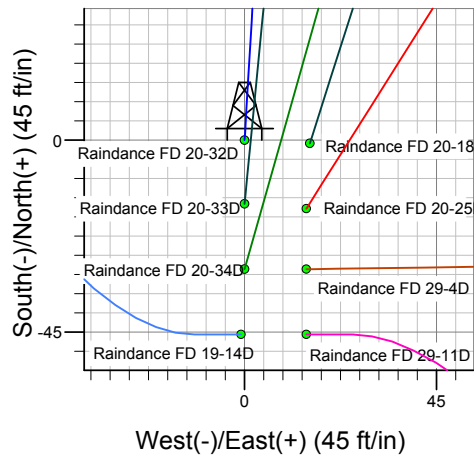
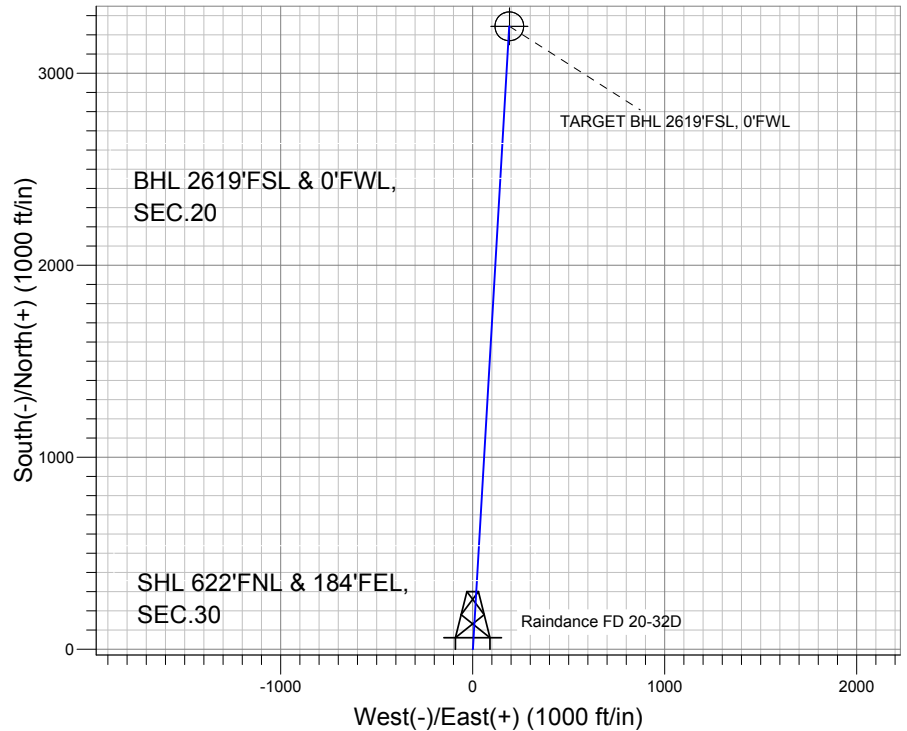
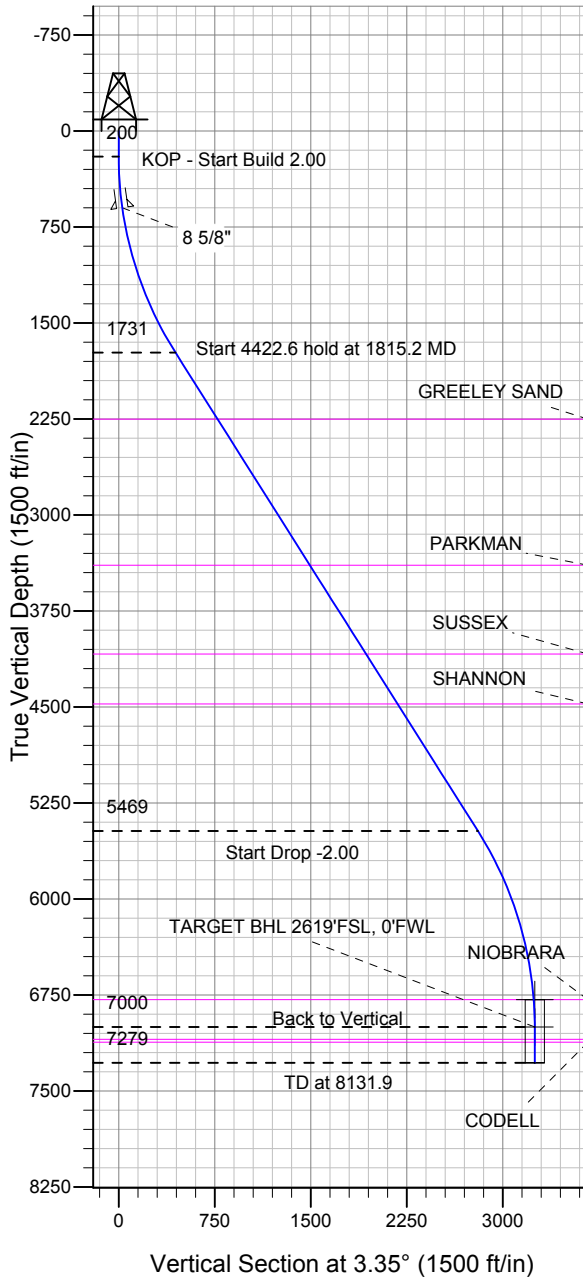


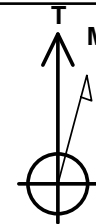
### Well Name: Raindance FD 20-32D

Surface Location: Raindance FD West Row Pad Sec.30-T6N-R67W  
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone  
 Ground Elevation: 4782.3  
 +N/-S +E/-W Northing Easting Latitude Longitude Slot  
 0.0 0.0 1412129.26 3159403.24 40.463283 -104.927119  
 Original Well Elev WELL @ 4796.3ft (Original Well Elev)

## Great Western



Raindance FD West Row Pad Sec.30-T6N-R67W  
 Raindance FD 20-32D  
 Plan #1 (10-18-12)



Azimuths to True North  
 Magnetic North: 8.78°

Magnetic Field  
 Strength: 53005.6snT  
 Dip Angle: 67.03°  
 Date: 10/19/2012  
 Model: IGRF2010

### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Target Circle 2619'FSL & 0'FWL	6786.0	3244.6	190.0	40.472189	-104.926436	Circle (Radius: 75.0)
TARGET BHL 2619'FSL, 0'FWL	7000.0	3244.6	190.0	40.472189	-104.926436	Point

### 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	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	1815.2	32.30	3.35	1730.9	442.6	25.9	2.00	3.35	443.4	
4	6237.7	32.30	3.35	5469.1	2802.0	164.1	0.00	0.00	2806.8	
5	7852.9	0.00	0.00	7000.0	3244.6	190.0	2.00	180.00	3250.2	TARGET BHL 2619'FSL, 0'FWL
6	8131.9	0.00	0.00	7279.0	3244.6	190.0	0.00	0.00	3250.2	



## **Directional**

### **Great Western**

**SEC.30-T6N-R67W**

**Raindance FD West Row Pad Sec.30-T6N-R67W**

**Raindance FD 20-32D**

**Wellbore #1**

**Plan: Plan #1 (10-18-12)**

### **Standard Planning Report**

**19 October, 2012**

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Raindance FD 20-32D
<b>Company:</b>	Great Western	<b>TVD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Project:</b>	SEC.30-T6N-R67W	<b>MD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Site:</b>	Raindance FD West Row Pad Sec.30-T6N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Raindance FD 20-32D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (10-18-12)		

<b>Project</b>	SEC.30-T6N-R67W, Weld County, Colorado		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		Using Well Reference Point
<b>Map Zone:</b>	Colorado Northern Zone		Using geodetic scale factor

Site						Raindance FD West Row Pad Sec.30-T6N-R67W											
Site Position:						Northing:			1,412,129.27 ft			Latitude:			40.463283		
From:			Lat/Long			Easting:			3,159,403.24 ft			Longitude:			-104.927119		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.37 °		

Well	Raindance FD 20-32D					
Well Position	+N/-S	0.0 ft	Northing:	1,412,129.26 ft	Latitude:	40.463283
	+E/-W	0.0 ft	Easting:	3,159,403.24 ft	Longitude:	-104.927119
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,782.3 ft

<b>Wellbore</b>	Wellbore #1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	10/19/2012	8.78	67.03	53,006

<b>Design</b>	Plan #1 (10-18-12)			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.0	0.0	0.0	3.35

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,815.2	32.30	3.35	1,730.9	442.6	25.9	2.00	2.00	0.00	3.35	
6,237.7	32.30	3.35	5,469.1	2,802.0	164.1	0.00	0.00	0.00	0.00	
7,852.9	0.00	0.00	7,000.0	3,244.6	190.0	2.00	-2.00	0.00	180.00	TARGET BHL 2619
8,131.9	0.00	0.00	7,279.0	3,244.6	190.0	0.00	0.00	0.00	0.00	

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Raindance FD 20-32D
<b>Company:</b>	Great Western	<b>TVD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Project:</b>	SEC.30-T6N-R67W	<b>MD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Site:</b>	Raindance FD West Row Pad Sec.30-T6N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Raindance FD 20-32D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (10-18-12)		

#### Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
40.0	0.00	0.00	40.0	0.0	0.0	0.0	0.00	0.00	0.00
80.0	0.00	0.00	80.0	0.0	0.0	0.0	0.00	0.00	0.00
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00
160.0	0.00	0.00	160.0	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
<b>KOP - Start Build 2.00</b>									
240.0	0.80	3.35	240.0	0.3	0.0	0.3	2.00	2.00	0.00
280.0	1.60	3.35	280.0	1.1	0.1	1.1	2.00	2.00	0.00
320.0	2.40	3.35	320.0	2.5	0.1	2.5	2.00	2.00	0.00
360.0	3.20	3.35	359.9	4.5	0.3	4.5	2.00	2.00	0.00
400.0	4.00	3.35	399.8	7.0	0.4	7.0	2.00	2.00	0.00
440.0	4.80	3.35	439.7	10.0	0.6	10.0	2.00	2.00	0.00
480.0	5.60	3.35	479.6	13.6	0.8	13.7	2.00	2.00	0.00
520.0	6.40	3.35	519.3	17.8	1.0	17.9	2.00	2.00	0.00
560.0	7.20	3.35	559.1	22.6	1.3	22.6	2.00	2.00	0.00
600.0	8.00	3.35	598.7	27.8	1.6	27.9	2.00	2.00	0.00
601.3	8.03	3.35	600.0	28.0	1.6	28.1	2.00	2.00	0.00
<b>8 5/8"</b>									
640.0	8.80	3.35	638.3	33.7	2.0	33.7	2.00	2.00	0.00
680.0	9.60	3.35	677.8	40.0	2.3	40.1	2.00	2.00	0.00
720.0	10.40	3.35	717.1	47.0	2.8	47.1	2.00	2.00	0.00
760.0	11.20	3.35	756.4	54.5	3.2	54.6	2.00	2.00	0.00
800.0	12.00	3.35	795.6	62.5	3.7	62.6	2.00	2.00	0.00
840.0	12.80	3.35	834.7	71.1	4.2	71.2	2.00	2.00	0.00
880.0	13.60	3.35	873.6	80.2	4.7	80.3	2.00	2.00	0.00
920.0	14.40	3.35	912.4	89.8	5.3	90.0	2.00	2.00	0.00
960.0	15.20	3.35	951.1	100.0	5.9	100.2	2.00	2.00	0.00
1,000.0	16.00	3.35	989.6	110.8	6.5	111.0	2.00	2.00	0.00
1,040.0	16.80	3.35	1,028.0	122.1	7.1	122.3	2.00	2.00	0.00
1,080.0	17.60	3.35	1,066.2	133.9	7.8	134.1	2.00	2.00	0.00
1,120.0	18.40	3.35	1,104.3	146.2	8.6	146.5	2.00	2.00	0.00
1,160.0	19.20	3.35	1,142.1	159.1	9.3	159.3	2.00	2.00	0.00
1,200.0	20.00	3.35	1,179.8	172.5	10.1	172.8	2.00	2.00	0.00
1,240.0	20.80	3.35	1,217.3	186.4	10.9	186.7	2.00	2.00	0.00
1,280.0	21.60	3.35	1,254.6	200.8	11.8	201.2	2.00	2.00	0.00
1,320.0	22.40	3.35	1,291.7	215.8	12.6	216.2	2.00	2.00	0.00
1,360.0	23.20	3.35	1,328.6	231.3	13.5	231.7	2.00	2.00	0.00
1,400.0	24.00	3.35	1,365.2	247.2	14.5	247.7	2.00	2.00	0.00
1,440.0	24.80	3.35	1,401.6	263.7	15.4	264.2	2.00	2.00	0.00
1,480.0	25.60	3.35	1,437.8	280.7	16.4	281.2	2.00	2.00	0.00
1,520.0	26.40	3.35	1,473.8	298.3	17.5	298.8	2.00	2.00	0.00
1,560.0	27.20	3.35	1,509.5	316.3	18.5	316.8	2.00	2.00	0.00
1,600.0	28.00	3.35	1,544.9	334.8	19.6	335.3	2.00	2.00	0.00
1,640.0	28.80	3.35	1,580.1	353.7	20.7	354.4	2.00	2.00	0.00
1,680.0	29.60	3.35	1,615.0	373.2	21.9	373.9	2.00	2.00	0.00
1,720.0	30.40	3.35	1,649.7	393.2	23.0	393.9	2.00	2.00	0.00
1,760.0	31.20	3.35	1,684.0	413.6	24.2	414.4	2.00	2.00	0.00
1,800.0	32.00	3.35	1,718.1	434.6	25.5	435.3	2.00	2.00	0.00
1,815.2	32.30	3.35	1,730.9	442.6	25.9	443.4	2.00	2.00	0.00
<b>Start 4422.6 hold at 1815.2 MD</b>									
1,840.0	32.30	3.35	1,751.9	455.9	26.7	456.7	0.00	0.00	0.00
1,880.0	32.30	3.35	1,785.7	477.2	27.9	478.0	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Raindance FD 20-32D
<b>Company:</b>	Great Western	<b>TVD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Project:</b>	SEC.30-T6N-R67W	<b>MD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Site:</b>	Raindance FD West Row Pad	<b>North Reference:</b>	True
<b>Well:</b>	Raindance FD 20-32D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (10-18-12)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,920.0	32.30	3.35	1,819.6	498.5	29.2	499.4	0.00	0.00	0.00
1,960.0	32.30	3.35	1,853.4	519.9	30.4	520.8	0.00	0.00	0.00
2,000.0	32.30	3.35	1,887.2	541.2	31.7	542.2	0.00	0.00	0.00
2,040.0	32.30	3.35	1,921.0	562.6	32.9	563.5	0.00	0.00	0.00
2,080.0	32.30	3.35	1,954.8	583.9	34.2	584.9	0.00	0.00	0.00
2,120.0	32.30	3.35	1,988.6	605.2	35.4	606.3	0.00	0.00	0.00
2,160.0	32.30	3.35	2,022.4	626.6	36.7	627.7	0.00	0.00	0.00
2,200.0	32.30	3.35	2,056.2	647.9	37.9	649.0	0.00	0.00	0.00
2,240.0	32.30	3.35	2,090.0	669.3	39.2	670.4	0.00	0.00	0.00
2,280.0	32.30	3.35	2,123.8	690.6	40.4	691.8	0.00	0.00	0.00
2,320.0	32.30	3.35	2,157.6	711.9	41.7	713.2	0.00	0.00	0.00
2,360.0	32.30	3.35	2,191.5	733.3	42.9	734.5	0.00	0.00	0.00
2,400.0	32.30	3.35	2,225.3	754.6	44.2	755.9	0.00	0.00	0.00
2,431.6	32.30	3.35	2,252.0	771.5	45.2	772.8	0.00	0.00	0.00
GREELEY SAND									
2,440.0	32.30	3.35	2,259.1	776.0	45.4	777.3	0.00	0.00	0.00
2,480.0	32.30	3.35	2,292.9	797.3	46.7	798.7	0.00	0.00	0.00
2,520.0	32.30	3.35	2,326.7	818.6	47.9	820.0	0.00	0.00	0.00
2,560.0	32.30	3.35	2,360.5	840.0	49.2	841.4	0.00	0.00	0.00
2,600.0	32.30	3.35	2,394.3	861.3	50.4	862.8	0.00	0.00	0.00
2,640.0	32.30	3.35	2,428.1	882.7	51.7	884.2	0.00	0.00	0.00
2,680.0	32.30	3.35	2,461.9	904.0	52.9	905.5	0.00	0.00	0.00
2,720.0	32.30	3.35	2,495.7	925.3	54.2	926.9	0.00	0.00	0.00
2,760.0	32.30	3.35	2,529.6	946.7	55.4	948.3	0.00	0.00	0.00
2,800.0	32.30	3.35	2,563.4	968.0	56.7	969.7	0.00	0.00	0.00
2,840.0	32.30	3.35	2,597.2	989.4	57.9	991.0	0.00	0.00	0.00
2,880.0	32.30	3.35	2,631.0	1,010.7	59.2	1,012.4	0.00	0.00	0.00
2,920.0	32.30	3.35	2,664.8	1,032.0	60.4	1,033.8	0.00	0.00	0.00
2,960.0	32.30	3.35	2,698.6	1,053.4	61.7	1,055.2	0.00	0.00	0.00
3,000.0	32.30	3.35	2,732.4	1,074.7	62.9	1,076.6	0.00	0.00	0.00
3,040.0	32.30	3.35	2,766.2	1,096.1	64.2	1,097.9	0.00	0.00	0.00
3,080.0	32.30	3.35	2,800.0	1,117.4	65.4	1,119.3	0.00	0.00	0.00
3,120.0	32.30	3.35	2,833.8	1,138.7	66.7	1,140.7	0.00	0.00	0.00
3,160.0	32.30	3.35	2,867.6	1,160.1	67.9	1,162.1	0.00	0.00	0.00
3,200.0	32.30	3.35	2,901.5	1,181.4	69.2	1,183.4	0.00	0.00	0.00
3,240.0	32.30	3.35	2,935.3	1,202.7	70.4	1,204.8	0.00	0.00	0.00
3,280.0	32.30	3.35	2,969.1	1,224.1	71.7	1,226.2	0.00	0.00	0.00
3,320.0	32.30	3.35	3,002.9	1,245.4	72.9	1,247.6	0.00	0.00	0.00
3,360.0	32.30	3.35	3,036.7	1,266.8	74.2	1,268.9	0.00	0.00	0.00
3,400.0	32.30	3.35	3,070.5	1,288.1	75.4	1,290.3	0.00	0.00	0.00
3,440.0	32.30	3.35	3,104.3	1,309.4	76.7	1,311.7	0.00	0.00	0.00
3,480.0	32.30	3.35	3,138.1	1,330.8	77.9	1,333.1	0.00	0.00	0.00
3,520.0	32.30	3.35	3,171.9	1,352.1	79.2	1,354.4	0.00	0.00	0.00
3,560.0	32.30	3.35	3,205.7	1,373.5	80.4	1,375.8	0.00	0.00	0.00
3,600.0	32.30	3.35	3,239.5	1,394.8	81.7	1,397.2	0.00	0.00	0.00
3,640.0	32.30	3.35	3,273.4	1,416.1	82.9	1,418.6	0.00	0.00	0.00
3,680.0	32.30	3.35	3,307.2	1,437.5	84.2	1,439.9	0.00	0.00	0.00
3,720.0	32.30	3.35	3,341.0	1,458.8	85.4	1,461.3	0.00	0.00	0.00
3,760.0	32.30	3.35	3,374.8	1,480.2	86.7	1,482.7	0.00	0.00	0.00
3,781.5	32.30	3.35	3,393.0	1,491.7	87.4	1,494.2	0.00	0.00	0.00
PARKMAN									
3,800.0	32.30	3.35	3,408.6	1,501.5	87.9	1,504.1	0.00	0.00	0.00
3,840.0	32.30	3.35	3,442.4	1,522.8	89.2	1,525.4	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Raindance FD 20-32D
<b>Company:</b>	Great Western	<b>TVD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Project:</b>	SEC.30-T6N-R67W	<b>MD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Site:</b>	Raindance FD West Row Pad Sec.30-T6N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Raindance FD 20-32D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (10-18-12)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,880.0	32.30	3.35	3,476.2	1,544.2	90.4	1,546.8	0.00	0.00	0.00
3,920.0	32.30	3.35	3,510.0	1,565.5	91.7	1,568.2	0.00	0.00	0.00
3,960.0	32.30	3.35	3,543.8	1,586.9	92.9	1,589.6	0.00	0.00	0.00
4,000.0	32.30	3.35	3,577.6	1,608.2	94.2	1,610.9	0.00	0.00	0.00
4,040.0	32.30	3.35	3,611.5	1,629.5	95.4	1,632.3	0.00	0.00	0.00
4,080.0	32.30	3.35	3,645.3	1,650.9	96.7	1,653.7	0.00	0.00	0.00
4,120.0	32.30	3.35	3,679.1	1,672.2	97.9	1,675.1	0.00	0.00	0.00
4,160.0	32.30	3.35	3,712.9	1,693.6	99.2	1,696.5	0.00	0.00	0.00
4,200.0	32.30	3.35	3,746.7	1,714.9	100.4	1,717.8	0.00	0.00	0.00
4,240.0	32.30	3.35	3,780.5	1,736.2	101.7	1,739.2	0.00	0.00	0.00
4,280.0	32.30	3.35	3,814.3	1,757.6	102.9	1,760.6	0.00	0.00	0.00
4,320.0	32.30	3.35	3,848.1	1,778.9	104.2	1,782.0	0.00	0.00	0.00
4,360.0	32.30	3.35	3,881.9	1,800.2	105.4	1,803.3	0.00	0.00	0.00
4,400.0	32.30	3.35	3,915.7	1,821.6	106.7	1,824.7	0.00	0.00	0.00
4,440.0	32.30	3.35	3,949.5	1,842.9	107.9	1,846.1	0.00	0.00	0.00
4,480.0	32.30	3.35	3,983.4	1,864.3	109.2	1,867.5	0.00	0.00	0.00
4,520.0	32.30	3.35	4,017.2	1,885.6	110.4	1,888.8	0.00	0.00	0.00
4,560.0	32.30	3.35	4,051.0	1,906.9	111.7	1,910.2	0.00	0.00	0.00
4,600.0	32.30	3.35	4,084.8	1,928.3	112.9	1,931.6	0.00	0.00	0.00
4,601.4	32.30	3.35	4,086.0	1,929.1	113.0	1,932.4	0.00	0.00	0.00
<b>SUSSEX</b>									
4,640.0	32.30	3.35	4,118.6	1,949.6	114.2	1,953.0	0.00	0.00	0.00
4,680.0	32.30	3.35	4,152.4	1,971.0	115.4	1,974.3	0.00	0.00	0.00
4,720.0	32.30	3.35	4,186.2	1,992.3	116.7	1,995.7	0.00	0.00	0.00
4,760.0	32.30	3.35	4,220.0	2,013.6	117.9	2,017.1	0.00	0.00	0.00
4,800.0	32.30	3.35	4,253.8	2,035.0	119.2	2,038.5	0.00	0.00	0.00
4,840.0	32.30	3.35	4,287.6	2,056.3	120.4	2,059.8	0.00	0.00	0.00
4,880.0	32.30	3.35	4,321.4	2,077.7	121.7	2,081.2	0.00	0.00	0.00
4,920.0	32.30	3.35	4,355.3	2,099.0	122.9	2,102.6	0.00	0.00	0.00
4,960.0	32.30	3.35	4,389.1	2,120.3	124.2	2,124.0	0.00	0.00	0.00
5,000.0	32.30	3.35	4,422.9	2,141.7	125.4	2,145.3	0.00	0.00	0.00
5,040.0	32.30	3.35	4,456.7	2,163.0	126.7	2,166.7	0.00	0.00	0.00
5,062.9	32.30	3.35	4,476.0	2,175.2	127.4	2,178.9	0.00	0.00	0.00
<b>SHANNON</b>									
5,080.0	32.30	3.35	4,490.5	2,184.4	127.9	2,188.1	0.00	0.00	0.00
5,120.0	32.30	3.35	4,524.3	2,205.7	129.2	2,209.5	0.00	0.00	0.00
5,160.0	32.30	3.35	4,558.1	2,227.0	130.4	2,230.9	0.00	0.00	0.00
5,200.0	32.30	3.35	4,591.9	2,248.4	131.7	2,252.2	0.00	0.00	0.00
5,240.0	32.30	3.35	4,625.7	2,269.7	132.9	2,273.6	0.00	0.00	0.00
5,280.0	32.30	3.35	4,659.5	2,291.1	134.2	2,295.0	0.00	0.00	0.00
5,320.0	32.30	3.35	4,693.3	2,312.4	135.4	2,316.4	0.00	0.00	0.00
5,360.0	32.30	3.35	4,727.2	2,333.7	136.7	2,337.7	0.00	0.00	0.00
5,400.0	32.30	3.35	4,761.0	2,355.1	137.9	2,359.1	0.00	0.00	0.00
5,440.0	32.30	3.35	4,794.8	2,376.4	139.2	2,380.5	0.00	0.00	0.00
5,480.0	32.30	3.35	4,828.6	2,397.7	140.4	2,401.9	0.00	0.00	0.00
5,520.0	32.30	3.35	4,862.4	2,419.1	141.7	2,423.2	0.00	0.00	0.00
5,560.0	32.30	3.35	4,896.2	2,440.4	142.9	2,444.6	0.00	0.00	0.00
5,600.0	32.30	3.35	4,930.0	2,461.8	144.2	2,466.0	0.00	0.00	0.00
5,640.0	32.30	3.35	4,963.8	2,483.1	145.4	2,487.4	0.00	0.00	0.00
5,680.0	32.30	3.35	4,997.6	2,504.4	146.7	2,508.7	0.00	0.00	0.00
5,720.0	32.30	3.35	5,031.4	2,525.8	147.9	2,530.1	0.00	0.00	0.00
5,760.0	32.30	3.35	5,065.3	2,547.1	149.2	2,551.5	0.00	0.00	0.00
5,800.0	32.30	3.35	5,099.1	2,568.5	150.4	2,572.9	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Raindance FD 20-32D
<b>Company:</b>	Great Western	<b>TVD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Project:</b>	SEC.30-T6N-R67W	<b>MD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Site:</b>	Raindance FD West Row Pad	<b>North Reference:</b>	True
<b>Well:</b>	Raindance FD 20-32D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (10-18-12)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,840.0	32.30	3.35	5,132.9	2,589.8	151.7	2,594.2	0.00	0.00	0.00
5,880.0	32.30	3.35	5,166.7	2,611.1	152.9	2,615.6	0.00	0.00	0.00
5,920.0	32.30	3.35	5,200.5	2,632.5	154.2	2,637.0	0.00	0.00	0.00
5,960.0	32.30	3.35	5,234.3	2,653.8	155.4	2,658.4	0.00	0.00	0.00
6,000.0	32.30	3.35	5,268.1	2,675.2	156.7	2,679.7	0.00	0.00	0.00
6,040.0	32.30	3.35	5,301.9	2,696.5	157.9	2,701.1	0.00	0.00	0.00
6,080.0	32.30	3.35	5,335.7	2,717.8	159.2	2,722.5	0.00	0.00	0.00
6,120.0	32.30	3.35	5,369.5	2,739.2	160.4	2,743.9	0.00	0.00	0.00
6,160.0	32.30	3.35	5,403.3	2,760.5	161.7	2,765.2	0.00	0.00	0.00
6,200.0	32.30	3.35	5,437.2	2,781.9	162.9	2,786.6	0.00	0.00	0.00
6,237.7	32.30	3.35	5,469.1	2,802.0	164.1	2,806.8	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
6,240.0	32.26	3.35	5,471.0	2,803.2	164.2	2,808.0	2.00	-2.00	0.00
6,280.0	31.46	3.35	5,504.9	2,824.3	165.4	2,829.1	2.00	-2.00	0.00
6,320.0	30.66	3.35	5,539.2	2,844.9	166.6	2,849.7	2.00	-2.00	0.00
6,360.0	29.86	3.35	5,573.8	2,865.0	167.8	2,869.9	2.00	-2.00	0.00
6,400.0	29.06	3.35	5,608.6	2,884.6	168.9	2,889.6	2.00	-2.00	0.00
6,440.0	28.26	3.35	5,643.7	2,903.8	170.1	2,908.8	2.00	-2.00	0.00
6,480.0	27.46	3.35	5,679.0	2,922.4	171.2	2,927.4	2.00	-2.00	0.00
6,520.0	26.66	3.35	5,714.7	2,940.6	172.2	2,945.6	2.00	-2.00	0.00
6,560.0	25.86	3.35	5,750.5	2,958.3	173.3	2,963.3	2.00	-2.00	0.00
6,600.0	25.06	3.35	5,786.7	2,975.4	174.3	2,980.5	2.00	-2.00	0.00
6,640.0	24.26	3.35	5,823.0	2,992.1	175.2	2,997.2	2.00	-2.00	0.00
6,680.0	23.46	3.35	5,859.6	3,008.2	176.2	3,013.4	2.00	-2.00	0.00
6,720.0	22.66	3.35	5,896.4	3,023.9	177.1	3,029.1	2.00	-2.00	0.00
6,760.0	21.86	3.35	5,933.4	3,039.0	178.0	3,044.2	2.00	-2.00	0.00
6,800.0	21.06	3.35	5,970.6	3,053.6	178.8	3,058.9	2.00	-2.00	0.00
6,840.0	20.26	3.35	6,008.1	3,067.7	179.7	3,073.0	2.00	-2.00	0.00
6,880.0	19.46	3.35	6,045.7	3,081.3	180.5	3,086.6	2.00	-2.00	0.00
6,920.0	18.66	3.35	6,083.5	3,094.3	181.2	3,099.6	2.00	-2.00	0.00
6,960.0	17.86	3.35	6,121.5	3,106.8	182.0	3,112.1	2.00	-2.00	0.00
7,000.0	17.06	3.35	6,159.6	3,118.8	182.7	3,124.1	2.00	-2.00	0.00
7,040.0	16.26	3.35	6,198.0	3,130.2	183.3	3,135.6	2.00	-2.00	0.00
7,080.0	15.46	3.35	6,236.4	3,141.2	184.0	3,146.5	2.00	-2.00	0.00
7,120.0	14.66	3.35	6,275.1	3,151.5	184.6	3,156.9	2.00	-2.00	0.00
7,160.0	13.86	3.35	6,313.8	3,161.4	185.2	3,166.8	2.00	-2.00	0.00
7,200.0	13.06	3.35	6,352.7	3,170.7	185.7	3,176.1	2.00	-2.00	0.00
7,240.0	12.26	3.35	6,391.8	3,179.4	186.2	3,184.9	2.00	-2.00	0.00
7,280.0	11.46	3.35	6,430.9	3,187.6	186.7	3,193.1	2.00	-2.00	0.00
7,320.0	10.66	3.35	6,470.2	3,195.3	187.1	3,200.7	2.00	-2.00	0.00
7,360.0	9.86	3.35	6,509.5	3,202.4	187.6	3,207.9	2.00	-2.00	0.00
7,400.0	9.06	3.35	6,549.0	3,208.9	187.9	3,214.4	2.00	-2.00	0.00
7,440.0	8.26	3.35	6,588.5	3,215.0	188.3	3,220.5	2.00	-2.00	0.00
7,480.0	7.46	3.35	6,628.1	3,220.4	188.6	3,225.9	2.00	-2.00	0.00
7,520.0	6.66	3.35	6,667.8	3,225.3	188.9	3,230.9	2.00	-2.00	0.00
7,560.0	5.86	3.35	6,707.6	3,229.7	189.2	3,235.2	2.00	-2.00	0.00
7,600.0	5.06	3.35	6,747.4	3,233.5	189.4	3,239.0	2.00	-2.00	0.00
7,638.7	4.28	3.35	6,786.0	3,236.6	189.6	3,242.2	2.00	-2.00	0.00
<b>NIORARA</b>									
7,640.0	4.26	3.35	6,787.3	3,236.7	189.6	3,242.3	2.00	-2.00	0.00
7,680.0	3.46	3.35	6,827.2	3,239.4	189.7	3,245.0	2.00	-2.00	0.00
7,720.0	2.66	3.35	6,867.1	3,241.5	189.8	3,247.1	2.00	-2.00	0.00
7,760.0	1.86	3.35	6,907.1	3,243.1	189.9	3,248.7	2.00	-2.00	0.00

