	7,069.9	93.0	92.8	-100.53	-670.0	3,102.5	326.1	143.2	182.92	1.783					
10,400.0	7,009.4	10,406.3	7,069.0	95.8	95.5	-100.54	-670.0	3,202.5	326.1	137.8	188.34	1.731					
10,500.0	7,008.5	10,506.3	7,068.2	98.5	98.3	-100.54	-670.0	3,302.5	326.1	132.3	193.77	1.683					
10,600.0	7,007.6	10,606.3	7,067.3	101.3	101.1	-100.55	-670.0	3,402.5	326.1	126.9	199.20	1.637					
10,700.0	7,006.6	10,706.3	7,066.4	104.0	103.8	-100.56	-670.0	3,502.5	326.1	121.5	204.64	1.594					
10,800.0	7,005.7	10,806.3	7,065.5	106.8	106.6	-100.56	-670.0	3,602.5	326.1	116.1	210.08	1.552					
10,900.0	7,004.8	10,906.3	7,064.6	109.5	109.3	-100.57	-670.0	3,702.5	326.1	110.6	215.52	1.513					
11,000.0	7,003.9	11,006.3	7,063.7	112.3	112.1	-100.57	-670.0	3,802.5	326.1	105.2	220.97	1.476	Level 3				
11,100.0	7,002.9	11,106.3	7,062.8	115.1	114.9	-100.58	-670.0	3,902.5	326.1	99.7	226.42	1.440	Level 3				
11,200.0	7,002.0	11,206.3	7,061.9	117.8	117.7	-100.59	-670.0	4,002.5	326.2	94.3	231.87	1.407	Level 3				
11,300.0	7,001.1	11,306.3	7,061.0	120.6	120.4	-100.59	-670.0	4,102.4	326.2	88.8	237.33	1.374	Level 3				
11,400.0	7,000.2	11,406.3	7,060.1	123.4	123.2	-100.60	-670.0	4,202.4	326.2	83.4	242.79	1.343	Level 3				
11,405.1	7,000.1	11,411.5	7,060.1	123.5	123.3	-100.60	-670.0	4,207.6	326.2	83.1	243.07	1.342	Level 3				
11,416.7	7,000.0	11,422.4	7,060.0	123.8	123.7	-100.60	-670.0	4,218.5	326.2	82.5	243.68	1.338	Level 3, SF				

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well High Pointe LLC 10F-232
Project:	SEC.10-T5N-R67W	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Reference Site:	High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	High Pointe LLC 10F-232	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 (1-18-16)	Offset TVD Reference:	Offset Datum

Offset Design High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W - High Pointe LLC 10F-312 - Wellbore #1 - Plan #1													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	3.64	43.7	2.8	43.8					
100.0	100.0	100.0	100.0	0.1	0.1	3.64	43.7	2.8	43.8	43.6	0.22	194.916		
200.0	200.0	200.0	200.0	0.3	0.3	3.64	43.7	2.8	43.8	43.1	0.67	64.968		
300.0	300.0	300.0	300.0	0.6	0.6	3.64	43.7	2.8	43.8	42.7	1.12	38.980		
400.0	400.0	400.0	400.0	0.8	0.8	3.64	43.7	2.8	43.8	42.2	1.57	27.843		
500.0	500.0	500.0	500.0	1.0	1.0	3.64	43.7	2.8	43.8	41.8	2.02	21.655		
600.0	600.0	600.0	600.0	1.2	1.2	3.64	43.7	2.8	43.8	41.3	2.47	17.718		
700.0	700.0	700.0	700.0	1.5	1.5	3.64	43.7	2.8	43.8	40.9	2.92	14.992		
800.0	800.0	800.0	800.0	1.7	1.7	3.64	43.7	2.8	43.8	40.4	3.37	12.993 CC, ES		
900.0	900.0	900.0	900.0	1.9	1.9	163.39	43.7	2.8	45.1	41.3	3.80	11.872		
1,000.0	999.9	999.9	999.9	2.1	2.1	164.69	43.7	2.8	48.8	44.6	4.20	11.623		
1,100.0	1,099.7	1,099.7	1,099.7	2.3	2.4	166.47	43.7	2.8	55.2	50.6	4.62	11.953		
1,200.0	1,199.3	1,199.3	1,199.3	2.5	2.6	168.35	43.7	2.8	64.1	59.1	5.03	12.731		
1,300.0	1,298.6	1,298.6	1,298.6	2.7	2.8	170.12	43.7	2.8	75.7	70.2	5.46	13.861		
1,400.0	1,397.5	1,397.5	1,397.5	3.0	3.0	171.66	43.7	2.8	89.8	83.9	5.88	15.269		
1,500.0	1,496.1	1,497.9	1,497.9	3.3	3.2	172.46	43.1	1.7	105.8	99.5	6.29	16.814		
1,600.0	1,594.2	1,598.5	1,598.4	3.6	3.4	172.27	41.3	-1.7	122.6	115.9	6.69	18.331		
1,677.6	1,669.9	1,676.6	1,676.4	3.9	3.6	171.67	38.9	-6.0	136.2	129.2	7.00	19.446		
1,700.0	1,691.7	1,699.2	1,698.9	4.0	3.6	171.45	38.1	-7.5	140.2	133.1	7.10	19.741		
1,800.0	1,789.1	1,800.3	1,799.5	4.4	3.8	170.13	33.7	-15.6	156.9	149.3	7.55	20.783		
1,900.0	1,886.5	1,901.7	1,900.3	4.8	4.1	168.36	28.0	-26.1	172.0	164.0	8.02	21.438		
2,000.0	1,983.8	2,000.9	1,998.6	5.3	4.3	166.50	21.7	-37.8	186.3	177.8	8.52	21.857		
2,100.0	2,081.2	2,099.7	2,096.5	5.7	4.6	164.91	15.3	-49.5	200.8	191.7	9.05	22.195		
2,200.0	2,178.6	2,198.5	2,194.4	6.2	4.8	163.54	9.0	-61.1	215.4	205.8	9.59	22.467		
2,300.0	2,275.9	2,297.3	2,292.3	6.6	5.1	162.34	2.7	-72.8	230.0	219.9	10.14	22.685		
2,400.0	2,373.3	2,396.1	2,390.2	7.1	5.4	161.29	-3.7	-84.5	244.8	234.1	10.71	22.859		
2,500.0	2,470.7	2,494.9	2,488.1	7.5	5.7	160.35	-10.0	-96.1	259.7	248.4	11.29	22.997		
2,600.0	2,568.1	2,593.7	2,586.0	8.0	6.0	159.52	-16.3	-107.8	274.6	262.7	11.88	23.106		
2,700.0	2,665.4	2,692.6	2,684.0	8.5	6.3	158.77	-22.7	-119.4	289.6	277.1	12.49	23.191		
2,800.0	2,762.8	2,791.4	2,781.9	9.0	6.6	158.10	-29.0	-131.1	304.6	291.5	13.10	23.257		
2,900.0	2,860.2	2,890.2	2,879.8	9.4	6.9	157.49	-35.3	-142.7	319.6	305.9	13.71	23.309		
3,000.0	2,957.5	2,989.0	2,977.7	9.9	7.2	156.93	-41.7	-154.4	334.7	320.4	14.34	23.347		
3,100.0	3,054.9	3,087.8	3,075.6	10.4	7.5	156.42	-48.0	-166.1	349.8	334.8	14.96	23.376		
3,200.0	3,152.3	3,186.6	3,173.5	10.9	7.8	155.95	-54.3	-177.7	364.9	349.3	15.60	23.396		
3,300.0	3,249.7	3,285.4	3,271.4	11.4	8.1	155.53	-60.7	-189.4	380.1	363.8	16.24	23.410		
3,400.0	3,347.0	3,384.2	3,369.3	11.8	8.5	155.13	-67.0	-201.0	395.3	378.4	16.88	23.419		
3,500.0	3,444.4	3,483.0	3,467.2	12.3	8.8	154.76	-73.3	-212.7	410.4	392.9	17.52	23.423		
3,600.0	3,541.8	3,581.8	3,565.2	12.8	9.1	154.42	-79.7	-224.4	425.6	407.5	18.17	23.423		
3,700.0	3,639.2	3,680.6	3,663.1	13.3	9.4	154.11	-86.0	-236.0	440.9	422.0	18.82	23.421		
3,800.0	3,736.5	3,779.4	3,761.0	13.8	9.8	153.81	-92.3	-247.7	456.1	436.6	19.48	23.416		
3,900.0	3,833.9	3,878.2	3,858.9	14.3	10.1	153.53	-98.7	-259.3	471.3	451.2	20.13	23.410		
4,000.0	3,931.3	3,977.0	3,956.8	14.7	10.4	153.27	-105.0	-271.0	486.6	465.8	20.79	23.402		
4,100.0	4,028.6	4,075.8	4,054.7	15.2	10.7	153.03	-111.3	-282.7	501.8	480.4	21.45	23.393		
4,200.0	4,126.0	4,174.7	4,152.6	15.7	11.1	152.80	-117.7	-294.3	517.1	495.0	22.12	23.383		
4,300.0	4,223.4	4,273.5	4,250.5	16.2	11.4	152.58	-124.0	-306.0	532.4	509.6	22.78	23.372		
4,400.0	4,320.8	4,372.3	4,348.5	16.7	11.7	152.38	-130.3	-317.6	547.7	524.2	23.44	23.361		
4,500.0	4,418.1	4,471.1	4,446.4	17.2	12.1	152.19	-136.7	-329.3	563.0	538.9	24.11	23.349		
4,600.0	4,515.5	4,569.9	4,544.3	17.7	12.4	152.00	-143.0	-341.0	578.3	553.5	24.78	23.337		
4,700.0	4,612.9	4,666.8	4,640.3	18.1	12.7	151.84	-149.2	-352.3	593.6	568.2	25.43	23.343		
4,800.0	4,710.2	4,758.4	4,731.3	18.6	12.9	151.89	-154.0	-361.1	609.8	583.8	25.98	23.477		
4,900.0	4,807.6	4,849.5	4,822.2	19.1	13.1	152.19	-157.3	-367.4	627.2	600.7	26.45	23.709		

