

Great Western

Well Name: **Raindance FD 30-024HC**

Surface Location: Raindance West Pad Sec.30-T6N-R67W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

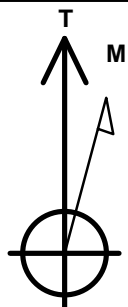
Ground Elevation: 4995.9

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1407823.40	3157005.08	40.451506	-104.935836	

RKB - 16.5' WELL @ 5012.4ft (RKB - 16.5')

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 352'FSL & 2322'FWL	1.0	0.0	0.0	Point
BHL 470'FNL & 750'FWL	7335.4	4383.9	-1559.9	Point
Entry Pt. 460'FSL & 750'FWL	7335.4	66.7	-1571.6	Point



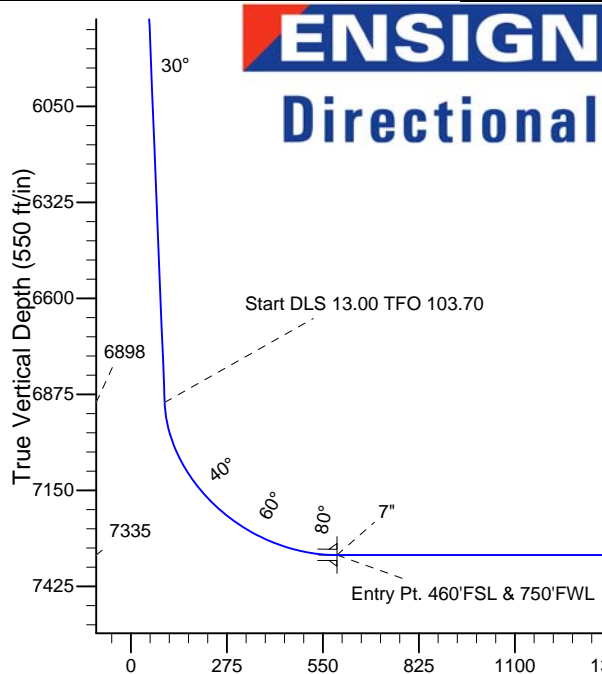
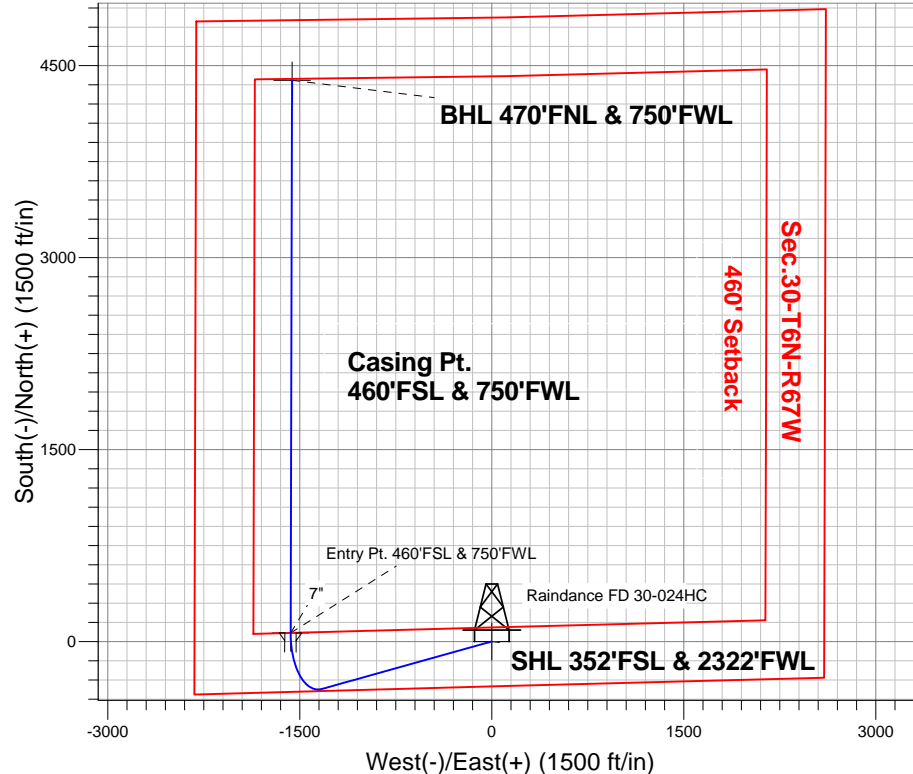
Azimuths to True North
Magnetic North: 8.64°

Magnetic Field
Strength: 52884.4snT
Dip Angle: 66.98°
Date: 11/13/2013
Model: IGRF2010

Raindance West Pad Sec.30-T6N-R67W
Raindance FD 30-024HC
Plan #1 (11-13-13)
15:48, November 13 2013

ANNOTATIONS

TVD	MD	Annotation
4000.0	4000.0	KOP - Start Build 3.00
6898.0	7244.8	Start DLS 13.00 TFO 103.70
7335.4	12314.3	TD at 12314.3



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	4000.0	0.00	0.00	4000.0	0.0	0.0	0.00	0.00	0.0	
3	5001.6	30.05	254.42	4956.3	-68.9	-247.2	3.00	254.42	18.0	
4	7244.8	30.05	254.42	6898.1	-370.6	-1329.2	0.00	0.00	96.5	
5	7997.1	90.00	0.15	7335.4	66.7	-1571.6	13.00	103.70	589.7	Entry Pt. 460'FSL & 750'FWL
6	7997.7	90.00	0.16	7335.4	67.3	-1571.6	1.00	90.00	590.2	
7	12314.3	90.00	0.16	7335.4	4383.9	-1559.9	0.00	0.00	4653.2	BHL 470'FNL & 750'FWL

BHL 470'FNL & 750'FWL

TD at 12314.3

Vertical Section at 340.41° (550 ft/in)



Great Western

SEC.30-T6N-R67W

Raindance West Pad Sec.30-T6N-R67W

Raindance FD 30-024HC

Wellbore #1

Plan: Plan #1 (11-13-13)

Standard Planning Report

13 November, 2013

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	
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
5,001.6	30.05	254.42	4,956.3	-68.9	-247.2	3.00	3.00	0.00	254.42	
7,244.8	30.05	254.42	6,898.1	-370.6	-1,329.2	0.00	0.00	0.00	0.00	
7,997.1	90.00	0.15	7,335.4	66.7	-1,571.6	13.00	7.97	14.05	103.70	Entry Pt. 460'FSL &
7,997.7	90.00	0.16	7,335.4	67.3	-1,571.6	1.00	0.00	1.00	90.00	
12,314.3	90.00	0.16	7,335.4	4,383.9	-1,559.9	0.00	0.00	0.00	0.00	BHL 470'FNL & 750'

Database:	Landmark	Local Co-ordinate Reference:	Well Raindance FD 30-024HC
Company:	Great Western	TVD Reference:	WELL @ 5012.4ft (RKB - 16.5')
Project:	SEC.30-T6N-R67W	MD Reference:	WELL @ 5012.4ft (RKB - 16.5')
Site:	Raindance West Pad Sec.30-T6N-R67W	North Reference:	True
Well:	Raindance FD 30-024HC	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-13-13)		

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
1.0	0.00	0.00	1.0	0.0	0.0	0.0	0.00	0.00	0.00
SHL 352'FSL & 2322'FWL									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 3.00									
4,100.0	3.00	254.42	4,100.0	-0.7	-2.5	0.2	3.00	3.00	0.00
4,200.0	6.00	254.42	4,199.6	-2.8	-10.1	0.7	3.00	3.00	0.00
4,300.0	9.00	254.42	4,298.8	-6.3	-22.6	1.6	3.00	3.00	0.00
4,400.0	12.00	254.42	4,397.1	-11.2	-40.2	2.9	3.00	3.00	0.00
4,500.0	15.00	254.42	4,494.3	-17.5	-62.7	4.6	3.00	3.00	0.00
4,600.0	18.00	254.42	4,590.2	-25.1	-90.0	6.5	3.00	3.00	0.00
4,700.0	21.00	254.42	4,684.4	-34.1	-122.2	8.9	3.00	3.00	0.00
4,800.0	24.00	254.42	4,776.8	-44.3	-159.1	11.5	3.00	3.00	0.00
4,900.0	27.00	254.42	4,867.1	-55.9	-200.5	14.6	3.00	3.00	0.00
5,000.0	30.00	254.42	4,954.9	-68.7	-246.5	17.9	3.00	3.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Raindance FD 30-024HC
Company:	Great Western	TVD Reference:	WELL @ 5012.4ft (RKB - 16.5')
Project:	SEC.30-T6N-R67W	MD Reference:	WELL @ 5012.4ft (RKB - 16.5')
Site:	Raindance West Pad Sec.30-T6N-R67W	North Reference:	True
Well:	Raindance FD 30-024HC	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (11-13-13)		