Plan Annotations					
	Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
			+N/-S (ft)	+E/-W (ft)	
	200.0	200.0	0.0	0.0	KOP - Start Build 2.00
	1,815.2	1,730.9	442.6	25.9	Start 4422.6 hold at 1815.2 MD
	6,237.7	5,469.1	2,802.0	164.1	Start Drop -2.00
	7,852.9	7,000.0	3,244.6	190.0	Back to Vertical
	8,131.9	7,279.0	3,244.6	190.0	TD at 8131.9





# **Directional**

## **Great Western**

**SEC.30-T6N-R67W**

**Raindance FD West Row Pad Sec.30-T6N-R67W**

**Raindance FD 20-32D**

**Wellbore #1**

**Plan #1 (10-18-12)**

## **Anticollision Report**

**19 October, 2012**

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Raindance FD 20-32D
<b>Project:</b>	SEC.30-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Reference Site:</b>	Raindance FD West Row Pad Sec.30-T6N-R67W	<b>MD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Raindance FD 20-32D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (10-18-12)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Plan #1 (10-18-12)		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	Stations	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 10,000.0ft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma		

<b>Survey Tool Program</b>	<b>Date</b>	10/19/2012		
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	8,131.9	Plan #1 (10-18-12) (Wellbore #1)	MWD	MWD - Standard