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 High Pointe LLC 10F-232
Project:	SEC.10-T5N-R67W	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Reference Site:	High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	High Pointe LLC 10F-232	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 (1-18-16)	Offset TVD Reference:	Offset Datum

Offset Design High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W - High Pointe LLC 10F-312 - Wellbore #1 - Plan #1													Offset Site Error: 0.0 ft		
Survey Program: 0-MWD														Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
5,000.0	4,905.0	4,939.9	4,912.5	19.6	13.3	152.71	-159.3	-371.0	645.8	618.9	26.88	24.028			
5,100.0	5,002.4	5,029.8	5,002.4	20.1	13.4	153.42	-160.0	-372.2	665.6	638.4	27.25	24.427			
5,200.0	5,099.7	5,127.2	5,099.7	20.6	13.6	154.27	-160.0	-372.2	686.2	658.5	27.61	24.854			
5,300.0	5,197.1	5,224.5	5,197.1	21.1	13.8	155.07	-160.0	-372.2	706.8	678.9	27.97	25.269			
5,400.0	5,294.5	5,321.9	5,294.5	21.6	13.9	155.82	-160.0	-372.2	727.6	699.3	28.34	25.673			
5,500.0	5,391.9	5,419.3	5,391.9	22.1	14.1	156.53	-160.0	-372.2	748.6	719.8	28.72	26.067			
5,557.2	5,447.6	5,475.0	5,447.6	22.3	14.2	156.92	-160.0	-372.2	760.6	731.7	28.93	26.287			
5,600.0	5,489.3	5,516.7	5,489.3	22.5	14.2	157.27	-160.0	-372.2	769.3	740.2	29.11	26.428			
5,700.0	5,587.3	5,614.8	5,587.3	22.8	14.4	157.95	-160.0	-372.2	787.5	758.0	29.48	26.711			
5,800.0	5,686.0	5,713.4	5,686.0	23.1	14.6	158.50	-160.0	-372.2	802.5	772.7	29.84	26.896			
5,900.0	5,785.2	5,812.6	5,785.2	23.3	14.8	158.91	-160.0	-372.2	814.4	784.2	30.18	26.988			
6,000.0	5,884.8	5,912.2	5,884.8	23.5	14.9	159.21	-160.0	-372.2	823.0	792.6	30.49	26.993			
6,100.0	5,984.6	6,012.0	5,984.6	23.7	15.1	159.39	-160.0	-372.2	828.4	797.7	30.78	26.915			
6,200.0	6,084.6	6,112.0	6,084.6	23.8	15.3	159.46	-160.0	-372.2	830.6	799.5	31.04	26.757			
6,215.4	6,100.0	6,127.4	6,100.0	23.8	15.3	0.19	-160.0	-372.2	830.6	794.0	36.65	22.666			
6,300.0	6,184.6	6,212.0	6,184.6	23.9	15.5	0.19	-160.0	-372.2	830.6	793.7	36.91	22.503			
6,386.9	6,271.4	6,298.9	6,271.4	24.0	15.6	0.19	-160.0	-372.2	830.6	793.4	37.17	22.345			
6,400.0	6,284.6	6,312.0	6,284.6	24.0	15.7	-89.82	-160.0	-372.2	830.6	798.9	31.72	26.190			
6,450.0	6,334.5	6,361.9	6,334.5	24.1	15.7	-89.99	-160.0	-372.2	830.6	798.7	31.90	26.042			
6,452.2	6,336.7	6,364.1	6,336.7	24.1	15.7	-90.00	-160.0	-372.2	830.6	798.7	31.90	26.036			
6,500.0	6,384.2	6,411.9	6,384.4	24.1	15.8	-90.30	-160.0	-371.0	830.6	798.6	32.06	25.909			
6,550.0	6,433.3	6,462.1	6,434.4	24.1	15.9	-90.61	-160.0	-366.5	830.7	798.5	32.18	25.812			
6,600.0	6,481.8	6,512.6	6,484.3	24.1	15.9	-90.92	-160.0	-358.7	830.7	798.5	32.26	25.747			
6,650.0	6,529.4	6,563.5	6,533.9	24.1	15.9	-91.23	-160.0	-347.5	830.8	798.5	32.31	25.710			
6,700.0	6,575.9	6,614.6	6,583.0	24.1	15.9	-91.53	-160.0	-332.9	830.9	798.6	32.33	25.697			
6,750.0	6,621.1	6,666.1	6,631.2	24.1	15.9	-91.83	-160.0	-315.0	831.0	798.7	32.34	25.700			
6,800.0	6,664.7	6,717.8	6,678.4	24.0	15.9	-92.12	-160.0	-293.7	831.2	798.9	32.33	25.710			
6,850.0	6,706.7	6,769.9	6,724.3	24.0	15.9	-92.41	-160.0	-269.2	831.4	799.0	32.33	25.715			
6,900.0	6,746.9	6,822.3	6,768.7	24.0	15.9	-92.68	-160.0	-241.4	831.5	799.2	32.35	25.701			
6,950.0	6,784.9	6,875.0	6,811.3	23.9	15.9	-92.94	-160.0	-210.4	831.7	799.3	32.43	25.650			
7,000.0	6,820.8	6,927.9	6,851.8	23.9	16.0	-93.19	-160.0	-176.4	831.9	799.3	32.56	25.547			
7,050.0	6,854.4	6,981.2	6,890.2	23.8	16.0	-93.42	-160.0	-139.4	832.1	799.3	32.80	25.371			
7,100.0	6,885.4	7,034.7	6,926.0	23.8	16.2	-93.64	-160.0	-99.7	832.3	799.2	33.15	25.107			
7,150.0	6,913.8	7,088.4	6,959.1	23.8	16.4	-93.85	-160.0	-57.4	832.5	798.9	33.64	24.744			
7,200.0	6,939.5	7,142.4	6,989.2	23.7	16.7	-94.03	-160.0	-12.6	832.7	798.4	34.30	24.275			
7,250.0	6,962.3	7,196.6	7,016.3	23.7	17.1	-94.20	-160.0	34.3	832.9	797.7	35.14	23.703			
7,300.0	6,982.2	7,250.9	7,040.0	23.7	17.6	-94.35	-160.0	83.2	833.0	796.9	36.16	23.037			
7,350.0	6,999.0	7,305.5	7,060.2	23.8	18.2	-94.48	-160.0	133.9	833.2	795.8	37.38	22.292			
7,400.0	7,012.7	7,360.2	7,076.8	23.8	19.0	-94.58	-160.0	186.0	833.3	794.5	38.77	21.492			
7,450.0	7,023.2	7,415.0	7,089.7	24.0	19.8	-94.67	-160.0	239.2	833.4	793.0	40.34	20.660			
7,500.0	7,030.5	7,469.9	7,098.7	24.2	20.7	-94.73	-160.0	293.4	833.5	791.4	42.06	19.818			
7,550.0	7,034.5	7,524.9	7,103.8	24.5	21.7	-94.78	-160.0	348.1	833.5	789.6	43.90	18.986			
7,593.9	7,035.4	7,573.2	7,105.0	25.0	22.6	-94.79	-160.0	396.4	833.5	787.9	45.61	18.277			
7,600.0	7,035.3	7,579.4	7,105.0	25.1	22.7	-94.79	-160.0	402.6	833.5	787.7	45.84	18.185			
7,700.0	7,034.4	7,679.4	7,104.1	26.5	24.7	-94.80	-160.0	502.6	833.5	783.8	49.79	16.743			
7,800.0	7,033.5	7,779.4	7,103.3	28.4	26.9	-94.81	-160.0	602.6	833.6	779.5	54.01	15.433			
7,900.0	7,032.5	7,879.4	7,102.5	30.5	29.2	-94.81	-160.0	702.6	833.6	775.1	58.47	14.257			
8,000.0	7,031.6	7,979.4	7,101.6	32.7	31.5	-94.82	-160.0	802.6	833.6	770.5	63.10	13.210			
8,100.0	7,030.7	8,079.4	7,100.8	35.0	33.9	-94.82	-160.0	902.6	833.6	765.7	67.88	12.279			
8,200.0	7,029.8	8,179.4	7,099.9	37.4	36.4	-94.83	-160.0	1,002.6	833.6	760.8	72.78	11.453			