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)
5,001.6	30.05	254.42	4,956.3	-68.9	-247.2	18.0	3.00	3.00	0.00
5,100.0	30.05	254.42	5,041.5	-82.2	-294.7	21.4	0.00	0.00	0.00
5,200.0	30.05	254.42	5,128.1	-95.6	-342.9	24.9	0.00	0.00	0.00
5,300.0	30.05	254.42	5,214.6	-109.0	-391.2	28.4	0.00	0.00	0.00
5,400.0	30.05	254.42	5,301.2	-122.5	-439.4	31.9	0.00	0.00	0.00
5,500.0	30.05	254.42	5,387.7	-135.9	-487.6	35.4	0.00	0.00	0.00
5,600.0	30.05	254.42	5,474.3	-149.4	-535.9	38.9	0.00	0.00	0.00
5,700.0	30.05	254.42	5,560.9	-162.8	-584.1	42.4	0.00	0.00	0.00
5,800.0	30.05	254.42	5,647.4	-176.3	-632.3	45.9	0.00	0.00	0.00
5,900.0	30.05	254.42	5,734.0	-189.7	-680.6	49.4	0.00	0.00	0.00
6,000.0	30.05	254.42	5,820.5	-203.2	-728.8	52.9	0.00	0.00	0.00
6,100.0	30.05	254.42	5,907.1	-216.6	-777.0	56.4	0.00	0.00	0.00
6,200.0	30.05	254.42	5,993.7	-230.1	-825.3	59.9	0.00	0.00	0.00
6,300.0	30.05	254.42	6,080.2	-243.5	-873.5	63.4	0.00	0.00	0.00
6,400.0	30.05	254.42	6,166.8	-257.0	-921.7	66.9	0.00	0.00	0.00
6,500.0	30.05	254.42	6,253.3	-270.4	-970.0	70.4	0.00	0.00	0.00
6,600.0	30.05	254.42	6,339.9	-283.8	-1,018.2	73.9	0.00	0.00	0.00
6,700.0	30.05	254.42	6,426.5	-297.3	-1,066.4	77.4	0.00	0.00	0.00
6,800.0	30.05	254.42	6,513.0	-310.7	-1,114.7	80.9	0.00	0.00	0.00
6,900.0	30.05	254.42	6,599.6	-324.2	-1,162.9	84.4	0.00	0.00	0.00
7,000.0	30.05	254.42	6,686.1	-337.6	-1,211.1	87.9	0.00	0.00	0.00
7,100.0	30.05	254.42	6,772.7	-351.1	-1,259.4	91.4	0.00	0.00	0.00
7,200.0	30.05	254.42	6,859.3	-364.5	-1,307.6	94.9	0.00	0.00	0.00
7,244.8	30.05	254.42	6,898.0	-370.5	-1,329.2	96.5	0.00	0.00	0.00
Start DLS 13.00 TFO 103.70									
7,300.0	29.12	268.86	6,946.1	-374.5	-1,356.0	101.7	12.99	-1.69	26.15
7,400.0	31.42	294.42	7,032.8	-364.2	-1,404.3	127.6	13.00	2.30	25.56
7,500.0	37.87	314.42	7,115.3	-331.8	-1,450.1	173.5	13.00	6.45	20.00
7,600.0	46.77	328.58	7,189.4	-279.0	-1,491.2	237.0	13.00	8.90	14.16
7,700.0	56.95	338.91	7,251.1	-208.5	-1,525.4	314.9	13.00	10.18	10.32
7,800.0	67.80	347.01	7,297.5	-123.9	-1,551.0	403.2	13.00	10.85	8.11
7,900.0	78.99	353.93	7,326.1	-29.6	-1,566.7	497.3	13.00	11.19	6.92
7,997.1	89.99	0.15	7,335.4	66.7	-1,571.6	589.7	12.99	11.33	6.40
7" - Entry Pt. 460'FSL & 750'FWL									
7,997.7	90.00	0.16	7,335.4	67.3	-1,571.6	590.2	1.93	1.08	1.60
8,000.0	90.00	0.16	7,335.4	69.6	-1,571.6	592.4	0.00	0.00	0.00
8,100.0	90.00	0.16	7,335.4	169.6	-1,571.3	686.6	0.00	0.00	0.00
8,200.0	90.00	0.16	7,335.4	269.6	-1,571.1	780.7	0.00	0.00	0.00
8,300.0	90.00	0.16	7,335.4	369.6	-1,570.8	874.8	0.00	0.00	0.00
8,400.0	90.00	0.16	7,335.4	469.6	-1,570.5	968.9	0.00	0.00	0.00
8,500.0	90.00	0.16	7,335.4	569.6	-1,570.2	1,063.0	0.00	0.00	0.00
8,600.0	90.00	0.16	7,335.4	669.6	-1,570.0	1,157.2	0.00	0.00	0.00
8,700.0	90.00	0.16	7,335.4	769.6	-1,569.7	1,251.3	0.00	0.00	0.00
8,800.0	90.00	0.16	7,335.4	869.6	-1,569.4	1,345.4	0.00	0.00	0.00
8,900.0	90.00	0.16	7,335.4	969.6	-1,569.2	1,439.5	0.00	0.00	0.00
9,000.0	90.00	0.16	7,335.4	1,069.6	-1,568.9	1,533.7	0.00	0.00	0.00
9,100.0	90.00	0.16	7,335.4	1,169.6	-1,568.6	1,627.8	0.00	0.00	0.00
9,200.0	90.00	0.16	7,335.4	1,269.6	-1,568.4	1,721.9	0.00	0.00	0.00
9,300.0	90.00	0.16	7,335.4	1,369.6	-1,568.1	1,816.0	0.00	0.00	0.00
9,400.0	90.00	0.16	7,335.4	1,469.6	-1,567.8	1,910.1	0.00	0.00	0.00
9,500.0	90.00	0.16	7,335.4	1,569.6	-1,567.5	2,004.3	0.00	0.00	0.00
9,600.0	90.00	0.16	7,335.4	1,669.6	-1,567.3	2,098.4	0.00	0.00	0.00
9,700.0	90.00	0.16	7,335.4	1,769.6	-1,567.0	2,192.5	0.00	0.00	0.00
9,800.0	90.00	0.16	7,335.4	1,869.6	-1,566.7	2,286.6	0.00	0.00	0.00



Great Western

SEC.30-T6N-R67W

Raindance West Pad Sec.30-T6N-R67W

Raindance FD 30-024HC

Wellbore #1

Plan #1 (11-13-13)

Anticollision Report

13 November, 2013

Company:	Great Western	Local Co-ordinate Reference:	Well Raindance FD 30-024HC
Project:	SEC.30-T6N-R67W	TVD Reference:	WELL @ 5012.4ft (RKB - 16.5')
Reference Site:	Raindance West Pad Sec.30-T6N-R67W	MD Reference:	WELL @ 5012.4ft (RKB - 16.5')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Raindance FD 30-024HC	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (11-13-13)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Raindance FD Horizontal Pad Sec.30-T6N-R67W - Raindance FD 19-21HN - Wellbore #1 - Wellbore #1												Offset Well Error:	0.0 ft
Survey Program: 100-NS-GYRO-MS, 7105-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
1,700.0	1,700.0	1,706.9	1,706.7	3.7	3.5	87.42	5.8	128.9	129.0	121.9	7.19	17.946	
1,800.0	1,800.0	1,807.1	1,806.8	3.9	3.7	87.36	5.9	128.8	128.9	121.3	7.63	16.891	
1,900.0	1,900.0	1,907.2	1,906.9	4.2	3.9	87.46	5.7	128.6	128.7	120.6	8.06	15.971	
2,000.0	2,000.0	2,007.4	2,007.1	4.4	4.1	87.77	5.0	128.3	128.4	119.9	8.49	15.117	
2,100.0	2,100.0	2,107.5	2,107.3	4.6	4.3	88.00	4.5	127.8	127.9	118.9	8.95	14.293	
2,200.0	2,200.0	2,207.7	2,207.5	4.8	4.6	87.97	4.5	127.2	127.3	117.9	9.41	13.524	
2,300.0	2,300.0	2,307.7	2,307.5	5.1	4.8	87.74	5.0	126.5	126.6	116.7	9.86	12.843	
2,400.0	2,400.0	2,407.7	2,407.4	5.3	5.0	87.38	5.8	125.8	125.9	115.6	10.29	12.240	
2,462.0	2,462.0	2,468.9	2,468.6	5.4	5.1	87.10	6.4	125.6	125.7	115.2	10.52	11.949	
2,500.0	2,500.0	2,506.5	2,506.2	5.5	5.2	86.93	6.7	125.6	125.8	115.1	10.66	11.799	
2,600.0	2,600.0	2,606.4	2,606.1	5.7	5.2	86.81	7.0	126.0	126.2	115.2	10.98	11.493	
2,700.0	2,700.0	2,706.6	2,706.3	6.0	5.4	87.10	6.4	126.2	126.4	115.1	11.31	11.179	
2,800.0	2,800.0	2,805.0	2,804.7	6.2	5.5	87.54	5.5	127.2	127.3	115.7	11.64	10.935	
2,900.0	2,900.0	2,905.5	2,905.2	6.4	5.6	88.08	4.3	128.5	128.6	116.6	11.97	10.745	
3,000.0	3,000.0	3,005.9	3,005.6	6.6	5.7	88.63	3.1	129.5	129.5	117.2	12.32	10.514	
3,100.0	3,100.0	3,106.4	3,106.1	6.9	5.8	89.15	1.9	130.1	130.1	117.4	12.70	10.250	
3,200.0	3,200.0	3,207.1	3,206.7	7.1	6.0	89.53	1.1	130.3	130.3	117.2	13.11	9.941	
3,300.0	3,300.0	3,307.8	3,307.4	7.3	6.3	89.75	0.6	129.9	129.9	116.4	13.56	9.584	
3,400.0	3,400.0	3,408.6	3,408.2	7.5	6.5	90.00	0.0	129.0	129.0	114.9	14.03	9.195	
3,500.0	3,500.0	3,509.3	3,508.9	7.8	6.7	90.50	-1.1	127.4	127.4	112.9	14.50	8.787	
3,600.0	3,600.0	3,609.0	3,608.7	8.0	7.0	91.30	-2.8	125.6	125.6	110.6	14.96	8.394	
3,700.0	3,700.0	3,707.5	3,707.1	8.2	7.2	92.01	-4.4	124.5	124.6	109.2	15.42	8.081	
3,730.5	3,730.5	3,737.5	3,737.1	8.3	7.3	92.15	-4.7	124.4	124.5	109.0	15.53	8.016 CC, ES	
3,800.0	3,800.0	3,806.0	3,805.6	8.4	7.4	92.29	-5.0	124.7	124.8	109.0	15.80	7.902	
3,900.0	3,900.0	3,906.1	3,905.6	8.7	7.5	92.34	-5.1	125.5	125.6	109.5	16.12	7.794	
4,000.0	4,000.0	4,005.4	4,005.0	8.9	7.6	92.32	-5.1	126.5	126.7	110.2	16.43	7.707 SF	
4,100.0	4,100.0	4,106.4	4,106.0	9.1	7.6	-162.58	-4.8	127.4	130.0	113.3	16.71	7.776	
4,200.0	4,199.6	4,206.3	4,205.9	9.3	7.7	-163.86	-3.9	127.7	137.8	120.8	16.95	8.131	
4,300.0	4,298.8	4,304.4	4,303.9	9.5	7.8	-165.42	-3.2	128.3	151.0	133.8	17.14	8.807	
4,400.0	4,397.1	4,400.6	4,400.2	9.7	8.0	-166.85	-3.0	129.7	170.2	152.9	17.30	9.835	
4,500.0	4,494.3	4,498.2	4,497.8	10.0	8.1	-168.23	-3.1	131.5	194.8	177.3	17.43	11.173	
4,600.0	4,590.2	4,594.1	4,593.6	10.2	8.2	-169.57	-2.9	133.0	224.1	206.6	17.52	12.792	
4,700.0	4,684.4	4,687.4	4,687.0	10.6	8.3	-170.75	-2.6	134.3	258.5	240.9	17.57	14.711	
4,800.0	4,776.8	4,778.9	4,778.4	11.0	8.5	-171.67	-2.8	135.9	297.9	280.3	17.59	16.931	
4,900.0	4,867.1	4,869.8	4,869.3	11.5	8.6	-172.39	-3.4	137.4	342.0	324.4	17.59	19.441	
5,000.0	4,954.9	4,958.7	4,958.2	12.1	8.8	-173.03	-3.9	138.4	390.3	372.7	17.55	22.232	
5,100.0	5,041.5	5,040.4	5,039.9	12.7	8.9	-173.69	-4.3	139.3	441.0	423.1	17.91	24.621	
5,200.0	5,128.1	5,113.3	5,112.8	13.5	9.0	-174.00	-5.7	141.7	493.4	475.2	18.28	26.991	
5,300.0	5,214.6	5,175.7	5,174.9	14.2	9.1	-174.19	-6.7	146.0	548.8	530.2	18.65	29.432	
5,400.0	5,301.2	5,241.5	5,240.3	15.1	9.2	-174.35	-7.3	152.9	607.1	588.1	19.02	31.915	
5,500.0	5,387.7	5,309.6	5,307.9	15.9	9.4	-174.38	-8.9	161.5	667.1	647.7	19.41	34.361	
5,600.0	5,474.3	5,374.9	5,372.4	16.8	9.5	-174.25	-11.6	171.3	728.6	708.8	19.82	36.761	
5,700.0	5,560.9	5,435.0	5,431.5	17.7	9.6	-174.01	-15.2	181.7	791.7	771.4	20.23	39.140	
5,800.0	5,647.4	5,500.0	5,495.0	18.7	9.7	-173.73	-19.4	194.7	856.7	836.0	20.65	41.482	
5,900.0	5,734.0	5,557.6	5,551.1	19.6	9.8	-173.48	-23.4	207.3	923.0	901.9	21.08	43.792	
6,000.0	5,820.5	5,631.6	5,623.0	20.6	10.0	-173.16	-28.8	223.8	989.7	968.2	21.54	45.955	