<b>Summary</b>						
<b>Site Name</b>	<b>Reference Measured Depth (ft)</b>	<b>Offset Measured Depth (ft)</b>	<b>Distance Between Centres (ft)</b>	<b>Distance Between Ellipses (ft)</b>	<b>Separation Factor</b>	<b>Warning</b>
<b>Offset Well - Wellbore - Design</b>						
Raindance FD East Row Pad Sec.30-T6N-R67W						
Raindance FD 20-18D - Wellbore #1 - Plan #1 (10-18-12)	200.0	199.9	15.3	14.6	22.730	CC
Raindance FD 20-18D - Wellbore #1 - Plan #1 (10-18-12)	300.0	299.8	15.8	14.6	14.034	ES
Raindance FD 20-18D - Wellbore #1 - Plan #1 (10-18-12)	1,800.0	1,791.6	122.5	104.9	6.969	SF
Raindance FD 20-25D - Wellbore #1 - Plan #1 (10-18-12)	200.0	200.3	21.6	20.9	31.993	CC, ES
Raindance FD 20-25D - Wellbore #1 - Plan #1 (10-18-12)	500.0	499.8	34.5	32.4	16.775	SF
Raindance FD West Row Pad Sec.30-T6N-R67W						
Raindance FD 20-33D - Wellbore #1 - Plan #1 (10-18-12)	200.0	199.6	14.9	14.3	22.181	CC, ES
Raindance FD 20-33D - Wellbore #1 - Plan #1 (10-18-12)	1,700.0	1,722.5	111.4	102.9	13.020	SF
Raindance FD 20-34D - Wellbore #1 - Plan #1 (10-18-12)	200.0	200.4	30.2	29.6	44.790	CC, ES
Raindance FD 20-34D - Wellbore #1 - Plan #1 (10-18-12)	500.0	499.9	45.9	43.9	22.335	SF

<b>Offset Design</b>													
Raindance FD East Row Pad Sec.30-T6N-R67W - Raindance FD 20-18D - Wellbore #1 - Plan #1 (10-1													
Survey Program: 0-MWD													
<b>Reference</b>		<b>Offset</b>		<b>Semi Major Axis</b>			<b>Distance</b>						
<b>Measured Depth (ft)</b>	<b>Vertical Depth (ft)</b>	<b>Measured Depth (ft)</b>	<b>Vertical Depth (ft)</b>	<b>Reference (ft)</b>	<b>Offset (ft)</b>	<b>Highside Toolface (°)</b>	<b>Offset Wellbore Centre +N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Between Centres (ft)</b>	<b>Between Ellipses (ft)</b>	<b>Minimum Separation (ft)</b>	<b>Separation Factor</b>	<b>Warning</b>
0.0	0.0	0.0	0.0	0.0	0.0	92.73	-0.7	15.3	15.3	15.3	0.00	N/A	
100.0	100.0	99.9	99.9	0.1	0.1	92.73	-0.7	15.3	15.3	15.1	0.22	68.201	
200.0	200.0	199.9	199.9	0.3	0.3	92.73	-0.7	15.3	15.3	14.6	0.67	22.730	CC
300.0	300.0	299.8	299.7	0.6	0.6	89.60	0.9	15.8	15.8	14.6	1.12	14.034	ES
400.0	399.8	399.6	399.4	0.8	0.8	90.18	5.9	17.4	17.0	15.5	1.58	10.760	
500.0	499.5	499.4	498.9	1.0	1.0	90.97	14.2	20.0	19.2	17.1	2.08	9.215	
600.0	598.7	599.2	597.9	1.3	1.3	91.80	25.7	23.7	22.2	19.6	2.64	8.401	
700.0	697.5	699.0	696.5	1.6	1.6	92.58	40.6	28.4	26.1	22.8	3.28	7.938	
800.0	795.6	798.7	794.3	2.0	2.0	93.24	58.7	34.2	30.8	26.8	4.02	7.657	
900.0	893.1	898.3	891.4	2.4	2.4	93.79	80.0	41.0	36.4	31.5	4.86	7.474	
1,000.0	989.6	997.9	987.6	2.9	2.9	94.23	104.5	48.7	42.8	36.9	5.82	7.348	
1,100.0	1,085.3	1,097.4	1,082.8	3.5	3.5	94.56	132.1	57.5	50.0	43.1	6.89	7.255	
1,200.0	1,179.8	1,196.7	1,176.8	4.1	4.1	94.82	162.9	67.3	58.1	50.0	8.08	7.185	
1,300.0	1,273.2	1,296.0	1,269.5	4.7	4.7	95.00	196.7	78.0	66.9	57.6	9.39	7.129	
1,400.0	1,365.2	1,395.2	1,360.8	5.5	5.4	95.13	233.5	89.7	76.6	65.8	10.82	7.083	
1,500.0	1,455.8	1,494.3	1,450.7	6.2	6.2	95.21	273.2	102.4	87.1	74.7	12.36	7.045	

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

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Rainsance FD 20-32D
<b>Project:</b>	SEC.30-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Reference Site:</b>	Rainsance FD West Row Pad Sec.30-T6N-R67W	<b>MD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Rainsance FD 20-32D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (10-18-12)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
1,600.0	1,544.9	1,593.2	1,539.0	7.1	7.0	95.26	315.8	115.9	98.3	84.3	14.02	7.014	
1,700.0	1,632.4	1,692.5	1,626.6	8.0	7.9	96.03	360.2	130.0	110.1	94.4	15.77	6.984	
1,800.0	1,718.1	1,791.6	1,714.1	8.9	8.8	98.23	404.6	144.1	122.5	104.9	17.57	6.969 SF	
1,815.2	1,730.9	1,806.6	1,727.3	9.1	8.9	98.65	411.3	146.3	124.4	106.5	17.85	6.970	
1,900.0	1,802.7	1,890.5	1,801.4	9.9	9.7	101.11	448.9	158.2	135.4	116.0	19.38	6.985	
2,000.0	1,887.2	1,989.5	1,888.8	10.9	10.5	103.54	493.2	172.3	148.6	127.4	21.16	7.020	
2,100.0	1,971.7	2,088.4	1,976.1	11.9	11.4	105.57	537.5	186.4	162.0	139.1	22.93	7.065	
2,200.0	2,056.2	2,187.4	2,063.5	13.0	12.3	107.29	581.8	200.4	175.6	150.9	24.68	7.114	
2,300.0	2,140.7	2,286.3	2,150.8	14.0	13.2	108.76	626.1	214.5	189.3	162.9	26.42	7.165	
2,400.0	2,225.3	2,385.3	2,238.2	15.0	14.1	110.03	670.4	228.6	203.1	175.0	28.15	7.215	
2,500.0	2,309.8	2,484.2	2,325.5	16.0	15.0	111.14	714.7	242.7	217.1	187.2	29.88	7.264	
2,600.0	2,394.3	2,583.1	2,412.9	17.0	15.9	112.11	759.0	256.7	231.0	199.4	31.60	7.312	
2,700.0	2,478.8	2,682.1	2,500.2	18.0	16.8	112.98	803.3	270.8	245.1	211.8	33.31	7.357	
2,800.0	2,563.4	2,781.0	2,587.6	19.1	17.7	113.75	847.6	284.9	259.2	224.2	35.03	7.400	
2,900.0	2,647.9	2,880.0	2,674.9	20.1	18.6	114.44	891.9	299.0	273.3	236.6	36.74	7.440	
3,000.0	2,732.4	2,978.9	2,762.3	21.1	19.4	115.06	936.2	313.1	287.5	249.0	38.44	7.479	
3,100.0	2,816.9	3,077.9	2,849.6	22.1	20.3	115.63	980.5	327.1	301.7	261.5	40.14	7.515	
3,200.0	2,901.5	3,176.8	2,937.0	23.1	21.2	116.14	1,024.8	341.2	315.9	274.1	41.85	7.549	
3,300.0	2,986.0	3,275.8	3,024.3	24.2	22.1	116.61	1,069.0	355.3	330.2	286.6	43.55	7.582	
3,400.0	3,070.5	3,374.7	3,111.7	25.2	23.0	117.04	1,113.3	369.4	344.4	299.2	45.25	7.612	
3,500.0	3,155.0	3,473.6	3,199.0	26.2	23.9	117.44	1,157.6	383.4	358.7	311.8	46.94	7.641	
3,600.0	3,239.5	3,572.6	3,286.4	27.2	24.8	117.80	1,201.9	397.5	373.0	324.4	48.64	7.669	
3,700.0	3,324.1	3,671.5	3,373.7	28.2	25.7	118.14	1,246.2	411.6	387.3	337.0	50.34	7.695	
3,800.0	3,408.6	3,770.5	3,461.0	29.3	26.6	118.46	1,290.5	425.7	401.7	349.6	52.03	7.720	
3,900.0	3,493.1	3,869.4	3,548.4	30.3	27.5	118.75	1,334.8	439.8	416.0	362.3	53.73	7.743	
4,000.0	3,577.6	3,968.4	3,635.7	31.3	28.4	119.02	1,379.1	453.8	430.4	374.9	55.42	7.765	
4,100.0	3,662.2	4,067.3	3,723.1	32.3	29.3	119.28	1,423.4	467.9	444.7	387.6	57.11	7.786	
4,200.0	3,746.7	4,166.3	3,810.4	33.4	30.2	119.52	1,467.7	482.0	459.1	400.3	58.81	7.807	
4,300.0	3,831.2	4,265.2	3,897.8	34.4	31.1	119.74	1,512.0	496.1	473.5	413.0	60.50	7.826	
4,400.0	3,915.7	4,364.2	3,985.1	35.4	32.0	119.96	1,556.3	510.1	487.8	425.6	62.19	7.844	
4,500.0	4,000.3	4,463.1	4,072.5	36.4	32.9	120.16	1,600.6	524.2	502.2	438.3	63.88	7.861	
4,600.0	4,084.8	4,562.0	4,159.8	37.4	33.8	120.34	1,644.9	538.3	516.6	451.0	65.58	7.878	
4,700.0	4,169.3	4,661.0	4,247.2	38.5	34.7	120.52	1,689.2	552.4	531.0	463.8	67.27	7.894	
4,800.0	4,253.8	4,759.9	4,334.5	39.5	35.6	120.69	1,733.5	566.5	545.4	476.5	68.96	7.909	
4,900.0	4,338.4	4,858.9	4,421.9	40.5	36.5	120.85	1,777.8	580.5	559.8	489.2	70.65	7.924	
5,000.0	4,422.9	4,957.8	4,509.2	41.5	37.4	121.00	1,822.1	594.6	574.2	501.9	72.34	7.938	
5,100.0	4,507.4	5,056.8	4,596.6	42.6	38.3	121.15	1,866.4	608.7	588.7	514.6	74.03	7.951	
5,200.0	4,591.9	5,155.7	4,683.9	43.6	39.2	121.29	1,910.7	622.8	603.1	527.4	75.72	7.964	
5,300.0	4,676.4	5,254.7	4,771.3	44.6	40.1	121.42	1,955.0	636.8	617.5	540.1	77.41	7.977	
5,400.0	4,761.0	5,353.6	4,858.6	45.6	41.0	121.54	1,999.2	650.9	631.9	552.8	79.10	7.989	
5,500.0	4,845.5	5,452.5	4,946.0	46.7	41.9	121.66	2,043.5	665.0	646.4	565.6	80.79	8.000	
5,600.0	4,930.0	5,551.5	5,033.3	47.7	42.8	121.78	2,087.8	679.1	660.8	578.3	82.48	8.011	
5,700.0	5,014.5	5,650.4	5,120.7	48.7	43.7	121.89	2,132.1	693.2	675.2	591.0	84.17	8.022	
5,800.0	5,099.1	5,749.4	5,208.0	49.7	44.6	121.99	2,176.4	707.2	689.6	603.8	85.86	8.032	
5,900.0	5,183.6	5,848.3	5,295.4	50.8	45.5	122.09	2,220.7	721.3	704.1	616.5	87.55	8.042	
6,000.0	5,268.1	5,947.3	5,382.7	51.8	46.4	122.19	2,265.0	735.4	718.5	629.3	89.24	8.052	
6,100.0	5,352.6	6,044.8	5,468.8	52.8	47.2	122.29	2,308.6	749.2	733.0	642.1	90.90	8.064	
6,200.0	5,437.2	6,135.5	5,549.8	53.8	47.9	122.51	2,347.6	761.6	748.2	655.9	92.28	8.108	
6,237.7	5,469.1	6,169.6	5,580.6	54.2	48.1	122.65	2,361.6	766.1	754.2	661.4	92.74	8.132	
6,300.0	5,522.0	6,225.8	5,631.7	54.8	48.5	123.06	2,383.9	773.2	764.1	670.7	93.37	8.183	
6,400.0	5,608.6	6,315.8	5,714.4	55.5	49.0	123.69	2,417.7	783.9	779.4	685.2	94.24	8.270	

