

PETROLEUM DEVELOPMENT CORP DJ Basin

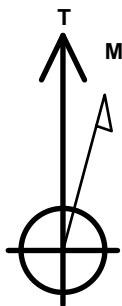
Well Name: **Nelson Family LLC 33W-214**

Surface Location: Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W
North American Datum 1983 , US State Plane 1983, Colorado Northern Zone
Ground Elevation: 4836.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1374629.08	3170162.62	40.360150	-104.889380	
Original Well Elev WELL @ 4849.0ft (Original Well Elev)						

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 1189'FNL, 305'FEL	1.0	0.0	0.0	Point
BHL 2160'FNL, 500'FWL	6770.0	-965.0	-4595.7	Point
WP	6773.9	-1038.0	-2995.3	Point



Azimuths to True North
Magnetic North: 8.27°

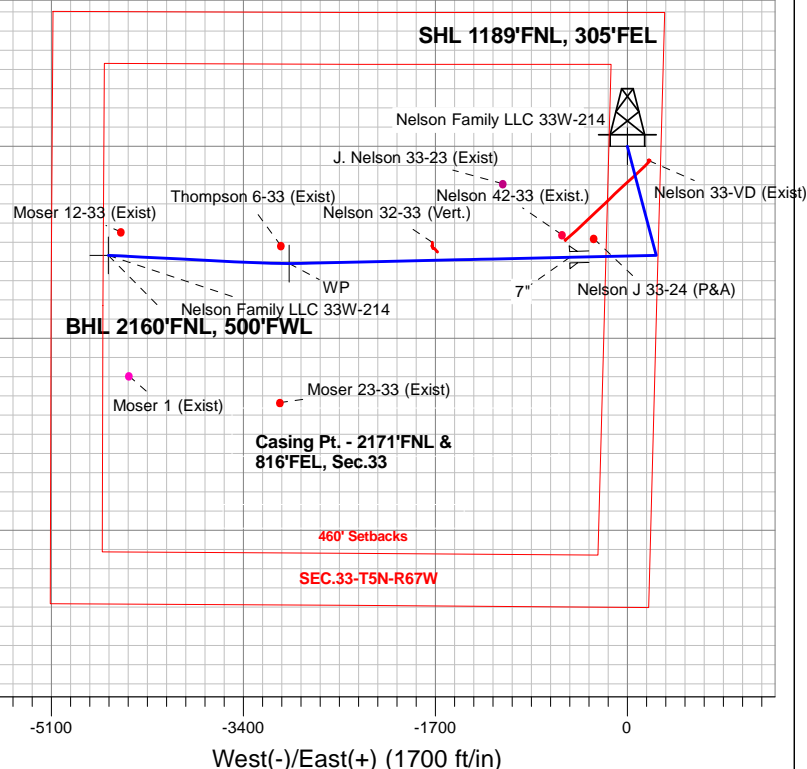
Magnetic Field
Strength: 52580.9snT
Dip Angle: 66.83°
Date: 5/11/2016
Model: IGRF2010

Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W
Nelson Family LLC 33W-214
Plan #2 (5-11-16)
9:36, May 11 2016

ANNOTATIONS

TVD	MD	Annotation
400.0	400.0	KOP - Start Build 1.50
5318.4	5412.0	Start Drop -2.00
6016.0	6113.6	KOP #2 - Start Build 7.50
6780.0	7315.5	Start 2485.3 hold at 7315.5 MD
6773.9	9800.8	Start DLS 2.00 TFO 90.00
6773.4	10009.4	Start 1393.7 hold at 10009.4 MD
6770.0	11403.1	TD at 11403.1

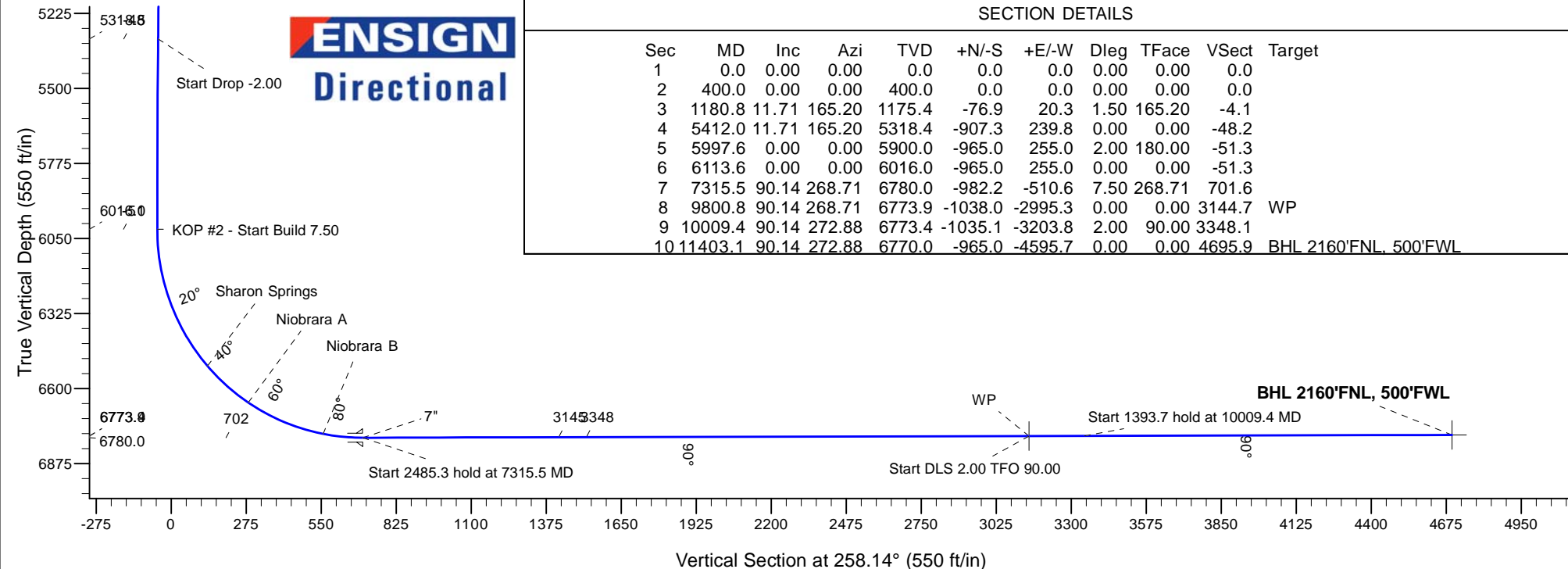
South(-)/North(+) (1700 ft/in)



West(-)/East(+) (1700 ft/in)

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.0	
3	1180.8	11.71	165.20	1175.4	-76.9	20.3	1.50	165.20	-4.1	
4	5412.0	11.71	165.20	5318.4	-907.3	239.8	0.00	0.00	-48.2	
5	5997.6	0.00	0.00	5900.0	-965.0	255.0	2.00	180.00	-51.3	
6	6113.6	0.00	0.00	6016.0	-965.0	255.0	0.00	0.00	-51.3	
7	7315.5	90.14	268.71	6780.0	-982.2	-510.6	7.50	268.71	701.6	
8	9800.8	90.14	268.71	6773.9	-1038.0	-2995.3	0.00	0.00	3144.7	WP
9	10009.4	90.14	272.88	6773.4	-1035.1	-3203.8	2.00	90.00	3348.1	
10	11403.1	90.14	272.88	6770.0	-965.0	-4595.7	0.00	0.00	4695.9	BHL 2160'FNL, 500'FWL





PETROLEUM DEVELOPMENT CORP DJ Basin

SEC.33-T5N-R67W

Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W

Nelson Family LLC 33W-214

Wellbore #1

Plan: Plan #2 (5-11-16)

Standard Planning Report

11 May, 2016

Database:	US_EDM	Local Co-ordinate Reference:	Well Nelson Family LLC 33W-214
Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Project:	SEC.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	North Reference:	True
Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (5-11-16)		

Project	SEC.33-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	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W				
Site Position:		Northing:	1,375,346.55 usft	Latitude:	40.362120
From:	Lat/Long	Easting:	3,170,129.81 usft	Longitude:	-104.889480
Position Uncertainty:	0.0 ft	Slot Radius:	13-3/16 "	Grid Convergence:	0.39

Well	Nelson Family LLC 33W-214					
Well Position	+N/-S	-717.7 ft	Northing:	1,374,629.08 usft	Latitude:	40.360150
	+E/-W	27.9 ft	Easting:	3,170,162.62 usft	Longitude:	-104.889380
Position Uncertainty		0.0 ft	Wellhead Elevation:	0.0 ft	Ground Level:	4,836.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/9/2016	8.29	66.83	52,599

Design	Plan #2 (5-11-16)			
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	258.14

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	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,180.8	11.71	165.20	1,175.4	-76.9	20.3	1.50	1.50	0.00	165.20	
5,412.0	11.71	165.20	5,318.4	-907.3	239.8	0.00	0.00	0.00	0.00	
5,997.6	0.00	0.00	5,900.0	-965.0	255.0	2.00	-2.00	0.00	180.00	
6,113.6	0.00	0.00	6,016.0	-965.0	255.0	0.00	0.00	0.00	0.00	
7,315.5	90.14	268.71	6,780.0	-982.2	-510.6	7.50	7.50	0.00	268.71	
9,800.8	90.14	268.71	6,773.9	-1,038.0	-2,995.3	0.00	0.00	0.00	0.00	WP
10,009.4	90.14	272.88	6,773.4	-1,035.1	-3,203.8	2.00	0.00	2.00	90.00	
11,403.1	90.14	272.88	6,770.0	-965.0	-4,595.7	0.00	0.00	0.00	0.00	BHL 2160'FNL, 500'F'

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Project:	SEC.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	North Reference:	True
Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (5-11-16)		

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 1189'FNL, 305'FEL									
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
KOP - Start Build 1.50									
500.0	1.50	165.20	500.0	-1.3	0.3	-0.1	1.50	1.50	0.00
600.0	3.00	165.20	599.9	-5.1	1.3	-0.3	1.50	1.50	0.00
700.0	4.50	165.20	699.7	-11.4	3.0	-0.6	1.50	1.50	0.00
800.0	6.00	165.20	799.3	-20.2	5.3	-1.1	1.50	1.50	0.00
900.0	7.50	165.20	898.6	-31.6	8.3	-1.7	1.50	1.50	0.00
1,000.0	9.00	165.20	997.5	-45.5	12.0	-2.4	1.50	1.50	0.00
1,100.0	10.50	165.20	1,096.1	-61.8	16.3	-3.3	1.50	1.50	0.00
1,180.8	11.71	165.20	1,175.4	-76.9	20.3	-4.1	1.50	1.50	0.00
1,200.0	11.71	165.20	1,194.2	-80.7	21.3	-4.3	0.00	0.00	0.00
1,300.0	11.71	165.20	1,292.1	-100.3	26.5	-5.3	0.00	0.00	0.00
1,400.0	11.71	165.20	1,390.0	-119.9	31.7	-6.4	0.00	0.00	0.00
1,500.0	11.71	165.20	1,487.9	-139.5	36.9	-7.4	0.00	0.00	0.00
1,600.0	11.71	165.20	1,585.8	-159.2	42.1	-8.5	0.00	0.00	0.00
1,700.0	11.71	165.20	1,683.8	-178.8	47.2	-9.5	0.00	0.00	0.00
1,800.0	11.71	165.20	1,781.7	-198.4	52.4	-10.5	0.00	0.00	0.00
1,900.0	11.71	165.20	1,879.6	-218.0	57.6	-11.6	0.00	0.00	0.00
2,000.0	11.71	165.20	1,977.5	-237.7	62.8	-12.6	0.00	0.00	0.00
2,100.0	11.71	165.20	2,075.4	-257.3	68.0	-13.7	0.00	0.00	0.00
2,200.0	11.71	165.20	2,173.4	-276.9	73.2	-14.7	0.00	0.00	0.00
2,300.0	11.71	165.20	2,271.3	-296.5	78.4	-15.8	0.00	0.00	0.00
2,400.0	11.71	165.20	2,369.2	-316.2	83.5	-16.8	0.00	0.00	0.00
2,500.0	11.71	165.20	2,467.1	-335.8	88.7	-17.8	0.00	0.00	0.00
2,600.0	11.71	165.20	2,565.0	-355.4	93.9	-18.9	0.00	0.00	0.00
2,700.0	11.71	165.20	2,662.9	-375.0	99.1	-19.9	0.00	0.00	0.00
2,800.0	11.71	165.20	2,760.9	-394.7	104.3	-21.0	0.00	0.00	0.00
2,900.0	11.71	165.20	2,858.8	-414.3	109.5	-22.0	0.00	0.00	0.00
3,000.0	11.71	165.20	2,956.7	-433.9	114.7	-23.1	0.00	0.00	0.00
3,100.0	11.71	165.20	3,054.6	-453.6	119.9	-24.1	0.00	0.00	0.00
3,200.0	11.71	165.20	3,152.5	-473.2	125.0	-25.1	0.00	0.00	0.00
3,300.0	11.71	165.20	3,250.4	-492.8	130.2	-26.2	0.00	0.00	0.00
3,393.5	11.71	165.20	3,342.0	-511.2	135.1	-27.2	0.00	0.00	0.00
Parkman									
3,400.0	11.71	165.20	3,348.4	-512.4	135.4	-27.2	0.00	0.00	0.00
3,500.0	11.71	165.20	3,446.3	-532.1	140.6	-28.3	0.00	0.00	0.00
3,600.0	11.71	165.20	3,544.2	-551.7	145.8	-29.3	0.00	0.00	0.00
3,700.0	11.71	165.20	3,642.1	-571.3	151.0	-30.4	0.00	0.00	0.00
3,800.0	11.71	165.20	3,740.0	-590.9	156.2	-31.4	0.00	0.00	0.00
3,900.0	11.71	165.20	3,838.0	-610.6	161.3	-32.4	0.00	0.00	0.00
3,923.5	11.71	165.20	3,861.0	-615.2	162.6	-32.7	0.00	0.00	0.00
Sussex									
4,000.0	11.71	165.20	3,935.9	-630.2	166.5	-33.5	0.00	0.00	0.00
4,100.0	11.71	165.20	4,033.8	-649.8	171.7	-34.5	0.00	0.00	0.00
4,200.0	11.71	165.20	4,131.7	-669.4	176.9	-35.6	0.00	0.00	0.00
4,300.0	11.71	165.20	4,229.6	-689.1	182.1	-36.6	0.00	0.00	0.00

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Project:	SEC.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	North Reference:	True
Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (5-11-16)		

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	11.71	165.20	4,327.5	-708.7	187.3	-37.6	0.00	0.00	0.00
4,469.9	11.71	165.20	4,396.0	-722.4	190.9	-38.4	0.00	0.00	0.00
Shannon									
4,500.0	11.71	165.20	4,425.5	-728.3	192.5	-38.7	0.00	0.00	0.00
4,600.0	11.71	165.20	4,523.4	-747.9	197.6	-39.7	0.00	0.00	0.00
4,700.0	11.71	165.20	4,621.3	-767.6	202.8	-40.8	0.00	0.00	0.00
4,800.0	11.71	165.20	4,719.2	-787.2	208.0	-41.8	0.00	0.00	0.00
4,900.0	11.71	165.20	4,817.1	-806.8	213.2	-42.9	0.00	0.00	0.00
5,000.0	11.71	165.20	4,915.1	-826.5	218.4	-43.9	0.00	0.00	0.00
5,100.0	11.71	165.20	5,013.0	-846.1	223.6	-44.9	0.00	0.00	0.00
5,200.0	11.71	165.20	5,110.9	-865.7	228.8	-46.0	0.00	0.00	0.00
5,300.0	11.71	165.20	5,208.8	-885.3	234.0	-47.0	0.00	0.00	0.00
5,400.0	11.71	165.20	5,306.7	-905.0	239.1	-48.1	0.00	0.00	0.00
5,412.0	11.71	165.20	5,318.5	-907.3	239.8	-48.2	0.00	0.00	0.00
Start Drop -2.00									
5,500.0	9.95	165.20	5,404.9	-923.3	244.0	-49.0	2.00	-2.00	0.00
5,600.0	7.95	165.20	5,503.7	-938.3	248.0	-49.8	2.00	-2.00	0.00
5,700.0	5.95	165.20	5,602.9	-950.0	251.1	-50.5	2.00	-2.00	0.00
5,800.0	3.95	165.20	5,702.6	-958.4	253.3	-50.9	2.00	-2.00	0.00
5,900.0	1.95	165.20	5,802.4	-963.4	254.6	-51.2	2.00	-2.00	0.00
5,997.6	0.00	0.00	5,900.0	-965.0	255.0	-51.3	2.00	-2.00	0.00
6,000.0	0.00	0.00	5,902.4	-965.0	255.0	-51.3	0.00	0.00	0.00
6,100.0	0.00	0.00	6,002.4	-965.0	255.0	-51.3	0.00	0.00	0.00
6,113.6	0.00	0.00	6,016.0	-965.0	255.0	-51.3	0.00	0.00	0.00
KOP #2 - Start Build 7.50									
6,200.0	6.48	268.71	6,102.2	-965.1	250.1	-46.5	7.50	7.50	0.00
6,300.0	13.98	268.71	6,200.6	-965.5	232.4	-29.0	7.50	7.50	0.00
6,400.0	21.48	268.71	6,295.7	-966.2	202.0	0.9	7.50	7.50	0.00
6,500.0	28.98	268.71	6,386.1	-967.1	159.4	42.8	7.50	7.50	0.00
6,600.0	36.48	268.71	6,470.2	-968.3	105.4	95.9	7.50	7.50	0.00
6,660.0	40.98	268.71	6,517.0	-969.2	67.9	132.8	7.50	7.50	0.00
Sharon Springs									
6,700.0	43.98	268.71	6,546.5	-969.8	40.8	159.3	7.50	7.50	0.00
6,800.0	51.48	268.71	6,613.7	-971.4	-33.1	232.0	7.50	7.50	0.00
6,863.2	56.22	268.71	6,651.0	-972.6	-84.1	282.2	7.50	7.50	0.00
Niobrara A									
6,900.0	58.98	268.71	6,670.7	-973.3	-115.1	312.7	7.50	7.50	0.00
7,000.0	66.48	268.71	6,716.5	-975.3	-203.9	400.0	7.50	7.50	0.00
7,100.0	73.98	268.71	6,750.3	-977.4	-298.0	492.4	7.50	7.50	0.00
7,167.3	79.02	268.71	6,766.0	-978.9	-363.3	556.7	7.50	7.50	0.00
Niobrara B									
7,200.0	81.48	268.71	6,771.5	-979.6	-395.6	588.4	7.50	7.50	0.00
7,300.0	88.98	268.71	6,779.9	-981.8	-495.1	686.3	7.50	7.50	0.00
7,315.5	90.14	268.71	6,780.0	-982.2	-510.6	701.6	7.50	7.50	0.00
Start 2485.3 hold at 7315.5 MD - 7"									
7,400.0	90.14	268.71	6,779.8	-984.1	-595.1	784.6	0.00	0.00	0.00
7,500.0	90.14	268.71	6,779.5	-986.3	-695.1	882.9	0.00	0.00	0.00
7,600.0	90.14	268.71	6,779.3	-988.6	-795.1	981.2	0.00	0.00	0.00
7,700.0	90.14	268.71	6,779.0	-990.8	-895.0	1,079.5	0.00	0.00	0.00
7,800.0	90.14	268.71	6,778.8	-993.1	-995.0	1,177.8	0.00	0.00	0.00
7,900.0	90.14	268.71	6,778.5	-995.3	-1,095.0	1,276.1	0.00	0.00	0.00

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Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	North Reference:	True
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Wellbore:	Wellbore #1		
Design:	Plan #2 (5-11-16)		

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	90.14	268.71	6,778.3	-997.6	-1,195.0	1,374.4	0.00	0.00	0.00	
8,100.0	90.14	268.71	6,778.1	-999.8	-1,294.9	1,472.7	0.00	0.00	0.00	
8,200.0	90.14	268.71	6,777.8	-1,002.0	-1,394.9	1,571.0	0.00	0.00	0.00	
8,300.0	90.14	268.71	6,777.6	-1,004.3	-1,494.9	1,669.3	0.00	0.00	0.00	
8,400.0	90.14	268.71	6,777.3	-1,006.5	-1,594.8	1,767.6	0.00	0.00	0.00	
8,500.0	90.14	268.71	6,777.1	-1,008.8	-1,694.8	1,866.0	0.00	0.00	0.00	
8,600.0	90.14	268.71	6,776.8	-1,011.0	-1,794.8	1,964.3	0.00	0.00	0.00	
8,700.0	90.14	268.71	6,776.6	-1,013.3	-1,894.8	2,062.6	0.00	0.00	0.00	
8,800.0	90.14	268.71	6,776.3	-1,015.5	-1,994.7	2,160.9	0.00	0.00	0.00	
8,900.0	90.14	268.71	6,776.1	-1,017.8	-2,094.7	2,259.2	0.00	0.00	0.00	
9,000.0	90.14	268.71	6,775.9	-1,020.0	-2,194.7	2,357.5	0.00	0.00	0.00	
9,100.0	90.14	268.71	6,775.6	-1,022.3	-2,294.7	2,455.8	0.00	0.00	0.00	
9,200.0	90.14	268.71	6,775.4	-1,024.5	-2,394.6	2,554.1	0.00	0.00	0.00	
9,300.0	90.14	268.71	6,775.1	-1,026.8	-2,494.6	2,652.4	0.00	0.00	0.00	
9,400.0	90.14	268.71	6,774.9	-1,029.0	-2,594.6	2,750.7	0.00	0.00	0.00	
9,500.0	90.14	268.71	6,774.6	-1,031.2	-2,694.6	2,849.0	0.00	0.00	0.00	
9,600.0	90.14	268.71	6,774.4	-1,033.5	-2,794.5	2,947.3	0.00	0.00	0.00	
9,700.0	90.14	268.71	6,774.1	-1,035.7	-2,894.5	3,045.6	0.00	0.00	0.00	
9,800.0	90.14	268.71	6,773.9	-1,038.0	-2,994.5	3,143.9	0.00	0.00	0.00	
9,800.8	90.14	268.71	6,773.9	-1,038.0	-2,995.3	3,144.7	0.00	0.00	0.00	
Start DLS 2.00 TFO 90.00 - WP										
9,900.0	90.14	270.70	6,773.7	-1,038.5	-3,094.5	3,241.9	2.00	0.00	2.00	
10,000.0	90.14	272.70	6,773.4	-1,035.6	-3,194.4	3,339.1	2.00	0.00	2.00	
10,009.4	90.14	272.88	6,773.4	-1,035.1	-3,203.8	3,348.2	1.99	0.00	1.99	
Start 1393.7 hold at 10009.4 MD										
10,100.0	90.14	272.88	6,773.2	-1,030.5	-3,294.3	3,435.8	0.00	0.00	0.00	
10,200.0	90.14	272.88	6,772.9	-1,025.5	-3,394.2	3,532.5	0.00	0.00	0.00	
10,300.0	90.14	272.88	6,772.7	-1,020.5	-3,494.1	3,629.2	0.00	0.00	0.00	
10,400.0	90.14	272.88	6,772.4	-1,015.4	-3,593.9	3,725.9	0.00	0.00	0.00	
10,500.0	90.14	272.88	6,772.2	-1,010.4	-3,693.8	3,822.6	0.00	0.00	0.00	
10,600.0	90.14	272.88	6,772.0	-1,005.4	-3,793.7	3,919.3	0.00	0.00	0.00	
10,700.0	90.14	272.88	6,771.7	-1,000.3	-3,893.5	4,016.0	0.00	0.00	0.00	
10,800.0	90.14	272.88	6,771.5	-995.3	-3,993.4	4,112.7	0.00	0.00	0.00	
10,900.0	90.14	272.88	6,771.2	-990.3	-4,093.3	4,209.4	0.00	0.00	0.00	
11,000.0	90.14	272.88	6,771.0	-985.3	-4,193.2	4,306.1	0.00	0.00	0.00	
11,100.0	90.14	272.88	6,770.7	-980.2	-4,293.0	4,402.8	0.00	0.00	0.00	
11,200.0	90.14	272.88	6,770.5	-975.2	-4,392.9	4,499.6	0.00	0.00	0.00	
11,300.0	90.14	272.88	6,770.3	-970.2	-4,492.8	4,596.3	0.00	0.00	0.00	
11,400.0	90.14	272.88	6,770.0	-965.1	-4,592.7	4,693.0	0.00	0.00	0.00	
11,403.1	90.14	272.88	6,770.0	-965.0	-4,595.7	4,695.9	0.00	0.00	0.00	
TD at 11403.1 - BHL 2160'FNL, 500'FWL										