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 High Pointe LLC 10F-232
Project:	SEC.10-T5N-R67W	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Reference Site:	High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	High Pointe LLC 10F-232	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 (1-18-16)	Offset TVD Reference:	Offset Datum

Offset Design		High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W - High Pointe LLC 10F-312 - Wellbore #1 - Plan #1											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			
8,300.0	7,028.8	8,279.4	7,099.1	39.8	38.9	-94.84	-160.0	1,102.6	833.6	755.8	77.77	10.719			
8,400.0	7,027.9	8,379.4	7,098.3	42.3	41.5	-94.84	-160.0	1,202.6	833.6	750.8	82.84	10.063			
8,500.0	7,027.0	8,479.4	7,097.4	44.8	44.1	-94.85	-160.0	1,302.6	833.6	745.6	87.96	9.477			
8,600.0	7,026.1	8,579.4	7,096.6	47.4	46.7	-94.85	-160.0	1,402.6	833.6	740.5	93.15	8.949			
8,700.0	7,025.1	8,679.4	7,095.8	50.0	49.3	-94.86	-160.0	1,502.6	833.6	735.2	98.37	8.474			
8,800.0	7,024.2	8,779.4	7,094.9	52.6	51.9	-94.87	-160.0	1,602.6	833.6	730.0	103.64	8.044			
8,900.0	7,023.3	8,879.4	7,094.1	55.2	54.6	-94.87	-160.0	1,702.6	833.6	724.7	108.94	7.653			
9,000.0	7,022.4	8,979.4	7,093.2	57.8	57.3	-94.88	-160.0	1,802.6	833.6	719.4	114.26	7.296			
9,100.0	7,021.4	9,079.4	7,092.4	60.5	60.0	-94.88	-160.0	1,902.6	833.7	714.0	119.61	6.970			
9,200.0	7,020.5	9,179.4	7,091.6	63.1	62.7	-94.89	-160.0	2,002.6	833.7	708.7	124.98	6.670			
9,300.0	7,019.6	9,279.4	7,090.7	65.8	65.4	-94.90	-160.0	2,102.6	833.7	703.3	130.37	6.395			
9,400.0	7,018.7	9,379.4	7,089.9	68.5	68.1	-94.90	-160.0	2,202.6	833.7	697.9	135.77	6.140			
9,500.0	7,017.7	9,479.4	7,089.1	71.2	70.8	-94.91	-160.0	2,302.6	833.7	692.5	141.19	5.905			
9,600.0	7,016.8	9,579.4	7,088.2	73.9	73.6	-94.91	-160.0	2,402.6	833.7	687.1	146.62	5.686			
9,700.0	7,015.9	9,679.4	7,087.4	76.6	76.3	-94.92	-160.0	2,502.6	833.7	681.6	152.06	5.483			
9,800.0	7,015.0	9,779.4	7,086.5	79.4	79.0	-94.93	-160.0	2,602.6	833.7	676.2	157.51	5.293			
9,900.0	7,014.0	9,879.4	7,085.7	82.1	81.8	-94.93	-159.9	2,702.6	833.7	670.7	162.98	5.116			
10,000.0	7,013.1	9,979.4	7,084.9	84.8	84.5	-94.94	-159.9	2,802.6	833.7	665.3	168.45	4.949			
10,100.0	7,012.2	10,079.4	7,084.0	87.5	87.3	-94.94	-159.9	2,902.6	833.7	659.8	173.92	4.794			
10,200.0	7,011.3	10,179.4	7,083.2	90.3	90.0	-94.95	-159.9	3,002.6	833.7	654.3	179.41	4.647			
10,300.0	7,010.3	10,279.4	7,082.3	93.0	92.8	-94.96	-159.9	3,102.5	833.7	648.8	184.90	4.509			
10,400.0	7,009.4	10,379.4	7,081.5	95.8	95.5	-94.96	-159.9	3,202.5	833.8	643.4	190.39	4.379			
10,500.0	7,008.5	10,479.4	7,080.7	98.5	98.3	-94.97	-159.9	3,302.5	833.8	637.9	195.89	4.256			
10,600.0	7,007.6	10,579.4	7,079.8	101.3	101.1	-94.97	-159.9	3,402.5	833.8	632.4	201.40	4.140			
10,700.0	7,006.6	10,679.4	7,079.0	104.0	103.8	-94.98	-159.9	3,502.5	833.8	626.9	206.91	4.030			
10,800.0	7,005.7	10,779.4	7,078.2	106.8	106.6	-94.99	-159.9	3,602.5	833.8	621.4	212.42	3.925			
10,900.0	7,004.8	10,879.4	7,077.3	109.5	109.4	-94.99	-159.9	3,702.5	833.8	615.9	217.94	3.826			
11,000.0	7,003.9	10,979.4	7,076.5	112.3	112.2	-95.00	-159.9	3,802.5	833.8	610.3	223.46	3.731			
11,100.0	7,002.9	11,079.4	7,075.6	115.1	114.9	-95.00	-159.9	3,902.5	833.8	604.8	228.98	3.641			
11,200.0	7,002.0	11,179.4	7,074.8	117.8	117.7	-95.01	-159.9	4,002.5	833.8	599.3	234.51	3.556			
11,300.0	7,001.1	11,279.4	7,074.0	120.6	120.5	-95.02	-159.9	4,102.5	833.8	593.8	240.04	3.474			
11,400.0	7,000.2	11,379.4	7,073.1	123.4	123.3	-95.02	-159.9	4,202.5	833.8	588.3	245.57	3.395			
11,416.7	7,000.0	11,396.0	7,073.0	123.8	123.7	-95.02	-159.9	4,219.1	833.8	587.3	246.49	3.383 SF			