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

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Raindance FD 20-32D
<b>Project:</b>	SEC.30-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Reference Site:</b>	Raindance FD West Row Pad Sec.30-T6N-R67W	<b>MD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Raindance FD 20-32D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (10-18-12)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Raindance FD East Row Pad Sec.30-T6N-R67W - Raindance FD 20-18D - Wellbore #1 - Plan #1 (10-1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance				Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
6,500.0	5,696.8	6,405.7	5,798.1	56.2	49.5	124.30	2,448.9	793.8	793.9	698.9	95.04	8.354		
6,600.0	5,786.7	6,500.0	5,887.0	56.9	50.0	124.89	2,478.9	803.4	807.7	711.9	95.77	8.434		
6,700.0	5,878.0	6,584.9	5,967.8	57.5	50.4	125.43	2,503.5	811.2	820.7	724.2	96.41	8.512		
6,800.0	5,970.6	6,674.2	6,053.7	58.1	50.8	125.95	2,527.0	818.6	832.8	735.8	96.98	8.587		
6,900.0	6,064.6	6,763.3	6,140.1	58.6	51.1	126.46	2,547.9	825.3	844.2	746.7	97.47	8.660		
7,000.0	6,159.6	6,852.3	6,227.0	59.1	51.5	126.94	2,566.1	831.1	854.7	756.8	97.88	8.732		
7,100.0	6,255.7	6,941.1	6,314.3	59.5	51.7	127.40	2,581.7	836.0	864.3	766.1	98.21	8.801		
7,200.0	6,352.7	7,029.8	6,401.8	59.9	52.0	127.85	2,594.8	840.2	873.2	774.7	98.44	8.870		
7,300.0	6,450.5	7,118.2	6,489.6	60.3	52.2	128.28	2,605.2	843.5	881.1	782.5	98.59	8.937		
7,400.0	6,549.0	7,206.6	6,577.6	60.6	52.4	128.69	2,613.0	846.0	888.2	789.6	98.65	9.003		
7,500.0	6,648.0	7,300.0	6,670.8	60.8	52.5	129.10	2,618.5	847.7	894.5	795.9	98.62	9.070		
7,600.0	6,747.4	7,382.8	6,753.6	61.0	52.6	129.47	2,620.9	848.5	899.8	801.3	98.50	9.135		
7,700.0	6,847.2	7,476.3	6,847.1	61.2	52.6	129.84	2,621.3	848.6	904.2	805.9	98.31	9.197		
7,800.0	6,947.1	7,576.2	6,947.0	61.3	52.7	130.04	2,621.3	848.6	906.5	808.3	98.18	9.233		
7,852.9	7,000.0	7,629.1	6,999.9	61.3	52.7	133.42	2,621.3	848.6	906.8	808.6	98.16	9.238		
7,900.0	7,047.1	7,676.2	7,047.0	61.3	52.8	133.42	2,621.3	848.6	906.8	808.6	98.21	9.233		
8,000.0	7,147.1	7,776.2	7,147.0	61.4	52.8	133.42	2,621.3	848.6	906.8	808.5	98.34	9.221		
8,100.0	7,247.1	7,876.2	7,247.0	61.4	52.9	133.42	2,621.3	848.6	906.8	808.3	98.46	9.209		
8,131.9	7,279.0	7,908.1	7,278.9	61.5	52.9	133.42	2,621.3	848.6	906.8	808.3	98.50	9.206		

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Raindance FD 20-32D
<b>Project:</b>	SEC.30-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Reference Site:</b>	Raindance FD West Row Pad Sec.30-T6N-R67W	<b>MD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Raindance FD 20-32D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (10-18-12)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Raindance FD East Row Pad Sec.30-T6N-R67W - Raindance FD 20-25D - Wellbore #1 - Plan #1 (10-1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.0	0.0	0.3	0.3	0.0	0.0	137.93	-16.0	14.5	21.6	21.6	0.00	N/A		
100.0	100.0	100.3	100.3	0.1	0.1	137.93	-16.0	14.5	21.6	21.4	0.23	95.789		
200.0	200.0	200.3	200.3	0.3	0.3	137.93	-16.0	14.5	21.6	20.9	0.67	31.993 CC, ES		
300.0	300.0	300.3	300.3	0.6	0.6	137.68	-16.0	14.5	22.9	21.7	1.13	20.248		
400.0	399.8	400.1	400.1	0.8	0.8	145.14	-16.0	14.5	27.0	25.4	1.59	16.960		
500.0	499.5	499.8	499.8	1.0	1.0	153.37	-16.0	14.5	34.5	32.4	2.05	16.775 SF		
600.0	598.7	599.0	599.0	1.3	1.2	160.15	-16.0	14.5	45.7	43.2	2.52	18.124		
700.0	697.5	697.8	697.8	1.6	1.5	165.09	-16.0	14.5	60.7	57.7	2.99	20.304		
800.0	795.6	795.9	795.9	2.0	1.7	168.57	-16.0	14.5	79.3	75.8	3.45	22.953		
900.0	893.1	896.0	896.0	2.4	1.9	170.50	-14.7	15.3	100.2	96.3	3.92	25.572		
1,000.0	989.6	996.7	996.6	2.9	2.1	170.97	-10.3	18.1	121.8	117.5	4.38	27.791		
1,100.0	1,085.3	1,097.9	1,097.4	3.5	2.4	170.63	-2.9	22.7	144.1	139.3	4.87	29.608		
1,200.0	1,179.8	1,199.5	1,198.3	4.1	2.6	169.78	7.5	29.3	167.1	161.7	5.38	31.065		
1,300.0	1,273.2	1,301.6	1,299.0	4.7	2.9	168.61	21.0	37.9	190.7	184.8	5.93	32.182		
1,400.0	1,365.2	1,404.0	1,399.6	5.5	3.2	167.23	37.6	48.4	215.1	208.5	6.52	32.968		
1,500.0	1,455.8	1,506.8	1,499.7	6.2	3.6	165.70	57.3	60.8	240.2	233.0	7.19	33.430		
1,600.0	1,544.9	1,609.9	1,599.2	7.1	4.0	164.09	80.1	75.2	266.2	258.2	7.93	33.582		
1,700.0	1,632.4	1,713.2	1,697.8	8.0	4.5	162.41	106.0	91.5	293.0	284.2	8.76	33.441		
1,800.0	1,718.1	1,816.8	1,795.6	8.9	5.1	160.69	134.9	109.8	320.7	311.0	9.69	33.088		
1,815.2	1,730.9	1,832.0	1,809.8	9.1	5.2	160.44	139.4	112.7	325.0	315.2	9.84	33.026		
1,900.0	1,802.7	1,913.0	1,885.7	9.9	5.7	159.34	163.4	127.8	349.2	338.5	10.74	32.531		
2,000.0	1,887.2	2,008.6	1,975.2	10.9	6.3	158.23	191.7	145.7	377.9	366.1	11.83	31.960		
2,100.0	1,971.7	2,104.1	2,064.7	11.9	6.9	157.28	220.0	163.6	406.8	393.8	12.94	31.424		
2,200.0	2,056.2	2,199.7	2,154.2	13.0	7.5	156.45	248.3	181.5	435.7	421.6	14.09	30.928		
2,300.0	2,140.7	2,295.2	2,243.7	14.0	8.1	155.72	276.6	199.3	464.7	449.4	15.25	30.474		
2,400.0	2,225.3	2,390.8	2,333.2	15.0	8.8	155.08	304.9	217.2	493.7	477.3	16.42	30.061		
2,500.0	2,309.8	2,486.4	2,422.7	16.0	9.4	154.51	333.2	235.1	522.8	505.2	17.61	29.685		
2,600.0	2,394.3	2,581.9	2,512.2	17.0	10.0	154.00	361.5	253.0	551.9	533.1	18.81	29.343		
2,700.0	2,478.8	2,677.5	2,601.7	18.0	10.7	153.55	389.8	270.8	581.1	561.1	20.02	29.032		
2,800.0	2,563.4	2,773.0	2,691.2	19.1	11.3	153.13	418.2	288.7	610.3	589.1	21.23	28.748		
2,900.0	2,647.9	2,868.6	2,780.7	20.1	12.0	152.76	446.5	306.6	639.5	617.1	22.45	28.488		
3,000.0	2,732.4	2,964.1	2,870.2	21.1	12.6	152.41	474.8	324.5	668.8	645.1	23.67	28.250		
3,100.0	2,816.9	3,059.7	2,959.7	22.1	13.3	152.10	503.1	342.4	698.0	673.1	24.90	28.031		
3,200.0	2,901.5	3,155.2	3,049.2	23.1	14.0	151.81	531.4	360.2	727.3	701.2	26.13	27.830		
3,300.0	2,986.0	3,250.8	3,138.7	24.2	14.6	151.54	559.7	378.1	756.6	729.3	27.37	27.643		
3,400.0	3,070.5	3,346.3	3,228.2	25.2	15.3	151.29	588.0	396.0	785.9	757.3	28.61	27.471		
3,500.0	3,155.0	3,441.9	3,317.7	26.2	15.9	151.06	616.3	413.9	815.3	785.4	29.85	27.310		
3,600.0	3,239.5	3,537.4	3,407.2	27.2	16.6	150.85	644.6	431.7	844.6	813.5	31.10	27.161		
3,700.0	3,324.1	3,633.0	3,496.7	28.2	17.2	150.65	672.9	449.6	874.0	841.6	32.34	27.022		
3,800.0	3,408.6	3,728.5	3,586.2	29.3	17.9	150.46	701.2	467.5	903.3	869.7	33.59	26.892		
3,900.0	3,493.1	3,824.1	3,675.7	30.3	18.6	150.29	729.5	485.4	932.7	897.9	34.84	26.771		
4,000.0	3,577.6	3,919.6	3,765.2	31.3	19.2	150.12	757.8	503.3	962.1	926.0	36.09	26.656		
4,100.0	3,662.2	4,015.2	3,854.7	32.3	19.9	149.97	786.1	521.1	991.5	954.1	37.34	26.549		
4,200.0	3,746.7	4,110.7	3,944.2	33.4	20.5	149.82	814.4	539.0	1,020.8	982.3	38.60	26.448		
4,300.0	3,831.2	4,206.3	4,033.7	34.4	21.2	149.69	842.7	556.9	1,050.2	1,010.4	39.85	26.353		
4,400.0	3,915.7	4,301.9	4,123.2	35.4	21.9	149.56	871.0	574.8	1,079.6	1,038.5	41.11	26.263		
4,500.0	4,000.3	4,397.4	4,212.6	36.4	22.5	149.43	899.3	592.6	1,109.0	1,066.7	42.37	26.178		
4,600.0	4,084.8	4,493.0	4,302.1	37.4	23.2	149.32	927.6	610.5	1,138.5	1,094.8	43.62	26.097		
4,700.0	4,169.3	4,588.5	4,391.6	38.5	23.9	149.21	955.9	628.4	1,167.9	1,123.0	44.88	26.021		
4,800.0	4,253.8	4,684.1	4,481.1	39.5	24.5	149.10	984.2	646.3	1,197.3	1,151.1	46.14	25.948		
4,900.0	4,338.4	4,779.6	4,570.6	40.5	25.2	149.00	1,012.5	664.1	1,226.7	1,179.3	47.40	25.879		