Database:	US_EDM	Local Co-ordinate Reference:	Well Nelson Family LLC 33W-214
Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Project:	SEC.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	North Reference:	True
Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #2 (5-11-16)		

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
SHL 1189'FNL, 305'FEL - plan hits target center - Point	0.00	0.00	1.0	0.0	0.0	1,374,629.10	3,170,162.62	40.360150	-104.889380
BHL 2160'FNL, 500'FWL - plan hits target center - Point	0.00	0.00	6,770.0	-965.0	-4,595.7	1,373,632.53	3,165,573.85	40.357500	-104.905870
WP - plan hits target center - Point	0.00	0.00	6,773.9	-1,038.0	-2,995.3	1,373,570.53	3,167,174.66	40.357300	-104.900128

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
7,315.5	6,780.0	7"	7	8-3/4	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
3,393.5	3,342.0	Parkman		0.00	
3,923.5	3,861.0	Sussex		0.00	
4,469.9	4,396.0	Shannon		0.00	
6,660.0	6,517.0	Sharon Springs		0.00	
6,863.2	6,651.0	Niobrara A		0.00	
7,167.3	6,766.0	Niobrara B		0.00	

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
400.0	400.0	0.0	0.0	KOP - Start Build 1.50
5,412.0	5,318.4	-76.9	20.3	Start Drop -2.00
6,113.6	6,016.0	-907.3	239.8	KOP #2 - Start Build 7.50
7,315.5	6,780.0	-965.0	255.0	Start 2485.3 hold at 7315.5 MD
9,800.8	6,773.9	-965.0	255.0	Start DLS 2.00 TFO 90.00
10,009.4	6,773.4	-982.2	-510.6	Start 1393.7 hold at 10009.4 MD
11,403.1	6,770.0	-1,038.0	-2,995.3	TD at 11403.1



PETROLEUM DEVELOPMENT CORP DJ Basin

SEC.33-T5N-R67W

Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W

Nelson Family LLC 33W-214

Wellbore #1

Plan #2 (5-11-16)

Anticollision Report

11 May, 2016



Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Nelson Family LLC 33W-214
Project:	SEC.33-T5N-R67W	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Reference Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #2 (5-11-16)	Offset TVD Reference:	Offset Datum

Reference	Plan #2 (5-11-16)		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,000.0 ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.45 Sigma	Casing Method:	Not applied

Survey Tool Program	Date 5/11/2016			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	11,402.4	Plan #2 (5-11-16) (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 Sec.33-T5N-R67W						
J. Nelson 33-23 (Exist) - Wellbore #1 - Wellbore #1	7,893.7	6,728.6	663.8	454.4	3.170	CC
J. Nelson 33-23 (Exist) - Wellbore #1 - Wellbore #1	7,900.0	6,728.5	663.9	454.2	3.167	ES
J. Nelson 33-23 (Exist) - Wellbore #1 - Wellbore #1	8,000.0	6,728.3	672.3	459.6	3.160	SF
Moser 1 (Exist) - Wellbore #1 - Wellbore #1						Out of range
Moser 12-33 (Exist) - Wellbore #1 - Wellbore #1	11,302.1	6,694.2	213.0	-108.3	0.663	Level 1, CC, ES, SF
Moser 23-33 (Exist) - Wellbore #1 - Wellbore #1						Out of range
Nelson J 33-24 (P&A) - Wellbore #1 - Wellbore #1	4,300.3	4,181.9	496.8	373.9	4.044	CC
Nelson J 33-24 (P&A) - Wellbore #1 - Wellbore #1	4,600.0	4,475.4	500.5	368.9	3.803	ES
Nelson J 33-24 (P&A) - Wellbore #1 - Wellbore #1	4,700.0	4,573.3	503.4	368.9	3.744	SF
Thompson 6-33 (Exist) - Wellbore #1 - Wellbore #1	9,874.5	6,693.7	160.9	-112.5	0.589	Level 1, CC, ES, SF
Nelson 33-SD Pad Sec.33-T5N-R67W						
Nelson 32-33 (Vert.) - Wellbore #1 - Wellbore #1	8,527.4	6,707.5	152.1	-139.5	0.522	Level 1, CC, ES, SF
Nelson 33-VD Pad Sec.33-T5N-R67W						
Nelson 33-VD (Exist) - Wellbore #1 - Wellbore #1	3,575.2	3,601.9	291.8	262.8	10.066	CC
Nelson 33-VD (Exist) - Wellbore #1 - Wellbore #1	3,600.0	3,624.3	292.0	262.8	10.004	ES
Nelson 33-VD (Exist) - Wellbore #1 - Wellbore #1	3,700.0	3,713.8	296.8	267.0	9.945	SF
Nelson 42-33 (Exist.) - Wellbore #1 - Wellbore #1	7,380.1	6,744.6	200.4	5.2	1.027	Level 2, CC, ES, SF

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Nelson Family LLC 33W-214
Project:	SEC.33-T5N-R67W	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Reference Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #2 (5-11-16)	Offset TVD Reference:	Offset Datum

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						
Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W						
Nelson Family LLC 33U-234 - Wellbore #1 - Plan #1 (3-0	400.0	424.0	718.9	716.9	360.636	CC, ES
Nelson Family LLC 33U-234 - Wellbore #1 - Plan #1 (3-0	2,000.0	1,958.1	986.7	975.7	90.366	SF
Nelson Family LLC 33U-304 - Wellbore #1 - Plan #1 (3-0	400.0	423.0	720.1	718.1	361.717	CC, ES
Nelson Family LLC 33U-304 - Wellbore #1 - Plan #1 (3-0	2,000.0	1,922.4	983.0	972.3	91.778	SF
Nelson Family LLC 33U-334 - Wellbore #1 - Plan #1 (3-0	400.0	424.0	718.2	716.2	360.300	CC, ES
Nelson Family LLC 33U-334 - Wellbore #1 - Plan #1 (3-0	2,400.0	2,427.7	998.8	984.8	71.362	SF
Nelson Family LLC 33V-214 - Wellbore #1 - Plan #1 (3-0	400.0	424.0	717.8	715.8	360.068	CC, ES
Nelson Family LLC 33V-214 - Wellbore #1 - Plan #1 (3-0	3,500.0	3,574.5	998.8	977.1	46.002	SF
Nelson Family LLC 33V-234 - Wellbore #1 - Plan #1 (3-0	400.0	399.0	30.7	28.7	15.928	CC
Nelson Family LLC 33V-234 - Wellbore #1 - Plan #1 (3-0	500.0	499.0	31.0	28.6	12.694	ES
Nelson Family LLC 33V-234 - Wellbore #1 - Plan #1 (3-0	11,403.1	11,335.6	546.9	227.4	1.712	SF
Nelson Family LLC 33V-304 - Wellbore #1 - Plan #1 (3-0	400.0	399.0	44.6	42.7	23.168	CC
Nelson Family LLC 33V-304 - Wellbore #1 - Plan #1 (3-0	500.0	499.0	44.9	42.5	18.395	ES
Nelson Family LLC 33V-304 - Wellbore #1 - Plan #1 (3-0	11,403.1	11,419.8	811.5	493.4	2.551	SF
Nelson Family LLC 33V-334 - Wellbore #1 - Plan #1 (3-0	400.0	399.0	16.7	14.8	8.688	CC
Nelson Family LLC 33V-334 - Wellbore #1 - Plan #1 (3-0	11,403.1	11,447.8	284.5	-21.1	0.931	Level 1, ES, SF
Nelson Family LLC 33V-404 - Wellbore #1 - Plan #1 (3-0	901.2	1,014.0	685.4	680.5	138.119	CC, ES
Nelson Family LLC 33V-404 - Wellbore #1 - Plan #1 (3-0	5,400.0	5,441.6	998.5	964.1	29.018	SF
Nelson Family LLC 33W-414 - Wellbore #1 - Plan #1 (3-0	200.0	200.0	13.9	13.1	16.869	CC
Nelson Family LLC 33W-414 - Wellbore #1 - Plan #1 (3-0	300.0	299.9	14.2	12.9	10.574	ES
Nelson Family LLC 33W-414 - Wellbore #1 - Plan #1 (3-0	11,403.1	11,646.3	335.7	111.3	1.496	Level 3, SF

Offset Design Existing Wells Sec.33-T5N-R67W - J. Nelson 33-23 (Exist) - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 ft
Survey Program: 7552-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)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
7,200.0	6,771.5	6,721.5	6,721.5	29.9	164.7	81.20	-331.5	-1,103.6	959.9	772.1	187.72	5.113	
7,300.0	6,779.9	6,729.9	6,729.9	31.2	164.9	89.09	-331.5	-1,103.6	890.6	697.9	192.75	4.621	
7,400.0	6,779.8	6,729.8	6,729.8	33.0	164.9	90.10	-331.5	-1,103.6	827.3	632.0	195.32	4.236	
7,500.0	6,779.5	6,729.5	6,729.5	35.2	164.9	90.08	-331.5	-1,103.6	771.8	573.8	197.97	3.899	
7,600.0	6,779.3	6,729.3	6,729.3	37.8	164.9	90.06	-331.5	-1,103.6	725.9	525.2	200.75	3.616	
7,700.0	6,779.0	6,729.0	6,729.0	40.5	164.9	90.04	-331.5	-1,103.6	691.5	487.9	203.63	3.396	
7,800.0	6,778.8	6,728.8	6,728.8	43.3	164.9	90.02	-331.5	-1,103.6	670.4	463.8	206.60	3.245	
7,893.7	6,778.6	6,728.6	6,728.6	46.0	164.8	90.00	-331.5	-1,103.6	663.8	454.4	209.44	3.170	CC
7,900.0	6,778.5	6,728.5	6,728.5	46.2	164.8	90.00	-331.5	-1,103.6	663.9	454.2	209.63	3.167	ES
8,000.0	6,778.3	6,728.3	6,728.3	49.2	164.8	89.98	-331.5	-1,103.6	672.3	459.6	212.72	3.160	SF
8,100.0	6,778.1	6,728.1	6,728.1	52.3	164.8	89.96	-331.5	-1,103.6	695.1	479.3	215.85	3.221	
8,200.0	6,777.8	6,727.8	6,727.8	55.3	164.8	89.94	-331.5	-1,103.6	731.1	512.1	219.02	3.338	
8,300.0	6,777.6	6,727.6	6,727.6	58.5	164.8	89.91	-331.5	-1,103.6	778.3	556.1	222.21	3.502	
8,400.0	6,777.3	6,727.3	6,727.3	61.7	164.8	89.89	-331.5	-1,103.6	834.9	609.4	225.43	3.703	
8,500.0	6,777.1	6,727.1	6,727.1	64.9	164.8	89.87	-331.5	-1,103.6	899.0	670.4	228.68	3.931	
8,600.0	6,776.8	6,726.8	6,726.8	68.1	164.8	89.85	-331.5	-1,103.6	969.3	737.3	231.94	4.179	

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Nelson Family LLC 33W-214
Project:	SEC.33-T5N-R67W	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Reference Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #2 (5-11-16)	Offset TVD Reference:	Offset Datum

Offset Design		Existing Wells Sec.33-T5N-R67W - Moser 12-33 (Exist) - Wellbore #1 - Wellbore #1											Offset Site Error:		0.0 ft
Survey Program:		7103-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)				
10,400.0	6,772.4	6,696.4	6,696.4	127.9	164.1	90.59	-757.3	-4,484.2	926.9	636.4	290.54	3.190			
10,500.0	6,772.2	6,696.2	6,696.2	131.3	164.1	90.53	-757.3	-4,484.2	829.9	536.0	293.94	2.823			
10,600.0	6,772.0	6,696.0	6,696.0	134.7	164.1	90.46	-757.3	-4,484.2	733.7	436.4	297.35	2.468			
10,700.0	6,771.7	6,695.7	6,695.7	138.0	164.0	90.39	-757.3	-4,484.2	638.7	337.9	300.75	2.124			
10,800.0	6,771.5	6,695.5	6,695.5	141.4	164.0	90.33	-757.3	-4,484.2	545.4	241.3	304.16	1.793			
10,900.0	6,771.2	6,695.2	6,695.2	144.8	164.0	90.26	-757.3	-4,484.2	455.0	147.5	307.57	1.479	Level 3		
11,000.0	6,771.0	6,695.0	6,695.0	148.2	164.0	90.20	-757.3	-4,484.2	369.6	58.7	310.98	1.189	Level 2		
11,100.0	6,770.7	6,694.7	6,694.7	151.6	164.0	90.13	-757.3	-4,484.2	293.6	-20.8	314.39	0.934	Level 1		
11,200.0	6,770.5	6,694.5	6,694.5	155.0	164.0	90.07	-757.3	-4,484.2	236.2	-81.6	317.81	0.743	Level 1		
11,300.0	6,770.3	6,694.3	6,694.3	158.4	164.0	90.00	-757.3	-4,484.2	213.0	-108.2	321.22	0.663	Level 1		
11,302.1	6,770.2	6,694.2	6,694.2	158.4	164.0	90.00	-757.3	-4,484.2	213.0	-108.3	321.27	0.663	Level 1, CC, ES, SF		
11,400.0	6,770.0	6,694.0	6,694.0	160.6	164.0	89.94	-757.3	-4,484.2	234.4	-89.0	323.42	0.725	Level 1		
11,403.1	6,770.0	6,694.0	6,694.0	160.7	164.0	89.93	-757.3	-4,484.2	235.7	-87.8	323.48	0.729	Level 1		

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Nelson Family LLC 33W-214
Project:	SEC.33-T5N-R67W	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Reference Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #2 (5-11-16)	Offset TVD Reference:	Offset Datum

Offset Design		Existing Wells Sec.33-T5N-R67W - Nelson J 33-24 (P&A) - Wellbore #1 - Wellbore #1											Offset Site Error:	0.0 ft
Survey Program:		4606-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)			
0.0	0.0	0.0	0.0	0.0	0.0	-159.93	-816.0	-298.2	870.2					
100.0	100.0	52.0	52.0	0.1	1.3	-159.93	-816.0	-298.2	868.8	867.4	1.41	615.355		
200.0	200.0	152.0	152.0	0.4	3.7	-159.93	-816.0	-298.2	868.8	864.7	4.14	210.001		
300.0	300.0	252.0	252.0	0.7	6.2	-159.93	-816.0	-298.2	868.8	862.0	6.86	126.603		
400.0	400.0	352.0	352.0	1.0	8.6	-159.93	-816.0	-298.2	868.8	859.2	9.59	90.617		
500.0	500.0	452.0	452.0	1.2	11.1	34.93	-816.0	-298.2	867.8	855.5	12.28	70.662		
600.0	599.9	551.9	551.9	1.4	13.5	35.11	-816.0	-298.2	864.5	849.6	14.95	57.823		
700.0	699.7	651.7	651.7	1.7	16.0	35.41	-816.0	-298.2	859.2	841.6	17.63	48.740		
800.0	799.3	751.3	751.3	2.0	18.4	35.83	-816.0	-298.2	851.7	831.4	20.30	41.949		
900.0	898.6	850.6	850.6	2.3	20.8	36.38	-816.0	-298.2	842.2	819.2	22.98	36.654		
1,000.0	997.5	949.5	949.5	2.7	23.3	37.07	-816.0	-298.2	830.7	805.0	25.65	32.389		
1,100.0	1,096.1	1,048.1	1,048.1	3.1	25.7	37.91	-816.0	-298.2	817.2	788.9	28.31	28.861		
1,200.0	1,194.2	1,146.2	1,146.2	3.6	28.1	38.87	-816.0	-298.2	801.8	770.8	31.00	25.865		
1,300.0	1,292.1	1,244.1	1,244.1	4.1	30.5	39.80	-816.0	-298.2	786.0	752.2	33.77	23.274		
1,400.0	1,390.0	1,342.0	1,342.0	4.6	32.9	40.75	-816.0	-298.2	770.4	733.8	36.56	21.070		
1,500.0	1,487.9	1,439.9	1,439.9	5.1	35.3	41.75	-816.0	-298.2	754.9	715.6	39.37	19.177		
1,600.0	1,585.8	1,537.8	1,537.8	5.6	37.7	42.79	-816.0	-298.2	739.8	697.6	42.19	17.534		
1,700.0	1,683.8	1,635.8	1,635.8	6.1	40.1	43.87	-816.0	-298.2	724.9	679.8	45.03	16.097		
1,800.0	1,781.7	1,733.7	1,733.7	6.7	42.5	44.99	-816.0	-298.2	710.2	662.3	47.88	14.832		
1,900.0	1,879.6	1,831.6	1,831.6	7.2	44.9	46.16	-816.0	-298.2	695.9	645.1	50.75	13.710		
2,000.0	1,977.5	1,929.5	1,929.5	7.8	47.3	47.37	-816.0	-298.2	681.8	628.2	53.64	12.711		
2,100.0	2,075.4	2,027.4	2,027.4	8.3	49.7	48.64	-816.0	-298.2	668.1	611.5	56.54	11.816		
2,200.0	2,173.4	2,125.4	2,125.4	8.8	52.1	49.96	-816.0	-298.2	654.7	595.2	59.46	11.011		
2,300.0	2,271.3	2,223.3	2,223.3	9.4	54.5	51.33	-816.0	-298.2	641.6	579.2	62.39	10.285		
2,400.0	2,369.2	2,321.2	2,321.2	9.9	56.9	52.75	-816.0	-298.2	629.0	563.6	65.33	9.627		
2,500.0	2,467.1	2,419.1	2,419.1	10.5	59.3	54.23	-816.0	-298.2	616.7	548.4	68.30	9.030		
2,600.0	2,565.0	2,517.0	2,517.0	11.0	61.7	55.77	-816.0	-298.2	604.9	533.7	71.28	8.487		
2,700.0	2,662.9	2,614.9	2,614.9	11.6	64.1	57.37	-816.0	-298.2	593.6	519.3	74.27	7.992		
2,800.0	2,760.9	2,712.9	2,712.9	12.1	66.5	59.02	-816.0	-298.2	582.7	505.4	77.28	7.541		
2,900.0	2,858.8	2,810.8	2,810.8	12.7	68.9	60.74	-816.0	-298.2	572.4	492.1	80.30	7.128		
3,000.0	2,956.7	2,908.7	2,908.7	13.2	71.3	62.51	-816.0	-298.2	562.6	479.2	83.33	6.751		
3,100.0	3,054.6	3,006.6	3,006.6	13.8	73.7	64.35	-816.0	-298.2	553.3	467.0	86.37	6.406		
3,200.0	3,152.5	3,104.5	3,104.5	14.3	76.1	66.24	-816.0	-298.2	544.7	455.3	89.42	6.091		
3,300.0	3,250.4	3,202.4	3,202.4	14.9	78.5	68.19	-816.0	-298.2	536.7	444.2	92.48	5.803		
3,400.0	3,348.4	3,300.4	3,300.4	15.4	80.9	70.19	-816.0	-298.2	529.3	433.8	95.55	5.540		
3,500.0	3,446.3	3,398.3	3,398.3	16.0	83.3	72.24	-816.0	-298.2	522.7	424.1	98.62	5.300		
3,600.0	3,544.2	3,496.2	3,496.2	16.5	85.7	74.35	-816.0	-298.2	516.7	415.1	101.68	5.082		
3,700.0	3,642.1	3,594.1	3,594.1	17.1	88.1	76.49	-816.0	-298.2	511.5	406.8	104.74	4.884		
3,800.0	3,740.0	3,692.0	3,692.0	17.6	90.5	78.68	-816.0	-298.2	507.1	399.3	107.80	4.704		
3,900.0	3,838.0	3,790.0	3,790.0	18.2	92.9	80.90	-816.0	-298.2	503.4	392.6	110.84	4.542		
4,000.0	3,935.9	3,887.9	3,887.9	18.7	95.3	83.15	-816.0	-298.2	500.5	386.6	113.87	4.395		
4,100.0	4,033.8	3,985.8	3,985.8	19.3	97.7	85.42	-816.0	-298.2	498.5	381.6	116.89	4.264		
4,200.0	4,131.7	4,083.7	4,083.7	19.8	100.1	87.70	-816.0	-298.2	497.2	377.3	119.88	4.148		
4,300.0	4,229.6	4,181.6	4,181.6	20.4	102.4	89.99	-816.0	-298.2	496.8	373.9	122.85	4.044		
4,300.3	4,229.9	4,181.9	4,181.9	20.4	102.5	90.00	-816.0	-298.2	496.8	373.9	122.85	4.044 CC		
4,400.0	4,327.5	4,279.5	4,279.5	21.0	104.8	92.28	-816.0	-298.2	497.2	371.4	125.79	3.953		
4,500.0	4,425.5	4,377.5	4,377.5	21.5	107.2	94.57	-816.0	-298.2	498.4	369.7	128.71	3.873		
4,600.0	4,523.4	4,475.4	4,475.4	22.1	109.6	96.84	-816.0	-298.2	500.5	368.9	131.59	3.803 ES		
4,700.0	4,621.3	4,573.3	4,573.3	22.6	112.0	99.09	-816.0	-298.2	503.4	368.9	134.45	3.744 SF		
4,800.0	4,719.2	4,606.0	4,606.0	23.2	112.8	99.83	-816.0	-298.2	511.2	375.5	135.76	3.766		
4,900.0	4,817.1	4,606.0	4,606.0	23.7	112.8	99.83	-816.0	-298.2	536.9	400.6	136.31	3.939		