Company:	Great Western	Local Co-ordinate Reference:	Well Raindance FD 30-024HC
Project:	SEC.30-T6N-R67W	TVD Reference:	WELL @ 5012.4ft (RKB - 16.5')
Reference Site:	Raindance West Pad Sec.30-T6N-R67W	MD Reference:	WELL @ 5012.4ft (RKB - 16.5')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Raindance FD 30-024HC	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (11-13-13)	Offset TVD Reference:	Offset Datum

Offset Design Raindance West Pad Sec.30-T6N-R67W - Raindance FD 30-021HN - Wellbore #1 - Plan #1 (11-12-13)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-91.03	-1.1	-60.4	60.4					
100.0	100.0	100.0	100.0	0.1	0.1	-91.03	-1.1	-60.4	60.4	60.2	0.22	268.737		
200.0	200.0	200.0	200.0	0.3	0.3	-91.03	-1.1	-60.4	60.4	59.7	0.67	89.579		
300.0	300.0	300.0	300.0	0.6	0.6	-91.03	-1.1	-60.4	60.4	59.3	1.12	53.747		
400.0	400.0	400.0	400.0	0.8	0.8	-91.03	-1.1	-60.4	60.4	58.8	1.57	38.391		
500.0	500.0	500.0	500.0	1.0	1.0	-91.03	-1.1	-60.4	60.4	58.4	2.02	29.860		
600.0	600.0	600.0	600.0	1.2	1.2	-91.03	-1.1	-60.4	60.4	57.9	2.47	24.431		
700.0	700.0	700.0	700.0	1.5	1.5	-91.03	-1.1	-60.4	60.4	57.5	2.92	20.672		
800.0	800.0	800.0	800.0	1.7	1.7	-91.03	-1.1	-60.4	60.4	57.0	3.37	17.916		
900.0	900.0	900.0	900.0	1.9	1.9	-91.03	-1.1	-60.4	60.4	56.6	3.82	15.808		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-91.03	-1.1	-60.4	60.4	56.1	4.27	14.144		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-91.03	-1.1	-60.4	60.4	55.7	4.72	12.797		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-91.03	-1.1	-60.4	60.4	55.2	5.17	11.684		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-91.03	-1.1	-60.4	60.4	54.8	5.62	10.749		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-91.03	-1.1	-60.4	60.4	54.3	6.07	9.953		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-91.03	-1.1	-60.4	60.4	53.9	6.52	9.267		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	-91.03	-1.1	-60.4	60.4	53.4	6.97	8.669		
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	-91.03	-1.1	-60.4	60.4	53.0	7.42	8.144		
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	-91.03	-1.1	-60.4	60.4	52.5	7.87	7.678		
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	-91.03	-1.1	-60.4	60.4	52.1	8.32	7.263		
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	-91.03	-1.1	-60.4	60.4	51.6	8.77	6.891		
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	-91.03	-1.1	-60.4	60.4	51.2	9.22	6.555		
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	-91.03	-1.1	-60.4	60.4	50.7	9.66	6.250		
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	-91.03	-1.1	-60.4	60.4	50.3	10.11	5.972		
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	-91.03	-1.1	-60.4	60.4	49.8	10.56	5.718		
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	-91.03	-1.1	-60.4	60.4	49.4	11.01	5.484		
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	-91.03	-1.1	-60.4	60.4	48.9	11.46	5.269		
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	-91.03	-1.1	-60.4	60.4	48.5	11.91	5.071		
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	-91.03	-1.1	-60.4	60.4	48.0	12.36	4.886 CC, ES		
2,900.0	2,900.0	2,896.9	2,896.9	6.4	6.4	-91.41	-1.5	-62.8	62.9	50.1	12.79	4.918		
3,000.0	3,000.0	2,993.3	2,993.0	6.6	6.6	-92.41	-2.9	-70.0	70.4	57.2	13.21	5.331		
3,100.0	3,100.0	3,088.7	3,087.6	6.9	6.8	-93.66	-5.2	-81.8	82.9	69.2	13.63	6.080		
3,200.0	3,200.0	3,182.7	3,180.2	7.1	7.0	-94.88	-8.4	-97.9	100.3	86.2	14.07	7.125		
3,300.0	3,300.0	3,274.9	3,270.0	7.3	7.2	-95.94	-12.3	-118.0	122.4	107.9	14.53	8.424		
3,400.0	3,400.0	3,364.8	3,356.6	7.5	7.5	-96.79	-16.9	-141.8	149.2	134.2	15.02	9.934		
3,500.0	3,500.0	3,452.3	3,439.6	7.8	7.8	-97.46	-22.1	-168.7	180.5	165.0	15.55	11.608		
3,600.0	3,600.0	3,536.9	3,518.8	8.0	8.2	-97.99	-27.8	-198.2	216.0	199.9	16.12	13.404		
3,700.0	3,700.0	3,618.7	3,593.8	8.2	8.6	-98.41	-34.0	-230.0	255.6	238.9	16.73	15.281		
3,800.0	3,800.0	3,700.0	3,667.1	8.4	9.0	-98.75	-40.7	-264.7	299.0	281.6	17.40	17.191		
3,900.0	3,900.0	3,772.9	3,731.3	8.7	9.5	-99.00	-47.3	-298.4	346.0	327.9	18.10	19.122		
4,000.0	4,000.0	3,850.6	3,798.5	8.9	10.1	-99.23	-54.7	-336.8	396.2	377.3	18.88	20.989		
4,100.0	4,100.0	3,938.0	3,873.8	9.1	10.9	6.01	-63.2	-380.4	444.8	427.1	17.69	25.148		
4,200.0	4,199.6	4,027.8	3,951.1	9.3	11.6	5.80	-71.9	-425.2	488.8	470.7	18.06	27.059		
4,300.0	4,298.8	4,119.8	4,030.3	9.5	12.5	5.69	-80.8	-471.2	528.0	509.6	18.42	28.657		
4,400.0	4,397.1	4,213.6	4,111.1	9.7	13.4	5.65	-89.9	-518.0	562.4	543.6	18.77	29.959		
4,500.0	4,494.3	4,309.2	4,193.4	10.0	14.3	5.68	-99.2	-565.7	591.9	572.7	19.10	30.979		
4,600.0	4,590.2	4,406.1	4,276.8	10.2	15.2	5.76	-108.6	-614.1	616.3	596.9	19.42	31.731		
4,700.0	4,684.4	4,504.2	4,361.3	10.6	16.2	5.89	-118.1	-663.1	635.7	615.9	19.73	32.225		
4,800.0	4,776.8	4,603.1	4,446.5	11.0	17.3	6.08	-127.7	-712.5	649.9	629.9	20.01	32.472		
4,900.0	4,867.1	4,702.7	4,532.2	11.5	18.3	6.32	-137.3	-762.2	659.0	638.7	20.29	32.478		
5,000.0	4,954.9	4,802.5	4,618.1	12.1	19.3	6.62	-147.0	-812.1	662.9	642.4	20.56	32.249		
5,100.0	5,041.5	4,902.4	4,704.1	12.7	20.4	6.97	-156.7	-861.9	664.2	643.0	21.17	31.366		

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

Company:	Great Western	Local Co-ordinate Reference:	Well Raindance FD 30-024HC
Project:	SEC.30-T6N-R67W	TVD Reference:	WELL @ 5012.4ft (RKB - 16.5')
Reference Site:	Raindance West Pad Sec.30-T6N-R67W	MD Reference:	WELL @ 5012.4ft (RKB - 16.5')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Raindance FD 30-024HC	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (11-13-13)	Offset TVD Reference:	Offset Datum