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

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Raindance FD 20-32D
<b>Project:</b>	SEC.30-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Reference Site:</b>	Raindance FD West Row Pad Sec.30-T6N-R67W	<b>MD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Raindance FD 20-32D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (10-18-12)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Raindance FD East Row Pad Sec.30-T6N-R67W - Raindance FD 20-25D - Wellbore #1 - Plan #1 (10-1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
5,000.0	4,422.9	4,875.2	4,660.1	41.5	25.9	148.91	1,040.8	682.0	1,256.1	1,207.5	48.66	25.813		
5,100.0	4,507.4	4,970.7	4,749.6	42.6	26.5	148.81	1,069.1	699.9	1,285.6	1,235.6	49.92	25.751		
5,200.0	4,591.9	5,066.3	4,839.1	43.6	27.2	148.73	1,097.4	717.8	1,315.0	1,263.8	51.18	25.691		
5,300.0	4,676.4	5,161.8	4,928.6	44.6	27.9	148.64	1,125.7	735.7	1,344.4	1,292.0	52.45	25.634		
5,400.0	4,761.0	5,252.6	5,013.7	45.6	28.5	148.57	1,152.6	752.6	1,373.9	1,320.2	53.66	25.602		
5,500.0	4,845.5	5,328.3	5,085.1	46.7	28.9	148.56	1,173.8	766.0	1,404.3	1,349.7	54.68	25.683		
5,600.0	4,930.0	5,400.0	5,153.3	47.7	29.2	148.62	1,192.4	777.8	1,436.1	1,380.5	55.59	25.832		
5,700.0	5,014.5	5,477.4	5,227.6	48.7	29.6	148.76	1,210.9	789.5	1,469.2	1,412.7	56.45	26.025		
5,800.0	5,099.1	5,550.7	5,298.3	49.7	29.9	148.94	1,226.9	799.5	1,503.6	1,446.4	57.24	26.268		
5,900.0	5,183.6	5,622.9	5,368.6	50.8	30.2	149.18	1,241.1	808.5	1,539.3	1,481.4	57.97	26.554		
6,000.0	5,268.1	5,700.0	5,444.0	51.8	30.5	149.49	1,254.6	817.1	1,576.4	1,517.7	58.64	26.884		
6,100.0	5,352.6	5,764.3	5,507.2	52.8	30.7	149.80	1,264.5	823.3	1,614.7	1,555.5	59.24	27.256		
6,200.0	5,437.2	5,833.2	5,575.3	53.8	30.9	150.16	1,273.9	829.2	1,654.4	1,594.6	59.80	27.667		
6,237.7	5,469.1	5,858.9	5,600.7	54.2	30.9	150.30	1,277.0	831.2	1,669.7	1,609.7	59.99	27.832		
6,300.0	5,522.0	5,900.0	5,641.4	54.8	31.1	150.80	1,281.6	834.1	1,694.8	1,634.6	60.24	28.135		
6,400.0	5,608.6	5,968.9	5,709.9	55.5	31.2	151.59	1,288.2	838.3	1,734.0	1,673.5	60.53	28.647		
6,500.0	5,696.8	6,036.6	5,777.3	56.2	31.3	152.33	1,293.3	841.5	1,771.7	1,711.0	60.78	29.149		
6,600.0	5,786.7	6,100.0	5,840.5	56.9	31.5	153.01	1,296.9	843.8	1,808.0	1,747.0	60.99	29.642		
6,700.0	5,878.0	6,171.5	5,911.9	57.5	31.6	153.70	1,299.5	845.4	1,842.6	1,781.5	61.12	30.147		
6,800.0	5,970.6	6,238.7	5,979.1	58.1	31.6	154.34	1,300.6	846.1	1,875.8	1,814.6	61.21	30.647		
6,900.0	6,064.6	6,324.4	6,064.9	58.6	31.7	155.02	1,300.6	846.1	1,907.0	1,845.8	61.20	31.162		
7,000.0	6,159.6	6,419.5	6,159.9	59.1	31.8	155.65	1,300.6	846.1	1,935.4	1,874.3	61.17	31.640		
7,100.0	6,255.7	6,515.6	6,256.0	59.5	31.9	156.19	1,300.6	846.1	1,960.9	1,899.7	61.14	32.070		
7,200.0	6,352.7	6,612.6	6,353.0	59.9	32.0	156.65	1,300.6	846.1	1,983.2	1,922.1	61.11	32.454		
7,300.0	6,450.5	6,710.4	6,450.8	60.3	32.0	157.04	1,300.6	846.1	2,002.5	1,941.4	61.06	32.794		
7,400.0	6,549.0	6,808.8	6,549.3	60.6	32.1	157.36	1,300.6	846.1	2,018.6	1,957.6	61.00	33.091		
7,500.0	6,648.0	6,907.8	6,648.3	60.8	32.2	157.62	1,300.6	846.1	2,031.6	1,970.7	60.93	33.344		
7,600.0	6,747.4	7,007.3	6,747.7	61.0	32.3	157.80	1,300.6	846.1	2,041.4	1,980.5	60.84	33.555		
7,700.0	6,847.2	7,107.0	6,847.5	61.2	32.4	157.93	1,300.6	846.1	2,047.9	1,987.2	60.73	33.722		
7,800.0	6,947.1	7,206.9	6,947.4	61.3	32.5	157.99	1,300.6	846.1	2,051.3	1,990.7	60.61	33.845		
7,852.9	7,000.0	7,259.8	7,000.3	61.3	32.6	161.35	1,300.6	846.1	2,051.7	1,991.2	60.54	33.892		
7,900.0	7,047.1	7,306.9	7,047.4	61.3	32.6	161.35	1,300.6	846.1	2,051.7	1,991.1	60.63	33.838		
8,000.0	7,147.1	7,406.9	7,147.4	61.4	32.7	161.35	1,300.6	846.1	2,051.7	1,990.9	60.84	33.721		
8,100.0	7,247.1	7,506.9	7,247.4	61.4	32.8	161.35	1,300.6	846.1	2,051.7	1,990.7	61.06	33.603		
8,131.9	7,279.0	7,538.8	7,279.3	61.5	32.9	161.35	1,300.6	846.1	2,051.7	1,990.6	61.13	33.565		

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Rainsance FD 20-32D
<b>Project:</b>	SEC.30-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Reference Site:</b>	Rainsance FD West Row Pad Sec.30-T6N-R67W	<b>MD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Rainsance FD 20-32D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (10-18-12)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	-180.00	-14.9	0.0	14.9	14.9	0.00	N/A		
100.0	100.0	99.6	99.6	0.1	0.1	-180.00	-14.9	0.0	14.9	14.7	0.22	66.589		
200.0	200.0	199.6	199.6	0.3	0.3	-180.00	-14.9	0.0	14.9	14.3	0.67	22.181 CC, ES		
300.0	300.0	299.6	299.6	0.6	0.6	177.00	-14.9	0.0	16.7	15.5	1.13	14.749		
400.0	399.8	399.4	399.4	0.8	0.8	177.71	-14.9	0.0	21.9	20.3	1.59	13.755		
500.0	499.5	500.1	500.1	1.0	1.0	178.13	-13.2	0.2	28.9	26.8	2.05	14.101		
600.0	598.7	601.0	600.8	1.3	1.2	178.18	-7.9	0.7	35.9	33.4	2.50	14.330		
700.0	697.5	702.1	701.6	1.6	1.5	178.03	0.9	1.5	42.8	39.8	2.96	14.449		
800.0	795.6	803.5	802.2	2.0	1.8	177.76	13.3	2.7	49.7	46.3	3.43	14.487		
900.0	893.1	905.2	902.5	2.4	2.1	177.42	29.3	4.3	56.5	52.6	3.91	14.458		
1,000.0	989.6	1,007.0	1,002.5	2.9	2.4	177.03	48.8	6.1	63.3	58.9	4.41	14.372		
1,100.0	1,085.3	1,109.2	1,102.0	3.5	2.8	176.60	72.0	8.4	70.1	65.2	4.92	14.237		
1,200.0	1,179.8	1,211.6	1,200.8	4.1	3.3	176.14	98.7	10.9	76.8	71.3	5.46	14.057		
1,300.0	1,273.2	1,314.2	1,298.8	4.7	3.9	175.66	129.0	13.9	83.4	77.4	6.03	13.839		
1,400.0	1,365.2	1,417.1	1,395.8	5.5	4.5	175.16	162.9	17.1	89.9	83.3	6.62	13.579		
1,500.0	1,455.8	1,520.2	1,491.9	6.2	5.1	174.64	200.3	20.7	96.4	89.1	7.24	13.316		
1,600.0	1,544.9	1,622.9	1,586.1	7.1	5.9	174.11	240.9	24.6	102.8	94.9	7.89	13.023		
1,700.0	1,632.4	1,722.5	1,677.1	8.0	6.6	173.76	281.4	28.5	111.4	102.9	8.56	13.020 SF		
1,800.0	1,718.1	1,821.8	1,767.7	8.9	7.4	173.63	321.8	32.4	123.5	114.3	9.23	13.377		
1,815.2	1,730.9	1,836.8	1,781.4	9.1	7.5	173.63	327.9	33.0	125.7	116.3	9.34	13.459		
1,900.0	1,802.7	1,920.8	1,858.0	9.9	8.1	173.65	362.0	36.3	137.9	127.9	9.99	13.802		
2,000.0	1,887.2	2,019.7	1,948.3	10.9	8.9	173.67	402.3	40.2	152.2	141.4	10.76	14.143		
2,100.0	1,971.7	2,118.7	2,038.6	11.9	9.6	173.69	442.5	44.1	166.6	155.0	11.54	14.430		
2,200.0	2,056.2	2,217.7	2,129.0	13.0	10.4	173.70	482.8	47.9	180.9	168.6	12.33	14.674		
2,300.0	2,140.7	2,316.6	2,219.3	14.0	11.2	173.72	523.0	51.8	195.3	182.1	13.12	14.884		
2,400.0	2,225.3	2,415.6	2,309.6	15.0	12.0	173.73	563.3	55.7	209.6	195.7	13.91	15.066		
2,500.0	2,309.8	2,514.6	2,400.0	16.0	12.7	173.74	603.5	59.6	224.0	209.2	14.71	15.224		
2,600.0	2,394.3	2,613.5	2,490.3	17.0	13.5	173.74	643.8	63.4	238.3	222.8	15.51	15.364		
2,700.0	2,478.8	2,712.5	2,580.6	18.0	14.3	173.75	684.0	67.3	252.7	236.3	16.31	15.488		
2,800.0	2,563.4	2,811.4	2,670.9	19.1	15.1	173.76	724.3	71.2	267.0	249.9	17.12	15.599		
2,900.0	2,647.9	2,910.4	2,761.3	20.1	15.8	173.76	764.5	75.1	281.4	263.4	17.92	15.698		
3,000.0	2,732.4	3,009.4	2,851.6	21.1	16.6	173.77	804.7	79.0	295.7	277.0	18.73	15.787		
3,100.0	2,816.9	3,108.3	2,941.9	22.1	17.4	173.77	845.0	82.8	310.1	290.5	19.54	15.868		
3,200.0	2,901.5	3,207.3	3,032.3	23.1	18.2	173.78	885.2	86.7	324.4	304.1	20.35	15.942		
3,300.0	2,986.0	3,306.3	3,122.6	24.2	19.0	173.78	925.5	90.6	338.8	317.6	21.16	16.009		
3,400.0	3,070.5	3,405.2	3,212.9	25.2	19.7	173.78	965.7	94.5	353.1	331.1	21.97	16.070		
3,500.0	3,155.0	3,504.2	3,303.2	26.2	20.5	173.79	1,006.0	98.3	367.5	344.7	22.79	16.127		
3,600.0	3,239.5	3,603.2	3,393.6	27.2	21.3	173.79	1,046.2	102.2	381.8	358.2	23.60	16.179		
3,700.0	3,324.1	3,702.1	3,483.9	28.2	22.1	173.79	1,086.5	106.1	396.2	371.7	24.41	16.227		
3,800.0	3,408.6	3,801.1	3,574.2	29.3	22.9	173.80	1,126.7	110.0	410.5	385.3	25.23	16.272		
3,900.0	3,493.1	3,900.1	3,664.6	30.3	23.6	173.80	1,167.0	113.8	424.9	398.8	26.04	16.314		
4,000.0	3,577.6	3,999.0	3,754.9	31.3	24.4	173.80	1,207.2	117.7	439.2	412.3	26.86	16.353		
4,100.0	3,662.2	4,098.0	3,845.2	32.3	25.2	173.80	1,247.5	121.6	453.6	425.9	27.67	16.389		
4,200.0	3,746.7	4,197.0	3,935.5	33.4	26.0	173.80	1,287.7	125.5	467.9	439.4	28.49	16.423		
4,300.0	3,831.2	4,295.9	4,025.9	34.4	26.8	173.81	1,328.0	129.3	482.3	452.9	29.31	16.455		
4,400.0	3,915.7	4,394.9	4,116.2	35.4	27.6	173.81	1,368.2	133.2	496.6	466.5	30.13	16.485		
4,500.0	4,000.3	4,493.9	4,206.5	36.4	28.3	173.81	1,408.4	137.1	511.0	480.0	30.94	16.513		
4,600.0	4,084.8	4,592.8	4,296.9	37.4	29.1	173.81	1,448.7	141.0	525.3	493.5	31.76	16.539		
4,700.0	4,169.3	4,691.8	4,387.2	38.5	29.9	173.81	1,488.9	144.9	539.7	507.1	32.58	16.564		
4,800.0	4,253.8	4,790.7	4,477.5	39.5	30.7	173.81	1,529.2	148.7	554.0	520.6	33.40	16.588		
4,900.0	4,338.4	4,889.7	4,567.8	40.5	31.5	173.82	1,569.4	152.6	568.4	534.1	34.22	16.611		