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 Nelson Family LLC 33W-214
Project:	SEC.33-T5N-R67W	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Reference Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #2 (5-11-16)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Sec.33-T5N-R67W - Nelson J 33-24 (P&A) - Wellbore #1 - Wellbore #1												Offset Site Error:	0.0 ft
Survey Program: 4606-UNKNOWN												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5,000.0	4,915.1	4,606.0	4,606.0	24.3	112.8	99.83	-816.0	-298.2	578.9	442.0	136.86	4.230	
5,100.0	5,013.0	4,606.0	4,606.0	24.8	112.8	99.83	-816.0	-298.2	634.1	496.6	137.41	4.614	
5,200.0	5,110.9	4,606.0	4,606.0	25.4	112.8	99.83	-816.0	-298.2	699.2	561.3	137.95	5.068	
5,300.0	5,208.8	4,606.0	4,606.0	25.9	112.8	99.83	-816.0	-298.2	771.9	633.4	138.50	5.573	
5,400.0	5,306.7	4,606.0	4,606.0	26.5	112.8	99.83	-816.0	-298.2	850.1	711.1	139.05	6.114	
5,500.0	5,404.9	4,606.0	4,606.0	26.9	112.8	102.35	-816.0	-298.2	932.4	793.0	139.37	6.690	

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Nelson Family LLC 33W-214
Project:	SEC.33-T5N-R67W	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Reference Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #2 (5-11-16)	Offset TVD Reference:	Offset Datum

Offset Design Existing Wells Sec.33-T5N-R67W - Thompson 6-33 (Exist) - Wellbore #1 - Wellbore #1													Offset Site Error: 0.0 ft	
Survey Program: 7131-UNKNOWN													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
8,900.0	6,776.1	6,696.1	6,696.1											
9,000.0	6,775.9	6,695.9	6,695.9	77.9	164.1	90.84	-877.8	-3,068.4	983.7	742.6	241.10	4.080		
9,100.0	6,775.6	6,695.6	6,695.6	81.1	164.0	90.75	-877.8	-3,068.4	885.2	640.8	244.41	3.622		
9,200.0	6,775.4	6,695.4	6,695.4	84.4	164.0	90.67	-877.8	-3,068.4	787.1	539.4	247.74	3.177		
9,300.0	6,775.1	6,695.1	6,695.1	87.8	164.0	90.58	-877.8	-3,068.4	689.6	438.5	251.07	2.747		
9,400.0	6,774.9	6,694.9	6,694.9	91.1	164.0	90.49	-877.8	-3,068.4	592.8	338.4	254.41	2.330		
				94.4	164.0	90.41	-877.8	-3,068.4	497.4	239.6	257.75	1.930		
9,500.0	6,774.6	6,694.6	6,694.6	97.7	164.0	90.32	-877.8	-3,068.4	404.1	143.0	261.10	1.548		
9,600.0	6,774.4	6,694.4	6,694.4	101.1	164.0	90.23	-877.8	-3,068.4	315.1	50.6	264.45	1.191	Level 2	
9,700.0	6,774.1	6,694.1	6,694.1	104.4	164.0	90.15	-877.8	-3,068.4	234.9	-32.9	267.81	0.877	Level 1	
9,800.0	6,773.9	6,693.9	6,693.9	107.8	164.0	90.06	-877.8	-3,068.4	176.4	-94.7	271.18	0.651	Level 1	
9,874.5	6,773.7	6,693.7	6,693.7	110.3	164.0	90.00	-877.8	-3,068.4	160.9	-112.5	273.37	0.589	Level 1, CC, ES, SF	
9,900.0	6,773.7	6,693.7	6,693.7	111.1	164.0	89.98	-877.8	-3,068.4	162.8	-111.3	274.10	0.594	Level 1	
10,000.0	6,773.4	6,693.4	6,693.4	114.5	164.0	89.90	-877.8	-3,068.4	201.9	-75.0	276.90	0.729	Level 1	
10,100.0	6,773.2	6,693.2	6,693.2	117.8	164.0	89.81	-877.8	-3,068.4	272.7	-7.6	280.23	0.973	Level 1	
10,200.0	6,772.9	6,692.9	6,692.9	121.2	164.0	89.73	-877.8	-3,068.4	357.7	74.0	283.62	1.261	Level 3	
10,300.0	6,772.7	6,692.7	6,692.7	124.6	164.0	89.64	-877.8	-3,068.4	448.9	161.9	287.01	1.564		
10,400.0	6,772.4	6,692.4	6,692.4	127.9	164.0	89.56	-877.8	-3,068.4	543.2	252.8	290.40	1.871		
10,500.0	6,772.2	6,692.2	6,692.2	131.3	164.0	89.47	-877.8	-3,068.4	639.3	345.5	293.80	2.176		
10,600.0	6,772.0	6,692.0	6,692.0	134.7	164.0	89.39	-877.8	-3,068.4	736.4	439.2	297.20	2.478		
10,700.0	6,771.7	6,691.7	6,691.7	138.0	163.9	89.30	-877.8	-3,068.4	834.2	533.6	300.59	2.775		
10,800.0	6,771.5	6,691.5	6,691.5	141.4	163.9	89.22	-877.8	-3,068.4	932.4	628.4	303.99	3.067		

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Nelson Family LLC 33W-214
Project:	SEC.33-T5N-R67W	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Reference Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #2 (5-11-16)	Offset TVD Reference:	Offset Datum

Offset Design Nelson 33-SD Pad Sec.33-T5N-R67W - Nelson 32-33 (Vert.) - Wellbore #1 - Wellbore #1													Offset Site Error:		0.0 ft
Survey Program: 700-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)				
7,600.0	6,779.3	6,708.0	6,706.8	37.8	227.3	88.41	-857.4	-1,725.7	939.8	677.0	262.81	3.576			
7,700.0	6,779.0	6,708.0	6,706.7	40.5	227.3	88.39	-857.4	-1,725.7	841.3	575.6	265.70	3.166			
7,800.0	6,778.8	6,707.9	6,706.7	43.3	227.3	88.37	-857.4	-1,725.7	743.2	474.5	268.67	2.766			
7,900.0	6,778.5	6,707.9	6,706.6	46.2	227.3	88.35	-857.4	-1,725.7	645.6	373.9	271.70	2.376			
8,000.0	6,778.3	6,707.8	6,706.6	49.2	227.3	88.32	-857.4	-1,725.7	548.9	274.1	274.79	1.998			
8,100.0	6,778.1	6,707.8	6,706.5	52.3	227.2	88.30	-857.4	-1,725.7	453.7	175.8	277.93	1.632			
8,200.0	6,777.8	6,707.7	6,706.4	55.3	227.2	88.28	-857.4	-1,725.7	361.0	80.0	281.09	1.284	Level 3		
8,300.0	6,777.6	6,707.7	6,706.4	58.5	227.2	88.26	-857.4	-1,725.7	273.6	-10.7	284.29	0.962	Level 1		
8,400.0	6,777.3	6,707.6	6,706.3	61.7	227.2	88.24	-857.4	-1,725.7	198.4	-89.1	287.52	0.690	Level 1		
8,500.0	6,777.1	6,707.5	6,706.3	64.9	227.2	88.22	-857.4	-1,725.7	154.6	-136.2	290.76	0.532	Level 1		
8,527.4	6,777.0	6,707.5	6,706.3	65.7	227.2	88.21	-857.4	-1,725.7	152.1	-139.5	291.66	0.522	Level 1, CC, ES, SF		
8,600.0	6,776.8	6,707.5	6,706.2	68.1	227.2	88.20	-857.4	-1,725.7	168.5	-125.5	294.02	0.573	Level 1		
8,700.0	6,776.6	6,707.4	6,706.2	71.3	227.2	88.17	-857.4	-1,725.7	230.0	-67.3	297.30	0.774	Level 1		
8,800.0	6,776.3	6,707.4	6,706.1	74.6	227.2	88.15	-857.4	-1,725.7	312.1	11.5	300.60	1.038	Level 2		
8,900.0	6,776.1	6,707.3	6,706.0	77.9	227.2	88.13	-857.4	-1,725.7	402.4	98.5	303.90	1.324	Level 3		
9,000.0	6,775.9	6,707.3	6,706.0	81.1	227.2	88.11	-857.4	-1,725.7	496.4	189.2	307.21	1.616			
9,100.0	6,775.6	6,707.2	6,705.9	84.4	227.2	88.09	-857.4	-1,725.7	592.4	281.9	310.54	1.908			
9,200.0	6,775.4	6,707.1	6,705.9	87.8	227.2	88.07	-857.4	-1,725.7	689.6	375.7	313.87	2.197			
9,300.0	6,775.1	6,707.1	6,705.8	91.1	227.2	88.04	-857.4	-1,725.7	787.4	470.2	317.21	2.482			
9,400.0	6,774.9	6,707.0	6,705.8	94.4	227.2	88.02	-857.4	-1,725.7	885.7	565.2	320.55	2.763			
9,500.0	6,774.6	6,707.0	6,705.7	97.7	227.2	88.00	-857.4	-1,725.7	984.4	660.5	323.90	3.039			

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Nelson Family LLC 33W-214
Project:	SEC.33-T5N-R67W	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Reference Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #2 (5-11-16)	Offset TVD Reference:	Offset Datum

Offset Design		Nelson 33-VD Pad Sec.33-T5N-R67W - Nelson 33-VD (Exist) - Wellbore #1 - Wellbore #1											Offset Site Error:		0.0 ft
Survey Program: 673-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)				
0.0	0.0	0.0	0.0	0.0	0.0	-146.29	-827.0	-551.8	994.8						
100.0	100.0	64.0	64.0	0.1	0.1	-146.29	-827.0	-551.8	994.2	993.9	0.23	4,393.009			
200.0	200.0	164.1	164.1	0.4	0.2	-146.29	-827.0	-551.7	994.2	993.5	0.64	1,553.961			
300.0	300.0	264.2	264.2	0.7	0.4	-146.31	-827.1	-551.5	994.1	993.1	1.05	943.921			
400.0	400.0	364.2	364.2	1.0	0.5	-146.33	-827.3	-551.2	994.1	992.7	1.47	677.817			
500.0	500.0	464.3	464.3	1.2	0.6	48.52	-827.5	-550.9	993.2	991.4	1.85	536.911			
600.0	599.9	564.3	564.3	1.4	0.8	48.69	-827.8	-550.4	990.6	988.4	2.22	445.512			
700.0	699.7	664.1	664.1	1.7	0.9	48.99	-828.1	-549.8	986.3	983.6	2.62	376.097			
800.0	799.3	765.4	765.4	2.0	1.2	49.42	-828.4	-549.1	980.1	977.0	3.17	309.583			
900.0	898.6	864.0	864.0	2.3	1.4	49.98	-828.8	-548.3	972.3	968.6	3.72	261.100			
1,000.0	997.5	963.7	963.6	2.7	1.7	50.70	-829.0	-547.6	962.9	958.6	4.29	224.305			
1,100.0	1,096.1	1,055.0	1,055.0	3.1	1.9	51.54	-829.3	-547.6	952.4	947.5	4.87	195.474			
1,200.0	1,194.2	1,161.4	1,161.4	3.6	2.1	52.68	-829.2	-548.1	940.5	934.9	5.54	169.673			
1,300.0	1,292.1	1,297.2	1,297.2	4.1	2.5	54.03	-827.3	-546.3	926.5	920.1	6.35	146.013			
1,400.0	1,390.0	1,416.7	1,416.4	4.6	2.8	55.19	-822.4	-540.4	908.1	901.0	7.13	127.436			
1,500.0	1,487.9	1,570.7	1,569.6	5.1	3.3	56.68	-812.9	-528.2	886.9	878.9	8.03	110.485			
1,600.0	1,585.8	1,704.9	1,702.1	5.6	3.7	58.03	-799.1	-512.0	860.1	851.1	8.90	96.596			
1,700.0	1,683.8	1,839.4	1,833.8	6.1	4.3	59.52	-780.7	-491.7	829.0	819.2	9.80	84.591			
1,800.0	1,781.7	1,941.1	1,932.7	6.7	4.7	60.76	-764.7	-474.6	795.9	785.3	10.61	75.036			
1,900.0	1,879.6	2,058.0	2,046.0	7.2	5.3	62.28	-745.3	-453.2	761.6	750.1	11.48	66.337			
2,000.0	1,977.5	2,182.1	2,164.8	7.8	6.1	64.13	-720.8	-427.1	723.3	710.9	12.42	58.259			
2,100.0	2,075.4	2,282.2	2,259.7	8.3	6.8	65.84	-698.9	-404.0	682.9	669.6	13.29	51.395			
2,200.0	2,173.4	2,379.6	2,351.7	8.8	7.5	67.74	-676.9	-380.9	641.9	627.8	14.17	45.291			
2,300.0	2,271.3	2,466.4	2,433.6	9.4	8.1	69.61	-657.2	-359.7	601.1	586.0	15.04	39.976			
2,400.0	2,369.2	2,544.6	2,507.6	9.9	8.6	71.47	-640.3	-340.9	561.9	546.0	15.87	35.398			
2,500.0	2,467.1	2,629.5	2,588.5	10.5	9.1	73.76	-622.8	-322.0	525.2	508.5	16.77	31.317			
2,600.0	2,565.0	2,717.5	2,672.4	11.0	9.7	76.47	-604.6	-302.7	489.8	472.1	17.74	27.616			
2,700.0	2,662.9	2,801.1	2,752.4	11.6	10.2	79.35	-588.0	-284.9	456.7	438.0	18.72	24.390			
2,800.0	2,760.9	2,886.5	2,834.4	12.1	10.7	82.73	-571.3	-268.3	426.7	406.9	19.77	21.579			
2,900.0	2,858.8	2,983.2	2,927.2	12.7	11.3	87.07	-552.2	-249.3	398.3	377.4	20.98	18.990			
3,000.0	2,956.7	3,076.5	3,016.7	13.2	12.0	91.78	-533.8	-229.9	371.4	349.1	22.23	16.706			
3,100.0	3,054.6	3,165.4	3,102.0	13.8	12.5	96.67	-517.4	-211.3	347.4	323.9	23.47	14.803			
3,200.0	3,152.5	3,255.7	3,188.8	14.3	13.1	102.26	-500.5	-192.8	327.1	302.4	24.74	13.222			
3,300.0	3,250.4	3,345.6	3,275.3	14.9	13.7	108.40	-483.6	-174.8	311.2	285.2	25.99	11.974			
3,400.0	3,348.4	3,437.0	3,363.2	15.4	14.2	115.15	-466.3	-156.8	300.1	273.0	27.18	11.042			
3,500.0	3,446.3	3,533.6	3,455.7	16.0	14.9	122.83	-447.2	-136.7	293.5	265.2	28.29	10.375			
3,575.2	3,519.9	3,601.9	3,520.8	16.4	15.4	128.52	-433.1	-121.7	291.8	262.8	28.99	10.066 CC			
3,600.0	3,544.2	3,624.3	3,542.1	16.5	15.6	130.41	-428.4	-116.7	292.0	262.8	29.19	10.004 ES			
3,700.0	3,642.1	3,713.8	3,627.4	17.1	16.2	137.90	-409.5	-96.9	296.8	267.0	29.84	9.945 SF			
3,800.0	3,740.0	3,805.1	3,714.3	17.6	16.8	145.20	-390.3	-76.8	307.6	277.3	30.31	10.147			
3,900.0	3,838.0	3,892.5	3,797.7	18.2	17.4	151.61	-372.2	-58.0	324.0	293.3	30.65	10.571			
4,000.0	3,935.9	3,983.2	3,884.7	18.7	18.0	157.41	-353.9	-40.0	345.3	314.4	30.94	11.159			
4,100.0	4,033.8	4,075.0	3,972.4	19.3	18.7	162.79	-334.9	-20.8	370.0	338.8	31.24	11.842			
4,200.0	4,131.7	4,170.9	4,064.0	19.8	19.3	167.81	-315.4	0.0	397.1	365.5	31.57	12.577			
4,300.0	4,229.6	4,262.9	4,152.2	20.4	19.9	171.93	-298.0	19.7	425.5	393.6	31.94	13.322			
4,400.0	4,327.5	4,359.3	4,244.6	21.0	20.6	175.67	-280.0	40.1	455.7	423.3	32.38	14.071			
4,500.0	4,425.5	4,452.3	4,333.8	21.5	21.2	178.98	-263.4	61.1	486.3	453.4	32.88	14.789			
4,600.0	4,523.4	4,539.0	4,416.8	22.1	21.8	-178.31	-247.7	80.4	518.6	485.2	33.41	15.521			
4,700.0	4,621.3	4,623.2	4,497.4	22.6	22.3	-176.03	-231.6	98.2	553.1	519.1	33.98	16.277			
4,800.0	4,719.2	4,711.0	4,581.5	23.2	22.9	-173.92	-213.8	116.6	589.5	554.9	34.59	17.044			
4,900.0	4,817.1	4,808.9	4,675.5	23.7	23.6	-171.93	-194.5	136.1	626.2	591.0	35.23	17.772			

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 Nelson Family LLC 33W-214
Project:	SEC.33-T5N-R67W	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Reference Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #2 (5-11-16)	Offset TVD Reference:	Offset Datum

Offset Design Nelson 33-VD Pad Sec.33-T5N-R67W - Nelson 33-VD (Exist) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 673-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,915.1	4,908.6	4,772.0	24.3	24.2	-170.42	-176.4	153.1	662.1	626.2	35.89	18.447		
5,100.0	5,013.0	5,024.6	4,885.0	24.8	24.8	-169.07	-157.2	170.8	697.0	660.4	36.59	19.050		
5,200.0	5,110.9	5,146.5	5,005.2	25.4	25.3	-168.15	-142.7	185.6	727.6	690.3	37.28	19.515		
5,300.0	5,208.8	5,266.3	5,124.0	25.9	25.7	-167.67	-132.6	196.1	755.2	717.3	37.93	19.911		
5,400.0	5,306.7	5,383.9	5,241.3	26.5	26.0	-167.66	-126.3	200.9	780.2	741.6	38.52	20.253		
5,500.0	5,404.9	5,506.2	5,363.6	26.9	26.2	-168.16	-123.7	200.0	800.9	761.7	39.21	20.426		
5,600.0	5,503.7	5,607.2	5,464.6	27.3	26.3	-168.56	-123.5	198.5	816.3	776.5	39.78	20.522		
5,700.0	5,602.9	5,706.8	5,564.2	27.5	26.4	-168.84	-123.2	197.4	828.6	788.3	40.28	20.573		
5,800.0	5,702.6	5,808.4	5,665.8	27.8	26.5	-169.10	-123.1	195.9	837.3	796.6	40.71	20.565		
5,900.0	5,802.4	5,908.0	5,765.3	28.0	26.6	-169.27	-123.1	194.7	842.5	801.4	41.08	20.506		
6,000.0	5,902.4	6,000.6	5,858.0	28.1	26.8	-4.16	-122.6	193.8	844.6	795.4	49.20	17.167		
6,100.0	6,002.4	6,097.6	5,954.9	28.2	26.9	-4.19	-121.5	193.3	845.8	796.3	49.50	17.089		
6,200.0	6,102.2	6,201.1	6,058.4	28.4	27.0	87.35	-120.3	192.7	846.8	804.7	42.05	20.138		
6,300.0	6,200.6	6,304.5	6,161.8	28.4	27.2	88.53	-119.7	191.6	846.7	804.5	42.21	20.060		
6,368.4	6,266.1	6,371.7	6,229.0	28.5	27.3	89.78	-119.6	190.8	846.6	804.3	42.26	20.033		
6,400.0	6,295.7	6,402.5	6,259.8	28.5	27.3	90.48	-119.6	190.5	846.6	804.4	42.27	20.027		
6,500.0	6,386.1	6,498.5	6,355.8	28.5	27.4	93.12	-119.9	189.9	847.8	805.5	42.29	20.047		
6,600.0	6,470.2	6,587.3	6,444.6	28.5	27.6	96.03	-120.8	189.8	851.8	809.5	42.30	20.137		
6,700.0	6,546.5	6,663.9	6,521.2	28.5	27.7	98.64	-121.8	189.9	861.1	818.7	42.40	20.309		
6,800.0	6,613.7	6,729.4	6,586.8	28.6	27.8	100.60	-122.6	190.1	877.8	835.0	42.73	20.541		
6,900.0	6,670.7	6,784.9	6,642.2	28.7	27.8	101.64	-123.2	190.3	903.4	859.9	43.50	20.767		
7,000.0	6,716.5	6,831.4	6,688.7	28.8	27.9	101.57	-123.6	190.2	938.6	893.7	44.88	20.913		
7,100.0	6,750.3	6,866.9	6,724.2	29.2	27.9	100.06	-123.8	190.0	983.3	936.3	46.95	20.941		

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Nelson Family LLC 33W-214
Project:	SEC.33-T5N-R67W	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Reference Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #2 (5-11-16)	Offset TVD Reference:	Offset Datum