Offset Design Raindance West Pad Sec.30-T6N-R67W - Raindance FD 30-021HN - Wellbore #1 - Plan #1 (11-12-13)													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		
5,200.0	5,128.1	5,002.3	4,790.2	13.5	21.5	7.30	-166.4	-911.8	665.4	643.6	21.82	30.495		
5,300.0	5,214.6	5,102.3	4,876.2	14.2	22.5	7.64	-176.0	-961.7	666.7	644.2	22.49	29.648		
5,400.0	5,301.2	5,202.2	4,962.2	15.1	23.6	7.98	-185.7	-1,011.6	668.1	644.9	23.18	28.825		
5,500.0	5,387.7	5,302.1	5,048.2	15.9	24.7	8.32	-195.4	-1,061.5	669.4	645.5	23.88	28.027		
5,600.0	5,474.3	5,402.0	5,134.3	16.8	25.8	8.65	-205.1	-1,111.4	670.8	646.2	24.61	27.254		
5,700.0	5,560.9	5,501.9	5,220.3	17.7	26.9	8.98	-214.8	-1,161.3	672.2	646.8	25.36	26.506		
5,800.0	5,647.4	5,601.8	5,306.3	18.7	28.0	9.31	-224.5	-1,211.2	673.6	647.4	26.12	25.784		
5,900.0	5,734.0	5,701.7	5,392.3	19.6	29.1	9.64	-234.2	-1,261.0	675.0	648.1	26.91	25.087		
6,000.0	5,820.5	5,801.6	5,478.4	20.6	30.2	9.97	-243.8	-1,310.9	676.5	648.7	27.71	24.414		
6,100.0	5,907.1	5,901.6	5,564.4	21.6	31.3	10.30	-253.5	-1,360.8	677.9	649.4	28.53	23.765		
6,200.0	5,993.7	6,001.5	5,650.4	22.6	32.4	10.63	-263.2	-1,410.7	679.4	650.1	29.36	23.139		
6,300.0	6,080.2	6,101.4	5,736.4	23.6	33.5	10.95	-272.9	-1,460.6	681.0	650.7	30.22	22.535		
6,400.0	6,166.8	6,201.3	5,822.5	24.6	34.6	11.27	-282.6	-1,510.5	682.5	651.4	31.09	21.954		
6,500.0	6,253.3	6,301.2	5,908.5	25.6	35.8	11.60	-292.3	-1,560.4	684.1	652.1	31.98	21.393		
6,600.0	6,339.9	6,401.1	5,994.5	26.6	36.9	11.92	-301.9	-1,610.3	685.7	652.8	32.88	20.853		
6,700.0	6,426.5	6,501.0	6,080.5	27.7	38.0	12.23	-311.6	-1,660.1	687.3	653.5	33.80	20.333		
6,800.0	6,513.0	6,601.0	6,166.6	28.7	39.1	12.55	-321.3	-1,710.0	688.9	654.2	34.74	19.831		
6,900.0	6,599.6	6,700.9	6,252.6	29.8	40.2	12.87	-331.0	-1,759.9	690.6	654.9	35.69	19.347		
7,000.0	6,686.1	6,800.8	6,338.6	30.8	41.3	13.18	-340.7	-1,809.8	692.2	655.6	36.66	18.881		
7,100.0	6,772.7	6,900.7	6,424.6	31.9	42.5	13.49	-350.4	-1,859.7	693.9	656.3	37.65	18.431		
7,200.0	6,859.3	7,000.6	6,510.7	32.9	43.6	13.80	-360.0	-1,909.6	695.6	657.0	38.65	17.998		
7,300.0	6,946.1	7,100.5	6,596.7	33.9	44.7	1.38	-369.7	-1,959.5	697.3	657.8	39.56	17.626		
7,400.0	7,032.8	7,198.3	6,680.9	34.7	45.8	-22.13	-379.2	-2,008.3	699.2	659.5	39.76	17.585		
7,500.0	7,115.3	7,289.1	6,759.0	35.4	46.8	-41.22	-388.0	-2,053.6	703.1	663.4	39.69	17.714		
7,600.0	7,189.4	7,379.0	6,836.6	36.0	47.8	-54.94	-394.9	-2,098.6	711.9	672.0	39.86	17.860		
7,700.0	7,251.1	7,498.6	6,938.8	36.4	48.9	-65.35	-379.4	-2,157.8	725.7	685.4	40.33	17.995		
7,800.0	7,297.5	7,657.5	7,062.3	36.7	50.0	-73.63	-311.2	-2,229.2	741.8	701.0	40.87	18.152		
7,900.0	7,326.1	7,876.7	7,182.7	36.8	50.9	-79.76	-144.6	-2,298.6	754.7	713.3	41.35	18.252		
8,000.0	7,335.4	8,099.4	7,220.4	36.8	51.1	-81.26	71.5	-2,319.9	757.1	714.8	42.35	17.877		
8,100.0	7,335.4	8,199.4	7,220.4	36.8	51.1	-81.26	171.5	-2,319.7	757.1	714.1	43.04	17.593		
8,200.0	7,335.4	8,299.4	7,220.4	36.9	51.2	-81.26	271.5	-2,319.4	757.1	713.1	44.04	17.191		
8,300.0	7,335.4	8,399.4	7,220.4	37.1	51.3	-81.26	371.5	-2,319.1	757.1	711.8	45.35	16.697		
8,400.0	7,335.4	8,499.4	7,220.4	37.3	51.4	-81.26	471.5	-2,318.9	757.1	710.2	46.92	16.136		
8,500.0	7,335.4	8,599.4	7,220.4	37.7	51.6	-81.26	571.5	-2,318.6	757.2	708.4	48.75	15.532		
8,600.0	7,335.4	8,699.4	7,220.4	38.1	51.9	-81.26	671.5	-2,318.4	757.2	706.4	50.79	14.907		
8,700.0	7,335.4	8,799.4	7,220.4	38.6	52.2	-81.26	771.5	-2,318.1	757.2	704.1	53.03	14.277		
8,800.0	7,335.4	8,899.4	7,220.4	39.2	52.6	-81.26	871.5	-2,317.8	757.2	701.7	55.44	13.657		
8,900.0	7,335.4	8,999.4	7,220.4	39.9	53.0	-81.26	971.5	-2,317.6	757.2	699.2	58.00	13.055		
9,000.0	7,335.4	9,099.4	7,220.4	40.6	53.5	-81.26	1,071.5	-2,317.3	757.2	696.5	60.69	12.476		
9,100.0	7,335.4	9,199.4	7,220.4	41.5	54.1	-81.26	1,171.5	-2,317.1	757.2	693.7	63.50	11.925		
9,200.0	7,335.4	9,299.4	7,220.4	42.5	54.7	-81.26	1,271.5	-2,316.8	757.2	690.8	66.40	11.404		
9,300.0	7,335.4	9,399.4	7,220.4	43.5	55.4	-81.26	1,371.5	-2,316.5	757.2	687.9	69.39	10.913		
9,400.0	7,335.4	9,499.4	7,220.4	44.6	56.2	-81.26	1,471.5	-2,316.3	757.3	684.8	72.46	10.451		
9,500.0	7,335.4	9,599.4	7,220.4	45.7	57.0	-81.27	1,571.5	-2,316.0	757.3	681.7	75.59	10.018		
9,600.0	7,335.4	9,699.4	7,220.4	47.0	57.9	-81.27	1,671.5	-2,315.8	757.3	678.5	78.78	9.612		
9,700.0	7,335.4	9,799.4	7,220.4	48.2	58.8	-81.27	1,771.5	-2,315.5	757.3	675.3	82.03	9.232		
9,800.0	7,335.4	9,899.4	7,220.4	49.6	59.8	-81.27	1,871.5	-2,315.2	757.3	672.0	85.32	8.876		
9,900.0	7,335.4	9,999.4	7,220.4	51.0	60.8	-81.27	1,971.5	-2,315.0	757.3	668.7	88.65	8.543		
10,000.0	7,335.4	10,099.4	7,220.4	52.4	61.9	-81.27	2,071.5	-2,314.7	757.3	665.3	92.02	8.230		
10,100.0	7,335.4	10,199.4	7,220.4	53.8	63.0	-81.27	2,171.5	-2,314.5	757.3	661.9	95.42	7.937		
10,200.0	7,335.4	10,299.4	7,220.4	55.3	64.2	-81.27	2,271.5	-2,314.2	757.3	658.5	98.85	7.662		
10,300.0	7,335.4	10,399.4	7,220.4	56.8	65.4	-81.27	2,371.5	-2,313.9	757.3	655.0	102.31	7.403		

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

Company:	Great Western	Local Co-ordinate Reference:	Well Raindance FD 30-024HC
Project:	SEC.30-T6N-R67W	TVD Reference:	WELL @ 5012.4ft (RKB - 16.5')
Reference Site:	Raindance West Pad Sec.30-T6N-R67W	MD Reference:	WELL @ 5012.4ft (RKB - 16.5')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Raindance FD 30-024HC	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (11-13-13)	Offset TVD Reference:	Offset Datum

Offset Design Raindance West Pad Sec.30-T6N-R67W - Raindance FD 30-021HN - Wellbore #1 - Plan #1 (11-12-13)													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		
10,400.0	7,335.4	10,499.4	7,220.4	58.4	66.7	-81.27	2,471.5	-2,313.7	757.4	651.6	105.79	7.159		
10,500.0	7,335.4	10,599.4	7,220.4	60.0	68.0	-81.27	2,571.5	-2,313.4	757.4	648.1	109.29	6.930		
10,600.0	7,335.4	10,699.4	7,220.4	61.6	69.4	-81.27	2,671.5	-2,313.2	757.4	644.6	112.81	6.714		
10,700.0	7,335.4	10,799.4	7,220.4	63.2	70.7	-81.27	2,771.5	-2,312.9	757.4	641.0	116.35	6.510		
10,800.0	7,335.4	10,899.4	7,220.4	64.8	72.1	-81.27	2,871.5	-2,312.6	757.4	637.5	119.91	6.317		
10,900.0	7,335.4	10,999.4	7,220.4	66.5	73.6	-81.27	2,971.5	-2,312.4	757.4	633.9	123.48	6.134		
11,000.0	7,335.4	11,099.4	7,220.4	68.1	75.0	-81.27	3,071.5	-2,312.1	757.4	630.4	127.06	5.961		
11,100.0	7,335.4	11,199.4	7,220.4	69.8	76.5	-81.27	3,171.5	-2,311.9	757.4	626.8	130.66	5.797		
11,200.0	7,335.4	11,299.4	7,220.4	71.5	78.0	-81.27	3,271.5	-2,311.6	757.4	623.2	134.26	5.641		
11,300.0	7,335.4	11,399.4	7,220.4	73.2	79.6	-81.27	3,371.5	-2,311.3	757.5	619.6	137.88	5.493		
11,400.0	7,335.4	11,499.4	7,220.4	74.9	81.1	-81.27	3,471.5	-2,311.1	757.5	616.0	141.51	5.353		
11,500.0	7,335.4	11,599.4	7,220.4	76.7	82.7	-81.27	3,571.5	-2,310.8	757.5	612.3	145.15	5.219		
11,600.0	7,335.4	11,699.4	7,220.4	78.4	84.3	-81.27	3,671.5	-2,310.6	757.5	608.7	148.79	5.091		
11,700.0	7,335.4	11,799.4	7,220.4	80.1	85.9	-81.27	3,771.5	-2,310.3	757.5	605.0	152.45	4.969		
11,800.0	7,335.4	11,899.4	7,220.4	81.9	87.5	-81.27	3,871.5	-2,310.0	757.5	601.4	156.11	4.852		
11,900.0	7,335.4	11,999.4	7,220.4	83.7	89.1	-81.27	3,971.5	-2,309.8	757.5	597.7	159.78	4.741		
12,000.0	7,335.4	12,099.4	7,220.4	85.4	90.8	-81.27	4,071.5	-2,309.5	757.5	594.1	163.45	4.635		
12,100.0	7,335.4	12,199.4	7,220.4	87.2	92.4	-81.27	4,171.5	-2,309.3	757.5	590.4	167.13	4.533		
12,200.0	7,335.4	12,299.4	7,220.4	89.0	94.1	-81.27	4,271.5	-2,309.0	757.6	586.7	170.81	4.435		
12,300.0	7,335.4	12,399.4	7,220.4	90.8	95.8	-81.27	4,371.5	-2,308.7	757.6	583.1	174.50	4.341		
12,314.3	7,335.4	12,402.7	7,220.4	91.0	95.8	-81.27	4,374.8	-2,308.7	757.6	582.8	174.83	4.334 SF		