Company:	PETROLEUM DEVELOPMENT CORP DJ	Local Co-ordinate Reference:	Well High Pointe LLC 10F-232
Project:	SEC.10-T5N-R67W	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Reference Site:	High Pointe LLC 5N67W10A Pad	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	High Pointe LLC 10F-232	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 (1-18-16)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W - High Pointe LLC 10G-202 - Wellbore #1 - Plan #														
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	-180.00	-29.1	0.0	29.1	29.1	0.00	N/A		
100.0	100.0	100.0	100.0	0.1	0.1	-180.00	-29.1	0.0	29.1	28.9	0.22	129.681		
200.0	200.0	200.0	200.0	0.3	0.3	-180.00	-29.1	0.0	29.1	28.5	0.67	43.224 CC, ES		
300.0	300.0	299.2	299.2	0.6	0.5	-179.43	-30.4	-0.3	30.4	29.3	1.10	27.653		
400.0	400.0	398.3	398.3	0.8	0.7	-177.99	-34.2	-1.2	34.2	32.7	1.53	22.412		
500.0	500.0	497.2	496.9	1.0	1.0	-176.18	-40.4	-2.7	40.6	38.6	1.97	20.598		
600.0	600.0	595.6	594.9	1.2	1.2	-174.44	-49.0	-4.8	49.5	47.1	2.43	20.425		
700.0	700.0	693.6	692.2	1.5	1.5	-172.95	-60.1	-7.4	61.1	58.2	2.89	21.135		
800.0	800.0	790.8	788.5	1.7	1.8	-171.76	-73.5	-10.6	75.1	71.8	3.36	22.356		
900.0	900.0	887.5	883.8	1.9	2.2	-11.68	-89.2	-14.4	90.5	86.7	3.76	24.076		
1,000.0	999.9	983.9	978.4	2.1	2.5	-11.26	-107.1	-18.7	105.8	101.6	4.18	25.329		
1,100.0	1,099.7	1,079.9	1,072.1	2.3	3.0	-11.10	-127.3	-23.5	121.0	116.4	4.61	26.248		
1,200.0	1,199.3	1,175.5	1,164.9	2.5	3.4	-11.10	-149.6	-28.9	136.2	131.1	5.06	26.914		
1,300.0	1,298.6	1,270.8	1,256.8	2.7	3.9	-11.22	-174.1	-34.8	151.3	145.8	5.53	27.383		
1,400.0	1,397.5	1,365.7	1,347.7	3.0	4.4	-11.42	-200.8	-41.2	166.3	160.3	6.00	27.709		
1,500.0	1,496.1	1,462.4	1,439.6	3.3	5.0	-11.69	-229.9	-48.2	181.0	174.5	6.50	27.827		
1,600.0	1,594.2	1,561.6	1,533.9	3.6	5.6	-12.08	-260.1	-55.4	193.5	186.5	7.02	27.547		
1,677.6	1,669.9	1,638.8	1,607.2	3.9	6.1	-12.46	-283.6	-61.1	201.4	194.0	7.44	27.081		
1,700.0	1,691.7	1,661.1	1,628.3	4.0	6.2	-12.59	-290.3	-62.7	203.5	195.9	7.56	26.913		
1,800.0	1,789.1	1,760.6	1,722.9	4.4	6.8	-13.12	-320.6	-70.0	212.7	204.6	8.12	26.201		
1,900.0	1,886.5	1,860.2	1,817.5	4.8	7.5	-13.61	-350.9	-77.2	222.0	213.3	8.69	25.551		
2,000.0	1,983.8	1,959.7	1,912.0	5.3	8.1	-14.06	-381.2	-84.5	231.3	222.0	9.27	24.957		
2,100.0	2,081.2	2,059.3	2,006.6	5.7	8.7	-14.47	-411.5	-91.8	240.6	230.8	9.86	24.414		
2,200.0	2,178.6	2,158.8	2,101.1	6.2	9.3	-14.85	-441.8	-99.0	249.9	239.5	10.45	23.916		
2,300.0	2,275.9	2,258.4	2,195.7	6.6	10.0	-15.21	-472.1	-106.3	259.3	248.2	11.05	23.459		
2,400.0	2,373.3	2,358.0	2,290.2	7.1	10.6	-15.54	-502.4	-113.6	268.6	256.9	11.66	23.039		
2,500.0	2,470.7	2,457.5	2,384.8	7.5	11.2	-15.85	-532.7	-120.8	277.9	265.7	12.27	22.652		
2,600.0	2,568.1	2,557.1	2,479.3	8.0	11.8	-16.14	-563.0	-128.1	287.3	274.4	12.89	22.294		
2,700.0	2,665.4	2,656.6	2,573.9	8.5	12.5	-16.41	-593.3	-135.4	296.7	283.1	13.51	21.962		
2,800.0	2,762.8	2,756.2	2,668.4	9.0	13.1	-16.66	-623.6	-142.7	306.0	291.9	14.13	21.655		
2,900.0	2,860.2	2,855.7	2,763.0	9.4	13.7	-16.90	-653.8	-149.9	315.4	300.6	14.76	21.369		
3,000.0	2,957.5	2,955.3	2,857.5	9.9	14.4	-17.12	-684.1	-157.2	324.8	309.4	15.39	21.103		
3,100.0	3,054.9	3,054.8	2,952.1	10.4	15.0	-17.34	-714.4	-164.5	334.1	318.1	16.02	20.854		
3,200.0	3,152.3	3,154.4	3,046.6	10.9	15.6	-17.54	-744.7	-171.7	343.5	326.9	16.66	20.621		
3,300.0	3,249.7	3,253.9	3,141.2	11.4	16.3	-17.73	-775.0	-179.0	352.9	335.6	17.30	20.403		
3,400.0	3,347.0	3,353.5	3,235.7	11.8	16.9	-17.91	-805.3	-186.3	362.3	344.4	17.94	20.198		
3,500.0	3,444.4	3,453.0	3,330.3	12.3	17.5	-18.08	-835.6	-193.5	371.7	353.1	18.58	20.005		
3,600.0	3,541.8	3,552.6	3,424.8	12.8	18.2	-18.24	-865.9	-200.8	381.1	361.9	19.22	19.823		
3,700.0	3,639.2	3,652.1	3,519.4	13.3	18.8	-18.39	-896.2	-208.1	390.5	370.6	19.87	19.652		
3,800.0	3,736.5	3,751.7	3,613.9	13.8	19.4	-18.54	-926.5	-215.4	399.9	379.4	20.52	19.490		
3,900.0	3,833.9	3,851.2	3,708.5	14.3	20.1	-18.68	-956.8	-222.6	409.3	388.1	21.17	19.337		
4,000.0	3,931.3	3,950.8	3,803.0	14.7	20.7	-18.82	-987.1	-229.9	418.7	396.9	21.82	19.192		
4,100.0	4,028.6	4,050.3	3,897.6	15.2	21.3	-18.94	-1,017.3	-237.2	428.1	405.7	22.47	19.054		
4,200.0	4,126.0	4,149.9	3,992.2	15.7	22.0	-19.07	-1,047.6	-244.4	437.5	414.4	23.12	18.923		
4,300.0	4,223.4	4,249.4	4,086.7	16.2	22.6	-19.19	-1,077.9	-251.7	446.9	423.2	23.78	18.799		
4,400.0	4,320.8	4,349.0	4,181.3	16.7	23.2	-19.30	-1,108.2	-259.0	456.4	431.9	24.43	18.680		
4,500.0	4,418.1	4,448.5	4,275.8	17.2	23.9	-19.41	-1,138.5	-266.2	465.8	440.7	25.09	18.567		
4,600.0	4,515.5	4,548.1	4,370.4	17.7	24.5	-19.51	-1,168.8	-273.5	475.2	449.5	25.74	18.459		
4,700.0	4,612.9	4,647.6	4,464.9	18.1	25.1	-19.61	-1,199.1	-280.8	484.6	458.2	26.40	18.356		
4,800.0	4,710.2	4,747.2	4,559.5	18.6	25.8	-19.71	-1,229.4	-288.1	494.0	467.0	27.06	18.258		
4,900.0	4,807.6	4,846.7	4,654.0	19.1	26.4	-19.80	-1,259.7	-295.3	503.5	475.7	27.72	18.164		

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 High Pointe LLC 10F-232
Project:	SEC.10-T5N-R67W	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Reference Site:	High Pointe LLC 5N67W10A Pad	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	High Pointe LLC 10F-232	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 (1-18-16)	Offset TVD Reference:	Offset Datum