Offset Design Nelson 33-VD Pad Sec.33-T5N-R67W - Nelson 42-33 (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 7578-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)			
0.0	0.0	0.0	0.0	0.0	0.0	-143.49	-783.3	-579.7	975.1					
100.0	100.0	64.0	64.0	0.1	1.6	-143.49	-783.3	-579.7	974.4	972.7	1.71	571.208		
200.0	200.0	164.0	164.0	0.4	4.0	-143.49	-783.3	-579.7	974.4	970.0	4.43	219.900		
300.0	300.0	264.0	264.0	0.7	6.5	-143.49	-783.3	-579.7	974.4	967.3	7.16	136.159		
400.0	400.0	364.0	364.0	1.0	8.9	-143.49	-783.3	-579.7	974.4	964.5	9.88	98.608		
500.0	500.0	464.0	464.0	1.2	11.4	51.38	-783.3	-579.7	973.6	961.0	12.57	77.428		
600.0	599.9	563.9	563.9	1.4	13.8	51.59	-783.3	-579.7	971.2	955.9	15.25	63.687		
700.0	699.7	663.7	663.7	1.7	16.3	51.94	-783.3	-579.7	967.1	949.2	17.94	53.916		
800.0	799.3	763.3	763.3	2.0	18.7	52.43	-783.3	-579.7	961.5	940.9	20.64	46.591		
900.0	898.6	862.6	862.6	2.3	21.1	53.08	-783.3	-579.7	954.3	931.0	23.35	40.873		
1,000.0	997.5	961.5	961.5	2.7	23.6	53.87	-783.3	-579.7	945.7	919.7	26.08	36.268		
1,100.0	1,096.1	1,060.1	1,060.1	3.1	26.0	54.82	-783.3	-579.7	935.8	907.0	28.82	32.465		
1,200.0	1,194.2	1,158.2	1,158.2	3.6	28.4	55.91	-783.3	-579.7	924.6	893.0	31.61	29.253		
1,300.0	1,292.1	1,256.1	1,256.1	4.1	30.8	56.95	-783.3	-579.7	913.2	878.7	34.45	26.509		
1,400.0	1,390.0	1,354.0	1,354.0	4.6	33.2	58.01	-783.3	-579.7	902.1	864.8	37.31	24.177		
1,500.0	1,487.9	1,451.9	1,451.9	5.1	35.6	59.10	-783.3	-579.7	891.4	851.2	40.19	22.177		
1,600.0	1,585.8	1,549.8	1,549.8	5.6	38.0	60.22	-783.3	-579.7	880.9	837.9	43.09	20.446		
1,700.0	1,683.8	1,647.8	1,647.8	6.1	40.4	61.36	-783.3	-579.7	870.9	824.9	46.00	18.934		
1,800.0	1,781.7	1,745.7	1,745.7	6.7	42.8	62.52	-783.3	-579.7	861.2	812.3	48.92	17.605		
1,900.0	1,879.6	1,843.6	1,843.6	7.2	45.2	63.71	-783.3	-579.7	851.8	800.0	51.85	16.430		
2,000.0	1,977.5	1,941.5	1,941.5	7.8	47.6	64.93	-783.3	-579.7	842.9	788.1	54.79	15.385		
2,100.0	2,075.4	2,039.4	2,039.4	8.3	50.0	66.17	-783.3	-579.7	834.3	776.6	57.74	14.451		
2,200.0	2,173.4	2,137.4	2,137.4	8.8	52.4	67.44	-783.3	-579.7	826.2	765.5	60.69	13.612		
2,300.0	2,271.3	2,235.3	2,235.3	9.4	54.8	68.73	-783.3	-579.7	818.5	754.8	63.66	12.857		
2,400.0	2,369.2	2,333.2	2,333.2	9.9	57.2	70.04	-783.3	-579.7	811.2	744.6	66.63	12.174		
2,500.0	2,467.1	2,431.1	2,431.1	10.5	59.6	71.37	-783.3	-579.7	804.4	734.8	69.61	11.555		
2,600.0	2,565.0	2,529.0	2,529.0	11.0	62.0	72.73	-783.3	-579.7	798.0	725.4	72.59	10.992		
2,700.0	2,662.9	2,626.9	2,626.9	11.6	64.4	74.10	-783.3	-579.7	792.1	716.5	75.58	10.480		
2,800.0	2,760.9	2,724.9	2,724.9	12.1	66.8	75.50	-783.3	-579.7	786.7	708.1	78.57	10.012		
2,900.0	2,858.8	2,822.8	2,822.8	12.7	69.2	76.91	-783.3	-579.7	781.7	700.2	81.56	9.584		
3,000.0	2,956.7	2,920.7	2,920.7	13.2	71.6	78.34	-783.3	-579.7	777.3	692.7	84.55	9.193		
3,100.0	3,054.6	3,018.6	3,018.6	13.8	74.0	79.78	-783.3	-579.7	773.3	685.8	87.55	8.833		
3,200.0	3,152.5	3,116.5	3,116.5	14.3	76.4	81.24	-783.3	-579.7	769.9	679.4	90.54	8.504		
3,300.0	3,250.4	3,214.4	3,214.4	14.9	78.8	82.70	-783.3	-579.7	767.0	673.5	93.53	8.201		
3,400.0	3,348.4	3,312.4	3,312.4	15.4	81.2	84.18	-783.3	-579.7	764.7	668.2	96.51	7.923		
3,500.0	3,446.3	3,410.3	3,410.3	16.0	83.6	85.67	-783.3	-579.7	762.8	663.3	99.49	7.668		
3,600.0	3,544.2	3,508.2	3,508.2	16.5	86.0	87.16	-783.3	-579.7	761.5	659.1	102.46	7.432		
3,700.0	3,642.1	3,606.1	3,606.1	17.1	88.4	88.66	-783.3	-579.7	760.8	655.3	105.43	7.216		
3,789.8	3,730.1	3,694.1	3,694.1	17.6	90.5	90.00	-783.3	-579.7	760.6	652.5	108.08	7.037		
3,800.0	3,740.0	3,704.0	3,704.0	17.6	90.7	90.15	-783.3	-579.7	760.6	652.2	108.38	7.017		
3,900.0	3,838.0	3,802.0	3,802.0	18.2	93.1	91.65	-783.3	-579.7	760.9	649.6	111.33	6.834		
4,000.0	3,935.9	3,899.9	3,899.9	18.7	95.5	93.14	-783.3	-579.7	761.8	647.5	114.27	6.666		
4,100.0	4,033.8	3,997.8	3,997.8	19.3	97.9	94.63	-783.3	-579.7	763.2	646.0	117.20	6.512		
4,200.0	4,131.7	4,095.7	4,095.7	19.8	100.3	96.12	-783.3	-579.7	765.1	645.0	120.11	6.370		
4,300.0	4,229.6	4,193.6	4,193.6	20.4	102.7	97.59	-783.3	-579.7	767.6	644.6	123.01	6.240		
4,400.0	4,327.5	4,291.5	4,291.5	21.0	105.1	99.06	-783.3	-579.7	770.6	644.7	125.90	6.120		
4,500.0	4,425.5	4,389.5	4,389.5	21.5	107.5	100.51	-783.3	-579.7	774.1	645.3	128.78	6.011		
4,600.0	4,523.4	4,487.4	4,487.4	22.1	109.9	101.96	-783.3	-579.7	778.1	646.5	131.64	5.911		
4,700.0	4,621.3	4,585.3	4,585.3	22.6	112.3	103.38	-783.3	-579.7	782.7	648.2	134.49	5.820		
4,800.0	4,719.2	4,683.2	4,683.2	23.2	114.7	104.79	-783.3	-579.7	787.7	650.4	137.32	5.736		
4,900.0	4,817.1	4,781.1	4,781.1	23.7	117.1	106.18	-783.3	-579.7	793.2	653.1	140.14	5.660		

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 Nelson Family LLC 33W-214
Project:	SEC.33-T5N-R67W	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Reference Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #2 (5-11-16)	Offset TVD Reference:	Offset Datum

Offset Design Nelson 33-VD Pad Sec.33-T5N-R67W - Nelson 42-33 (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 7578-UNKNOWN													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,000.0	4,915.1	4,879.1	4,879.1	24.3	119.5	107.55	-783.3	-579.7	799.2	656.3	142.95	5.591		
5,100.0	5,013.0	4,977.0	4,977.0	24.8	121.9	108.90	-783.3	-579.7	805.7	660.0	145.74	5.529		
5,200.0	5,110.9	5,074.9	5,074.9	25.4	124.3	110.23	-783.3	-579.7	812.6	664.1	148.52	5.472		
5,300.0	5,208.8	5,172.8	5,172.8	25.9	126.7	111.54	-783.3	-579.7	820.0	668.7	151.28	5.420		
5,400.0	5,306.7	5,270.7	5,270.7	26.5	129.1	112.82	-783.3	-579.7	827.8	673.8	154.03	5.374		
5,500.0	5,404.9	5,368.9	5,368.9	26.9	131.5	114.13	-783.3	-579.7	835.5	678.7	156.81	5.328		
5,600.0	5,503.7	5,467.7	5,467.7	27.3	134.0	115.20	-783.3	-579.7	842.1	682.5	159.51	5.279		
5,700.0	5,602.9	5,566.9	5,566.9	27.5	136.4	116.03	-783.3	-579.7	847.3	685.1	162.20	5.224		
5,800.0	5,702.6	5,666.6	5,666.6	27.8	138.8	116.62	-783.3	-579.7	851.2	686.3	164.86	5.163		
5,900.0	5,802.4	5,766.4	5,766.4	28.0	141.3	116.97	-783.3	-579.7	853.5	686.0	167.49	5.096		
6,000.0	5,902.4	5,866.4	5,866.4	28.1	143.7	-77.72	-783.3	-579.7	854.2	690.0	164.20	5.202		
6,100.0	6,002.4	5,966.4	5,966.4	28.2	146.2	-77.72	-783.3	-579.7	854.2	687.4	166.82	5.121		
6,200.0	6,102.2	6,066.2	6,066.2	28.4	148.6	13.73	-783.3	-579.7	849.5	675.4	174.07	4.880		
6,300.0	6,200.6	6,164.6	6,164.6	28.4	151.0	14.34	-783.3	-579.7	832.3	659.7	172.55	4.823		
6,400.0	6,295.7	6,259.7	6,259.7	28.5	153.4	15.49	-783.3	-579.7	802.8	634.7	168.11	4.775		
6,500.0	6,386.1	6,350.1	6,350.1	28.5	155.6	17.32	-783.3	-579.7	761.6	600.6	161.01	4.730		
6,600.0	6,470.2	6,434.2	6,434.2	28.5	157.6	20.11	-783.3	-579.7	709.6	557.7	151.96	4.670		
6,700.0	6,546.5	6,510.5	6,510.5	28.5	159.5	24.32	-783.3	-579.7	648.0	505.4	142.57	4.545		
6,800.0	6,613.7	6,577.7	6,577.7	28.6	161.2	30.69	-783.3	-579.7	578.1	441.8	136.33	4.240		
6,900.0	6,670.7	6,634.7	6,634.7	28.7	162.6	40.20	-783.3	-579.7	501.9	362.7	139.18	3.606		
7,000.0	6,716.5	6,680.5	6,680.5	28.8	163.7	53.52	-783.3	-579.7	422.0	266.9	155.07	2.721		
7,100.0	6,750.3	6,714.3	6,714.3	29.2	164.5	69.10	-783.3	-579.7	342.2	166.1	176.01	1.944		
7,200.0	6,771.5	6,735.5	6,735.5	29.9	165.0	82.43	-783.3	-579.7	269.2	80.5	188.69	1.426 Level 3		
7,300.0	6,779.9	6,743.9	6,743.9	31.2	165.2	89.59	-783.3	-579.7	215.8	22.7	193.14	1.117 Level 2		
7,380.1	6,780.6	6,744.6	6,744.6	32.6	165.2	90.00	-783.3	-579.7	200.4	5.2	195.18	1.027 Level 2, CC, ES, SF		
7,400.0	6,779.8	6,743.8	6,743.8	33.0	165.2	89.99	-783.3	-579.7	201.4	5.8	195.66	1.029 Level 2		
7,500.0	6,779.5	6,743.5	6,743.5	35.2	165.2	89.92	-783.3	-579.7	233.6	35.3	198.30	1.178 Level 2		
7,600.0	6,779.3	6,743.3	6,743.3	37.8	165.2	89.85	-783.3	-579.7	297.6	96.5	201.08	1.480 Level 3		
7,700.0	6,779.0	6,743.0	6,743.0	40.5	165.2	89.78	-783.3	-579.7	377.5	173.6	203.96	1.851		
7,800.0	6,778.8	6,742.8	6,742.8	43.3	165.2	89.71	-783.3	-579.7	465.3	258.4	206.92	2.249		
7,900.0	6,778.5	6,742.5	6,742.5	46.2	165.2	89.64	-783.3	-579.7	557.2	347.3	209.95	2.654		
8,000.0	6,778.3	6,742.3	6,742.3	49.2	165.2	89.57	-783.3	-579.7	651.5	438.5	213.03	3.058		
8,100.0	6,778.1	6,742.1	6,742.1	52.3	165.2	89.50	-783.3	-579.7	747.3	531.1	216.16	3.457		
8,200.0	6,777.8	6,741.8	6,741.8	55.3	165.2	89.43	-783.3	-579.7	844.1	624.7	219.32	3.849		
8,300.0	6,777.6	6,741.6	6,741.6	58.5	165.2	89.36	-783.3	-579.7	941.5	719.0	222.51	4.231		

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Nelson Family LLC 33W-214
Project:	SEC.33-T5N-R67W	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Reference Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #2 (5-11-16)	Offset TVD Reference:	Offset Datum

Offset Design														Offset Site Error:	0.0 ft
Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W - Nelson Family LLC 33U-234 - Wellbore #1 - P														Offset Well Error:	0.0 ft
Survey Program: 0-MWD															
Reference		Offset		Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
0.0	0.0	24.0	24.0	0.0	0.0	-3.33	717.7	-41.8	718.9	718.9	0.03	N/A			
100.0	100.0	124.0	124.0	0.1	0.2	-3.33	717.7	-41.8	718.9	718.6	0.34	2,105.651			
200.0	200.0	224.0	224.0	0.4	0.5	-3.33	717.7	-41.8	718.9	718.0	0.89	805.866			
300.0	300.0	324.0	324.0	0.7	0.8	-3.33	717.7	-41.8	718.9	717.5	1.44	498.284			
400.0	400.0	424.0	424.0	1.0	1.0	-3.33	717.7	-41.8	718.9	716.9	1.99	360.636 CC, ES			
500.0	500.0	524.0	524.0	1.2	1.3	-168.55	717.7	-41.8	720.2	717.7	2.52	286.028			
600.0	599.9	623.9	623.9	1.4	1.6	-168.60	717.7	-41.8	724.0	721.0	3.03	238.741			
700.0	699.7	723.7	723.7	1.7	1.9	-168.68	717.7	-41.8	730.5	726.9	3.56	204.963			
800.0	799.3	823.3	823.3	2.0	2.1	-168.79	717.7	-41.8	739.4	735.3	4.10	180.136			
900.0	898.6	922.6	922.6	2.3	2.4	-168.93	717.7	-41.8	751.0	746.3	4.65	161.411			
1,000.0	997.5	1,021.5	1,021.5	2.7	2.7	-169.10	717.7	-41.8	765.1	759.9	5.21	146.982			
1,100.0	1,096.1	1,120.1	1,120.1	3.1	2.9	-169.29	717.7	-41.8	781.7	775.9	5.76	135.672			
1,200.0	1,194.2	1,216.7	1,216.7	3.6	3.2	-169.50	717.7	-41.8	800.9	794.5	6.32	126.806			
1,300.0	1,292.1	1,306.5	1,306.5	4.1	3.5	-169.64	718.4	-40.5	821.5	814.6	6.85	119.919			
1,400.0	1,390.0	1,400.0	1,399.9	4.6	3.7	-169.64	720.3	-37.2	843.1	835.7	7.40	113.952			
1,500.0	1,487.9	1,485.0	1,484.8	5.1	3.9	-169.52	722.9	-32.5	865.7	857.7	7.94	109.077			
1,600.0	1,585.8	1,573.5	1,572.9	5.6	4.2	-169.28	726.7	-25.9	889.2	880.7	8.50	104.669			
1,700.0	1,683.8	1,667.6	1,666.5	6.1	4.4	-168.93	731.5	-17.4	913.5	904.4	9.08	100.586			
1,800.0	1,781.7	1,764.4	1,762.8	6.7	4.7	-168.59	736.5	-8.5	937.8	928.2	9.69	96.834			
1,900.0	1,879.6	1,861.2	1,859.1	7.2	5.0	-168.27	741.5	0.3	962.2	951.9	10.30	93.450			
2,000.0	1,977.5	1,958.1	1,955.4	7.8	5.3	-167.96	746.5	9.2	986.7	975.7	10.92	90.366 SF			

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Nelson Family LLC 33W-214
Project:	SEC.33-T5N-R67W	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Reference Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #2 (5-11-16)	Offset TVD Reference:	Offset Datum

Offset Design														Offset Site Error:	0.0 ft
Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W - Nelson Family LLC 33U-304 - Wellbore #1 - P														Offset Well Error:	0.0 ft
Survey Program: 0-MWD															
Reference		Offset		Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
0.0	0.0	23.0	23.0	0.0	0.0	-4.66	717.7	-58.5	720.1	720.0	0.03	N/A			
100.0	100.0	123.0	123.0	0.1	0.2	-4.66	717.7	-58.5	720.1	719.7	0.34	2,126.188			
200.0	200.0	223.0	223.0	0.4	0.5	-4.66	717.7	-58.5	720.1	719.2	0.89	809.663			
300.0	300.0	323.0	323.0	0.7	0.8	-4.66	717.7	-58.5	720.1	718.6	1.44	500.040			
400.0	400.0	423.0	423.0	1.0	1.0	-4.66	717.7	-58.5	720.1	718.1	1.99	361.717 CC, ES			
500.0	500.0	523.0	523.0	1.2	1.3	-169.87	717.7	-58.5	721.4	718.8	2.52	286.798			
600.0	599.9	622.9	622.9	1.4	1.6	-169.92	717.7	-58.5	725.2	722.2	3.03	239.338			
700.0	699.7	722.7	722.7	1.7	1.9	-169.99	717.7	-58.5	731.7	728.1	3.56	205.455			
800.0	799.3	822.3	822.3	2.0	2.1	-170.09	717.7	-58.5	740.7	736.6	4.10	180.565			
900.0	898.6	921.6	921.6	2.3	2.4	-170.22	717.7	-58.5	752.3	747.6	4.65	161.803			
1,000.0	997.5	1,020.5	1,020.5	2.7	2.7	-170.36	717.7	-58.5	766.4	761.2	5.20	147.354			
1,100.0	1,096.1	1,119.1	1,119.1	3.1	2.9	-170.53	717.7	-58.5	783.1	777.4	5.76	136.034			
1,200.0	1,194.2	1,217.2	1,217.2	3.6	3.2	-170.72	717.7	-58.5	802.3	796.0	6.31	127.061			
1,300.0	1,292.1	1,315.1	1,315.1	4.1	3.5	-170.95	717.7	-58.5	822.4	815.5	6.87	119.641			
1,400.0	1,390.0	1,413.0	1,413.0	4.6	3.8	-171.16	717.7	-58.5	842.4	835.0	7.44	113.250			
1,500.0	1,487.9	1,509.4	1,509.4	5.1	4.0	-171.37	717.7	-58.5	862.5	854.5	8.00	107.762			
1,600.0	1,585.8	1,600.0	1,600.0	5.6	4.3	-171.49	718.7	-57.7	883.6	875.0	8.56	103.245			
1,700.0	1,683.8	1,676.6	1,676.5	6.1	4.5	-171.52	720.9	-56.1	906.1	897.1	9.08	99.810			
1,800.0	1,781.7	1,759.2	1,759.0	6.7	4.7	-171.47	724.7	-53.2	930.2	920.6	9.62	96.703			
1,900.0	1,879.6	1,841.2	1,840.8	7.2	4.9	-171.34	729.8	-49.3	955.9	945.7	10.16	94.052			
2,000.0	1,977.5	1,922.4	1,921.6	7.8	5.2	-171.15	736.3	-44.4	983.0	972.3	10.71	91.778 SF			

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Nelson Family LLC 33W-214
Project:	SEC.33-T5N-R67W	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Reference Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #2 (5-11-16)	Offset TVD Reference:	Offset Datum

Offset Design														Offset Site Error:	0.0 ft
Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W - Nelson Family LLC 33U-334 - Wellbore #1 - P														Offset Well Error:	0.0 ft
Survey Program: 0-MWD															
Reference		Offset		Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
0.0	0.0	24.0	24.0	0.0	0.0	-2.22	717.7	-27.9	718.2	718.2	0.03	N/A			
100.0	100.0	124.0	124.0	0.1	0.2	-2.22	717.7	-27.9	718.2	717.9	0.34	2,103.684			
200.0	200.0	224.0	224.0	0.4	0.5	-2.22	717.7	-27.9	718.2	717.3	0.89	805.114			
300.0	300.0	324.0	324.0	0.7	0.8	-2.22	717.7	-27.9	718.2	716.8	1.44	497.818			
400.0	400.0	424.0	424.0	1.0	1.0	-2.22	717.7	-27.9	718.2	716.2	1.99	360.300 CC, ES			
500.0	500.0	524.0	524.0	1.2	1.3	-167.44	717.7	-27.9	719.5	717.0	2.52	285.764			
600.0	599.9	623.9	623.9	1.4	1.6	-167.50	717.7	-27.9	723.3	720.3	3.03	238.520			
700.0	699.7	723.7	723.7	1.7	1.9	-167.59	717.7	-27.9	729.7	726.2	3.56	204.764			
800.0	799.3	823.3	823.3	2.0	2.1	-167.71	717.7	-27.9	738.7	734.6	4.10	179.947			
900.0	898.6	922.6	922.6	2.3	2.4	-167.86	717.7	-27.9	750.2	745.5	4.65	161.221			
1,000.0	997.5	1,023.0	1,023.0	2.7	2.7	-168.04	717.7	-27.8	764.2	759.0	5.21	146.806			
1,100.0	1,096.1	1,128.5	1,128.4	3.1	2.9	-168.12	717.1	-25.8	780.1	774.4	5.75	135.577			
1,200.0	1,194.2	1,233.8	1,233.7	3.6	3.2	-168.04	715.8	-21.0	797.7	791.4	6.30	126.599			
1,300.0	1,292.1	1,339.2	1,338.8	4.1	3.5	-167.82	713.7	-13.4	815.3	808.4	6.87	118.690			
1,400.0	1,390.0	1,443.2	1,442.2	4.6	3.8	-167.43	710.9	-3.2	832.0	824.5	7.46	111.535			
1,500.0	1,487.9	1,541.6	1,540.0	5.1	4.1	-167.02	708.0	7.3	848.5	840.5	8.06	105.228			
1,600.0	1,585.8	1,640.1	1,637.9	5.6	4.4	-166.63	705.1	17.7	865.1	856.4	8.68	99.624			
1,700.0	1,683.8	1,738.5	1,735.7	6.1	4.7	-166.25	702.2	28.1	881.7	872.4	9.32	94.632			
1,800.0	1,781.7	1,837.0	1,833.6	6.7	5.0	-165.89	699.4	38.6	898.3	888.3	9.96	90.176			
1,900.0	1,879.6	1,935.4	1,931.4	7.2	5.3	-165.54	696.5	49.0	915.0	904.4	10.62	86.183			
2,000.0	1,977.5	2,033.9	2,029.3	7.8	5.7	-165.20	693.6	59.4	931.7	920.4	11.28	82.602			
2,100.0	2,075.4	2,132.3	2,127.1	8.3	6.0	-164.87	690.7	69.9	948.4	936.5	11.95	79.368			
2,200.0	2,173.4	2,230.8	2,225.0	8.8	6.4	-164.56	687.8	80.3	965.2	952.5	12.63	76.442			
2,300.0	2,271.3	2,329.2	2,322.8	9.4	6.7	-164.25	685.0	90.8	982.0	968.7	13.31	73.784			
2,400.0	2,369.2	2,427.7	2,420.7	9.9	7.0	-163.96	682.1	101.2	998.8	984.8	14.00	71.362 SF			