Company:	Great Western	Local Co-ordinate Reference:	Well Raindance FD 30-024HC
Project:	SEC.30-T6N-R67W	TVD Reference:	WELL @ 5012.4ft (RKB - 16.5')
Reference Site:	Raindance West Pad Sec.30-T6N-R67W	MD Reference:	WELL @ 5012.4ft (RKB - 16.5')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Raindance FD 30-024HC	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (11-13-13)	Offset TVD Reference:	Offset Datum

Offset Design Raindance West Pad Sec.30-T6N-R67W - Raindance FD 30-022HN - Wellbore #1 - Plan #1 (11-12-13)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-89.97	0.0	-30.1	30.1					
100.0	100.0	100.0	100.0	0.1	0.1	-89.97	0.0	-30.1	30.1	29.8	0.22	133.728		
200.0	200.0	200.0	200.0	0.3	0.3	-89.97	0.0	-30.1	30.1	29.4	0.67	44.576		
300.0	300.0	300.0	300.0	0.6	0.6	-89.97	0.0	-30.1	30.1	28.9	1.12	26.746		
400.0	400.0	400.0	400.0	0.8	0.8	-89.97	0.0	-30.1	30.1	28.5	1.57	19.104		
500.0	500.0	500.0	500.0	1.0	1.0	-89.97	0.0	-30.1	30.1	28.0	2.02	14.859		
600.0	600.0	600.0	600.0	1.2	1.2	-89.97	0.0	-30.1	30.1	27.6	2.47	12.157		
700.0	700.0	700.0	700.0	1.5	1.5	-89.97	0.0	-30.1	30.1	27.1	2.92	10.287		
800.0	800.0	800.0	800.0	1.7	1.7	-89.97	0.0	-30.1	30.1	26.7	3.37	8.915		
900.0	900.0	900.0	900.0	1.9	1.9	-89.97	0.0	-30.1	30.1	26.2	3.82	7.866		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-89.97	0.0	-30.1	30.1	25.8	4.27	7.038		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-89.97	0.0	-30.1	30.1	25.3	4.72	6.368		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-89.97	0.0	-30.1	30.1	24.9	5.17	5.814		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-89.97	0.0	-30.1	30.1	24.4	5.62	5.349		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-89.97	0.0	-30.1	30.1	24.0	6.07	4.953		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-89.97	0.0	-30.1	30.1	23.5	6.52	4.611		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	-89.97	0.0	-30.1	30.1	23.1	6.97	4.314		
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	-89.97	0.0	-30.1	30.1	22.6	7.42	4.052		
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	-89.97	0.0	-30.1	30.1	22.2	7.87	3.821		
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	-89.97	0.0	-30.1	30.1	21.7	8.32	3.614		
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	-89.97	0.0	-30.1	30.1	21.3	8.77	3.429		
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	-89.97	0.0	-30.1	30.1	20.8	9.22	3.262		
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	-89.97	0.0	-30.1	30.1	20.4	9.66	3.110		
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	-89.97	0.0	-30.1	30.1	19.9	10.11	2.972		
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	-89.97	0.0	-30.1	30.1	19.5	10.56	2.845		
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	-89.97	0.0	-30.1	30.1	19.0	11.01	2.729		
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	-89.97	0.0	-30.1	30.1	18.6	11.46	2.622		
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	-89.97	0.0	-30.1	30.1	18.1	11.91	2.523		
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	-89.97	0.0	-30.1	30.1	17.7	12.36	2.431		
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	-89.97	0.0	-30.1	30.1	17.2	12.81	2.346		
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	-89.97	0.0	-30.1	30.1	16.8	13.26	2.267		
3,100.0	3,100.0	3,100.0	3,100.0	6.9	6.9	-89.97	0.0	-30.1	30.1	16.3	13.71	2.192		
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	-89.97	0.0	-30.1	30.1	15.9	14.16	2.123		
3,300.0	3,300.0	3,300.0	3,300.0	7.3	7.3	-89.97	0.0	-30.1	30.1	15.4	14.61	2.057		
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	-89.97	0.0	-30.1	30.1	15.0	15.06	1.996		
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	-89.97	0.0	-30.1	30.1	14.5	15.51	1.938 CC, ES		
3,600.0	3,600.0	3,598.4	3,598.4	8.0	8.0	-91.01	-0.6	-32.5	32.6	16.6	15.94	2.043		
3,700.0	3,700.0	3,696.3	3,695.9	8.2	8.2	-93.36	-2.3	-39.9	40.1	23.8	16.36	2.454		
3,800.0	3,800.0	3,793.2	3,792.0	8.4	8.4	-95.76	-5.2	-51.9	52.8	36.0	16.78	3.144		
3,900.0	3,900.0	3,888.5	3,885.8	8.7	8.6	-97.66	-9.2	-68.3	70.4	53.2	17.22	4.089		
4,000.0	4,000.0	3,982.0	3,976.9	8.9	8.8	-99.03	-14.1	-88.9	92.9	75.2	17.67	5.257		
4,100.0	4,100.0	4,073.8	4,065.2	9.1	9.1	5.62	-20.0	-113.2	117.6	99.7	17.95	6.552		
4,200.0	4,199.6	4,164.6	4,151.3	9.3	9.4	5.08	-26.7	-141.4	141.9	123.7	18.27	7.770		
4,300.0	4,298.8	4,254.5	4,235.0	9.5	9.7	4.76	-34.4	-173.1	165.8	147.2	18.54	8.940		
4,400.0	4,397.1	4,343.5	4,316.3	9.7	10.2	4.57	-42.8	-208.2	189.1	170.3	18.79	10.066		
4,500.0	4,494.3	4,431.6	4,395.1	10.0	10.6	4.47	-52.0	-246.6	211.8	192.8	19.00	11.152		
4,600.0	4,590.2	4,519.9	4,472.1	10.2	11.2	4.43	-62.1	-288.6	233.9	214.8	19.18	12.198		
4,700.0	4,684.4	4,618.1	4,556.8	10.6	11.9	4.47	-73.7	-336.8	252.8	233.5	19.36	13.059		
4,800.0	4,776.8	4,717.1	4,642.3	11.0	12.7	4.60	-85.4	-385.5	266.5	247.0	19.53	13.650		
4,900.0	4,867.1	4,816.7	4,728.3	11.5	13.6	4.81	-97.2	-434.4	275.1	255.4	19.68	13.976		
5,000.0	4,954.9	4,916.7	4,814.5	12.1	14.4	5.12	-109.0	-483.5	278.4	258.6	19.83	14.040		
5,100.0	5,041.5	5,016.6	4,900.8	12.7	15.3	5.48	-120.8	-532.6	279.1	258.7	20.38	13.692		

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

Company:	Great Western	Local Co-ordinate Reference:	Well Raindance FD 30-024HC
Project:	SEC.30-T6N-R67W	TVD Reference:	WELL @ 5012.4ft (RKB - 16.5')
Reference Site:	Raindance West Pad Sec.30-T6N-R67W	MD Reference:	WELL @ 5012.4ft (RKB - 16.5')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Raindance FD 30-024HC	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (11-13-13)	Offset TVD Reference:	Offset Datum