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



<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Raindance FD 20-32D
<b>Project:</b>	SEC.30-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Reference Site:</b>	Raindance FD West Row Pad Sec.30-T6N-R67W	<b>MD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Raindance FD 20-32D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (10-18-12)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Raindance FD West Row Pad Sec.30-T6N-R67W - Raindance FD 20-33D - Wellbore #1 - Plan #1 (10-1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
5,000.0	4,422.9	4,988.7	4,658.2	41.5	32.3	173.82	1,609.7	156.5	582.7	547.7	35.04	16.632		
5,100.0	4,507.4	5,087.6	4,748.5	42.6	33.1	173.82	1,649.9	160.4	597.1	561.2	35.85	16.652		
5,200.0	4,591.9	5,184.8	4,837.2	43.6	33.8	173.82	1,689.4	164.2	611.4	574.8	36.67	16.676		
5,300.0	4,676.4	5,266.1	4,912.0	44.6	34.3	173.84	1,721.2	167.2	627.4	590.1	37.38	16.787		
5,400.0	4,761.0	5,346.6	4,986.9	45.6	34.7	173.89	1,750.6	170.1	646.2	608.2	38.07	16.977		
5,500.0	4,845.5	5,426.2	5,061.7	46.7	35.2	173.96	1,777.6	172.7	667.7	629.0	38.73	17.239		
5,600.0	4,930.0	5,500.0	5,131.7	47.7	35.5	174.04	1,800.8	174.9	691.9	652.5	39.37	17.574		
5,700.0	5,014.5	5,582.2	5,210.4	48.7	35.9	174.16	1,824.4	177.2	718.6	678.6	40.01	17.962		
5,800.0	5,099.1	5,658.5	5,284.0	49.7	36.2	174.28	1,844.4	179.1	748.0	707.3	40.62	18.416		
5,900.0	5,183.6	5,733.5	5,356.8	50.8	36.5	174.42	1,862.1	180.8	779.8	738.6	41.21	18.923		
6,000.0	5,268.1	5,800.0	5,421.8	51.8	36.8	174.54	1,876.2	182.2	814.1	772.3	41.77	19.488		
6,100.0	5,352.6	5,879.3	5,499.7	52.8	37.0	174.70	1,891.1	183.6	850.7	808.3	42.34	20.090		
6,200.0	5,437.2	5,950.0	5,569.5	53.8	37.2	174.85	1,902.5	184.7	889.6	846.7	42.89	20.742		
6,237.7	5,469.1	5,976.3	5,595.5	54.2	37.3	174.91	1,906.3	185.1	904.9	861.8	43.09	20.998		
6,300.0	5,522.0	6,019.5	5,638.3	54.8	37.4	175.05	1,912.1	185.6	930.1	886.6	43.49	21.389		
6,400.0	5,608.6	6,100.0	5,718.3	55.5	37.6	175.28	1,921.1	186.5	970.0	925.9	44.07	22.013		
6,500.0	5,696.8	6,157.1	5,775.1	56.2	37.7	175.44	1,926.1	187.0	1,008.7	964.1	44.55	22.644		
6,600.0	5,786.7	6,225.3	5,843.2	56.9	37.8	175.62	1,930.6	187.4	1,046.5	1,001.5	44.97	23.269		
6,700.0	5,878.0	6,300.0	5,917.8	57.5	37.9	175.79	1,933.7	187.7	1,083.2	1,037.9	45.34	23.893		
6,800.0	5,970.6	6,360.7	5,978.6	58.1	38.0	175.93	1,934.8	187.8	1,118.9	1,073.3	45.61	24.531		
6,900.0	6,064.6	6,446.3	6,064.2	58.6	38.0	176.09	1,934.9	187.8	1,153.0	1,107.1	45.85	25.146		
7,000.0	6,159.6	6,541.4	6,159.2	59.1	38.1	176.23	1,934.9	187.8	1,183.9	1,137.9	46.05	25.712		
7,100.0	6,255.7	6,637.5	6,255.3	59.5	38.2	176.36	1,934.9	187.8	1,211.5	1,165.3	46.18	26.235		
7,200.0	6,352.7	6,734.5	6,352.3	59.9	38.2	176.46	1,934.9	187.8	1,235.8	1,189.5	46.25	26.718		
7,300.0	6,450.5	6,832.3	6,450.1	60.3	38.3	176.54	1,934.9	187.8	1,256.6	1,210.4	46.26	27.161		
7,400.0	6,549.0	6,930.8	6,548.6	60.6	38.4	176.61	1,934.9	187.8	1,274.1	1,227.8	46.21	27.568		
7,500.0	6,648.0	7,029.8	6,647.6	60.8	38.5	176.67	1,934.9	187.8	1,288.0	1,241.9	46.10	27.939		
7,600.0	6,747.4	7,129.2	6,747.0	61.0	38.5	176.70	1,934.9	187.8	1,298.6	1,252.7	45.93	28.275		
7,700.0	6,847.2	7,228.9	6,846.8	61.2	38.6	176.73	1,934.9	187.8	1,305.6	1,260.0	45.69	28.576		
7,800.0	6,947.1	7,328.9	6,946.7	61.3	38.7	176.74	1,934.9	187.8	1,309.2	1,263.8	45.39	28.842		
7,852.9	7,000.0	7,381.8	6,999.6	61.3	38.7	-179.90	1,934.9	187.8	1,309.7	1,264.5	45.21	28.969		
7,900.0	7,047.1	7,428.9	7,046.7	61.3	38.8	-179.90	1,934.9	187.8	1,309.7	1,264.4	45.34	28.888		
8,000.0	7,147.1	7,528.9	7,146.7	61.4	38.9	-179.90	1,934.9	187.8	1,309.7	1,264.1	45.62	28.711		
8,100.0	7,247.1	7,628.9	7,246.7	61.4	38.9	-179.90	1,934.9	187.8	1,309.7	1,263.8	45.90	28.535		
8,131.9	7,279.0	7,660.8	7,278.6	61.5	39.0	-179.90	1,934.9	187.8	1,309.7	1,263.7	45.99	28.479		