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Nelson Family LLC 33W-214
Project:	SEC.33-T5N-R67W	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Reference Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #2 (5-11-16)	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						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	24.0	24.0	0.0	0.0	-0.89	717.7	-11.1	717.8	717.7	0.03	N/A			
100.0	100.0	124.0	124.0	0.1	0.2	-0.89	717.7	-11.1	717.8	717.4	0.34	2,102.330			
200.0	200.0	224.0	224.0	0.4	0.5	-0.89	717.7	-11.1	717.8	716.9	0.89	804.595			
300.0	300.0	324.0	324.0	0.7	0.8	-0.89	717.7	-11.1	717.8	716.3	1.44	497.498			
400.0	400.0	424.0	424.0	1.0	1.0	-0.89	717.7	-11.1	717.8	715.8	1.99	360.068 CC, ES			
500.0	500.0	528.2	528.2	1.2	1.3	-166.11	717.6	-11.1	719.0	716.5	2.52	285.162			
600.0	599.9	646.0	646.0	1.4	1.6	-166.06	715.5	-9.4	721.0	717.9	3.04	237.071			
700.0	699.7	763.8	763.6	1.7	1.9	-165.90	710.5	-5.6	723.0	719.4	3.58	202.175			
800.0	799.3	881.5	880.9	2.0	2.2	-165.62	702.6	0.5	725.2	721.0	4.15	174.945			
900.0	898.6	989.2	987.9	2.3	2.5	-165.30	693.3	7.7	727.8	723.1	4.72	154.274			
1,000.0	997.5	1,089.0	1,087.1	2.7	2.9	-165.02	684.3	14.6	732.7	727.5	5.29	138.463			
1,100.0	1,096.1	1,188.7	1,186.1	3.1	3.2	-164.80	675.4	21.5	740.2	734.3	5.88	125.833			
1,200.0	1,194.2	1,288.2	1,285.0	3.6	3.6	-164.62	666.5	28.4	750.2	743.7	6.49	115.648			
1,300.0	1,292.1	1,387.6	1,383.7	4.1	3.9	-164.50	657.6	35.3	761.0	753.9	7.10	107.146			
1,400.0	1,390.0	1,487.0	1,482.5	4.6	4.3	-164.38	648.7	42.2	771.7	764.0	7.73	99.878			
1,500.0	1,487.9	1,586.4	1,581.3	5.1	4.6	-164.27	639.8	49.1	782.5	774.2	8.36	93.588			
1,600.0	1,585.8	1,685.8	1,680.0	5.6	5.0	-164.16	630.9	55.9	793.3	784.3	9.00	88.125			
1,700.0	1,683.8	1,785.2	1,778.8	6.1	5.4	-164.05	622.0	62.8	804.1	794.5	9.65	83.340			
1,800.0	1,781.7	1,884.6	1,877.6	6.7	5.8	-163.95	613.1	69.7	814.9	804.6	10.30	79.121			
1,900.0	1,879.6	1,984.0	1,976.3	7.2	6.1	-163.84	604.2	76.6	825.7	814.8	10.95	75.377			
2,000.0	1,977.5	2,083.4	2,075.1	7.8	6.5	-163.74	595.3	83.5	836.5	824.9	11.61	72.035			
2,100.0	2,075.4	2,182.8	2,173.9	8.3	6.9	-163.65	586.4	90.3	847.3	835.0	12.27	69.035			
2,200.0	2,173.4	2,282.2	2,272.6	8.8	7.3	-163.55	577.5	97.2	858.1	845.2	12.94	66.329			
2,300.0	2,271.3	2,381.6	2,371.4	9.4	7.6	-163.46	568.7	104.1	868.9	855.3	13.60	63.877			
2,400.0	2,369.2	2,481.0	2,470.2	9.9	8.0	-163.37	559.8	111.0	879.7	865.5	14.27	61.644			
2,500.0	2,467.1	2,580.4	2,568.9	10.5	8.4	-163.28	550.9	117.9	890.5	875.6	14.94	59.604			
2,600.0	2,565.0	2,679.8	2,667.7	11.0	8.8	-163.20	542.0	124.7	901.4	885.7	15.61	57.734			
2,700.0	2,662.9	2,779.3	2,766.5	11.6	9.2	-163.11	533.1	131.6	912.2	895.9	16.29	56.012			
2,800.0	2,760.9	2,878.7	2,865.2	12.1	9.5	-163.03	524.2	138.5	923.0	906.0	16.96	54.423			
2,900.0	2,858.8	2,978.1	2,964.0	12.7	9.9	-162.95	515.3	145.4	933.8	916.2	17.64	52.951			
3,000.0	2,956.7	3,077.5	3,062.8	13.2	10.3	-162.87	506.4	152.2	944.6	926.3	18.31	51.585			
3,100.0	3,054.6	3,176.9	3,161.5	13.8	10.7	-162.80	497.5	159.1	955.5	936.5	18.99	50.314			
3,200.0	3,152.5	3,276.3	3,260.3	14.3	11.1	-162.72	488.6	166.0	966.3	946.6	19.67	49.127			
3,300.0	3,250.4	3,375.7	3,359.1	14.9	11.4	-162.65	479.7	172.9	977.1	956.8	20.35	48.018			
3,400.0	3,348.4	3,475.1	3,457.8	15.4	11.8	-162.58	470.8	179.8	987.9	966.9	21.03	46.978			
3,500.0	3,446.3	3,574.5	3,556.6	16.0	12.2	-162.51	461.9	186.6	998.8	977.1	21.71	46.002 SF			

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Nelson Family LLC 33W-214
Project:	SEC.33-T5N-R67W	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Reference Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #2 (5-11-16)	Offset TVD Reference:	Offset Datum

Offset Design													Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W - Nelson Family LLC 33V-234 - Wellbore #1 - P		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)					
0.0	0.0	0.0	0.0	0.0	0.0	-90.03	0.0	-30.7	30.7							
100.0	100.0	99.0	99.0	0.1	0.1	-90.03	0.0	-30.7	30.7	30.4	0.27	111.896				
200.0	200.0	199.0	199.0	0.4	0.4	-90.03	0.0	-30.7	30.7	29.8	0.82	37.237				
300.0	300.0	299.0	299.0	0.7	0.7	-90.03	0.0	-30.7	30.7	29.3	1.37	22.312				
400.0	400.0	399.0	399.0	1.0	1.0	-90.03	0.0	-30.7	30.7	28.7	1.92	15.928 CC				
500.0	500.0	499.0	499.0	1.2	1.2	107.10	0.0	-30.7	31.0	28.6	2.44	12.694 ES				
600.0	599.9	598.9	598.9	1.4	1.5	113.73	0.0	-30.7	32.4	29.4	2.95	10.975				
700.0	699.7	698.7	698.7	1.7	1.8	123.38	0.0	-30.7	35.5	32.0	3.49	10.194				
800.0	799.3	798.3	798.3	2.0	2.1	133.96	0.0	-30.7	41.3	37.2	4.04	10.218				
900.0	898.6	898.8	898.8	2.3	2.3	143.24	-1.1	-29.9	49.0	44.4	4.57	10.707				
1,000.0	997.5	999.6	999.5	2.7	2.5	150.72	-4.3	-27.7	57.3	52.2	5.09	11.263				
1,100.0	1,096.1	1,100.6	1,100.3	3.1	2.8	157.00	-9.8	-24.0	66.1	60.5	5.61	11.786				
1,200.0	1,194.2	1,201.8	1,201.1	3.6	3.0	162.44	-17.5	-18.8	75.2	69.1	6.13	12.271				
1,300.0	1,292.1	1,301.3	1,300.0	4.1	3.3	166.86	-26.2	-12.8	84.4	77.7	6.66	12.660				
1,400.0	1,390.0	1,400.7	1,398.8	4.6	3.6	170.40	-34.9	-6.9	93.9	86.6	7.21	13.022				
1,500.0	1,487.9	1,500.1	1,497.7	5.1	4.0	173.28	-43.6	-1.0	103.7	95.9	7.76	13.350				
1,600.0	1,585.8	1,599.5	1,596.5	5.6	4.3	175.66	-52.3	5.0	113.7	105.3	8.33	13.642				
1,700.0	1,683.8	1,698.9	1,695.3	6.1	4.6	177.65	-61.1	10.9	123.8	114.9	8.91	13.899				
1,800.0	1,781.7	1,798.3	1,794.2	6.7	4.9	179.34	-69.8	16.9	134.1	124.6	9.50	14.122				
1,900.0	1,879.6	1,897.7	1,893.0	7.2	5.3	-179.21	-78.5	22.8	144.5	134.4	10.10	14.317				
2,000.0	1,977.5	1,997.1	1,991.8	7.8	5.6	-177.96	-87.2	28.7	155.0	144.3	10.70	14.487				
2,100.0	2,075.4	2,096.5	2,090.7	8.3	6.0	-176.86	-95.9	34.7	165.6	154.2	11.31	14.636				
2,200.0	2,173.4	2,195.9	2,189.5	8.8	6.3	-175.90	-104.7	40.6	176.1	164.2	11.93	14.766				
2,300.0	2,271.3	2,295.3	2,288.3	9.4	6.7	-175.05	-113.4	46.5	186.8	174.2	12.55	14.881				
2,400.0	2,369.2	2,394.7	2,387.2	9.9	7.0	-174.29	-122.1	52.5	197.5	184.3	13.18	14.983				
2,500.0	2,467.1	2,494.0	2,486.0	10.5	7.4	-173.60	-130.8	58.4	208.2	194.4	13.81	15.073				
2,600.0	2,565.0	2,593.4	2,584.8	11.0	7.8	-172.99	-139.5	64.4	218.9	204.5	14.45	15.153				
2,700.0	2,662.9	2,692.8	2,683.7	11.6	8.1	-172.43	-148.2	70.3	229.7	214.6	15.08	15.224				
2,800.0	2,760.9	2,792.2	2,782.5	12.1	8.5	-171.92	-157.0	76.2	240.4	224.7	15.73	15.289				
2,900.0	2,858.8	2,891.6	2,881.3	12.7	8.8	-171.46	-165.7	82.2	251.2	234.8	16.37	15.347				
3,000.0	2,956.7	2,991.0	2,980.2	13.2	9.2	-171.03	-174.4	88.1	262.0	245.0	17.02	15.399				
3,100.0	3,054.6	3,090.4	3,079.0	13.8	9.6	-170.64	-183.1	94.0	272.8	255.2	17.66	15.447				
3,200.0	3,152.5	3,189.8	3,177.9	14.3	9.9	-170.27	-191.8	100.0	283.7	265.4	18.31	15.490				
3,300.0	3,250.4	3,289.2	3,276.7	14.9	10.3	-169.94	-200.6	105.9	294.5	275.6	18.97	15.529				
3,400.0	3,348.4	3,388.6	3,375.5	15.4	10.7	-169.62	-209.3	111.9	305.4	285.8	19.62	15.565				
3,500.0	3,446.3	3,488.0	3,474.4	16.0	11.0	-169.33	-218.0	117.8	316.2	296.0	20.27	15.598				
3,600.0	3,544.2	3,587.4	3,573.2	16.5	11.4	-169.06	-226.7	123.7	327.1	306.2	20.93	15.629				
3,700.0	3,642.1	3,686.8	3,672.0	17.1	11.8	-168.81	-235.4	129.7	338.0	316.4	21.59	15.657				
3,800.0	3,740.0	3,786.2	3,770.9	17.6	12.1	-168.57	-244.2	135.6	348.8	326.6	22.24	15.683				
3,900.0	3,838.0	3,885.6	3,869.7	18.2	12.5	-168.35	-252.9	141.5	359.7	336.8	22.90	15.707				
4,000.0	3,935.9	3,985.0	3,968.5	18.7	12.9	-168.14	-261.6	147.5	370.6	347.1	23.56	15.730				
4,100.0	4,033.8	4,084.4	4,067.4	19.3	13.2	-167.94	-270.3	153.4	381.5	357.3	24.22	15.750				
4,200.0	4,131.7	4,183.8	4,166.2	19.8	13.6	-167.75	-279.0	159.3	392.4	367.5	24.88	15.770				
4,300.0	4,229.6	4,283.2	4,265.0	20.4	14.0	-167.57	-287.7	165.3	403.3	377.8	25.55	15.788				
4,400.0	4,327.5	4,382.6	4,363.9	21.0	14.4	-167.40	-296.5	171.2	414.2	388.0	26.21	15.805				
4,500.0	4,425.5	4,482.0	4,462.7	21.5	14.7	-167.24	-305.2	177.2	425.1	398.3	26.87	15.821				
4,600.0	4,523.4	4,581.4	4,561.5	22.1	15.1	-167.09	-313.9	183.1	436.1	408.5	27.54	15.836				
4,700.0	4,621.3	4,680.8	4,660.4	22.6	15.5	-166.95	-322.6	189.0	447.0	418.8	28.20	15.850				
4,800.0	4,719.2	4,780.2	4,759.2	23.2	15.8	-166.81	-331.3	195.0	457.9	429.0	28.87	15.863				
4,900.0	4,817.1	4,879.6	4,858.0	23.7	16.2	-166.68	-340.1	200.9	468.8	439.3	29.53	15.876				
5,000.0	4,915.1	4,979.0	4,956.9	24.3	16.6	-166.56	-348.8	206.8	479.7	449.5	30.20	15.887				

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 Nelson Family LLC 33W-214
Project:	SEC.33-T5N-R67W	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Reference Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #2 (5-11-16)	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							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)				
5,100.0	5,013.0	5,078.3	5,055.7	24.8	16.9	-166.44	-357.5	212.8	490.7	459.8	30.86	15.898			
5,200.0	5,110.9	5,177.7	5,154.6	25.4	17.3	-166.32	-366.2	218.7	501.6	470.1	31.53	15.909			
5,300.0	5,208.8	5,277.1	5,253.4	25.9	17.7	-166.21	-374.9	224.7	512.5	480.3	32.20	15.919			
5,400.0	5,306.7	5,376.5	5,352.2	26.5	18.1	-166.11	-383.6	230.6	523.5	490.6	32.86	15.928			
5,500.0	5,404.9	5,476.1	5,451.2	26.9	18.4	-166.01	-392.4	236.5	533.1	499.5	33.55	15.889			
5,600.0	5,503.7	5,575.8	5,550.4	27.3	18.8	-165.82	-401.1	242.5	539.4	505.2	34.18	15.779			
5,700.0	5,602.9	5,668.4	5,642.5	27.5	19.1	-165.58	-408.9	247.8	542.6	507.9	34.73	15.624			
5,800.0	5,702.6	5,754.8	5,728.6	27.8	19.3	-165.40	-414.3	251.5	544.8	509.6	35.16	15.495			
5,900.0	5,802.4	5,841.1	5,814.9	28.0	19.5	-165.30	-417.5	253.6	546.1	510.6	35.50	15.383			
6,000.0	5,902.4	5,927.7	5,901.4	28.1	19.7	-0.07	-418.5	254.3	546.5	500.3	46.14	11.844			
6,100.0	6,002.4	6,027.7	6,001.4	28.2	19.9	-0.07	-418.5	254.3	546.5	500.0	46.46	11.762			
6,200.0	6,102.2	6,127.7	6,101.3	28.4	20.0	91.33	-418.5	250.6	546.6	510.0	36.57	14.947			
6,300.0	6,200.6	6,227.8	6,200.0	28.4	20.1	91.45	-418.5	234.3	547.0	510.2	36.79	14.869			
6,400.0	6,295.7	6,328.2	6,295.9	28.5	20.2	91.55	-418.5	205.1	547.7	510.8	36.88	14.848			
6,500.0	6,386.1	6,428.7	6,387.4	28.5	20.2	91.61	-418.5	163.5	548.6	511.7	36.95	14.847			
6,600.0	6,470.2	6,529.4	6,472.7	28.5	20.2	91.65	-418.5	110.2	549.9	512.7	37.13	14.809			
6,700.0	6,546.5	6,630.2	6,550.4	28.5	20.1	91.66	-418.5	46.0	551.3	513.7	37.61	14.660			
6,800.0	6,613.7	6,731.2	6,619.0	28.6	20.1	91.64	-418.5	-27.9	553.0	514.4	38.59	14.328			
6,900.0	6,670.7	6,832.3	6,677.4	28.7	20.1	91.60	-418.5	-110.4	554.8	514.6	40.29	13.773			
7,000.0	6,716.5	6,933.5	6,724.4	28.8	20.7	91.52	-418.5	-200.0	556.9	514.1	42.80	13.010			
7,100.0	6,750.3	7,034.8	6,759.3	29.2	22.5	91.42	-418.5	-295.0	559.0	512.8	46.15	12.112			
7,200.0	6,771.5	7,136.2	6,781.2	29.9	24.6	91.29	-418.5	-393.9	561.2	510.9	50.23	11.171			
7,300.0	6,779.9	7,237.6	6,789.9	31.2	27.0	91.14	-418.5	-494.9	563.4	508.5	54.88	10.266			
7,400.0	6,779.8	7,337.8	6,790.0	33.0	29.5	91.14	-418.5	-595.1	565.7	505.8	59.91	9.442			
7,500.0	6,779.5	7,437.8	6,790.0	35.2	32.2	91.16	-418.5	-695.1	567.9	502.7	65.26	8.703			
7,600.0	6,779.3	7,537.8	6,790.0	37.8	35.0	91.18	-418.5	-795.1	570.2	499.3	70.86	8.046			
7,700.0	6,779.0	7,637.8	6,790.0	40.5	38.0	91.20	-418.5	-895.0	572.4	495.7	76.68	7.465			
7,800.0	6,778.8	7,737.7	6,790.0	43.3	41.0	91.21	-418.5	-995.0	574.7	492.0	82.66	6.953			
7,900.0	6,778.5	7,837.7	6,790.0	46.2	44.0	91.23	-418.5	-1,095.0	576.9	488.2	88.76	6.500			
8,000.0	6,778.3	7,937.7	6,790.0	49.2	47.1	91.25	-418.5	-1,194.9	579.2	484.2	94.98	6.098			
8,100.0	6,778.1	8,037.7	6,790.0	52.3	50.3	91.27	-418.5	-1,294.9	581.4	480.2	101.27	5.741			
8,200.0	6,777.8	8,137.6	6,790.0	55.3	53.5	91.29	-418.5	-1,394.9	583.7	476.0	107.64	5.422			
8,300.0	6,777.6	8,237.6	6,790.0	58.5	56.7	91.31	-418.5	-1,494.9	585.9	471.9	114.07	5.137			
8,400.0	6,777.3	8,337.6	6,790.0	61.7	59.9	91.33	-418.5	-1,594.8	588.2	467.6	120.54	4.879			
8,500.0	6,777.1	8,437.5	6,790.0	64.9	63.2	91.35	-418.5	-1,694.8	590.4	463.4	127.06	4.647			
8,600.0	6,776.8	8,537.5	6,790.0	68.1	66.5	91.37	-418.5	-1,794.8	592.7	459.1	133.61	4.436			
8,700.0	6,776.6	8,637.5	6,790.0	71.3	69.8	91.39	-418.5	-1,894.8	594.9	454.7	140.19	4.244			
8,800.0	6,776.3	8,737.5	6,790.0	74.6	73.1	91.40	-418.5	-1,994.7	597.2	450.4	146.80	4.068			
8,900.0	6,776.1	8,837.4	6,790.0	77.9	76.4	91.42	-418.5	-2,094.7	599.4	446.0	153.43	3.907			
9,000.0	6,775.9	8,937.4	6,790.0	81.1	79.7	91.44	-418.5	-2,194.7	601.7	441.6	160.09	3.759			
9,100.0	6,775.6	9,037.4	6,790.0	84.4	83.1	91.46	-418.5	-2,294.7	603.9	437.2	166.76	3.622			
9,200.0	6,775.4	9,137.4	6,790.0	87.8	86.4	91.47	-418.5	-2,394.6	606.2	432.8	173.44	3.495			
9,300.0	6,775.1	9,237.3	6,790.0	91.1	89.8	91.49	-418.5	-2,494.6	608.4	428.3	180.14	3.378			
9,400.0	6,774.9	9,337.3	6,790.0	94.4	93.1	91.51	-418.5	-2,594.6	610.7	423.8	186.85	3.268			
9,500.0	6,774.6	9,437.3	6,790.0	97.7	96.5	91.53	-418.5	-2,694.6	612.9	419.4	193.57	3.166			
9,600.0	6,774.4	9,537.3	6,790.0	101.1	99.9	91.54	-418.5	-2,794.5	615.2	414.9	200.31	3.071			
9,700.0	6,774.1	9,637.2	6,790.0	104.4	103.2	91.56	-418.5	-2,894.5	617.5	410.4	207.05	2.982			
9,800.0	6,773.9	9,737.2	6,790.0	107.8	106.6	91.58	-418.5	-2,994.5	619.7	405.9	213.80	2.899			
9,900.0	6,773.7	9,837.2	6,790.0	111.1	110.0	91.60	-418.5	-3,094.5	620.2	400.3	219.97	2.820			
10,000.0	6,773.4	9,937.2	6,790.0	114.5	113.4	91.64	-418.5	-3,194.4	617.3	391.4	225.89	2.733			

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 Nelson Family LLC 33W-214
Project:	SEC.33-T5N-R67W	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Reference Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #2 (5-11-16)	Offset TVD Reference:	Offset Datum

Offset Design														Offset Site Error:	0.0 ft
Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W - Nelson Family LLC 33V-234 - Wellbore #1 - P														Offset Well Error:	0.0 ft
Survey Program: 0-MWD															
Reference		Offset		Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
10,100.0	6,773.2	10,037.0	6,790.0	117.8	116.8	91.68	-418.5	-3,294.3	612.3	379.7	232.58	2.633			
10,200.0	6,772.9	10,136.9	6,790.0	121.2	120.2	91.71	-418.5	-3,394.2	607.3	367.9	239.36	2.537			
10,300.0	6,772.7	10,236.8	6,790.0	124.6	123.6	91.75	-418.5	-3,494.1	602.2	356.1	246.14	2.447			
10,400.0	6,772.4	10,336.7	6,790.0	127.9	127.0	91.79	-418.5	-3,593.9	597.2	344.3	252.93	2.361			
10,500.0	6,772.2	10,436.5	6,790.0	131.3	130.4	91.83	-418.5	-3,693.8	592.2	332.5	259.73	2.280			
10,600.0	6,772.0	10,536.4	6,790.0	134.7	133.8	91.87	-418.5	-3,793.7	587.2	320.6	266.53	2.203			
10,700.0	6,771.7	10,636.3	6,790.0	138.0	137.2	91.91	-418.5	-3,893.5	582.2	308.8	273.33	2.130			
10,800.0	6,771.5	10,736.1	6,790.0	141.4	140.6	91.95	-418.5	-3,993.4	577.1	297.0	280.13	2.060			
10,900.0	6,771.2	10,836.0	6,790.0	144.8	144.0	91.99	-418.5	-4,093.3	572.1	285.2	286.94	1.994			
11,000.0	6,771.0	10,935.9	6,790.0	148.2	147.4	92.03	-418.5	-4,193.2	567.1	273.3	293.75	1.931			
11,100.0	6,770.7	11,035.8	6,790.0	151.6	150.8	92.08	-418.5	-4,293.0	562.1	261.5	300.57	1.870			
11,200.0	6,770.5	11,135.6	6,790.0	155.0	154.2	92.12	-418.5	-4,392.9	557.1	249.7	307.38	1.812			
11,300.0	6,770.3	11,235.5	6,790.0	158.4	157.6	92.16	-418.5	-4,492.8	552.0	237.8	314.20	1.757			
11,400.0	6,770.0	11,335.4	6,790.0	160.6	160.6	92.21	-418.5	-4,592.7	547.0	227.7	319.37	1.713			
11,403.1	6,770.0	11,335.6	6,790.0	160.7	160.6	92.21	-418.5	-4,592.8	546.9	227.4	319.44	1.712 SF			

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Nelson Family LLC 33W-214
Project:	SEC.33-T5N-R67W	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Reference Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #2 (5-11-16)	Offset TVD Reference:	Offset Datum