Offset Design Raindance West Pad Sec.30-T6N-R67W - Raindance FD 30-022HN - Wellbore #1 - Plan #1 (11-12-13)													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		
5,200.0	5,128.1	5,116.6	4,987.1	13.5	16.3	5.85	-132.6	-581.7	279.7	258.8	20.96	13.343		
5,300.0	5,214.6	5,216.6	5,073.4	14.2	17.2	6.20	-144.4	-630.8	280.4	258.8	21.57	12.999		
5,400.0	5,301.2	5,316.6	5,159.7	15.1	18.2	6.56	-156.2	-679.9	281.1	258.9	22.20	12.661		
5,500.0	5,387.7	5,416.6	5,245.9	15.9	19.2	6.92	-168.0	-729.0	281.8	258.9	22.85	12.330		
5,600.0	5,474.3	5,516.5	5,332.2	16.8	20.2	7.27	-179.8	-778.2	282.5	259.0	23.53	12.007		
5,700.0	5,560.9	5,616.5	5,418.5	17.7	21.2	7.62	-191.6	-827.3	283.2	259.0	24.22	11.692		
5,800.0	5,647.4	5,716.5	5,504.8	18.7	22.3	7.97	-203.4	-876.4	284.0	259.0	24.94	11.386		
5,900.0	5,734.0	5,816.5	5,591.1	19.6	23.3	8.32	-215.2	-925.5	284.7	259.0	25.67	11.089		
6,000.0	5,820.5	5,916.5	5,677.4	20.6	24.4	8.67	-227.0	-974.6	285.5	259.0	26.43	10.801		
6,100.0	5,907.1	6,016.5	5,763.6	21.6	25.4	9.01	-238.8	-1,023.7	286.2	259.0	27.20	10.521		
6,200.0	5,993.7	6,116.4	5,849.9	22.6	26.5	9.36	-250.6	-1,072.8	287.0	259.0	28.00	10.251		
6,300.0	6,080.2	6,216.4	5,936.2	23.6	27.5	9.70	-262.4	-1,121.9	287.8	259.0	28.81	9.989		
6,400.0	6,166.8	6,316.4	6,022.5	24.6	28.6	10.04	-274.3	-1,171.1	288.6	258.9	29.64	9.736		
6,500.0	6,253.3	6,416.4	6,108.8	25.6	29.7	10.37	-286.1	-1,220.2	289.4	258.9	30.49	9.492		
6,600.0	6,339.9	6,516.4	6,195.1	26.6	30.8	10.71	-297.9	-1,269.3	290.2	258.8	31.35	9.255		
6,700.0	6,426.5	6,616.4	6,281.4	27.7	31.8	11.04	-309.7	-1,318.4	291.0	258.8	32.24	9.027		
6,800.0	6,513.0	6,716.3	6,367.6	28.7	32.9	11.37	-321.5	-1,367.5	291.8	258.7	33.14	8.807		
6,900.0	6,599.6	6,816.3	6,453.9	29.8	34.0	11.70	-333.3	-1,416.6	292.7	258.6	34.06	8.594		
7,000.0	6,686.1	6,916.3	6,540.2	30.8	35.1	12.03	-345.1	-1,465.7	293.5	258.5	34.99	8.389		
7,100.0	6,772.7	7,016.3	6,626.5	31.9	36.2	12.36	-356.9	-1,514.8	294.4	258.5	35.95	8.190		
7,200.0	6,859.3	7,116.3	6,712.8	32.9	37.3	12.68	-368.7	-1,564.0	295.3	258.4	36.92	7.999		
7,300.0	6,946.1	7,216.3	6,799.1	33.9	38.4	-0.15	-380.4	-1,613.1	296.2	258.5	37.67	7.863		
7,400.0	7,032.8	7,316.5	6,887.7	34.7	39.3	-23.86	-378.7	-1,663.5	297.4	259.6	37.88	7.853		
7,500.0	7,115.3	7,422.7	6,975.3	35.4	40.2	-41.80	-352.8	-1,713.2	298.8	260.7	38.12	7.839		
7,600.0	7,189.4	7,528.9	7,056.6	36.0	40.8	-53.50	-302.9	-1,759.8	300.2	261.7	38.48	7.801		
7,700.0	7,251.1	7,636.8	7,126.2	36.4	41.4	-60.80	-230.9	-1,798.8	301.4	262.4	38.98	7.732		
7,800.0	7,297.5	7,745.9	7,179.0	36.7	41.7	-65.12	-140.6	-1,828.6	302.3	262.6	39.62	7.629		
7,900.0	7,326.1	7,855.6	7,211.2	36.8	41.9	-67.27	-37.5	-1,846.6	302.7	262.3	40.40	7.493		
8,000.0	7,335.4	7,964.2	7,220.4	36.8	41.9	-67.67	70.4	-1,851.6	302.7	261.4	41.30	7.329		
8,100.0	7,335.4	8,064.2	7,220.4	36.8	41.9	-67.67	170.4	-1,851.3	302.6	260.5	42.15	7.180		
8,200.0	7,335.4	8,164.2	7,220.4	36.9	41.9	-67.67	270.4	-1,851.0	302.6	259.4	43.26	6.995		
8,300.0	7,335.4	8,264.2	7,220.4	37.1	42.1	-67.67	370.4	-1,850.7	302.6	258.0	44.64	6.779		
8,400.0	7,335.4	8,364.2	7,220.4	37.3	42.3	-67.67	470.4	-1,850.4	302.6	256.4	46.26	6.541		
8,500.0	7,335.4	8,464.2	7,220.4	37.7	42.6	-67.67	570.4	-1,850.2	302.6	254.5	48.10	6.292		
8,600.0	7,335.4	8,564.2	7,220.4	38.1	42.9	-67.67	670.4	-1,849.9	302.6	252.5	50.12	6.037		
8,700.0	7,335.4	8,664.2	7,220.4	38.6	43.3	-67.66	770.4	-1,849.6	302.6	250.3	52.32	5.784		
8,800.0	7,335.4	8,764.2	7,220.4	39.2	43.8	-67.66	870.4	-1,849.3	302.6	247.9	54.66	5.536		
8,900.0	7,335.4	8,864.2	7,220.4	39.9	44.4	-67.66	970.4	-1,849.1	302.6	245.5	57.14	5.296		
9,000.0	7,335.4	8,964.2	7,220.4	40.6	45.0	-67.66	1,070.4	-1,848.8	302.6	242.9	59.72	5.066		
9,100.0	7,335.4	9,064.2	7,220.4	41.5	45.8	-67.66	1,170.4	-1,848.5	302.6	240.2	62.41	4.848		
9,200.0	7,335.4	9,164.2	7,220.4	42.5	46.6	-67.66	1,270.4	-1,848.2	302.6	237.4	65.19	4.642		
9,300.0	7,335.4	9,264.2	7,220.4	43.5	47.5	-67.66	1,370.4	-1,847.9	302.6	234.5	68.04	4.447		
9,400.0	7,335.4	9,364.2	7,220.4	44.6	48.4	-67.66	1,470.4	-1,847.7	302.6	231.6	70.96	4.264		
9,500.0	7,335.4	9,464.2	7,220.4	45.7	49.4	-67.66	1,570.4	-1,847.4	302.6	228.6	73.94	4.092		
9,600.0	7,335.4	9,564.2	7,220.4	47.0	50.5	-67.66	1,670.4	-1,847.1	302.5	225.6	76.98	3.930		
9,700.0	7,335.4	9,664.2	7,220.4	48.2	51.6	-67.66	1,770.4	-1,846.8	302.5	222.5	80.06	3.779		
9,800.0	7,335.4	9,764.2	7,220.4	49.6	52.8	-67.66	1,870.4	-1,846.6	302.5	219.4	83.18	3.637		
9,900.0	7,335.4	9,864.2	7,220.4	51.0	54.1	-67.66	1,970.4	-1,846.3	302.5	216.2	86.33	3.504		
10,000.0	7,335.4	9,964.2	7,220.4	52.4	55.4	-67.66	2,070.4	-1,846.0	302.5	213.0	89.53	3.379		
10,100.0	7,335.4	10,064.2	7,220.4	53.8	56.7	-67.66	2,170.4	-1,845.7	302.5	209.8	92.75	3.262		
10,200.0	7,335.4	10,164.2	7,220.4	55.3	58.1	-67.66	2,270.4	-1,845.4	302.5	206.5	95.99	3.151		
10,300.0	7,335.4	10,264.2	7,220.4	56.8	59.5	-67.66	2,370.4	-1,845.2	302.5	203.2	99.27	3.047		

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

Rairandance West Pad Sec.30-T6N-R67W - Rairandance FD 30-022HN - Wellbore #1 - Plan #1 (11-12-13)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
10,400.0	7,335.4	10,364.2	7,220.4	58.4	61.0	-67.66	2,470.4	-1,844.9	302.5	199.9	102.56	2.949		
10,500.0	7,335.4	10,464.2	7,220.4	60.0	62.5	-67.66	2,570.4	-1,844.6	302.5	196.6	105.87	2.857		
10,600.0	7,335.4	10,564.2	7,220.4	61.6	64.0	-67.65	2,670.4	-1,844.3	302.5	193.3	109.20	2.770		
10,700.0	7,335.4	10,664.2	7,220.4	63.2	65.5	-67.65	2,770.4	-1,844.1	302.5	189.9	112.55	2.687		
10,800.0	7,335.4	10,764.2	7,220.4	64.8	67.1	-67.65	2,870.4	-1,843.8	302.5	186.6	115.91	2.609		
10,900.0	7,335.4	10,864.2	7,220.4	66.5	68.7	-67.65	2,970.4	-1,843.5	302.5	183.2	119.29	2.536		
11,000.0	7,335.4	10,964.2	7,220.4	68.1	70.3	-67.65	3,070.4	-1,843.2	302.5	179.8	122.68	2.465		
11,100.0	7,335.4	11,064.2	7,220.4	69.8	71.9	-67.65	3,170.4	-1,842.9	302.5	176.4	126.08	2.399		
11,200.0	7,335.4	11,164.2	7,220.4	71.5	73.5	-67.65	3,270.4	-1,842.7	302.4	173.0	129.49	2.336		
11,300.0	7,335.4	11,264.2	7,220.4	73.2	75.2	-67.65	3,370.4	-1,842.4	302.4	169.5	132.91	2.276		
11,400.0	7,335.4	11,364.2	7,220.4	74.9	76.8	-67.65	3,470.4	-1,842.1	302.4	166.1	136.34	2.218		
11,500.0	7,335.4	11,464.2	7,220.4	76.7	78.5	-67.65	3,570.4	-1,841.8	302.4	162.6	139.78	2.164		
11,600.0	7,335.4	11,564.2	7,220.4	78.4	80.2	-67.65	3,670.4	-1,841.6	302.4	159.2	143.22	2.112		
11,700.0	7,335.4	11,664.2	7,220.4	80.1	81.9	-67.65	3,770.4	-1,841.3	302.4	155.7	146.67	2.062		
11,800.0	7,335.4	11,764.2	7,220.4	81.9	83.6	-67.65	3,870.4	-1,841.0	302.4	152.3	150.13	2.014		
11,900.0	7,335.4	11,864.2	7,220.4	83.7	85.3	-67.65	3,970.4	-1,840.7	302.4	148.8	153.60	1.969		
12,000.0	7,335.4	11,964.2	7,220.4	85.4	87.1	-67.65	4,070.4	-1,840.4	302.4	145.3	157.07	1.925		
12,100.0	7,335.4	12,064.2	7,220.4	87.2	88.8	-67.65	4,170.4	-1,840.2	302.4	141.8	160.55	1.883		
12,200.0	7,335.4	12,164.2	7,220.4	89.0	90.5	-67.65	4,270.4	-1,839.9	302.4	138.3	164.03	1.843		
12,300.0	7,335.4	12,264.2	7,220.4	90.8	92.3	-67.65	4,370.4	-1,839.6	302.4	134.9	167.52	1.805		
12,310.4	7,335.4	12,274.6	7,220.4	91.0	92.5	-67.65	4,380.7	-1,839.6	302.4	134.5	167.88	1.801		
12,314.3	7,335.4	12,274.9	7,220.4	91.0	92.5	-67.65	4,381.0	-1,839.6	302.4	134.4	167.95	1.800 SF		