Offset Design													High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W - High Pointe LLC 10G-202 - Wellbore #1 - Plan #		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 Depth (ft)	Vertical Depth Depth (ft)	Measured Depth Depth (ft)	Vertical Depth Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor				
5,000.0	4,905.0	4,946.3	4,748.6	19.6	27.0	-19.89	-1,290.0	-302.6	512.9	484.5	28.38	18.073				
5,100.0	5,002.4	5,045.8	4,843.1	20.1	27.7	-19.97	-1,320.3	-309.9	522.3	493.3	29.04	17.987				
5,200.0	5,099.7	5,145.4	4,937.7	20.6	28.3	-20.06	-1,350.5	-317.1	531.7	502.0	29.70	17.904				
5,300.0	5,197.1	5,245.0	5,032.2	21.1	28.9	-20.14	-1,380.8	-324.4	541.2	510.8	30.36	17.824				
5,400.0	5,294.5	5,344.5	5,126.8	21.6	29.6	-20.21	-1,411.1	-331.7	550.6	519.6	31.02	17.747				
5,500.0	5,391.9	5,444.1	5,221.3	22.1	30.2	-20.29	-1,441.4	-338.9	560.0	528.3	31.69	17.674				
5,557.2	5,447.6	5,506.5	5,280.7	22.3	30.6	-20.34	-1,460.3	-343.5	565.3	533.2	32.08	17.624				
5,600.0	5,489.3	5,559.3	5,331.1	22.5	30.8	-20.41	-1,475.4	-347.1	568.9	536.5	32.35	17.586				
5,700.0	5,587.3	5,683.1	5,450.5	22.8	31.3	-20.55	-1,507.3	-354.8	576.5	543.6	32.90	17.521				
5,800.0	5,686.0	5,807.3	5,571.6	23.1	31.7	-20.66	-1,534.3	-361.2	583.1	549.8	33.38	17.472				
5,900.0	5,785.2	5,931.9	5,694.1	23.3	32.0	-20.73	-1,556.1	-366.5	588.9	555.1	33.77	17.439				
6,000.0	5,884.8	6,056.9	5,817.9	23.5	32.3	-20.77	-1,572.9	-370.5	593.6	559.5	34.08	17.420				
6,100.0	5,984.6	6,182.1	5,942.6	23.7	32.6	-20.78	-1,584.3	-373.2	597.4	563.1	34.31	17.414				
6,200.0	6,084.6	6,307.6	6,067.8	23.8	32.7	-20.76	-1,590.5	-374.7	600.2	565.7	34.45	17.421				
6,215.4	6,100.0	6,326.9	6,087.2	23.8	32.8	179.98	-1,591.0	-374.8	600.5	545.5	55.02	10.915				
6,300.0	6,184.6	6,424.3	6,184.6	23.9	32.8	-180.00	-1,591.6	-375.0	601.0	545.8	55.21	10.887				
6,386.9	6,271.4	6,511.2	6,271.4	24.0	32.9	-180.00	-1,591.6	-375.0	601.0	545.7	55.36	10.857				
6,400.0	6,284.6	6,524.3	6,284.6	24.0	32.9	90.00	-1,591.6	-374.9	601.0	566.0	35.02	17.164				
6,450.0	6,334.5	6,574.3	6,334.5	24.1	32.9	90.00	-1,591.6	-372.4	601.0	565.9	35.13	17.109				
6,500.0	6,384.2	6,624.3	6,384.2	24.1	33.0	90.00	-1,591.6	-366.6	601.0	565.8	35.20	17.075				
6,550.0	6,433.3	6,674.3	6,433.3	24.1	33.0	90.00	-1,591.6	-357.7	601.0	565.8	35.23	17.059				
6,600.0	6,481.8	6,724.3	6,481.8	24.1	33.0	90.00	-1,591.6	-345.5	601.0	565.8	35.23	17.061				
6,650.0	6,529.4	6,774.3	6,529.4	24.1	33.0	90.00	-1,591.6	-330.1	601.0	565.8	35.20	17.077				
6,700.0	6,575.9	6,824.3	6,575.9	24.1	33.0	90.00	-1,591.6	-311.7	601.0	565.9	35.14	17.103				
6,750.0	6,621.1	6,874.3	6,621.1	24.1	32.9	90.00	-1,591.6	-290.3	601.0	566.0	35.08	17.135				
6,800.0	6,664.7	6,924.3	6,664.7	24.0	32.9	90.00	-1,591.6	-266.0	601.0	566.0	35.01	17.166				
6,850.0	6,706.7	6,974.3	6,706.7	24.0	32.9	90.00	-1,591.6	-238.9	601.0	566.1	34.96	17.190				
6,900.0	6,746.9	7,024.3	6,746.8	24.0	32.8	90.00	-1,591.6	-209.1	601.0	566.1	34.95	17.198				
6,950.0	6,784.9	7,074.3	6,784.9	23.9	32.8	90.00	-1,591.6	-176.7	601.0	566.1	34.99	17.179				
7,000.0	6,820.8	7,124.3	6,820.8	23.9	32.8	90.00	-1,591.6	-141.9	601.0	565.9	35.10	17.124				
7,050.0	6,854.4	7,174.3	6,854.4	23.8	32.8	90.00	-1,591.6	-104.8	601.0	565.7	35.31	17.024				
7,100.0	6,885.4	7,224.3	6,885.4	23.8	32.7	90.00	-1,591.6	-65.6	601.0	565.4	35.63	16.870				
7,150.0	6,913.8	7,274.3	6,913.8	23.8	32.7	90.00	-1,591.6	-24.5	601.1	565.0	36.09	16.656				
7,200.0	6,939.5	7,324.3	6,939.5	23.7	32.7	90.00	-1,591.6	18.4	601.1	564.4	36.69	16.381				
7,250.0	6,962.3	7,374.3	6,962.3	23.7	32.7	90.00	-1,591.6	62.9	601.1	563.6	37.46	16.045				
7,300.0	6,982.2	7,424.3	6,982.2	23.7	32.7	90.00	-1,591.6	108.8	601.1	562.7	38.39	15.655				
7,350.0	6,999.0	7,474.3	6,999.0	23.8	32.8	90.00	-1,591.6	155.8	601.1	561.6	39.49	15.220				
7,400.0	7,012.7	7,524.3	7,012.6	23.8	32.8	90.00	-1,591.6	203.9	601.1	560.3	40.75	14.749				
7,450.0	7,023.2	7,574.3	7,023.2	24.0	32.9	90.00	-1,591.7	252.8	601.1	558.9	42.16	14.257				
7,500.0	7,030.5	7,624.3	7,030.5	24.2	33.0	90.00	-1,591.7	302.3	601.1	557.4	43.70	13.753				
7,550.0	7,034.5	7,674.3	7,034.5	24.5	33.2	90.00	-1,591.7	352.1	601.1	555.7	45.36	13.250				
7,593.9	7,035.4	7,718.3	7,035.4	25.0	33.3	90.00	-1,591.7	396.0	601.1	554.2	46.90	12.817				
7,600.0	7,035.3	7,724.3	7,035.3	25.1	33.4	90.00	-1,591.7	402.1	601.1	553.9	47.12	12.756				
7,700.0	7,034.4	7,824.3	7,034.4	26.5	33.9	90.00	-1,591.7	502.1	601.1	550.1	50.92	11.804				
7,800.0	7,033.5	7,924.3	7,033.5	28.4	34.7	90.00	-1,591.7	602.1	601.1	546.0	55.02	10.925				
7,900.0	7,032.5	8,024.3	7,032.5	30.5	35.8	90.00	-1,591.7	702.1	601.1	541.7	59.36	10.126				
8,000.0	7,031.6	8,124.3	7,031.6	32.7	37.3	90.00	-1,591.7	802.0	601.1	537.2	63.90	9.406				
8,100.0	7,030.7	8,224.3	7,030.7	35.0	39.0	90.00	-1,591.7	902.0	601.1	532.5	68.60	8.761				
8,200.0	7,029.8	8,324.3	7,029.8	37.4	40.9	90.00	-1,591.7	1,002.0	601.1	527.6	73.43	8.185				
8,300.0	7,028.8	8,424.3	7,028.8	39.8	42.9	90.00	-1,591.7	1,102.0	601.1	522.7	78.36	7.670				

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 High Pointe LLC 10F-232
Project:	SEC.10-T5N-R67W	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Reference Site:	High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	High Pointe LLC 10F-232	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 (1-18-16)	Offset TVD Reference:	Offset Datum

Offset Design		High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W - High Pointe LLC 10G-202 - Wellbore #1 - Plan #											Offset Site Error:		0.0 ft
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
Depth (ft)	Depth (ft)	Depth (ft)	Depth (ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
8,400.0	7,027.9	8,524.3	7,027.9	42.3	45.1	90.00	-1,591.7	1,202.0	601.1	517.7	83.38	7.209			
8,500.0	7,027.0	8,624.3	7,027.0	44.8	47.4	90.00	-1,591.7	1,302.0	601.1	512.6	88.47	6.794			
8,600.0	7,026.1	8,724.3	7,026.1	47.4	49.7	90.00	-1,591.7	1,402.0	601.1	507.5	93.62	6.420			
8,700.0	7,025.1	8,824.3	7,025.1	50.0	52.1	90.00	-1,591.7	1,502.0	601.1	502.3	98.82	6.083			
8,800.0	7,024.2	8,924.3	7,024.2	52.6	54.6	90.00	-1,591.7	1,602.0	601.1	497.0	104.06	5.776			
8,900.0	7,023.3	9,024.3	7,023.3	55.2	57.1	90.00	-1,591.7	1,702.0	601.1	491.7	109.34	5.497			
9,000.0	7,022.4	9,124.3	7,022.4	57.8	59.6	90.00	-1,591.7	1,802.0	601.1	486.4	114.65	5.243			
9,100.0	7,021.4	9,224.3	7,021.4	60.5	62.2	90.00	-1,591.7	1,902.0	601.1	481.1	119.98	5.010			
9,200.0	7,020.5	9,324.3	7,020.5	63.1	64.8	90.00	-1,591.7	2,002.0	601.1	475.7	125.35	4.795			
9,300.0	7,019.6	9,424.3	7,019.6	65.8	67.4	90.00	-1,591.7	2,102.0	601.1	470.4	130.73	4.598			
9,400.0	7,018.7	9,524.3	7,018.7	68.5	70.0	90.00	-1,591.7	2,202.0	601.1	465.0	136.13	4.416			
9,500.0	7,017.7	9,624.3	7,017.7	71.2	72.6	90.00	-1,591.7	2,302.0	601.1	459.5	141.54	4.247			
9,600.0	7,016.8	9,724.3	7,016.8	73.9	75.3	90.00	-1,591.7	2,402.0	601.1	454.1	146.97	4.090			
9,700.0	7,015.9	9,824.3	7,015.9	76.6	77.9	90.00	-1,591.7	2,502.0	601.1	448.7	152.42	3.944			
9,800.0	7,015.0	9,924.3	7,015.0	79.4	80.6	90.00	-1,591.7	2,602.0	601.1	443.2	157.87	3.807			
9,900.0	7,014.0	10,024.3	7,014.0	82.1	83.3	90.00	-1,591.7	2,702.0	601.1	437.8	163.34	3.680			
10,000.0	7,013.1	10,124.3	7,013.1	84.8	85.9	90.00	-1,591.7	2,802.0	601.1	432.3	168.81	3.561			
10,100.0	7,012.2	10,224.3	7,012.2	87.5	88.6	90.00	-1,591.7	2,902.0	601.1	426.8	174.30	3.449			
10,200.0	7,011.3	10,324.3	7,011.3	90.3	91.3	90.00	-1,591.7	3,002.0	601.1	421.3	179.79	3.343			
10,300.0	7,010.3	10,424.3	7,010.3	93.0	94.0	90.00	-1,591.7	3,101.9	601.1	415.8	185.29	3.244			
10,400.0	7,009.4	10,524.3	7,009.4	95.8	96.7	90.00	-1,591.7	3,201.9	601.1	410.3	190.79	3.151			
10,500.0	7,008.5	10,624.3	7,008.5	98.5	99.5	90.00	-1,591.7	3,301.9	601.1	404.8	196.30	3.062			
10,600.0	7,007.6	10,724.3	7,007.6	101.3	102.2	90.00	-1,591.7	3,401.9	601.1	399.3	201.82	2.978			
10,700.0	7,006.6	10,824.3	7,006.6	104.0	104.9	90.00	-1,591.7	3,501.9	601.1	393.8	207.34	2.899			
10,800.0	7,005.7	10,924.3	7,005.7	106.8	107.6	90.00	-1,591.7	3,601.9	601.1	388.2	212.87	2.824			
10,900.0	7,004.8	11,024.3	7,004.8	109.5	110.4	90.00	-1,591.7	3,701.9	601.1	382.7	218.40	2.752			
11,000.0	7,003.9	11,124.3	7,003.9	112.3	113.1	90.00	-1,591.7	3,801.9	601.1	377.2	223.93	2.684			
11,100.0	7,002.9	11,224.3	7,002.9	115.1	115.9	90.00	-1,591.7	3,901.9	601.1	371.6	229.47	2.620			
11,200.0	7,002.0	11,324.3	7,002.0	117.8	118.6	90.00	-1,591.7	4,001.9	601.1	366.1	235.01	2.558			
11,300.0	7,001.1	11,424.3	7,001.1	120.6	121.3	90.00	-1,591.7	4,101.9	601.1	360.6	240.55	2.499			
11,400.0	7,000.2	11,524.3	7,000.2	123.4	124.1	90.00	-1,591.7	4,201.9	601.1	355.0	246.10	2.443			
11,416.7	7,000.0	11,541.0	7,000.0	123.8	124.5	90.00	-1,591.7	4,218.6	601.1	354.1	247.03	2.433 SF			