Offset Design													Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W - Nelson Family LLC 33V-304 - Wellbore #1 - P		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)					
0.0	0.0	0.0	0.0	0.0	0.0	-89.99	0.0	-44.6	44.6							
100.0	100.0	99.0	99.0	0.1	0.1	-89.99	0.0	-44.6	44.6	44.3	0.27	162.758				
200.0	200.0	199.0	199.0	0.4	0.4	-89.99	0.0	-44.6	44.6	43.8	0.82	54.162				
300.0	300.0	299.0	299.0	0.7	0.7	-89.99	0.0	-44.6	44.6	43.2	1.37	32.454				
400.0	400.0	399.0	399.0	1.0	1.0	-89.99	0.0	-44.6	44.6	42.7	1.92	23.168	CC			
500.0	500.0	499.0	499.0	1.2	1.2	106.42	0.0	-44.6	44.9	42.5	2.44	18.395	ES			
600.0	599.9	598.9	598.9	1.4	1.5	111.07	0.0	-44.6	46.2	43.3	2.95	15.659				
700.0	699.7	698.7	698.7	1.7	1.8	118.19	0.0	-44.6	48.9	45.5	3.48	14.045				
800.0	799.3	798.3	798.3	2.0	2.1	126.71	0.0	-44.6	53.9	49.8	4.04	13.330				
900.0	898.6	897.6	897.6	2.3	2.3	135.39	0.0	-44.6	61.7	57.0	4.61	13.363				
1,000.0	997.5	996.5	996.5	2.7	2.6	143.24	0.0	-44.6	72.6	67.4	5.19	13.991				
1,100.0	1,096.1	1,095.1	1,095.1	3.1	2.9	149.81	0.0	-44.6	86.8	81.1	5.76	15.066				
1,200.0	1,194.2	1,193.2	1,193.2	3.6	3.1	155.10	0.0	-44.6	104.2	97.8	6.33	16.456				
1,300.0	1,292.1	1,291.1	1,291.1	4.1	3.4	159.07	0.0	-44.6	122.9	116.0	6.89	17.840				
1,400.0	1,390.0	1,389.0	1,389.0	4.6	3.7	161.99	0.0	-44.6	142.1	134.7	7.45	19.071				
1,500.0	1,487.9	1,486.9	1,486.9	5.1	4.0	164.21	0.0	-44.6	161.6	153.6	8.02	20.156				
1,600.0	1,585.8	1,588.3	1,588.3	5.6	4.2	166.19	-0.5	-43.7	180.4	171.8	8.56	21.063				
1,700.0	1,683.8	1,690.9	1,690.8	6.1	4.5	168.26	-2.2	-40.4	197.3	188.2	9.09	21.703				
1,800.0	1,781.7	1,793.9	1,793.6	6.7	4.7	170.46	-5.3	-34.6	212.2	202.6	9.62	22.062				
1,900.0	1,879.6	1,896.7	1,896.0	7.2	5.0	172.80	-9.7	-26.4	225.4	215.2	10.16	22.186				
2,000.0	1,977.5	1,995.5	1,994.3	7.8	5.2	174.96	-14.3	-17.7	238.1	227.3	10.71	22.232				
2,100.0	2,075.4	2,094.3	2,092.6	8.3	5.5	176.90	-19.0	-8.9	251.0	239.8	11.27	22.272				
2,200.0	2,173.4	2,193.1	2,190.9	8.8	5.8	178.65	-23.7	-0.1	264.3	252.4	11.85	22.304				
2,300.0	2,271.3	2,292.0	2,289.2	9.4	6.1	-179.77	-28.4	8.6	277.8	265.3	12.44	22.328				
2,400.0	2,369.2	2,390.8	2,387.5	9.9	6.4	-178.33	-33.0	17.4	291.4	278.4	13.04	22.344				
2,500.0	2,467.1	2,489.6	2,485.9	10.5	6.7	-177.03	-37.7	26.2	305.2	291.6	13.66	22.352				
2,600.0	2,565.0	2,588.4	2,584.2	11.0	7.0	-175.83	-42.4	34.9	319.2	304.9	14.28	22.353				
2,700.0	2,662.9	2,687.2	2,682.5	11.6	7.3	-174.74	-47.1	43.7	333.3	318.4	14.91	22.349				
2,800.0	2,760.9	2,786.0	2,780.8	12.1	7.6	-173.74	-51.7	52.5	347.5	331.9	15.55	22.341				
2,900.0	2,858.8	2,884.8	2,879.1	12.7	8.0	-172.81	-56.4	61.3	361.8	345.6	16.20	22.328				
3,000.0	2,956.7	2,983.6	2,977.4	13.2	8.3	-171.95	-61.1	70.0	376.1	359.3	16.86	22.313				
3,100.0	3,054.6	3,082.4	3,075.7	13.8	8.6	-171.16	-65.7	78.8	390.6	373.1	17.52	22.295				
3,200.0	3,152.5	3,181.2	3,174.0	14.3	9.0	-170.43	-70.4	87.6	405.1	386.9	18.19	22.276				
3,300.0	3,250.4	3,280.1	3,272.3	14.9	9.3	-169.74	-75.1	96.3	419.7	400.9	18.86	22.255				
3,400.0	3,348.4	3,378.9	3,370.6	15.4	9.6	-169.10	-79.8	105.1	434.4	414.8	19.54	22.233				
3,500.0	3,446.3	3,477.7	3,468.9	16.0	10.0	-168.50	-84.4	113.9	449.0	428.8	20.22	22.210				
3,600.0	3,544.2	3,576.5	3,567.3	16.5	10.3	-167.94	-89.1	122.6	463.8	442.9	20.90	22.187				
3,700.0	3,642.1	3,675.3	3,665.6	17.1	10.6	-167.42	-93.8	131.4	478.6	457.0	21.59	22.163				
3,800.0	3,740.0	3,774.1	3,763.9	17.6	11.0	-166.93	-98.5	140.2	493.4	471.1	22.28	22.140				
3,900.0	3,838.0	3,872.9	3,862.2	18.2	11.3	-166.46	-103.1	149.0	508.2	485.2	22.98	22.117				
4,000.0	3,935.9	3,971.7	3,960.5	18.7	11.7	-166.02	-107.8	157.7	523.1	499.4	23.68	22.093				
4,100.0	4,033.8	4,070.5	4,058.8	19.3	12.0	-165.61	-112.5	166.5	538.0	513.6	24.38	22.071				
4,200.0	4,131.7	4,169.3	4,157.1	19.8	12.4	-165.22	-117.2	175.3	552.9	527.8	25.08	22.048				
4,300.0	4,229.6	4,268.2	4,255.4	20.4	12.7	-164.84	-121.8	184.0	567.9	542.1	25.78	22.026				
4,400.0	4,327.5	4,367.0	4,353.7	21.0	13.1	-164.49	-126.5	192.8	582.9	556.4	26.49	22.004				
4,500.0	4,425.5	4,465.8	4,452.0	21.5	13.4	-164.16	-131.2	201.6	597.9	570.7	27.20	21.983				
4,600.0	4,523.4	4,564.6	4,550.3	22.1	13.8	-163.84	-135.8	210.3	612.9	585.0	27.91	21.962				
4,700.0	4,621.3	4,663.4	4,648.7	22.6	14.1	-163.54	-140.5	219.1	627.9	599.3	28.62	21.942				
4,800.0	4,719.2	4,762.2	4,747.0	23.2	14.4	-163.25	-145.2	227.9	643.0	613.6	29.33	21.922				
4,900.0	4,817.1	4,861.0	4,845.3	23.7	14.8	-162.97	-149.9	236.6	658.0	628.0	30.04	21.902				
5,000.0	4,915.1	4,956.9	4,940.7	24.3	15.1	-162.73	-154.3	245.0	673.2	642.4	30.73	21.903				

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 Nelson Family LLC 33W-214
Project:	SEC.33-T5N-R67W	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Reference Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #2 (5-11-16)	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							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)				
5,100.0	5,013.0	5,046.3	5,029.8	24.8	15.4	-162.67	-157.5	250.9	689.4	658.0	31.33	22.002			
5,200.0	5,110.9	5,135.2	5,118.7	25.4	15.6	-162.83	-159.3	254.4	706.9	675.0	31.87	22.182			
5,300.0	5,208.8	5,224.4	5,207.8	25.9	15.8	-163.17	-159.9	255.4	725.8	693.4	32.36	22.425			
5,400.0	5,306.7	5,322.3	5,305.7	26.5	16.0	-163.62	-159.9	255.4	745.3	712.4	32.86	22.677			
5,500.0	5,404.9	5,420.5	5,403.9	26.9	16.2	-164.11	-159.9	255.4	763.5	730.1	33.40	22.859			
5,600.0	5,503.7	5,519.2	5,502.7	27.3	16.4	-164.51	-159.9	255.4	778.5	744.6	33.88	22.977			
5,700.0	5,602.9	5,618.5	5,601.9	27.5	16.6	-164.80	-159.9	255.4	790.2	755.9	34.33	23.018			
5,800.0	5,702.6	5,718.1	5,701.6	27.8	16.9	-165.01	-159.9	255.4	798.5	763.8	34.74	22.986			
5,900.0	5,802.4	5,818.0	5,801.4	28.0	17.1	-165.13	-159.9	255.4	803.5	768.4	35.11	22.886			
6,000.0	5,902.4	5,918.0	5,901.4	28.1	17.3	0.03	-159.9	255.4	805.1	761.7	43.45	18.530			
6,100.0	6,002.4	6,018.0	6,001.4	28.2	17.5	0.03	-159.9	255.4	805.1	761.3	43.81	18.376			
6,200.0	6,102.2	6,117.8	6,101.2	28.4	17.8	91.65	-159.9	255.4	805.2	768.9	36.34	22.161			
6,300.0	6,200.6	6,218.3	6,201.5	28.4	18.0	92.58	-159.9	251.2	805.8	769.1	36.75	21.928			
6,400.0	6,295.7	6,320.8	6,302.5	28.5	18.1	93.50	-159.9	233.7	807.0	770.0	37.01	21.803			
6,500.0	6,386.1	6,425.3	6,402.0	28.5	18.1	94.36	-159.9	202.1	808.6	771.4	37.17	21.751			
6,600.0	6,470.2	6,531.8	6,498.0	28.5	18.2	95.15	-159.9	156.3	810.6	773.2	37.35	21.704			
6,700.0	6,546.5	6,640.2	6,588.3	28.5	18.2	95.84	-159.9	96.4	813.0	775.2	37.71	21.559			
6,800.0	6,613.7	6,750.6	6,670.5	28.6	18.5	96.44	-159.9	22.9	815.6	777.1	38.49	21.187			
6,900.0	6,670.7	6,862.6	6,742.3	28.7	19.1	96.92	-159.9	-63.0	818.3	778.3	39.98	20.468			
7,000.0	6,716.5	6,976.2	6,801.4	28.8	20.3	97.26	-159.9	-159.8	821.1	778.8	42.36	19.384			
7,100.0	6,750.3	7,091.0	6,846.0	29.2	22.0	97.46	-159.9	-265.5	823.9	778.2	45.71	18.022			
7,200.0	6,771.5	7,206.6	6,874.3	29.9	24.3	97.52	-159.9	-377.5	826.5	776.5	49.98	16.535			
7,300.0	6,779.9	7,322.7	6,885.5	31.2	26.9	97.42	-159.9	-493.0	828.9	773.9	54.97	15.080			
7,400.0	6,779.8	7,425.3	6,885.3	33.0	29.5	97.37	-159.9	-595.5	831.1	771.1	60.01	13.850			
7,500.0	6,779.5	7,525.2	6,885.0	35.2	32.2	97.34	-159.9	-695.5	833.3	768.0	65.29	12.762			
7,600.0	6,779.3	7,625.2	6,884.6	37.8	35.0	97.31	-159.9	-795.5	835.5	764.7	70.84	11.794			
7,700.0	6,779.0	7,725.2	6,884.2	40.5	37.9	97.28	-159.9	-895.4	837.7	761.1	76.60	10.936			
7,800.0	6,778.8	7,825.2	6,883.8	43.3	40.9	97.25	-159.9	-995.4	839.9	757.4	82.52	10.179			
7,900.0	6,778.5	7,925.1	6,883.4	46.2	44.0	97.22	-159.9	-1,095.4	842.1	753.6	88.57	9.508			
8,000.0	6,778.3	8,025.1	6,883.0	49.2	47.1	97.19	-159.9	-1,195.4	844.3	749.6	94.72	8.914			
8,100.0	6,778.1	8,125.1	6,882.7	52.3	50.2	97.16	-159.9	-1,295.3	846.6	745.6	100.97	8.384			
8,200.0	6,777.8	8,225.1	6,882.3	55.3	53.4	97.14	-159.9	-1,395.3	848.8	741.5	107.28	7.911			
8,300.0	6,777.6	8,325.0	6,881.9	58.5	56.7	97.11	-159.9	-1,495.3	851.0	737.3	113.66	7.487			
8,400.0	6,777.3	8,425.0	6,881.5	61.7	59.9	97.08	-159.9	-1,595.3	853.2	733.1	120.08	7.105			
8,500.0	6,777.1	8,525.0	6,881.1	64.9	63.2	97.05	-159.9	-1,695.2	855.4	728.8	126.55	6.759			
8,600.0	6,776.8	8,625.0	6,880.7	68.1	66.4	97.02	-159.9	-1,795.2	857.6	724.6	133.06	6.445			
8,700.0	6,776.6	8,724.9	6,880.3	71.3	69.7	97.00	-159.9	-1,895.2	859.8	720.2	139.59	6.160			
8,800.0	6,776.3	8,824.9	6,880.0	74.6	73.1	96.97	-159.9	-1,995.1	862.0	715.9	146.16	5.898			
8,900.0	6,776.1	8,924.9	6,879.6	77.9	76.4	96.94	-159.9	-2,095.1	864.2	711.5	152.74	5.658			
9,000.0	6,775.9	9,024.9	6,879.2	81.1	79.7	96.91	-159.9	-2,195.1	866.5	707.1	159.35	5.437			
9,100.0	6,775.6	9,124.8	6,878.8	84.4	83.1	96.89	-159.9	-2,295.1	868.7	702.7	165.98	5.234			
9,200.0	6,775.4	9,224.8	6,878.4	87.8	86.4	96.86	-159.9	-2,395.0	870.9	698.3	172.63	5.045			
9,300.0	6,775.1	9,324.8	6,878.0	91.1	89.8	96.83	-159.9	-2,495.0	873.1	693.8	179.29	4.870			
9,400.0	6,774.9	9,424.8	6,877.7	94.4	93.1	96.81	-159.9	-2,595.0	875.3	689.4	185.96	4.707			
9,500.0	6,774.6	9,524.7	6,877.3	97.7	96.5	96.78	-159.9	-2,695.0	877.5	684.9	192.64	4.555			
9,600.0	6,774.4	9,624.7	6,876.9	101.1	99.9	96.76	-159.9	-2,794.9	879.7	680.4	199.34	4.413			
9,700.0	6,774.1	9,724.7	6,876.5	104.4	103.2	96.73	-159.9	-2,894.9	882.0	675.9	206.04	4.280			
9,800.0	6,773.9	9,824.7	6,876.1	107.8	106.6	96.70	-159.9	-2,994.9	884.2	671.4	212.76	4.156			
9,900.0	6,773.7	9,924.7	6,875.7	111.1	110.0	96.69	-159.9	-3,094.9	884.7	665.7	219.01	4.040			
10,000.0	6,773.4	10,024.6	6,875.4	114.5	113.4	96.72	-159.9	-3,194.8	881.7	656.7	224.99	3.919			

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 Nelson Family LLC 33W-214
Project:	SEC.33-T5N-R67W	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Reference Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #2 (5-11-16)	Offset TVD Reference:	Offset Datum

Offset Design Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W - Nelson Family LLC 33V-304 - Wellbore #1 - P													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth Depth (ft)	Vertical Depth Depth (ft)	Measured Depth Depth (ft)	Vertical Depth Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
10,100.0	6,773.2	10,124.5	6,875.0	117.8	116.8	96.75	-159.9	-3,294.7	876.7	645.1	231.63	3.785		
10,200.0	6,772.9	10,224.4	6,874.6	121.2	120.2	96.78	-159.9	-3,394.6	871.7	633.4	238.36	3.657		
10,300.0	6,772.7	10,324.2	6,874.2	124.6	123.6	96.81	-159.9	-3,494.4	866.7	621.6	245.09	3.536		
10,400.0	6,772.4	10,424.1	6,873.8	127.9	127.0	96.84	-159.9	-3,594.3	861.7	609.9	251.82	3.422		
10,500.0	6,772.2	10,524.0	6,873.4	131.3	130.4	96.87	-159.9	-3,694.2	856.7	598.1	258.56	3.313		
10,600.0	6,772.0	10,623.8	6,873.1	134.7	133.8	96.90	-159.9	-3,794.1	851.7	586.4	265.30	3.210		
10,700.0	6,771.7	10,723.7	6,872.7	138.0	137.2	96.93	-159.9	-3,893.9	846.7	574.6	272.05	3.112		
10,800.0	6,771.5	10,823.6	6,872.3	141.4	140.6	96.96	-159.9	-3,993.8	841.6	562.8	278.80	3.019		
10,900.0	6,771.2	10,923.5	6,871.9	144.8	144.0	97.00	-159.9	-4,093.7	836.6	551.1	285.55	2.930		
11,000.0	6,771.0	11,023.3	6,871.5	148.2	147.4	97.03	-159.9	-4,193.6	831.6	539.3	292.30	2.845		
11,100.0	6,770.7	11,123.2	6,871.1	151.6	150.8	97.06	-159.9	-4,293.4	826.6	527.6	299.05	2.764		
11,200.0	6,770.5	11,223.1	6,870.8	155.0	154.2	97.10	-159.9	-4,393.3	821.6	515.8	305.81	2.687		
11,300.0	6,770.3	11,323.0	6,870.4	158.4	157.6	97.13	-159.9	-4,493.2	816.6	504.0	312.57	2.613		
11,400.0	6,770.0	11,419.8	6,870.0	160.6	160.9	97.16	-159.9	-4,590.0	811.6	493.6	318.01	2.552		
11,403.1	6,770.0	11,419.8	6,870.0	160.7	160.9	97.16	-159.9	-4,590.0	811.5	493.4	318.08	2.551 SF		

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Nelson Family LLC 33W-214
Project:	SEC.33-T5N-R67W	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Reference Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #2 (5-11-16)	Offset TVD Reference:	Offset Datum

Offset Design														Offset Site Error:	0.0 ft
Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W - Nelson Family LLC 33V-334 - Wellbore #1 - P														Offset Well Error:	0.0 ft
Survey Program: 0-MWD															
Reference		Offset		Semi Major Axis			Distance								Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
0.0	0.0	0.0	0.0	0.0	0.0	-90.04	0.0	-16.7	16.8	16.8	0.00	N/A			
100.0	100.0	99.0	99.0	0.1	0.1	-90.04	0.0	-16.7	16.7	16.4	0.27	61.034			
200.0	200.0	199.0	199.0	0.4	0.4	-90.04	0.0	-16.7	16.7	15.9	0.82	20.311			
300.0	300.0	299.0	299.0	0.7	0.7	-90.04	0.0	-16.7	16.7	15.3	1.37	12.170			
400.0	400.0	399.0	399.0	1.0	1.0	-90.04	0.0	-16.7	16.7	14.8	1.92	8.688 CC			
500.0	500.0	499.0	499.0	1.2	1.2	109.00	0.0	-16.7	17.1	14.7	2.44	6.999			
600.0	599.9	598.9	598.9	1.4	1.5	120.39	0.0	-16.7	18.8	15.8	2.95	6.351			
700.0	699.7	699.1	699.1	1.7	1.8	132.62	-1.2	-16.3	21.8	18.3	3.45	6.308			
800.0	799.3	799.5	799.4	2.0	2.0	142.09	-4.9	-14.8	25.4	21.4	3.95	6.425			
900.0	898.6	900.0	899.7	2.3	2.2	149.58	-11.0	-12.5	29.4	24.9	4.47	6.567			
1,000.0	997.5	1,000.6	999.9	2.7	2.5	155.67	-19.6	-9.1	33.6	28.6	5.01	6.710			
1,100.0	1,096.1	1,101.4	1,099.9	3.1	2.8	160.79	-30.6	-4.8	38.0	32.5	5.55	6.848			
1,200.0	1,194.2	1,202.0	1,199.5	3.6	3.2	165.18	-44.1	0.4	42.6	36.5	6.10	6.985			
1,300.0	1,292.1	1,301.8	1,298.2	4.1	3.5	168.82	-58.1	5.8	47.5	40.9	6.66	7.133			
1,400.0	1,390.0	1,401.7	1,396.9	4.6	3.9	171.76	-72.1	11.3	52.6	45.3	7.23	7.270			
1,500.0	1,487.9	1,501.5	1,495.6	5.1	4.3	174.18	-86.2	16.7	57.7	49.9	7.81	7.393			
1,600.0	1,585.8	1,601.4	1,594.3	5.6	4.7	176.21	-100.2	22.2	63.0	54.6	8.39	7.502			
1,700.0	1,683.8	1,701.2	1,693.0	6.1	5.2	177.92	-114.2	27.6	68.3	59.3	8.99	7.596			
1,800.0	1,781.7	1,801.0	1,791.7	6.7	5.6	179.38	-128.2	33.1	73.6	64.0	9.59	7.677			
1,900.0	1,879.6	1,900.9	1,890.4	7.2	6.0	-179.36	-142.3	38.5	79.0	68.8	10.20	7.747			
2,000.0	1,977.5	2,000.7	1,989.1	7.8	6.4	-178.26	-156.3	44.0	84.5	73.7	10.82	7.808			
2,100.0	2,075.4	2,100.6	2,087.8	8.3	6.9	-177.29	-170.3	49.4	90.0	78.5	11.44	7.860			
2,200.0	2,173.4	2,200.4	2,186.5	8.8	7.3	-176.43	-184.3	54.8	95.4	83.4	12.07	7.906			
2,300.0	2,271.3	2,300.2	2,285.2	9.4	7.7	-175.67	-198.4	60.3	100.9	88.2	12.71	7.945			
2,400.0	2,369.2	2,400.1	2,383.9	9.9	8.2	-174.98	-212.4	65.7	106.5	93.1	13.34	7.980			
2,500.0	2,467.1	2,499.9	2,482.6	10.5	8.6	-174.37	-226.4	71.2	112.0	98.0	13.98	8.010			
2,600.0	2,565.0	2,599.8	2,581.3	11.0	9.1	-173.81	-240.4	76.6	117.6	102.9	14.63	8.037			
2,700.0	2,662.9	2,699.6	2,680.0	11.6	9.5	-173.30	-254.5	82.1	123.1	107.8	15.28	8.060			
2,800.0	2,760.9	2,799.4	2,778.7	12.1	10.0	-172.84	-268.5	87.5	128.7	112.8	15.93	8.081			
2,900.0	2,858.8	2,899.3	2,877.4	12.7	10.4	-172.41	-282.5	93.0	134.3	117.7	16.58	8.099			
3,000.0	2,956.7	2,999.1	2,976.1	13.2	10.8	-172.02	-296.5	98.4	139.8	122.6	17.23	8.116			
3,100.0	3,054.6	3,099.0	3,074.8	13.8	11.3	-171.66	-310.6	103.9	145.4	127.5	17.89	8.131			
3,200.0	3,152.5	3,198.8	3,173.5	14.3	11.7	-171.32	-324.6	109.3	151.0	132.5	18.55	8.144			
3,300.0	3,250.4	3,298.6	3,272.2	14.9	12.2	-171.01	-338.6	114.7	156.6	137.4	19.20	8.156			
3,400.0	3,348.4	3,398.5	3,370.9	15.4	12.6	-170.72	-352.6	120.2	162.2	142.4	19.87	8.167			
3,500.0	3,446.3	3,498.3	3,469.6	16.0	13.1	-170.45	-366.7	125.6	167.8	147.3	20.53	8.176			
3,600.0	3,544.2	3,598.2	3,568.3	16.5	13.5	-170.20	-380.7	131.1	173.5	152.3	21.19	8.185			
3,700.0	3,642.1	3,698.0	3,667.0	17.1	14.0	-169.96	-394.7	136.5	179.1	157.2	21.86	8.193			
3,800.0	3,740.0	3,797.8	3,765.7	17.6	14.4	-169.74	-408.7	142.0	184.7	162.2	22.52	8.201			
3,900.0	3,838.0	3,897.7	3,864.4	18.2	14.9	-169.53	-422.8	147.4	190.3	167.1	23.19	8.207			
4,000.0	3,935.9	3,997.5	3,963.1	18.7	15.3	-169.33	-436.8	152.9	195.9	172.1	23.85	8.213			
4,100.0	4,033.8	4,097.4	4,061.8	19.3	15.8	-169.15	-450.8	158.3	201.5	177.0	24.52	8.219			
4,200.0	4,131.7	4,197.2	4,160.5	19.8	16.2	-168.97	-464.8	163.8	207.2	182.0	25.19	8.224			
4,300.0	4,229.6	4,297.0	4,259.2	20.4	16.7	-168.81	-478.9	169.2	212.8	186.9	25.86	8.229			
4,400.0	4,327.5	4,396.9	4,357.9	21.0	17.1	-168.65	-492.9	174.7	218.4	191.9	26.53	8.233			
4,500.0	4,425.5	4,496.7	4,456.6	21.5	17.6	-168.50	-506.9	180.1	224.1	196.9	27.20	8.238			
4,600.0	4,523.4	4,596.6	4,555.3	22.1	18.0	-168.35	-520.9	185.5	229.7	201.8	27.87	8.241			
4,700.0	4,621.3	4,696.4	4,654.0	22.6	18.5	-168.22	-535.0	191.0	235.3	206.8	28.54	8.245			
4,800.0	4,719.2	4,796.2	4,752.7	23.2	18.9	-168.09	-549.0	196.4	241.0	211.7	29.21	8.248			
4,900.0	4,817.1	4,896.1	4,851.4	23.7	19.4	-167.96	-563.0	201.9	246.6	216.7	29.89	8.251			
5,000.0	4,915.1	4,995.9	4,950.1	24.3	19.8	-167.85	-577.1	207.3	252.2	221.7	30.56	8.254			