Company:	Great Western	Local Co-ordinate Reference:	Well Raindance FD 30-024HC
Project:	SEC.30-T6N-R67W	TVD Reference:	WELL @ 5012.4ft (RKB - 16.5')
Reference Site:	Raindance West Pad Sec.30-T6N-R67W	MD Reference:	WELL @ 5012.4ft (RKB - 16.5')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Raindance FD 30-024HC	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (11-13-13)	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 (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	88.59	0.7	30.1	30.1					
100.0	100.0	100.0	100.0	0.1	0.1	88.59	0.7	30.1	30.1	29.8	0.22	133.768		
200.0	200.0	200.0	200.0	0.3	0.3	88.59	0.7	30.1	30.1	29.4	0.67	44.589		
300.0	300.0	300.0	300.0	0.6	0.6	88.59	0.7	30.1	30.1	28.9	1.12	26.754		
400.0	400.0	400.0	400.0	0.8	0.8	88.59	0.7	30.1	30.1	28.5	1.57	19.110		
500.0	500.0	500.0	500.0	1.0	1.0	88.59	0.7	30.1	30.1	28.0	2.02	14.863		
600.0	600.0	600.0	600.0	1.2	1.2	88.59	0.7	30.1	30.1	27.6	2.47	12.161		
700.0	700.0	700.0	700.0	1.5	1.5	88.59	0.7	30.1	30.1	27.1	2.92	10.290		
800.0	800.0	800.0	800.0	1.7	1.7	88.59	0.7	30.1	30.1	26.7	3.37	8.918		
900.0	900.0	900.0	900.0	1.9	1.9	88.59	0.7	30.1	30.1	26.2	3.82	7.869		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	88.59	0.7	30.1	30.1	25.8	4.27	7.040		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	88.59	0.7	30.1	30.1	25.3	4.72	6.370		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	88.59	0.7	30.1	30.1	24.9	5.17	5.816		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	88.59	0.7	30.1	30.1	24.4	5.62	5.351		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	88.59	0.7	30.1	30.1	24.0	6.07	4.954		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	88.59	0.7	30.1	30.1	23.5	6.52	4.613		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	88.59	0.7	30.1	30.1	23.1	6.97	4.315		
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	88.59	0.7	30.1	30.1	22.6	7.42	4.054		
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	88.59	0.7	30.1	30.1	22.2	7.87	3.822		
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	88.59	0.7	30.1	30.1	21.8	8.32	3.615		
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	88.59	0.7	30.1	30.1	21.3	8.77	3.430		
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	88.59	0.7	30.1	30.1	20.9	9.22	3.263		
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	88.59	0.7	30.1	30.1	20.4	9.66	3.111		
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	88.59	0.7	30.1	30.1	20.0	10.11	2.973		
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	88.59	0.7	30.1	30.1	19.5	10.56	2.846		
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	88.59	0.7	30.1	30.1	19.1	11.01	2.730		
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	88.59	0.7	30.1	30.1	18.6	11.46	2.623		
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	88.59	0.7	30.1	30.1	18.2	11.91	2.524		
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	88.59	0.7	30.1	30.1	17.7	12.36	2.432		
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	88.59	0.7	30.1	30.1	17.3	12.81	2.347		
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	88.59	0.7	30.1	30.1	16.8	13.26	2.267		
3,100.0	3,100.0	3,100.0	3,100.0	6.9	6.9	88.59	0.7	30.1	30.1	16.4	13.71	2.193		
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	88.59	0.7	30.1	30.1	15.9	14.16	2.123		
3,300.0	3,300.0	3,300.0	3,300.0	7.3	7.3	88.59	0.7	30.1	30.1	15.5	14.61	2.058		
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	88.59	0.7	30.1	30.1	15.0	15.06	1.997		
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	88.59	0.7	30.1	30.1	14.6	15.51	1.939		
3,600.0	3,600.0	3,600.0	3,600.0	8.0	8.0	88.59	0.7	30.1	30.1	14.1	15.96	1.884		
3,700.0	3,700.0	3,700.0	3,700.0	8.2	8.2	88.59	0.7	30.1	30.1	13.7	16.41	1.832		
3,800.0	3,800.0	3,800.0	3,800.0	8.4	8.4	88.59	0.7	30.1	30.1	13.2	16.86	1.784		
3,900.0	3,900.0	3,900.0	3,900.0	8.7	8.7	88.59	0.7	30.1	30.1	12.8	17.31	1.737		
4,000.0	4,000.0	4,000.0	4,000.0	8.9	8.9	88.59	0.7	30.1	30.1	12.3	17.76	1.693 CC, ES, SF		
4,100.0	4,100.0	4,100.0	4,100.0	9.1	9.1	-166.94	0.7	30.1	32.6	14.4	18.17	1.795		
4,200.0	4,199.6	4,199.6	4,199.6	9.3	9.3	-169.42	0.7	30.1	40.3	21.8	18.52	2.176		
4,300.0	4,298.8	4,298.8	4,298.8	9.5	9.5	-171.95	0.7	30.1	53.2	34.4	18.82	2.825		
4,400.0	4,397.1	4,400.7	4,400.7	9.7	9.8	-173.66	-0.1	27.5	68.7	49.7	19.06	3.606		
4,500.0	4,494.3	4,503.6	4,503.2	10.0	10.0	-174.53	-2.7	19.8	84.3	65.0	19.25	4.378		
4,600.0	4,590.2	4,607.3	4,606.0	10.2	10.2	-174.94	-7.1	6.7	99.6	80.2	19.39	5.139		
4,700.0	4,684.4	4,712.0	4,708.8	10.6	10.4	-175.08	-13.4	-11.9	114.8	95.3	19.50	5.890		
4,800.0	4,776.8	4,817.5	4,811.2	11.0	10.7	-175.04	-21.5	-36.0	129.8	110.2	19.58	6.631		
4,900.0	4,867.1	4,924.0	4,913.0	11.5	11.0	-174.87	-31.6	-65.7	144.5	124.9	19.63	7.361		
5,000.0	4,954.9	5,031.4	5,013.7	12.1	11.3	-174.61	-43.5	-101.0	158.9	139.2	19.67	8.078		
5,100.0	5,041.5	5,140.1	5,113.2	12.7	11.8	-174.21	-57.4	-142.2	170.4	150.2	20.15	8.457		

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

Company:	Great Western	Local Co-ordinate Reference:	Well Raindance FD 30-024HC
Project:	SEC.30-T6N-R67W	TVD Reference:	WELL @ 5012.4ft (RKB - 16.5')
Reference Site:	Raindance West Pad Sec.30-T6N-R67W	MD Reference:	WELL @ 5012.4ft (RKB - 16.5')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Raindance FD 30-024HC	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (11-13-13)	Offset TVD Reference:	Offset Datum