<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Rainsance FD 20-32D
<b>Project:</b>	SEC.30-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Reference Site:</b>	Rainsance FD West Row Pad Sec.30-T6N-R67W	<b>MD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Rainsance FD 20-32D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (10-18-12)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
0.0	0.0	0.4	0.4	0.0	0.0	-180.00	-30.2	0.0	30.2	30.2	0.00	N/A		
100.0	100.0	100.4	100.4	0.1	0.1	-180.00	-30.2	0.0	30.2	30.0	0.23	134.014		
200.0	200.0	200.4	200.4	0.3	0.3	-180.00	-30.2	0.0	30.2	29.6	0.68	44.790 CC, ES		
300.0	300.0	300.4	300.4	0.6	0.6	176.83	-30.2	0.0	32.0	30.9	1.13	28.238		
400.0	399.8	400.2	400.2	0.8	0.8	177.27	-30.2	0.0	37.2	35.6	1.59	23.338		
500.0	499.5	499.9	499.9	1.0	1.0	177.78	-30.2	0.0	45.9	43.9	2.06	22.335 SF		
600.0	598.7	599.1	599.1	1.3	1.2	178.24	-30.2	0.0	58.1	55.6	2.52	23.077		
700.0	697.5	697.9	697.9	1.6	1.5	178.60	-30.2	0.0	73.7	70.8	2.98	24.744		
800.0	795.6	796.0	796.0	2.0	1.7	178.88	-30.2	0.0	92.8	89.4	3.44	26.952		
900.0	893.1	893.5	893.5	2.4	1.9	179.09	-30.2	0.0	115.3	111.4	3.91	29.497		
1,000.0	989.6	990.0	990.0	2.9	2.1	179.25	-30.2	0.0	141.2	136.8	4.38	32.260		
1,100.0	1,085.3	1,085.7	1,085.7	3.5	2.3	179.37	-30.2	0.0	170.4	165.6	4.85	35.167		
1,200.0	1,179.8	1,180.2	1,180.2	4.1	2.5	179.47	-30.2	0.0	203.0	197.6	5.32	38.169		
1,300.0	1,273.2	1,273.6	1,273.6	4.7	2.8	179.54	-30.2	0.0	238.8	233.0	5.79	41.232		
1,400.0	1,365.2	1,365.6	1,365.6	5.5	3.0	179.60	-30.2	0.0	277.9	271.6	6.27	44.335		
1,500.0	1,455.8	1,456.2	1,456.2	6.2	3.2	179.65	-30.2	0.0	320.1	313.4	6.75	47.461		
1,600.0	1,544.9	1,551.8	1,551.8	7.1	3.4	179.67	-29.8	0.1	365.1	357.9	7.23	50.479		
1,700.0	1,632.4	1,654.4	1,654.4	8.0	3.6	179.58	-26.2	1.1	410.5	402.8	7.73	53.140		
1,800.0	1,718.1	1,759.0	1,758.6	8.9	3.8	179.40	-19.0	3.2	455.9	447.6	8.22	55.438		
1,815.2	1,730.9	1,775.0	1,774.6	9.1	3.9	179.36	-17.6	3.6	462.7	454.4	8.30	55.756		
1,900.0	1,802.7	1,866.1	1,865.1	9.9	4.1	179.14	-7.8	6.4	500.0	491.2	8.81	56.769		
2,000.0	1,887.2	1,977.0	1,974.8	10.9	4.4	178.81	7.9	10.8	540.8	531.4	9.43	57.360		
2,100.0	1,971.7	2,081.6	2,077.7	11.9	4.7	178.46	26.1	16.0	578.5	568.4	10.05	57.539		
2,200.0	2,056.2	2,174.5	2,168.9	13.0	4.9	178.18	42.9	20.7	615.6	604.9	10.68	57.635		
2,300.0	2,140.7	2,267.3	2,260.1	14.0	5.2	177.93	59.7	25.5	652.7	641.4	11.31	57.712		
2,400.0	2,225.3	2,360.1	2,351.2	15.0	5.5	177.70	76.5	30.2	689.8	677.9	11.95	57.723		
2,500.0	2,309.8	2,452.9	2,442.4	16.0	5.8	177.50	93.2	35.0	727.0	714.4	12.60	57.716		
2,600.0	2,394.3	2,545.8	2,533.6	17.0	6.1	177.32	110.0	39.7	764.1	750.9	13.24	57.692		
2,700.0	2,478.8	2,638.6	2,624.7	18.0	6.5	177.15	126.8	44.5	801.2	787.3	13.90	57.655		
2,800.0	2,563.4	2,731.4	2,715.9	19.1	6.8	177.00	143.6	49.2	838.4	823.8	14.55	57.609		
2,900.0	2,647.9	2,824.2	2,807.1	20.1	7.1	176.86	160.4	54.0	875.5	860.3	15.21	57.555		
3,000.0	2,732.4	2,917.0	2,898.2	21.1	7.5	176.74	177.1	58.7	912.7	896.8	15.87	57.497		
3,100.0	2,816.9	3,009.9	2,989.4	22.1	7.8	176.62	193.9	63.5	949.9	933.3	16.54	57.434		
3,200.0	2,901.5	3,102.7	3,080.6	23.1	8.2	176.51	210.7	68.2	987.0	969.8	17.20	57.369		
3,300.0	2,986.0	3,195.5	3,171.7	24.2	8.5	176.41	227.5	73.0	1,024.2	1,006.3	17.87	57.303		
3,400.0	3,070.5	3,288.3	3,262.9	25.2	8.9	176.32	244.3	77.7	1,061.4	1,042.8	18.54	57.236		
3,500.0	3,155.0	3,381.2	3,354.1	26.2	9.2	176.23	261.0	82.5	1,098.5	1,079.3	19.22	57.169		
3,600.0	3,239.5	3,474.0	3,445.3	27.2	9.6	176.15	277.8	87.2	1,135.7	1,115.8	19.89	57.102		
3,700.0	3,324.1	3,566.8	3,536.4	28.2	9.9	176.07	294.6	92.0	1,172.9	1,152.3	20.56	57.036		
3,800.0	3,408.6	3,659.6	3,627.6	29.3	10.3	176.00	311.4	96.7	1,210.1	1,188.8	21.24	56.970		
3,900.0	3,493.1	3,752.5	3,718.8	30.3	10.7	175.93	328.2	101.5	1,247.2	1,225.3	21.92	56.906		
4,000.0	3,577.6	3,845.3	3,809.9	31.3	11.0	175.87	344.9	106.2	1,284.4	1,261.8	22.60	56.843		
4,100.0	3,662.2	3,938.1	3,901.1	32.3	11.4	175.81	361.7	111.0	1,321.6	1,298.3	23.28	56.781		
4,200.0	3,746.7	4,030.9	3,992.3	33.4	11.8	175.75	378.5	115.7	1,358.8	1,334.8	23.96	56.720		
4,300.0	3,831.2	4,123.7	4,083.4	34.4	12.1	175.70	395.3	120.5	1,396.0	1,371.3	24.64	56.661		
4,400.0	3,915.7	4,216.6	4,174.6	35.4	12.5	175.65	412.1	125.2	1,433.1	1,407.8	25.32	56.603		
4,500.0	4,000.3	4,309.4	4,265.8	36.4	12.9	175.60	428.8	130.0	1,470.3	1,444.3	26.00	56.547		
4,600.0	4,084.8	4,402.2	4,356.9	37.4	13.2	175.56	445.6	134.7	1,507.5	1,480.8	26.69	56.492		
4,700.0	4,169.3	4,495.0	4,448.1	38.5	13.6	175.51	462.4	139.5	1,544.7	1,517.3	27.37	56.438		
4,800.0	4,253.8	4,587.9	4,539.3	39.5	14.0	175.47	479.2	144.2	1,581.9	1,553.8	28.05	56.385		
4,900.0	4,338.4	4,680.7	4,630.5	40.5	14.3	175.43	496.0	149.0	1,619.1	1,590.3	28.74	56.334		

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

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Raindance FD 20-32D
<b>Project:</b>	SEC.30-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Reference Site:</b>	Raindance FD West Row Pad Sec.30-T6N-R67W	<b>MD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Raindance FD 20-32D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (10-18-12)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design		Raindance FD West Row Pad Sec.30-T6N-R67W - Raindance FD 20-34D - Wellbore #1 - Plan #1 (10-1											Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	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	4,422.9	4,773.5	4,721.6	41.5	14.7	175.39	512.8	153.7	1,656.3	1,626.8	29.43	56.284		
5,100.0	4,507.4	4,866.3	4,812.8	42.6	15.1	175.36	529.5	158.5	1,693.5	1,663.3	30.11	56.236		
5,200.0	4,591.9	4,959.1	4,904.0	43.6	15.5	175.32	546.3	163.2	1,730.6	1,699.8	30.80	56.188		
5,300.0	4,676.4	5,052.0	4,995.1	44.6	15.8	175.29	563.1	168.0	1,767.8	1,736.3	31.49	56.142		
5,400.0	4,761.0	5,135.4	5,077.1	45.6	16.2	175.26	578.1	172.2	1,805.1	1,772.9	32.15	56.150		
5,500.0	4,845.5	5,200.0	5,140.7	46.7	16.4	175.25	588.8	175.2	1,843.7	1,810.9	32.74	56.309		
5,600.0	4,930.0	5,249.1	5,189.2	47.7	16.5	175.25	596.0	177.3	1,884.0	1,850.7	33.28	56.606		
5,700.0	5,014.5	5,300.0	5,239.7	48.7	16.7	175.26	602.6	179.1	1,926.0	1,892.2	33.82	56.940		
5,800.0	5,099.1	5,359.0	5,298.3	49.7	16.8	175.28	609.1	181.0	1,969.6	1,935.3	34.37	57.299		
5,900.0	5,183.6	5,400.0	5,339.1	50.8	16.9	175.30	613.0	182.1	2,015.0	1,980.1	34.89	57.750		
6,000.0	5,268.1	5,465.0	5,403.9	51.8	17.0	175.35	618.0	183.5	2,061.8	2,026.4	35.44	58.174		
6,100.0	5,352.6	5,500.0	5,438.8	52.8	17.1	175.38	620.1	184.1	2,110.3	2,074.4	35.94	58.713		
6,200.0	5,437.2	5,567.0	5,505.7	53.8	17.2	175.44	623.0	184.9	2,160.1	2,123.6	36.48	59.205		
6,237.7	5,469.1	5,600.0	5,538.7	54.2	17.3	175.47	623.8	185.1	2,179.4	2,142.7	36.70	59.384		
6,300.0	5,522.0	5,616.7	5,555.4	54.8	17.3	175.55	624.1	185.2	2,210.8	2,173.8	37.09	59.602		
6,400.0	5,608.6	5,670.2	5,609.0	55.5	17.4	175.69	624.4	185.3	2,260.2	2,222.5	37.71	59.944		
6,500.0	5,696.8	5,758.5	5,697.2	56.2	17.5	175.86	624.4	185.3	2,307.2	2,268.8	38.33	60.189		
6,600.0	5,786.7	5,848.3	5,787.1	56.9	17.6	176.00	624.4	185.3	2,351.0	2,312.1	38.92	60.414		
6,700.0	5,878.0	5,939.6	5,878.4	57.5	17.8	176.13	624.4	185.3	2,391.7	2,352.3	39.45	60.628		
6,800.0	5,970.6	6,032.3	5,971.0	58.1	17.9	176.25	624.4	185.3	2,429.2	2,389.3	39.93	60.836		
6,900.0	6,064.6	6,126.2	6,065.0	58.6	18.1	176.34	624.4	185.3	2,463.4	2,423.1	40.36	61.039		
7,000.0	6,159.6	6,221.3	6,160.0	59.1	18.2	176.43	624.4	185.3	2,494.4	2,453.6	40.73	61.239		
7,100.0	6,255.7	6,317.4	6,256.1	59.5	18.4	176.50	624.4	185.3	2,522.0	2,480.9	41.05	61.438		
7,200.0	6,352.7	6,414.4	6,353.1	59.9	18.5	176.57	624.4	185.3	2,546.2	2,504.9	41.31	61.638		
7,300.0	6,450.5	6,512.2	6,450.9	60.3	18.7	176.62	624.4	185.3	2,567.1	2,525.6	41.51	61.841		
7,400.0	6,549.0	6,610.6	6,549.4	60.6	18.9	176.66	624.4	185.3	2,584.5	2,542.8	41.65	62.046		
7,500.0	6,648.0	6,709.6	6,648.4	60.8	19.0	176.70	624.4	185.3	2,598.5	2,556.8	41.74	62.255		
7,600.0	6,747.4	6,809.1	6,747.8	61.0	19.2	176.72	624.4	185.3	2,609.0	2,567.3	41.76	62.470		
7,700.0	6,847.2	6,908.8	6,847.6	61.2	19.4	176.74	624.4	185.3	2,616.1	2,574.4	41.73	62.690		
7,800.0	6,947.1	7,008.8	6,947.5	61.3	19.5	176.75	624.4	185.3	2,619.7	2,578.0	41.64	62.916		
7,852.9	7,000.0	7,061.7	7,000.4	61.3	19.6	-179.90	624.4	185.3	2,620.2	2,578.6	41.57	63.038		
7,900.0	7,047.1	7,108.8	7,047.5	61.3	19.7	-179.90	624.4	185.3	2,620.2	2,578.5	41.71	62.812		
8,000.0	7,147.1	7,208.8	7,147.5	61.4	19.9	-179.90	624.4	185.3	2,620.2	2,578.1	42.04	62.322		
8,100.0	7,247.1	7,308.8	7,247.5	61.4	20.1	-179.90	624.4	185.3	2,620.2	2,577.8	42.37	61.838		
8,131.9	7,279.0	7,340.7	7,279.4	61.5	20.1	-179.90	624.4	185.3	2,620.2	2,577.7	42.48	61.685		

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Raindance FD 20-32D
<b>Project:</b>	SEC.30-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Reference Site:</b>	Raindance FD West Row Pad Sec.30-T6N-R67W	<b>MD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Raindance FD 20-32D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (10-18-12)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4796.3ft (Original Well Elev) Coordinates are relative to: Raindance FD 20-32D  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000 °  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.37°



<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Raindance FD 20-32D
<b>Project:</b>	SEC.30-T6N-R67W	<b>TVD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Reference Site:</b>	Raindance FD West Row Pad Sec.30-T6N-R67W	<b>MD Reference:</b>	WELL @ 4796.3ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Raindance FD 20-32D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (10-18-12)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4796.3ft (Original Well Elev) Coordinates are relative to: Raindance FD 20-32D  
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