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 Nelson Family LLC 33W-214
Project:	SEC.33-T5N-R67W	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Reference Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #2 (5-11-16)	Offset TVD Reference:	Offset Datum

Offset Design		Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W - Nelson Family LLC 33V-334 - Wellbore #1 - P											Offset Site Error:		0.0 ft
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor			
5,100.0	5,013.0	5,095.8	5,048.8	24.8	20.3	-167.73	-591.1	212.8	257.9	226.6	31.23	8.257			
5,200.0	5,110.9	5,195.6	5,147.5	25.4	20.7	-167.63	-605.1	218.2	263.5	231.6	31.91	8.259			
5,300.0	5,208.8	5,295.4	5,246.2	25.9	21.2	-167.52	-619.1	223.7	269.2	236.6	32.58	8.261			
5,400.0	5,306.7	5,395.3	5,344.9	26.5	21.6	-167.42	-633.2	229.1	274.8	241.5	33.25	8.263			
5,500.0	5,404.9	5,495.2	5,443.7	26.9	22.1	-167.28	-647.2	234.6	279.1	245.2	33.94	8.225			
5,600.0	5,503.7	5,595.1	5,542.5	27.3	22.5	-166.98	-661.2	240.0	280.1	245.5	34.57	8.101			
5,700.0	5,602.9	5,688.9	5,635.3	27.5	22.9	-166.58	-673.7	244.8	278.5	243.3	35.13	7.927			
5,800.0	5,702.6	5,780.5	5,726.3	27.8	23.1	-166.23	-683.2	248.5	276.4	240.8	35.57	7.769			
5,900.0	5,802.4	5,872.2	5,817.7	28.0	23.4	-165.93	-690.0	251.2	273.9	237.9	35.94	7.620			
6,000.0	5,902.4	5,964.0	5,909.4	28.1	23.5	-0.47	-694.1	252.8	271.0	220.7	50.31	5.388			
6,100.0	6,002.4	6,056.0	6,001.4	28.2	23.7	-0.37	-695.4	253.3	269.6	219.0	50.58	5.330			
6,102.9	6,005.3	6,058.9	6,004.3	28.2	23.7	90.92	-695.4	253.3	269.6	232.9	36.68	7.350			
6,200.0	6,102.2	6,155.8	6,101.2	28.4	23.9	91.94	-695.4	253.3	269.7	232.5	37.25	7.241			
6,300.0	6,200.6	6,256.2	6,201.4	28.4	24.0	94.54	-695.4	247.9	270.5	232.5	38.06	7.109			
6,400.0	6,295.7	6,358.4	6,301.7	28.5	24.1	97.06	-695.4	229.1	272.2	233.5	38.68	7.037			
6,500.0	6,386.1	6,462.3	6,400.3	28.5	24.1	99.44	-695.4	196.4	274.7	235.6	39.08	7.029			
6,600.0	6,470.2	6,568.0	6,495.0	28.5	24.1	101.63	-695.4	149.8	277.7	238.4	39.29	7.068			
6,700.0	6,546.5	6,675.4	6,583.8	28.5	24.1	103.57	-695.4	89.4	281.3	241.8	39.49	7.123			
6,800.0	6,613.7	6,784.4	6,664.3	28.6	24.1	105.23	-695.4	16.1	285.1	245.2	39.91	7.143			
6,900.0	6,670.7	6,895.0	6,734.5	28.7	24.1	106.58	-695.4	-69.3	289.0	248.1	40.89	7.068			
7,000.0	6,716.5	7,006.9	6,792.3	28.8	24.2	107.59	-695.4	-165.0	292.8	250.1	42.75	6.850			
7,100.0	6,750.3	7,119.9	6,835.8	29.2	24.5	108.26	-695.4	-269.1	296.4	250.7	45.67	6.490			
7,200.0	6,771.5	7,233.6	6,863.6	29.9	25.8	108.58	-695.4	-379.3	299.5	249.8	49.65	6.032			
7,300.0	6,779.9	7,347.8	6,874.8	31.2	28.2	108.54	-695.4	-492.9	302.1	247.5	54.54	5.538			
7,400.0	6,779.8	7,450.4	6,874.7	33.0	30.6	108.37	-695.4	-595.5	304.2	244.7	59.44	5.117			
7,500.0	6,779.5	7,550.4	6,874.3	35.2	33.3	108.22	-695.4	-695.4	306.3	241.8	64.52	4.747			
7,600.0	6,779.3	7,650.4	6,873.9	37.8	36.0	108.07	-695.4	-795.4	308.4	238.5	69.86	4.414			
7,700.0	6,779.0	7,750.3	6,873.6	40.5	38.9	107.92	-695.4	-895.4	310.5	235.1	75.41	4.117			
7,800.0	6,778.8	7,850.3	6,873.2	43.3	41.8	107.77	-695.4	-995.4	312.6	231.5	81.12	3.853			
7,900.0	6,778.5	7,950.3	6,872.8	46.2	44.8	107.62	-695.4	-1,095.3	314.7	227.7	86.96	3.619			
8,000.0	6,778.3	8,050.2	6,872.5	49.2	47.9	107.48	-695.4	-1,195.3	316.8	223.9	92.92	3.409			
8,100.0	6,778.1	8,150.2	6,872.1	52.3	51.0	107.34	-695.4	-1,295.3	318.9	219.9	98.96	3.222			
8,200.0	6,777.8	8,250.2	6,871.7	55.3	54.2	107.20	-695.4	-1,395.2	321.0	215.9	105.09	3.055			
8,300.0	6,777.6	8,350.2	6,871.4	58.5	57.4	107.06	-695.4	-1,495.2	323.1	211.8	111.28	2.904			
8,400.0	6,777.3	8,450.1	6,871.0	61.7	60.6	106.92	-695.4	-1,595.2	325.2	207.7	117.53	2.767			
8,500.0	6,777.1	8,550.1	6,870.6	64.9	63.8	106.79	-695.4	-1,695.2	327.3	203.5	123.82	2.644			
8,600.0	6,776.8	8,650.1	6,870.3	68.1	67.1	106.65	-695.4	-1,795.1	329.5	199.3	130.16	2.531			
8,700.0	6,776.6	8,750.1	6,869.9	71.3	70.4	106.52	-695.4	-1,895.1	331.6	195.0	136.54	2.428			
8,800.0	6,776.3	8,850.0	6,869.5	74.6	73.7	106.39	-695.4	-1,995.1	333.7	190.7	142.95	2.334			
8,900.0	6,776.1	8,950.0	6,869.2	77.9	77.0	106.27	-695.4	-2,095.1	335.8	186.4	149.39	2.248			
9,000.0	6,775.9	9,050.0	6,868.8	81.1	80.3	106.14	-695.4	-2,195.0	337.9	182.1	155.86	2.168			
9,100.0	6,775.6	9,150.0	6,868.4	84.4	83.6	106.01	-695.4	-2,295.0	340.1	177.7	162.36	2.095			
9,200.0	6,775.4	9,249.9	6,868.1	87.8	86.9	105.89	-695.4	-2,395.0	342.2	173.3	168.87	2.026			
9,300.0	6,775.1	9,349.9	6,867.7	91.1	90.3	105.77	-695.4	-2,495.0	344.3	168.9	175.40	1.963			
9,400.0	6,774.9	9,449.9	6,867.3	94.4	93.6	105.65	-695.4	-2,594.9	346.4	164.5	181.96	1.904			
9,500.0	6,774.6	9,549.9	6,867.0	97.7	97.0	105.53	-695.4	-2,694.9	348.6	160.0	188.53	1.849			
9,600.0	6,774.4	9,649.8	6,866.6	101.1	100.3	105.41	-695.4	-2,794.9	350.7	155.6	195.11	1.797			
9,700.0	6,774.1	9,749.8	6,866.2	104.4	103.7	105.30	-695.4	-2,894.9	352.8	151.1	201.71	1.749			
9,800.0	6,773.9	9,849.8	6,865.9	107.8	107.1	105.18	-695.4	-2,994.8	355.0	146.7	208.33	1.704			
9,900.0	6,773.7	9,949.8	6,865.5	111.1	110.5	105.14	-695.4	-3,094.8	355.5	141.2	214.23	1.659			

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 Nelson Family LLC 33W-214
Project:	SEC.33-T5N-R67W	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Reference Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #2 (5-11-16)	Offset TVD Reference:	Offset Datum

Offset Design														Offset Site Error:	0.0 ft
Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W - Nelson Family LLC 33V-334 - Wellbore #1 - P														Offset Well Error:	0.0 ft
Survey Program: 0-MWD															
Reference		Offset		Semi Major Axis			Distance								
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning		
10,000.0	6,773.4	10,049.7	6,865.1	114.5	113.8	105.27	-695.4	-3,194.8	352.6	132.8	219.75	1.604			
10,100.0	6,773.2	10,149.6	6,864.8	117.8	117.2	105.47	-695.4	-3,294.6	347.7	121.7	226.01	1.538			
10,200.0	6,772.9	10,249.5	6,864.4	121.2	120.6	105.67	-695.4	-3,394.5	342.8	110.5	232.36	1.475	Level 3		
10,300.0	6,772.7	10,349.4	6,864.0	124.6	124.0	105.88	-695.4	-3,494.4	337.9	99.2	238.70	1.416	Level 3		
10,400.0	6,772.4	10,449.2	6,863.7	127.9	127.4	106.10	-695.4	-3,594.3	333.1	88.1	245.01	1.359	Level 3		
10,500.0	6,772.2	10,549.1	6,863.3	131.3	130.8	106.32	-695.4	-3,694.1	328.2	76.9	251.31	1.306	Level 3		
10,600.0	6,772.0	10,649.0	6,862.9	134.7	134.1	106.55	-695.4	-3,794.0	323.3	65.8	257.59	1.255	Level 3		
10,700.0	6,771.7	10,748.9	6,862.6	138.0	137.5	106.79	-695.4	-3,893.9	318.5	54.6	263.84	1.207	Level 2		
10,800.0	6,771.5	10,848.7	6,862.2	141.4	140.9	107.03	-695.4	-3,993.8	313.6	43.6	270.07	1.161	Level 2		
10,900.0	6,771.2	10,948.6	6,861.8	144.8	144.3	107.28	-695.4	-4,093.6	308.8	32.5	276.27	1.118	Level 2		
11,000.0	6,771.0	11,048.5	6,861.5	148.2	147.7	107.54	-695.4	-4,193.5	304.0	21.5	282.45	1.076	Level 2		
11,100.0	6,770.7	11,148.3	6,861.1	151.6	151.1	107.81	-695.4	-4,293.4	299.1	10.5	288.59	1.037	Level 2		
11,200.0	6,770.5	11,248.2	6,860.7	155.0	154.5	108.09	-695.4	-4,393.2	294.3	-0.4	294.70	0.999	Level 1		
11,300.0	6,770.3	11,348.1	6,860.4	158.4	157.9	108.37	-695.4	-4,493.1	289.5	-11.3	300.77	0.962	Level 1		
11,400.0	6,770.0	11,447.8	6,860.0	160.6	161.3	108.67	-695.4	-4,592.9	284.7	-21.0	305.63	0.931	Level 1		
11,403.1	6,770.0	11,447.8	6,860.0	160.7	161.3	108.67	-695.4	-4,592.9	284.5	-21.1	305.69	0.931	Level 1, ES, SF		

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Nelson Family LLC 33W-214
Project:	SEC.33-T5N-R67W	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Reference Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #2 (5-11-16)	Offset TVD Reference:	Offset Datum

Offset Design		Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W - Nelson Family LLC 33V-404 - Wellbore #1 - P											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)				
0.0	0.0	24.0	24.0	0.0	0.0	0.22	717.7	2.8	717.7	717.7	0.03	N/A			
100.0	100.0	124.0	124.0	0.1	0.2	0.22	717.7	2.8	717.7	717.4	0.34	2,102.104			
200.0	200.0	229.0	229.0	0.4	0.5	0.23	717.6	2.8	717.6	716.7	0.90	798.994			
300.0	300.0	349.7	349.7	0.7	0.8	0.32	715.0	3.9	715.5	714.0	1.47	485.111			
400.0	400.0	470.2	470.0	1.0	1.1	0.53	708.9	6.6	710.4	708.4	2.07	343.525			
500.0	500.0	590.3	589.6	1.2	1.5	-164.39	699.4	10.6	703.8	701.2	2.64	266.222			
600.0	599.9	710.0	708.5	1.4	1.9	-164.05	686.5	16.2	696.8	693.6	3.23	215.787			
700.0	699.7	813.0	810.5	1.7	2.3	-163.74	673.4	21.8	690.5	686.7	3.79	182.018			
800.0	799.3	912.9	909.5	2.0	2.7	-163.48	660.7	27.3	686.7	682.4	4.37	157.281			
900.0	898.6	1,012.9	1,008.5	2.3	3.1	-163.28	648.0	32.7	685.4	680.5	4.96	138.316			
901.2	899.7	1,014.0	1,009.6	2.3	3.1	-163.28	647.9	32.8	685.4	680.5	4.96	138.119 CC, ES			
1,000.0	997.5	1,112.9	1,107.5	2.7	3.5	-163.13	635.3	38.2	686.7	681.1	5.56	123.526			
1,100.0	1,096.1	1,212.8	1,206.4	3.1	4.0	-163.03	622.6	43.6	690.4	684.2	6.17	111.831			
1,200.0	1,194.2	1,312.6	1,305.3	3.6	4.4	-162.99	609.9	49.1	696.6	689.8	6.80	102.470			
1,300.0	1,292.1	1,412.3	1,404.1	4.1	4.8	-162.99	597.2	54.5	703.6	696.2	7.43	94.690			
1,400.0	1,390.0	1,512.1	1,502.9	4.6	5.2	-162.99	584.5	60.0	710.6	702.5	8.07	88.051			
1,500.0	1,487.9	1,611.8	1,601.7	5.1	5.6	-163.00	571.9	65.4	717.6	708.9	8.72	82.333			
1,600.0	1,585.8	1,711.6	1,700.5	5.6	6.1	-163.00	559.2	70.8	724.6	715.2	9.37	77.368			
1,700.0	1,683.8	1,811.4	1,799.3	6.1	6.5	-163.00	546.5	76.3	731.6	721.6	10.02	73.021			
1,800.0	1,781.7	1,911.1	1,898.0	6.7	6.9	-163.00	533.8	81.7	738.6	727.9	10.68	69.188			
1,900.0	1,879.6	2,010.9	1,996.8	7.2	7.3	-163.00	521.1	87.2	745.6	734.3	11.33	65.786			
2,000.0	1,977.5	2,110.6	2,095.6	7.8	7.8	-163.00	508.5	92.6	752.6	740.6	11.99	62.747			
2,100.0	2,075.4	2,210.4	2,194.4	8.3	8.2	-163.01	495.8	98.1	759.6	747.0	12.66	60.018			
2,200.0	2,173.4	2,310.1	2,293.2	8.8	8.6	-163.01	483.1	103.5	766.6	753.3	13.32	57.554			
2,300.0	2,271.3	2,409.9	2,392.0	9.4	9.1	-163.01	470.4	109.0	773.6	759.7	13.99	55.319			
2,400.0	2,369.2	2,509.6	2,490.8	9.9	9.5	-163.01	457.7	114.4	780.7	766.0	14.65	53.284			
2,500.0	2,467.1	2,609.4	2,589.6	10.5	9.9	-163.01	445.1	119.9	787.7	772.3	15.32	51.423			
2,600.0	2,565.0	2,709.1	2,688.4	11.0	10.3	-163.01	432.4	125.3	794.7	778.7	15.98	49.714			
2,700.0	2,662.9	2,808.9	2,787.2	11.6	10.8	-163.01	419.7	130.7	801.7	785.0	16.65	48.141			
2,800.0	2,760.9	2,908.6	2,886.0	12.1	11.2	-163.01	407.0	136.2	808.7	791.4	17.32	46.688			
2,900.0	2,858.8	3,008.4	2,984.8	12.7	11.6	-163.02	394.3	141.6	815.7	797.7	17.99	45.341			
3,000.0	2,956.7	3,108.2	3,083.6	13.2	12.1	-163.02	381.7	147.1	822.7	804.0	18.66	44.089			
3,100.0	3,054.6	3,207.9	3,182.4	13.8	12.5	-163.02	369.0	152.5	829.7	810.4	19.33	42.924			
3,200.0	3,152.5	3,307.7	3,281.2	14.3	12.9	-163.02	356.3	158.0	836.7	816.7	20.00	41.836			
3,300.0	3,250.4	3,407.4	3,380.0	14.9	13.3	-163.02	343.6	163.4	843.7	823.0	20.67	40.818			
3,400.0	3,348.4	3,507.2	3,478.8	15.4	13.8	-163.02	330.9	168.9	850.7	829.4	21.34	39.863			
3,500.0	3,446.3	3,606.9	3,577.6	16.0	14.2	-163.02	318.3	174.3	857.7	835.7	22.01	38.966			
3,600.0	3,544.2	3,706.7	3,676.4	16.5	14.6	-163.02	305.6	179.7	864.7	842.0	22.68	38.121			
3,700.0	3,642.1	3,806.4	3,775.2	17.1	15.1	-163.03	292.9	185.2	871.7	848.4	23.36	37.325			
3,800.0	3,740.0	3,906.2	3,874.0	17.6	15.5	-163.03	280.2	190.6	878.7	854.7	24.03	36.573			
3,900.0	3,838.0	4,005.9	3,972.7	18.2	15.9	-163.03	267.5	196.1	885.7	861.0	24.70	35.862			
4,000.0	3,935.9	4,105.7	4,071.5	18.7	16.3	-163.03	254.9	201.5	892.7	867.4	25.37	35.188			
4,100.0	4,033.8	4,205.5	4,170.3	19.3	16.8	-163.03	242.2	207.0	899.8	873.7	26.04	34.549			
4,200.0	4,131.7	4,305.2	4,269.1	19.8	17.2	-163.03	229.5	212.4	906.8	880.0	26.72	33.941			
4,300.0	4,229.6	4,405.0	4,367.9	20.4	17.6	-163.03	216.8	217.9	913.8	886.4	27.39	33.364			
4,400.0	4,327.5	4,504.7	4,466.7	21.0	18.1	-163.03	204.1	223.3	920.8	892.7	28.06	32.814			
4,500.0	4,425.5	4,604.5	4,565.5	21.5	18.5	-163.03	191.5	228.7	927.8	899.0	28.73	32.289			
4,600.0	4,523.4	4,704.2	4,664.3	22.1	18.9	-163.03	178.8	234.2	934.8	905.4	29.41	31.788			
4,700.0	4,621.3	4,804.0	4,763.1	22.6	19.3	-163.04	166.1	239.6	941.8	911.7	30.08	31.310			
4,800.0	4,719.2	4,903.7	4,861.9	23.2	19.8	-163.04	153.4	245.1	948.8	918.0	30.75	30.853			
4,900.0	4,817.1	5,003.5	4,960.7	23.7	20.2	-163.04	140.7	250.5	955.8	924.4	31.43	30.415			

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 Nelson Family LLC 33W-214
Project:	SEC.33-T5N-R67W	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Reference Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #2 (5-11-16)	Offset TVD Reference:	Offset Datum

Offset Design														Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W - Nelson Family LLC 33V-404 - Wellbore #1 - P		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	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)	(ft)							
5,000.0	4,915.1	5,103.2	5,059.5	24.3	20.6	-163.04	128.0	256.0	962.8	930.7	32.10	29.995							
5,100.0	5,013.0	5,203.0	5,158.3	24.8	21.1	-163.04	115.4	261.4	969.8	937.0	32.77	29.593							
5,200.0	5,110.9	5,290.0	5,244.5	25.4	21.4	-163.05	104.6	266.1	977.2	943.8	33.39	29.268							
5,300.0	5,208.8	5,366.0	5,320.0	25.9	21.6	-163.10	96.8	269.4	986.7	952.8	33.91	29.096							
5,400.0	5,306.7	5,441.6	5,395.3	26.5	21.8	-163.20	91.0	271.9	998.5	964.1	34.41	29.018 SF							

Company:	PETROLEUM DEVELOPMENT CORP DJ	Local Co-ordinate Reference:	Well Nelson Family LLC 33W-214
Project:	SEC.33-T5N-R67W	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Reference Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #2 (5-11-16)	Offset TVD Reference:	Offset Datum