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well High Pointe LLC 10F-232
Project:	SEC.10-T5N-R67W	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Reference Site:	High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	High Pointe LLC 10F-232	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 (1-18-16)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W - High Pointe LLC 10G-312 - Wellbore #1 - Plan #														
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	-180.00	-14.6	0.0	14.6	14.6	0.00	N/A		
100.0	100.0	100.0	100.0	0.1	0.1	-180.00	-14.6	0.0	14.6	14.3	0.22	64.841		
200.0	200.0	200.0	200.0	0.3	0.3	-180.00	-14.6	0.0	14.6	13.9	0.67	21.612		
300.0	300.0	300.0	300.0	0.6	0.6	-180.00	-14.6	0.0	14.6	13.4	1.12	12.967		
400.0	400.0	400.0	400.0	0.8	0.8	-180.00	-14.6	0.0	14.6	13.0	1.57	9.262 CC, ES		
500.0	500.0	499.6	499.6	1.0	1.0	-178.64	-15.8	-0.4	15.8	13.8	2.00	7.926		
600.0	600.0	599.1	599.0	1.2	1.2	-175.62	-19.5	-1.5	19.6	17.2	2.41	8.139		
700.0	700.0	698.3	698.0	1.5	1.4	-172.57	-25.7	-3.4	26.0	23.2	2.84	9.158		
800.0	800.0	797.1	796.4	1.7	1.6	-170.17	-34.3	-5.9	35.0	31.7	3.28	10.670		
900.0	900.0	895.5	894.2	1.9	1.9	-9.43	-45.3	-9.3	45.3	41.6	3.69	12.291		
1,000.0	999.9	993.7	991.3	2.1	2.2	-8.68	-58.7	-13.3	55.6	51.5	4.09	13.607		
1,100.0	1,099.7	1,091.6	1,087.9	2.3	2.5	-8.32	-74.4	-18.0	65.9	61.4	4.51	14.632		
1,200.0	1,199.3	1,189.3	1,183.7	2.5	2.9	-8.19	-92.4	-23.4	76.2	71.2	4.94	15.430		
1,300.0	1,298.6	1,286.7	1,278.8	2.7	3.3	-8.21	-112.7	-29.5	86.4	81.0	5.38	16.052		
1,400.0	1,397.5	1,384.7	1,373.9	3.0	3.7	-8.33	-135.4	-36.4	96.5	90.7	5.84	16.526		
1,500.0	1,496.1	1,483.4	1,469.3	3.3	4.2	-8.57	-159.5	-43.6	105.4	99.1	6.31	16.686		
1,600.0	1,594.2	1,583.2	1,565.8	3.6	4.7	-8.99	-183.9	-51.0	111.7	104.9	6.80	16.419		
1,677.6	1,669.9	1,660.8	1,640.8	3.9	5.1	-9.44	-202.8	-56.7	114.8	107.6	7.19	15.964		
1,700.0	1,691.7	1,683.2	1,662.4	4.0	5.2	-9.58	-208.3	-58.3	115.4	108.1	7.30	15.802		
1,800.0	1,789.1	1,783.1	1,759.1	4.4	5.7	-10.20	-232.7	-65.7	118.4	110.6	7.83	15.123		
1,900.0	1,886.5	1,883.1	1,855.7	4.8	6.2	-10.79	-257.1	-73.0	121.4	113.1	8.37	14.514		
2,000.0	1,983.8	1,983.0	1,952.4	5.3	6.8	-11.36	-281.5	-80.4	124.5	115.6	8.91	13.964		
2,100.0	2,081.2	2,083.0	2,049.0	5.7	7.3	-11.89	-305.9	-87.7	127.5	118.1	9.47	13.467		
2,200.0	2,178.6	2,182.9	2,145.6	6.2	7.8	-12.41	-330.3	-95.1	130.6	120.5	10.03	13.015		
2,300.0	2,275.9	2,282.8	2,242.3	6.6	8.3	-12.89	-354.7	-102.4	133.6	123.0	10.60	12.604		
2,400.0	2,373.3	2,382.8	2,338.9	7.1	8.9	-13.36	-379.1	-109.7	136.7	125.5	11.18	12.229		
2,500.0	2,470.7	2,482.7	2,435.6	7.5	9.4	-13.81	-403.5	-117.1	139.8	128.0	11.76	11.884		
2,600.0	2,568.1	2,582.7	2,532.2	8.0	9.9	-14.23	-427.9	-124.4	142.9	130.5	12.35	11.568		
2,700.0	2,665.4	2,682.6	2,628.9	8.5	10.4	-14.64	-452.3	-131.8	146.0	133.0	12.95	11.276		
2,800.0	2,762.8	2,782.6	2,725.5	9.0	11.0	-15.03	-476.7	-139.1	149.1	135.6	13.55	11.007		
2,900.0	2,860.2	2,882.5	2,822.2	9.4	11.5	-15.41	-501.1	-146.5	152.2	138.1	14.15	10.757		
3,000.0	2,957.5	2,982.5	2,918.8	9.9	12.0	-15.77	-525.5	-153.8	155.3	140.6	14.76	10.525		
3,100.0	3,054.9	3,082.4	3,015.4	10.4	12.6	-16.11	-549.9	-161.2	158.5	143.1	15.37	10.309		
3,200.0	3,152.3	3,182.4	3,112.1	10.9	13.1	-16.45	-574.3	-168.5	161.6	145.6	15.99	10.107		
3,300.0	3,249.7	3,282.3	3,208.7	11.4	13.6	-16.77	-598.7	-175.9	164.7	148.1	16.61	9.918		
3,400.0	3,347.0	3,382.3	3,305.4	11.8	14.2	-17.07	-623.1	-183.2	167.9	150.6	17.23	9.741		
3,500.0	3,444.4	3,482.2	3,402.0	12.3	14.7	-17.37	-647.5	-190.5	171.0	153.1	17.86	9.576		
3,600.0	3,541.8	3,582.2	3,498.7	12.8	15.2	-17.66	-671.9	-197.9	174.2	155.7	18.49	9.420		
3,700.0	3,639.2	3,682.1	3,595.3	13.3	15.8	-17.93	-696.3	-205.2	177.3	158.2	19.12	9.273		
3,800.0	3,736.5	3,782.0	3,692.0	13.8	16.3	-18.20	-720.7	-212.6	180.5	160.7	19.76	9.134		
3,900.0	3,833.9	3,882.0	3,788.6	14.3	16.8	-18.46	-745.1	-219.9	183.6	163.2	20.40	9.003		
4,000.0	3,931.3	3,981.9	3,885.2	14.7	17.4	-18.70	-769.5	-227.3	186.8	165.8	21.04	8.879		
4,100.0	4,028.6	4,081.9	3,981.9	15.2	17.9	-18.95	-793.9	-234.6	190.0	168.3	21.68	8.761		
4,200.0	4,126.0	4,181.8	4,078.5	15.7	18.4	-19.18	-818.3	-242.0	193.1	170.8	22.33	8.650		
4,300.0	4,223.4	4,281.8	4,175.2	16.2	19.0	-19.40	-842.7	-249.3	196.3	173.3	22.98	8.544		
4,400.0	4,320.8	4,381.7	4,271.8	16.7	19.5	-19.62	-867.1	-256.7	199.5	175.9	23.63	8.443		
4,500.0	4,418.1	4,481.7	4,368.5	17.2	20.0	-19.83	-891.5	-264.0	202.7	178.4	24.28	8.348		
4,600.0	4,515.5	4,581.6	4,465.1	17.7	20.6	-20.03	-915.9	-271.4	205.8	180.9	24.93	8.256		
4,700.0	4,612.9	4,681.6	4,561.7	18.1	21.1	-20.23	-940.3	-278.7	209.0	183.4	25.59	8.169		
4,800.0	4,710.2	4,781.5	4,658.4	18.6	21.7	-20.42	-964.7	-286.0	212.2	186.0	26.25	8.086		
4,900.0	4,807.6	4,881.5	4,755.0	19.1	22.2	-20.61	-989.1	-293.4	215.4	188.5	26.91	8.006		