Offset Design													Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W - Nelson Family LLC 33W-414 - Wellbore #1 - P		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)	+E/-W (ft)	Between Centres Centres (ft)	Between Ellipses Ellipses (ft)	Minimum Separation Separation (ft)	Separation Factor				
0.0	0.0	0.0	0.0	0.0	0.0	89.97	0.0	13.9	13.9	13.9	0.00	N/A				
100.0	100.0	100.0	100.0	0.1	0.1	89.97	0.0	13.9	13.9	13.7	0.28	50.608				
200.0	200.0	200.0	200.0	0.4	0.4	89.97	0.0	13.9	13.9	13.1	0.83	16.869 CC				
300.0	300.0	299.9	299.9	0.7	0.7	95.12	-1.3	14.2	14.2	12.9	1.35	10.574 ES				
400.0	400.0	399.7	399.6	1.0	0.9	108.85	-5.1	15.0	15.8	13.9	1.87	8.449				
500.0	500.0	499.3	499.0	1.2	1.2	-42.45	-11.5	16.2	18.9	16.5	2.39	7.932				
600.0	599.9	598.7	598.0	1.4	1.5	-32.56	-20.4	18.0	22.7	19.8	2.90	7.827				
700.0	699.7	698.0	696.6	1.7	1.9	-25.37	-31.8	20.3	26.9	23.5	3.45	7.810				
800.0	799.3	797.2	794.8	2.0	2.2	-19.93	-45.7	23.1	31.4	27.3	4.01	7.822				
900.0	898.6	896.3	892.4	2.3	2.7	-15.64	-62.0	26.4	35.9	31.3	4.58	7.842				
1,000.0	997.5	995.2	989.5	2.7	3.2	-12.14	-80.8	30.2	40.6	35.4	5.16	7.858				
1,100.0	1,096.1	1,094.0	1,085.8	3.1	3.7	-9.18	-102.1	34.4	45.3	39.6	5.76	7.868				
1,200.0	1,194.2	1,193.9	1,183.0	3.6	4.3	-6.86	-124.8	39.0	48.8	42.5	6.37	7.672				
1,300.0	1,292.1	1,293.8	1,280.3	4.1	4.9	-4.94	-147.5	43.6	51.6	44.6	6.98	7.391				
1,400.0	1,390.0	1,393.8	1,377.5	4.6	5.4	-3.22	-170.2	48.1	54.4	46.8	7.59	7.160				
1,500.0	1,487.9	1,493.7	1,474.7	5.1	6.0	-1.66	-192.9	52.7	57.2	49.0	8.22	6.961				
1,600.0	1,585.8	1,593.7	1,571.9	5.6	6.6	-0.26	-215.6	57.3	60.1	51.2	8.85	6.790				
1,700.0	1,683.8	1,693.6	1,669.2	6.1	7.2	1.02	-238.3	61.8	63.0	53.5	9.49	6.641				
1,800.0	1,781.7	1,793.6	1,766.4	6.7	7.8	2.18	-261.0	66.4	65.9	55.8	10.13	6.509				
1,900.0	1,879.6	1,893.5	1,863.6	7.2	8.4	3.25	-283.7	70.9	68.9	58.1	10.78	6.391				
2,000.0	1,977.5	1,993.5	1,960.9	7.8	9.0	4.22	-306.4	75.5	71.9	60.5	11.44	6.285				
2,100.0	2,075.4	2,093.4	2,058.1	8.3	9.7	5.12	-329.1	80.1	74.9	62.8	12.10	6.189				
2,200.0	2,173.4	2,193.4	2,155.3	8.8	10.3	5.95	-351.8	84.6	77.9	65.1	12.77	6.101				
2,300.0	2,271.3	2,293.3	2,252.5	9.4	10.9	6.71	-374.6	89.2	81.0	67.5	13.45	6.021				
2,400.0	2,369.2	2,393.3	2,349.8	9.9	11.5	7.43	-397.3	93.8	84.0	69.9	14.13	5.947				
2,500.0	2,467.1	2,493.2	2,447.0	10.5	12.1	8.09	-420.0	98.3	87.1	72.3	14.81	5.879				
2,600.0	2,565.0	2,593.2	2,544.2	11.0	12.7	8.70	-442.7	102.9	90.1	74.6	15.50	5.815				
2,700.0	2,662.9	2,693.1	2,641.5	11.6	13.3	9.28	-465.4	107.4	93.2	77.0	16.19	5.757				
2,800.0	2,760.9	2,793.1	2,738.7	12.1	13.9	9.82	-488.1	112.0	96.3	79.4	16.89	5.702				
2,900.0	2,858.8	2,893.0	2,835.9	12.7	14.5	10.32	-510.8	116.6	99.4	81.8	17.59	5.650				
3,000.0	2,956.7	2,993.0	2,933.1	13.2	15.1	10.80	-533.5	121.1	102.5	84.2	18.30	5.602				
3,100.0	3,054.6	3,092.9	3,030.4	13.8	15.7	11.24	-556.2	125.7	105.6	86.6	19.01	5.557				
3,200.0	3,152.5	3,192.9	3,127.6	14.3	16.4	11.66	-578.9	130.3	108.8	89.0	19.72	5.515				
3,300.0	3,250.4	3,292.8	3,224.8	14.9	17.0	12.06	-601.6	134.8	111.9	91.4	20.44	5.475				
3,400.0	3,348.4	3,392.8	3,322.1	15.4	17.6	12.44	-624.3	139.4	115.0	93.9	21.15	5.437				
3,500.0	3,446.3	3,492.7	3,419.3	16.0	18.2	12.79	-647.0	143.9	118.1	96.3	21.87	5.402				
3,600.0	3,544.2	3,592.7	3,516.5	16.5	18.8	13.13	-669.7	148.5	121.3	98.7	22.59	5.368				
3,700.0	3,642.1	3,692.6	3,613.7	17.1	19.4	13.45	-692.4	153.1	124.4	101.1	23.32	5.336				
3,800.0	3,740.0	3,792.5	3,711.0	17.6	20.0	13.75	-715.1	157.6	127.6	103.5	24.04	5.306				
3,900.0	3,838.0	3,892.5	3,808.2	18.2	20.6	14.04	-737.9	162.2	130.7	106.0	24.77	5.277				
4,000.0	3,935.9	3,992.4	3,905.4	18.7	21.2	14.32	-760.6	166.7	133.9	108.4	25.50	5.250				
4,100.0	4,033.8	4,092.4	4,002.6	19.3	21.9	14.58	-783.3	171.3	137.0	110.8	26.23	5.223				
4,200.0	4,131.7	4,192.3	4,099.9	19.8	22.5	14.83	-806.0	175.9	140.2	113.2	26.97	5.199				
4,300.0	4,229.6	4,292.3	4,197.1	20.4	23.1	15.08	-828.7	180.4	143.4	115.7	27.70	5.175				
4,400.0	4,327.5	4,392.2	4,294.3	21.0	23.7	15.31	-851.4	185.0	146.5	118.1	28.44	5.152				
4,500.0	4,425.5	4,492.2	4,391.6	21.5	24.3	15.53	-874.1	189.6	149.7	120.5	29.18	5.130				
4,600.0	4,523.4	4,592.1	4,488.8	22.1	24.9	15.74	-896.8	194.1	152.9	122.9	29.92	5.110				
4,700.0	4,621.3	4,692.1	4,586.0	22.6	25.5	15.94	-919.5	198.7	156.0	125.4	30.66	5.090				
4,800.0	4,719.2	4,792.0	4,683.2	23.2	26.1	16.13	-942.2	203.2	159.2	127.8	31.40	5.071				
4,900.0	4,817.1	4,892.0	4,780.5	23.7	26.8	16.32	-964.9	207.8	162.4	130.2	32.14	5.052				
5,000.0	4,915.1	4,991.9	4,877.7	24.3	27.4	16.50	-987.6	212.4	165.6	132.7	32.88	5.035				

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 Nelson Family LLC 33W-214
Project:	SEC.33-T5N-R67W	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Reference Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #2 (5-11-16)	Offset TVD Reference:	Offset Datum

Offset Design		Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W - Nelson Family LLC 33W-414 - Wellbore #1 - P											Offset Site Error:		0.0 ft
Survey Program: 0-MWD													Offset Well Error:		0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor			
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)				
5,100.0	5,013.0	5,091.9	4,974.9	24.8	28.0	16.67	-1,010.3	216.9	168.7	135.1	33.63	5.018			
5,200.0	5,110.9	5,191.8	5,072.2	25.4	28.6	16.84	-1,033.0	221.5	171.9	137.5	34.37	5.002			
5,300.0	5,208.8	5,291.8	5,169.4	25.9	29.2	17.00	-1,055.7	226.1	175.1	140.0	35.12	4.986			
5,400.0	5,306.7	5,391.7	5,266.6	26.5	29.8	17.16	-1,078.4	230.6	178.3	142.4	35.86	4.971			
5,500.0	5,404.9	5,491.6	5,363.8	26.9	30.4	17.20	-1,101.1	235.2	182.7	146.2	36.54	5.002			
5,600.0	5,503.7	5,593.1	5,462.5	27.3	31.0	16.96	-1,124.1	239.8	190.4	153.4	37.05	5.140			
5,700.0	5,602.9	5,699.7	5,566.9	27.5	31.4	16.62	-1,145.4	244.1	198.8	161.4	37.43	5.312			
5,800.0	5,702.6	5,806.8	5,672.4	27.8	31.8	16.26	-1,163.0	247.6	206.9	169.2	37.72	5.486			
5,900.0	5,802.4	5,914.2	5,778.9	28.0	32.1	15.88	-1,176.8	250.4	214.8	176.8	37.94	5.661			
6,000.0	5,902.4	6,021.9	5,886.2	28.1	32.4	-179.32	-1,186.7	252.4	222.3	163.0	59.25	3.751			
6,100.0	6,002.4	6,130.1	5,994.2	28.2	32.5	-179.63	-1,192.6	253.5	227.7	168.1	59.62	3.820			
6,200.0	6,102.2	6,238.2	6,102.2	28.4	32.7	-89.67	-1,194.5	253.9	229.4	190.9	38.52	5.956			
6,211.2	6,113.3	6,249.3	6,113.3	28.4	32.7	-90.00	-1,194.5	253.9	229.4	190.9	38.48	5.962			
6,300.0	6,200.6	6,336.5	6,200.6	28.4	32.8	-93.97	-1,194.5	253.9	230.0	192.0	38.00	6.053			
6,400.0	6,295.7	6,436.5	6,300.5	28.5	32.9	-100.36	-1,194.5	250.3	233.4	195.9	37.48	6.227			
6,500.0	6,386.1	6,541.3	6,403.7	28.5	33.0	-106.64	-1,194.5	233.0	239.6	202.3	37.34	6.418			
6,600.0	6,470.2	6,650.5	6,507.8	28.5	33.0	-112.47	-1,194.5	200.1	248.1	210.8	37.27	6.656			
6,700.0	6,546.5	6,764.5	6,610.2	28.5	33.0	-117.73	-1,194.5	150.3	257.9	221.0	36.98	6.975			
6,800.0	6,613.7	6,883.4	6,707.9	28.6	33.1	-122.32	-1,194.5	82.8	268.4	232.1	36.33	7.388			
6,900.0	6,670.7	7,007.3	6,797.3	28.7	33.1	-126.22	-1,194.5	-2.7	278.5	243.1	35.42	7.864			
7,000.0	6,716.5	7,135.8	6,874.2	28.8	33.2	-129.41	-1,194.5	-105.5	287.4	252.9	34.51	8.328			
7,100.0	6,750.3	7,268.4	6,934.3	29.2	33.4	-131.87	-1,194.5	-223.5	294.1	260.0	34.09	8.629			
7,200.0	6,771.5	7,404.0	6,973.7	29.9	33.8	-133.61	-1,194.5	-353.1	298.1	263.5	34.58	8.620			
7,300.0	6,779.9	7,541.5	6,989.8	31.2	34.8	-134.61	-1,194.5	-489.5	298.9	262.6	36.30	8.232			
7,400.0	6,779.8	7,645.8	6,990.6	33.0	36.1	-135.06	-1,194.5	-593.8	297.8	258.2	39.64	7.514			
7,500.0	6,779.5	7,745.8	6,991.2	35.2	37.8	-135.48	-1,194.5	-693.8	296.9	253.5	43.33	6.851			
7,600.0	6,779.3	7,845.8	6,991.8	37.8	39.9	-135.90	-1,194.5	-793.8	295.9	248.7	47.16	6.275			
7,700.0	6,779.0	7,945.7	6,992.4	40.5	42.3	-136.33	-1,194.5	-893.7	295.0	243.9	51.07	5.776			
7,800.0	6,778.8	8,045.7	6,993.0	43.3	44.9	-136.76	-1,194.5	-993.7	294.0	239.0	55.03	5.343			
7,900.0	6,778.5	8,145.7	6,993.6	46.2	47.6	-137.20	-1,194.5	-1,093.7	293.1	234.1	59.02	4.967			
8,000.0	6,778.3	8,245.7	6,994.2	49.2	50.5	-137.64	-1,194.5	-1,193.6	292.2	229.2	63.00	4.638			
8,100.0	6,778.1	8,345.6	6,994.8	52.3	53.5	-138.08	-1,194.5	-1,293.6	291.4	224.4	66.98	4.350			
8,200.0	6,777.8	8,445.6	6,995.4	55.3	56.5	-138.52	-1,194.5	-1,393.6	290.5	219.6	70.92	4.096			
8,300.0	6,777.6	8,545.6	6,996.0	58.5	59.5	-138.96	-1,194.5	-1,493.5	289.7	214.8	74.83	3.871			
8,400.0	6,777.3	8,645.5	6,996.7	61.7	62.6	-139.41	-1,194.5	-1,593.5	288.9	210.2	78.69	3.671			
8,500.0	6,777.1	8,745.5	6,997.3	64.9	65.8	-139.86	-1,194.5	-1,693.5	288.1	205.5	82.51	3.491			
8,600.0	6,776.8	8,845.5	6,997.9	68.1	69.0	-140.31	-1,194.5	-1,793.4	287.3	201.0	86.26	3.330			
8,700.0	6,776.6	8,945.5	6,998.5	71.3	72.2	-140.77	-1,194.5	-1,893.4	286.5	196.5	89.96	3.185			
8,800.0	6,776.3	9,045.4	6,999.1	74.6	75.4	-141.22	-1,194.5	-1,993.4	285.7	192.2	93.59	3.053			
8,900.0	6,776.1	9,145.4	6,999.7	77.9	78.6	-141.68	-1,194.5	-2,093.4	285.0	187.9	97.15	2.934			
9,000.0	6,775.9	9,245.4	7,000.3	81.1	81.9	-142.15	-1,194.5	-2,193.3	284.3	183.7	100.65	2.825			
9,100.0	6,775.6	9,345.3	7,000.9	84.4	85.1	-142.61	-1,194.5	-2,293.3	283.6	179.5	104.07	2.725			
9,200.0	6,775.4	9,445.3	7,001.5	87.8	88.4	-143.08	-1,194.5	-2,393.3	282.9	175.5	107.41	2.634			
9,300.0	6,775.1	9,545.3	7,002.2	91.1	91.7	-143.54	-1,194.5	-2,493.2	282.3	171.6	110.68	2.550			
9,400.0	6,774.9	9,645.3	7,002.8	94.4	95.0	-144.02	-1,194.5	-2,593.2	281.6	167.8	113.87	2.473			
9,500.0	6,774.6	9,745.2	7,003.4	97.7	98.4	-144.49	-1,194.5	-2,693.2	281.0	164.1	116.97	2.402			
9,600.0	6,774.4	9,845.2	7,004.0	101.1	101.7	-144.96	-1,194.5	-2,793.1	280.4	160.4	120.00	2.337			
9,700.0	6,774.1	9,945.2	7,004.6	104.4	105.0	-145.44	-1,194.5	-2,893.1	279.8	156.9	122.94	2.276			
9,800.0	6,773.9	10,045.1	7,005.2	107.8	108.4	-145.92	-1,194.5	-2,993.1	279.3	153.5	125.79	2.220			
9,828.1	6,773.8	10,073.3	7,005.4	108.7	109.3	-146.03	-1,194.5	-3,021.2	279.2	152.7	126.52	2.207			

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

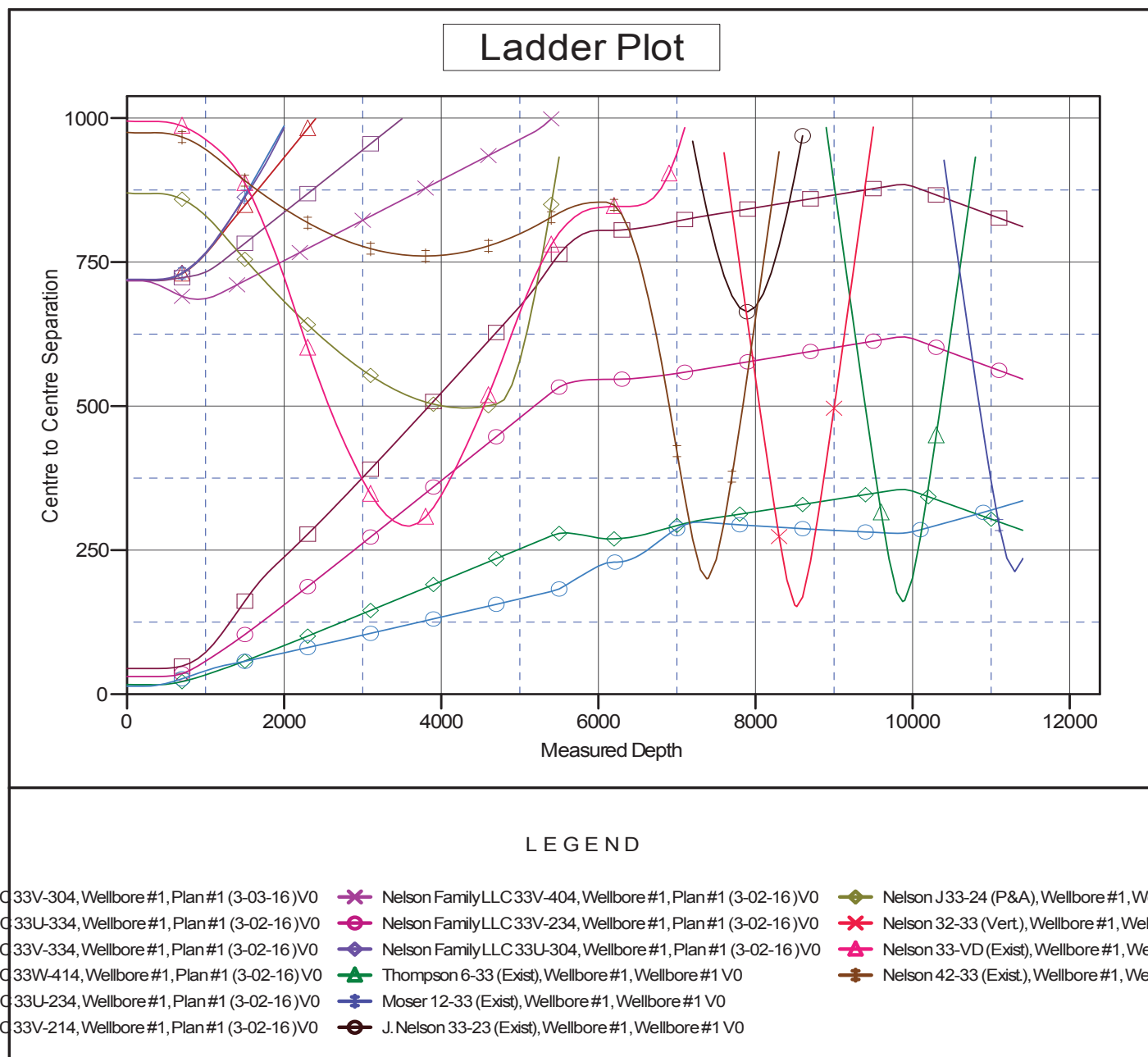
Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Nelson Family LLC 33W-214
Project:	SEC.33-T5N-R67W	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Reference Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #2 (5-11-16)	Offset TVD Reference:	Offset Datum

Offset Design		Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W - Nelson Family LLC 33W-414 - Wellbore #1 - P											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			
9,900.0	6,773.7	10,145.1	7,005.8	111.1	111.7	-146.11	-1,194.5	-3,093.1	279.7	150.8	128.86	2.171			
10,000.0	6,773.4	10,245.1	7,006.4	114.5	115.0	-145.74	-1,194.5	-3,193.0	282.1	148.7	133.34	2.115			
10,100.0	6,773.2	10,345.0	7,007.0	117.8	118.4	-145.01	-1,194.5	-3,292.9	285.6	146.1	139.50	2.047			
10,200.0	6,772.9	10,444.8	7,007.7	121.2	121.8	-144.29	-1,194.5	-3,392.7	289.2	143.4	145.81	1.984			
10,300.0	6,772.7	10,544.7	7,008.3	124.6	125.1	-143.59	-1,194.5	-3,492.6	292.9	140.7	152.18	1.925			
10,400.0	6,772.4	10,644.6	7,008.9	127.9	128.5	-142.91	-1,194.5	-3,592.5	296.6	138.0	158.61	1.870			
10,500.0	6,772.2	10,744.4	7,009.5	131.3	131.9	-142.24	-1,194.5	-3,692.4	300.3	135.2	165.08	1.819			
10,600.0	6,772.0	10,844.3	7,010.1	134.7	135.2	-141.59	-1,194.5	-3,792.2	304.1	132.5	171.61	1.772			
10,700.0	6,771.7	10,944.2	7,010.7	138.0	138.6	-140.95	-1,194.5	-3,892.1	307.9	129.7	178.17	1.728			
10,800.0	6,771.5	11,044.0	7,011.3	141.4	142.0	-140.34	-1,194.5	-3,992.0	311.8	127.0	184.78	1.687			
10,900.0	6,771.2	11,143.9	7,011.9	144.8	145.4	-139.73	-1,194.5	-4,091.8	315.7	124.2	191.43	1.649			
11,000.0	6,771.0	11,243.8	7,012.5	148.2	148.7	-139.14	-1,194.5	-4,191.7	319.6	121.5	198.11	1.613			
11,100.0	6,770.7	11,343.6	7,013.1	151.6	152.1	-138.57	-1,194.5	-4,291.6	323.5	118.7	204.82	1.580			
11,200.0	6,770.5	11,443.5	7,013.8	155.0	155.5	-138.01	-1,194.5	-4,391.4	327.5	116.0	211.56	1.548			
11,300.0	6,770.3	11,543.4	7,014.4	158.4	158.9	-137.46	-1,194.5	-4,491.3	331.5	113.2	218.33	1.519			
11,400.0	6,770.0	11,643.3	7,015.0	160.6	162.3	-136.93	-1,194.5	-4,591.2	335.6	111.4	224.23	1.497 Level 3			
11,403.1	6,770.0	11,646.3	7,015.0	160.7	162.4	-136.91	-1,194.5	-4,594.2	335.7	111.3	224.41	1.496 Level 3, SF			

Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Nelson Family LLC 33W-214
Project:	SEC.33-T5N-R67W	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
Reference Site:	Nelson Family LLC 5N67W33U Pad Sec.33-T5N-R67W	MD Reference:	WELL @ 4849.0ft (Original Well Elev)
Site Error:	0.0 ft	North Reference:	True
Reference Well:	Nelson Family LLC 33W-214	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0 ft	Output errors are at	2.45 sigma
Reference Wellbore	Wellbore #1	Database:	US_EDM
Reference Design:	Plan #2 (5-11-16)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4849.0ft (Original Well Elev)
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000

Coordinates are relative to: Nelson Family LLC 33W-214
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.39°



Company:	PETROLEUM DEVELOPMENT CORP DJ Basin	Local Co-ordinate Reference:	Well Nelson Family LLC 33W-214
Project:	SEC.33-T5N-R67W	TVD Reference:	WELL @ 4849.0ft (Original Well Elev)
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