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 High Pointe LLC 10F-232
Project:	SEC.10-T5N-R67W	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Reference Site:	High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	High Pointe LLC 10F-232	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 (1-18-16)	Offset TVD Reference:	Offset Datum

Offset Design													High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W - High Pointe LLC 10G-312 - Wellbore #1 - Plan #		Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft		
Reference		Offset		Semi Major Axis			Distance									
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)					
5,000.0	4,905.0	4,981.4	4,851.7	19.6	22.7	-20.79	-1,013.5	-300.7	218.6	191.0	27.57	7.930				
5,100.0	5,002.4	5,081.4	4,948.3	20.1	23.3	-20.97	-1,037.9	-308.1	221.8	193.6	28.23	7.857				
5,200.0	5,099.7	5,181.3	5,045.0	20.6	23.8	-21.14	-1,062.3	-315.4	225.0	196.1	28.89	7.787				
5,300.0	5,197.1	5,281.2	5,141.6	21.1	24.3	-21.30	-1,086.7	-322.8	228.2	198.6	29.56	7.720				
5,400.0	5,294.5	5,381.2	5,238.3	21.6	24.9	-21.47	-1,111.1	-330.1	231.4	201.2	30.23	7.655				
5,500.0	5,391.9	5,481.1	5,334.9	22.1	25.4	-21.62	-1,135.5	-337.5	234.6	203.7	30.90	7.593				
5,557.2	5,447.6	5,538.3	5,390.2	22.3	25.7	-21.71	-1,149.5	-341.7	236.4	205.1	31.28	7.559				
5,600.0	5,489.3	5,581.1	5,431.5	22.5	25.9	-21.76	-1,159.9	-344.8	238.1	206.5	31.55	7.547				
5,700.0	5,587.3	5,686.2	5,533.4	22.8	26.4	-21.71	-1,184.9	-352.3	243.6	211.6	32.07	7.597				
5,800.0	5,686.0	5,795.0	5,639.6	23.1	26.8	-21.60	-1,207.2	-359.0	249.1	216.6	32.49	7.667				
5,900.0	5,785.2	5,904.0	5,746.9	23.3	27.1	-21.47	-1,225.6	-364.6	254.2	221.4	32.83	7.742				
6,000.0	5,884.8	6,013.2	5,855.0	23.5	27.4	-21.31	-1,240.2	-369.0	258.9	225.8	33.10	7.822				
6,100.0	5,984.6	6,122.6	5,963.9	23.7	27.6	-21.12	-1,250.8	-372.2	263.2	229.9	33.30	7.905				
6,200.0	6,084.6	6,232.2	6,073.3	23.8	27.8	-20.90	-1,257.5	-374.2	267.2	233.7	33.42	7.994				
6,215.4	6,100.0	6,249.2	6,090.2	23.8	27.8	179.87	-1,258.1	-374.4	267.7	217.8	49.90	5.365				
6,300.0	6,184.6	6,342.0	6,183.0	23.9	27.9	180.00	-1,260.1	-375.0	269.5	219.4	50.13	5.376				
6,386.9	6,271.4	6,430.4	6,271.4	24.0	28.0	-180.00	-1,260.2	-375.0	269.6	219.2	50.31	5.358				
6,386.9	6,271.4	6,430.5	6,271.4	24.0	28.0	-180.00	-1,260.2	-375.0	269.6	219.2	50.31	5.358				
6,400.0	6,284.6	6,443.6	6,284.6	24.0	28.0	90.02	-1,260.2	-375.0	269.6	235.6	33.97	7.934				
6,450.0	6,334.5	6,493.5	6,334.5	24.1	28.0	90.55	-1,260.2	-375.0	269.6	235.6	33.96	7.937				
6,500.0	6,384.2	6,543.7	6,384.6	24.1	28.1	91.36	-1,260.2	-373.1	269.6	235.8	33.85	7.966				
6,550.0	6,433.3	6,594.1	6,434.7	24.1	28.1	92.17	-1,260.2	-367.8	269.8	236.1	33.70	8.004				
6,600.0	6,481.8	6,644.7	6,484.7	24.1	28.1	92.97	-1,260.2	-359.2	269.9	236.4	33.53	8.050				
6,650.0	6,529.4	6,695.7	6,534.1	24.1	28.1	93.76	-1,260.2	-347.3	270.1	236.8	33.35	8.101				
6,700.0	6,575.9	6,746.8	6,583.0	24.1	28.1	94.53	-1,260.2	-331.9	270.4	237.3	33.16	8.155				
6,750.0	6,621.1	6,798.3	6,630.9	24.1	28.1	95.29	-1,260.2	-313.3	270.7	237.7	32.97	8.210				
6,800.0	6,664.7	6,850.0	6,677.7	24.0	28.1	96.02	-1,260.2	-291.4	271.1	238.3	32.80	8.263				
6,850.0	6,706.7	6,901.9	6,723.1	24.0	28.0	96.72	-1,260.2	-266.2	271.4	238.8	32.67	8.310				
6,900.0	6,746.9	6,954.1	6,766.9	24.0	28.0	97.40	-1,260.2	-237.8	271.8	239.3	32.57	8.346				
6,950.0	6,784.9	7,006.5	6,808.8	23.9	28.0	98.04	-1,260.2	-206.4	272.2	239.7	32.54	8.366				
7,000.0	6,820.8	7,059.1	6,848.7	23.9	27.9	98.64	-1,260.2	-172.0	272.7	240.1	32.59	8.367				
7,050.0	6,854.4	7,112.0	6,886.2	23.8	27.9	99.21	-1,260.2	-134.8	273.1	240.4	32.74	8.342				
7,100.0	6,885.4	7,165.1	6,921.3	23.8	27.9	99.74	-1,260.2	-95.0	273.5	240.5	33.00	8.287				
7,150.0	6,913.8	7,218.3	6,953.5	23.8	27.8	100.22	-1,260.2	-52.6	273.9	240.5	33.40	8.200				
7,200.0	6,939.5	7,271.8	6,982.9	23.7	27.8	100.65	-1,260.2	-8.0	274.3	240.3	33.95	8.078				
7,250.0	6,962.3	7,325.3	7,009.1	23.7	27.8	101.04	-1,260.2	38.8	274.6	240.0	34.66	7.923				
7,300.0	6,982.2	7,379.1	7,032.0	23.7	27.8	101.38	-1,260.2	87.3	275.0	239.4	35.53	7.738				
7,350.0	6,999.0	7,432.9	7,051.5	23.8	27.8	101.66	-1,260.2	137.5	275.2	238.7	36.57	7.526				
7,400.0	7,012.7	7,486.9	7,067.5	23.8	27.9	101.89	-1,260.2	189.1	275.5	237.7	37.77	7.293				
7,450.0	7,023.2	7,540.9	7,079.7	24.0	28.0	102.07	-1,260.2	241.7	275.7	236.5	39.13	7.045				
7,500.0	7,030.5	7,595.0	7,088.3	24.2	28.1	102.20	-1,260.2	295.1	275.8	235.2	40.62	6.789				
7,550.0	7,034.5	7,649.2	7,093.0	24.5	28.3	102.26	-1,260.2	349.0	275.9	233.6	42.24	6.531				
7,593.9	7,035.4	7,696.8	7,094.0	25.0	28.6	102.28	-1,260.2	396.6	275.9	232.1	43.74	6.307				
7,600.0	7,035.3	7,702.9	7,094.0	25.1	28.6	102.28	-1,260.2	402.7	275.9	231.9	43.96	6.275				
7,700.0	7,034.4	7,802.9	7,092.9	26.5	29.5	102.24	-1,260.2	502.7	275.8	228.1	47.76	5.775				
7,800.0	7,033.5	7,902.9	7,091.8	28.4	30.7	102.21	-1,260.2	602.7	275.8	223.9	51.87	5.317				
7,900.0	7,032.5	8,002.9	7,090.7	30.5	32.4	102.17	-1,260.2	702.7	275.8	219.6	56.21	4.906				
8,000.0	7,031.6	8,102.9	7,089.6	32.7	34.3	102.13	-1,260.2	802.7	275.7	215.0	60.75	4.539				
8,100.0	7,030.7	8,202.9	7,088.5	35.0	36.4	102.10	-1,260.2	902.7	275.7	210.3	65.43	4.213				
8,200.0	7,029.8	8,302.9	7,087.4	37.4	38.6	102.06	-1,260.2	1,002.7	275.7	205.4	70.24	3.925				

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 High Pointe LLC 10F-232
Project:	SEC.10-T5N-R67W	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Reference Site:	High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	High Pointe LLC 10F-232	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 (1-18-16)	Offset TVD Reference:	Offset Datum

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		
8,300.0	7,028.8	8,402.9	7,086.3	39.8	41.0	102.03	-1,260.2	1,102.7	275.6	200.5	75.14	3.668			
8,400.0	7,027.9	8,502.9	7,085.2	42.3	43.3	101.99	-1,260.2	1,202.7	275.6	195.5	80.12	3.440			
8,500.0	7,027.0	8,602.9	7,084.1	44.8	45.8	101.96	-1,260.2	1,302.7	275.5	190.4	85.17	3.235			
8,600.0	7,026.1	8,702.9	7,083.0	47.4	48.3	101.92	-1,260.2	1,402.7	275.5	185.2	90.27	3.052			
8,700.0	7,025.1	8,802.9	7,081.9	50.0	50.8	101.89	-1,260.2	1,502.6	275.5	180.1	95.42	2.887			
8,800.0	7,024.2	8,902.9	7,080.8	52.6	53.4	101.85	-1,260.2	1,602.6	275.4	174.8	100.61	2.738			
8,900.0	7,023.3	9,002.9	7,079.7	55.2	55.9	101.81	-1,260.2	1,702.6	275.4	169.6	105.83	2.602			
9,000.0	7,022.4	9,102.9	7,078.6	57.8	58.5	101.78	-1,260.2	1,802.6	275.4	164.3	111.08	2.479			
9,100.0	7,021.4	9,202.9	7,077.5	60.5	61.2	101.74	-1,260.2	1,902.6	275.3	159.0	116.36	2.366			
9,200.0	7,020.5	9,302.9	7,076.4	63.1	63.8	101.71	-1,260.2	2,002.6	275.3	153.6	121.66	2.263			
9,300.0	7,019.6	9,402.9	7,075.3	65.8	66.4	101.67	-1,260.2	2,102.6	275.3	148.3	126.98	2.168			
9,400.0	7,018.7	9,502.9	7,074.2	68.5	69.1	101.64	-1,260.2	2,202.6	275.2	142.9	132.32	2.080			
9,500.0	7,017.7	9,602.9	7,073.1	71.2	71.8	101.60	-1,260.2	2,302.6	275.2	137.5	137.68	1.999			
9,600.0	7,016.8	9,702.9	7,072.0	73.9	74.5	101.57	-1,260.2	2,402.6	275.2	132.1	143.04	1.924			
9,700.0	7,015.9	9,802.9	7,070.9	76.6	77.1	101.53	-1,260.2	2,502.6	275.1	126.7	148.42	1.854			
9,800.0	7,015.0	9,902.9	7,069.8	79.4	79.8	101.49	-1,260.2	2,602.6	275.1	121.3	153.82	1.788			
9,900.0	7,014.0	10,002.9	7,068.7	82.1	82.6	101.46	-1,260.2	2,702.6	275.1	115.8	159.22	1.728			
10,000.0	7,013.1	10,102.9	7,067.6	84.8	85.3	101.42	-1,260.2	2,802.6	275.0	110.4	164.63	1.671			
10,100.0	7,012.2	10,202.9	7,066.5	87.5	88.0	101.39	-1,260.2	2,902.6	275.0	104.9	170.05	1.617			
10,200.0	7,011.3	10,302.9	7,065.4	90.3	90.7	101.35	-1,260.2	3,002.6	275.0	99.5	175.48	1.567			
10,300.0	7,010.3	10,402.9	7,064.3	93.0	93.4	101.32	-1,260.2	3,102.5	274.9	94.0	180.91	1.520			
10,400.0	7,009.4	10,502.9	7,063.2	95.8	96.2	101.28	-1,260.2	3,202.5	274.9	88.5	186.36	1.475 Level 3			
10,500.0	7,008.5	10,602.9	7,062.1	98.5	98.9	101.24	-1,260.2	3,302.5	274.9	83.1	191.81	1.433 Level 3			
10,600.0	7,007.6	10,702.9	7,061.0	101.3	101.6	101.21	-1,260.2	3,402.5	274.8	77.6	197.26	1.393 Level 3			
10,700.0	7,006.6	10,802.9	7,059.9	104.0	104.4	101.17	-1,260.2	3,502.5	274.8	72.1	202.72	1.356 Level 3			
10,800.0	7,005.7	10,902.9	7,058.8	106.8	107.1	101.14	-1,260.2	3,602.5	274.8	66.6	208.19	1.320 Level 3			
10,900.0	7,004.8	11,002.9	7,057.7	109.5	109.9	101.10	-1,260.2	3,702.5	274.7	61.1	213.66	1.286 Level 3			
11,000.0	7,003.9	11,102.9	7,056.6	112.3	112.6	101.07	-1,260.2	3,802.5	274.7	55.6	219.13	1.254 Level 3			
11,100.0	7,002.9	11,202.9	7,055.5	115.1	115.4	101.03	-1,260.2	3,902.5	274.7	50.1	224.61	1.223 Level 2			
11,200.0	7,002.0	11,302.9	7,054.4	117.8	118.1	100.99	-1,260.2	4,002.5	274.6	44.5	230.10	1.194 Level 2			
11,300.0	7,001.1	11,402.9	7,053.3	120.6	120.9	100.96	-1,260.2	4,102.5	274.6	39.0	235.58	1.166 Level 2			
11,400.0	7,000.2	11,502.9	7,052.2	123.4	123.7	100.92	-1,260.2	4,202.5	274.6	33.5	241.07	1.139 Level 2			
11,416.3	7,000.0	11,519.0	7,052.0	123.8	124.1	100.92	-1,260.2	4,218.6	274.6	32.6	241.96	1.135 Level 2			
11,416.7	7,000.0	11,519.0	7,052.0	123.8	124.1	100.92	-1,260.2	4,218.6	274.6	32.6	241.98	1.135 Level 2, SF			

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well High Pointe LLC 10F-232
Project:	SEC.10-T5N-R67W	TVD Reference:	WELL @ 4937.0ft (Original Well Elev)
Reference Site:	High Pointe LLC 5N67W10A Pad Sec.10-T5N-R67W	MD Reference:	WELL @ 4937.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	High Pointe LLC 10F-232	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 (1-18-16)	Offset TVD Reference:	Offset Datum

Offset Design Highpointe 10ND Pad Sec.10-T5N-R67W - Highpointe 10SD - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 120-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
9,900.0	7,014.0	7,206.5	7,038.4	82.1	25.4	90.85	-1,661.2	3,413.2	977.6	879.3	98.26	9.949		
10,000.0	7,013.1	7,205.3	7,037.3	84.8	25.4	90.75	-1,661.2	3,413.2	907.4	806.4	101.01	8.984		
10,100.0	7,012.2	7,204.2	7,036.1	87.5	25.4	90.65	-1,661.2	3,413.2	843.3	739.6	103.77	8.127		
10,200.0	7,011.3	7,203.0	7,034.9	90.3	25.4	90.55	-1,661.2	3,413.2	786.7	680.2	106.53	7.385		
10,300.0	7,010.3	7,201.8	7,033.7	93.0	25.4	90.45	-1,661.2	3,413.2	739.4	630.1	109.29	6.766		
10,400.0	7,009.4	7,200.6	7,032.6	95.8	25.4	90.35	-1,661.3	3,413.2	703.2	591.1	112.05	6.275		
10,500.0	7,008.5	7,199.5	7,031.4	98.5	25.4	90.25	-1,661.3	3,413.2	679.9	565.0	114.82	5.921		
10,600.0	7,007.6	7,198.3	7,030.2	101.3	25.4	90.15	-1,661.3	3,413.2	670.8	553.2	117.59	5.704		
10,611.3	7,007.5	7,198.2	7,030.1	101.6	25.4	90.14	-1,661.3	3,413.2	670.7	552.8	117.90	5.688 CC, ES		
10,700.0	7,006.6	7,197.2	7,029.1	104.0	25.4	90.06	-1,661.3	3,413.2	676.5	556.2	120.36	5.621 SF		
10,800.0	7,005.7	7,196.0	7,027.9	106.8	25.4	89.96	-1,661.3	3,413.2	696.7	573.6	123.14	5.658		
10,900.0	7,004.8	7,194.9	7,026.8	109.5	25.4	89.86	-1,661.3	3,413.2	730.2	604.3	125.91	5.799		
11,000.0	7,003.9	7,193.7	7,025.7	112.3	25.4	89.76	-1,661.3	3,413.2	775.2	646.5	128.69	6.024		
11,100.0	7,002.9	7,192.6	7,024.5	115.1	25.4	89.66	-1,661.3	3,413.3	829.8	698.4	131.46	6.312		
11,200.0	7,002.0	7,191.5	7,023.4	117.8	25.4	89.57	-1,661.3	3,413.3	892.4	758.2	134.24	6.648		
11,300.0	7,001.1	7,190.3	7,022.3	120.6	25.4	89.47	-1,661.3	3,413.3	961.3	824.3	137.02	7.016		

Reference Depths are relative to WELL @ 4937.0ft (Original Well Elev)	Coordinates are relative to: High Pointe LLC 10F-232
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.500000	Grid Convergence at Surface is: 0.40°



Reference Depths are relative to WELL @ 4937.0ft (Original Well Elev)	Coordinates are relative to: High Pointe LLC 10F-232
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.500000	Grid Convergence at Surface is: 0.40°