Offset Design Raindance West Pad Sec.30-T6N-R67W - Raindance FD 30-025HN - Wellbore #1 - Plan #1 (11-13-13)													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		
5,200.0	5,128.1	5,249.7	5,211.0	13.5	12.4	-173.56	-73.2	-189.1	176.2	155.6	20.67	8.526		
5,300.0	5,214.6	5,354.5	5,302.1	14.2	13.0	-172.69	-89.8	-238.2	177.2	156.0	21.23	8.349		
5,400.0	5,301.2	5,454.5	5,388.6	15.1	13.7	-171.83	-105.8	-285.7	177.6	155.8	21.81	8.143		
5,500.0	5,387.7	5,554.4	5,475.1	15.9	14.4	-170.97	-121.9	-333.2	178.0	155.6	22.43	7.935		
5,600.0	5,474.3	5,654.4	5,561.6	16.8	15.2	-170.12	-137.9	-380.6	178.5	155.4	23.10	7.726		
5,700.0	5,560.9	5,754.3	5,648.1	17.7	16.0	-169.28	-153.9	-428.1	179.0	155.2	23.81	7.518		
5,800.0	5,647.4	5,854.3	5,734.6	18.7	16.9	-168.43	-169.9	-475.6	179.5	154.9	24.56	7.309		
5,900.0	5,734.0	5,954.3	5,821.1	19.6	17.7	-167.60	-186.0	-523.0	180.1	154.7	25.35	7.102		
6,000.0	5,820.5	6,054.2	5,907.6	20.6	18.6	-166.77	-202.0	-570.5	180.7	154.5	26.19	6.897		
6,100.0	5,907.1	6,154.2	5,994.1	21.6	19.6	-165.94	-218.0	-618.0	181.3	154.2	27.08	6.695		
6,200.0	5,993.7	6,254.2	6,080.6	22.6	20.5	-165.12	-234.0	-665.4	182.0	154.0	28.02	6.495		
6,300.0	6,080.2	6,354.1	6,167.1	23.6	21.5	-164.31	-250.0	-712.9	182.7	153.7	29.00	6.300		
6,400.0	6,166.8	6,454.1	6,253.6	24.6	22.4	-163.50	-266.1	-760.4	183.5	153.4	30.04	6.109		
6,500.0	6,253.3	6,554.1	6,340.1	25.6	23.4	-162.70	-282.1	-807.8	184.3	153.2	31.12	5.922		
6,600.0	6,339.9	6,654.0	6,426.6	26.6	24.4	-161.91	-298.1	-855.3	185.1	152.9	32.25	5.740		
6,700.0	6,426.5	6,754.0	6,513.1	27.7	25.4	-161.12	-314.1	-902.8	186.0	152.6	33.42	5.564		
6,800.0	6,513.0	6,853.9	6,599.7	28.7	26.4	-160.34	-330.2	-950.2	186.9	152.2	34.65	5.394		
6,900.0	6,599.6	6,953.9	6,686.2	29.8	27.5	-159.57	-346.2	-997.7	187.8	151.9	35.92	5.229		
7,000.0	6,686.1	7,054.0	6,772.7	30.8	28.5	-158.81	-362.2	-1,045.2	188.8	151.5	37.23	5.070		
7,100.0	6,772.7	7,158.4	6,864.0	31.9	29.4	-161.84	-366.3	-1,095.3	188.4	151.6	36.87	5.110		
7,141.6	6,808.7	7,199.5	6,899.8	32.3	29.7	-165.06	-361.1	-1,114.9	188.2	152.2	35.94	5.235		
7,200.0	6,859.3	7,253.2	6,945.6	32.9	30.1	-170.93	-348.7	-1,139.9	189.3	154.8	34.50	5.486		
7,300.0	6,946.1	7,334.2	7,011.3	33.9	30.6	164.50	-318.2	-1,175.9	199.7	165.5	34.20	5.839		
7,400.0	7,032.8	7,409.1	7,066.8	34.7	31.0	131.44	-278.3	-1,206.2	218.5	181.1	37.44	5.838		
7,500.0	7,115.3	7,480.5	7,113.5	35.4	31.2	106.41	-230.8	-1,231.7	240.7	200.3	40.34	5.966		
7,600.0	7,189.4	7,550.0	7,152.0	36.0	31.4	89.61	-176.9	-1,252.6	262.2	221.5	40.76	6.433		
7,700.0	7,251.1	7,616.6	7,181.4	36.4	31.6	78.88	-119.4	-1,268.6	280.7	242.0	38.67	7.260		
7,800.0	7,297.5	7,682.7	7,202.8	36.7	31.7	72.30	-58.0	-1,280.1	294.5	259.3	35.21	8.363		
7,900.0	7,326.1	7,750.0	7,216.0	36.8	31.7	68.78	7.6	-1,287.2	302.7	270.5	32.18	9.405		
8,000.0	7,335.4	7,813.2	7,220.4	36.8	31.7	67.83	70.5	-1,289.4	304.7	273.3	31.44	9.692		
8,035.1	7,335.4	7,846.6	7,220.4	36.8	31.7	67.83	103.9	-1,289.3	304.7	273.2	31.56	9.655		
8,100.0	7,335.4	7,911.5	7,220.4	36.8	31.7	67.83	168.8	-1,289.1	304.7	272.9	31.80	9.581		
8,200.0	7,335.4	8,011.5	7,220.4	36.9	31.9	67.83	268.8	-1,288.9	304.7	272.1	32.65	9.333		
8,300.0	7,335.4	8,111.5	7,220.4	37.1	32.1	67.83	368.8	-1,288.6	304.7	270.9	33.86	9.000		
8,400.0	7,335.4	8,211.5	7,220.4	37.3	32.4	67.83	468.8	-1,288.3	304.7	269.3	35.39	8.610		
8,500.0	7,335.4	8,311.5	7,220.4	37.7	32.8	67.83	568.8	-1,288.1	304.7	267.5	37.21	8.188		
8,600.0	7,335.4	8,411.5	7,220.4	38.1	33.3	67.83	668.8	-1,287.8	304.7	265.4	39.28	7.757		
8,700.0	7,335.4	8,511.5	7,220.4	38.6	34.0	67.83	768.8	-1,287.5	304.7	263.2	41.56	7.332		
8,800.0	7,335.4	8,611.5	7,220.4	39.2	34.7	67.83	868.8	-1,287.3	304.7	260.7	44.01	6.923		
8,900.0	7,335.4	8,711.5	7,220.4	39.9	35.5	67.83	968.8	-1,287.0	304.7	258.1	46.62	6.536		
9,000.0	7,335.4	8,811.5	7,220.4	40.6	36.5	67.83	1,068.8	-1,286.7	304.7	255.4	49.35	6.175		
9,100.0	7,335.4	8,911.5	7,220.4	41.5	37.5	67.83	1,168.8	-1,286.4	304.7	252.5	52.19	5.839		
9,200.0	7,335.4	9,011.5	7,220.4	42.5	38.6	67.83	1,268.8	-1,286.2	304.7	249.6	55.11	5.529		
9,300.0	7,335.4	9,111.5	7,220.4	43.5	39.8	67.83	1,368.8	-1,285.9	304.7	246.6	58.11	5.243		
9,400.0	7,335.4	9,211.5	7,220.4	44.6	41.0	67.83	1,468.8	-1,285.6	304.7	243.5	61.18	4.981		
9,500.0	7,335.4	9,311.5	7,220.4	45.7	42.3	67.83	1,568.8	-1,285.4	304.7	240.4	64.30	4.739		
9,600.0	7,335.4	9,411.5	7,220.4	47.0	43.7	67.83	1,668.8	-1,285.1	304.7	237.2	67.47	4.516		
9,700.0	7,335.4	9,511.5	7,220.4	48.2	45.1	67.83	1,768.8	-1,284.8	304.7	234.0	70.68	4.311		
9,800.0	7,335.4	9,611.5	7,220.4	49.6	46.6	67.83	1,868.8	-1,284.6	304.7	230.8	73.93	4.121		
9,900.0	7,335.4	9,711.5	7,220.4	51.0	48.1	67.83	1,968.8	-1,284.3	304.7	227.5	77.21	3.946		
10,000.0	7,335.4	9,811.5	7,220.4	52.4	49.6	67.83	2,068.8	-1,284.0	304.7	224.2	80.52	3.784		
10,100.0	7,335.4	9,911.5	7,220.4	53.8	51.1	67.83	2,168.8	-1,283.8	304.7	220.9	83.85	3.634		

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

Company:	Great Western	Local Co-ordinate Reference:	Well Raindance FD 30-024HC
Project:	SEC.30-T6N-R67W	TVD Reference:	WELL @ 5012.4ft (RKB - 16.5')
Reference Site:	Raindance West Pad Sec.30-T6N-R67W	MD Reference:	WELL @ 5012.4ft (RKB - 16.5')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Raindance FD 30-024HC	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (11-13-13)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,200.0	7,335.4	10,011.5	7,220.4	55.3	52.7	67.83	2,268.8	-1,283.5	304.7	217.5	87.20	3.494	
10,300.0	7,335.4	10,111.5	7,220.4	56.8	54.3	67.83	2,368.8	-1,283.2	304.7	214.1	90.57	3.364	
10,400.0	7,335.4	10,211.5	7,220.4	58.4	56.0	67.83	2,468.8	-1,282.9	304.7	210.7	93.96	3.243	
10,500.0	7,335.4	10,311.5	7,220.4	60.0	57.6	67.83	2,568.8	-1,282.7	304.7	207.3	97.37	3.129	
10,600.0	7,335.4	10,411.5	7,220.4	61.6	59.3	67.83	2,668.8	-1,282.4	304.7	203.9	100.78	3.023	
10,700.0	7,335.4	10,511.5	7,220.4	63.2	61.0	67.83	2,768.8	-1,282.1	304.7	200.5	104.21	2.924	
10,800.0	7,335.4	10,611.5	7,220.4	64.8	62.7	67.83	2,868.8	-1,281.9	304.7	197.0	107.66	2.830	
10,900.0	7,335.4	10,711.5	7,220.4	66.5	64.4	67.83	2,968.8	-1,281.6	304.7	193.6	111.11	2.742	
11,000.0	7,335.4	10,811.5	7,220.4	68.1	66.1	67.83	3,068.8	-1,281.3	304.7	190.1	114.57	2.660	
11,100.0	7,335.4	10,911.5	7,220.4	69.8	67.9	67.83	3,168.8	-1,281.1	304.7	186.7	118.04	2.581	
11,200.0	7,335.4	11,011.5	7,220.4	71.5	69.6	67.83	3,268.8	-1,280.8	304.7	183.2	121.52	2.507	
11,300.0	7,335.4	11,111.5	7,220.4	73.2	71.4	67.83	3,368.8	-1,280.5	304.7	179.7	125.00	2.438	
11,400.0	7,335.4	11,211.5	7,220.4	74.9	73.1	67.83	3,468.8	-1,280.2	304.7	176.2	128.49	2.371	
11,500.0	7,335.4	11,311.5	7,220.4	76.7	74.9	67.83	3,568.8	-1,280.0	304.7	172.7	131.99	2.308	
11,600.0	7,335.4	11,411.5	7,220.4	78.4	76.7	67.83	3,668.8	-1,279.7	304.7	169.2	135.49	2.249	
11,700.0	7,335.4	11,511.5	7,220.4	80.1	78.5	67.83	3,768.8	-1,279.4	304.7	165.7	139.00	2.192	
11,800.0	7,335.4	11,611.5	7,220.4	81.9	80.3	67.83	3,868.8	-1,279.2	304.7	162.2	142.51	2.138	
11,900.0	7,335.4	11,711.5	7,220.4	83.7	82.1	67.83	3,968.8	-1,278.9	304.7	158.7	146.03	2.087	
12,000.0	7,335.4	11,811.5	7,220.4	85.4	83.9	67.83	4,068.8	-1,278.6	304.7	155.1	149.55	2.037	
12,100.0	7,335.4	11,911.5	7,220.4	87.2	85.7	67.83	4,168.8	-1,278.4	304.7	151.6	153.07	1.990	
12,200.0	7,335.4	12,011.5	7,220.4	89.0	87.5	67.82	4,268.8	-1,278.1	304.7	148.1	156.60	1.946	
12,300.0	7,335.4	12,111.5	7,220.4	90.8	89.3	67.82	4,368.8	-1,277.8	304.7	144.6	160.13	1.903	
12,314.3	7,335.4	12,125.8	7,220.4	91.0	89.6	67.82	4,383.1	-1,277.8	304.7	144.1	160.64	1.897	

Company:	Great Western	Local Co-ordinate Reference:	Well Raindance FD 30-024HC
Project:	SEC.30-T6N-R67W	TVD Reference:	WELL @ 5012.4ft (RKB - 16.5')
Reference Site:	Raindance West Pad Sec.30-T6N-R67W	MD Reference:	WELL @ 5012.4ft (RKB - 16.5')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Raindance FD 30-024HC	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (11-13-13)	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 (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	88.26	1.8	60.4	60.4					
100.0	100.0	100.0	100.0	0.1	0.1	88.26	1.8	60.4	60.4	60.2	0.22	268.817		
200.0	200.0	200.0	200.0	0.3	0.3	88.26	1.8	60.4	60.4	59.7	0.67	89.606		
300.0	300.0	300.0	300.0	0.6	0.6	88.26	1.8	60.4	60.4	59.3	1.12	53.763		
400.0	400.0	400.0	400.0	0.8	0.8	88.26	1.8	60.4	60.4	58.8	1.57	38.402		
500.0	500.0	500.0	500.0	1.0	1.0	88.26	1.8	60.4	60.4	58.4	2.02	29.869		
600.0	600.0	600.0	600.0	1.2	1.2	88.26	1.8	60.4	60.4	57.9	2.47	24.438		
700.0	700.0	700.0	700.0	1.5	1.5	88.26	1.8	60.4	60.4	57.5	2.92	20.678		
800.0	800.0	800.0	800.0	1.7	1.7	88.26	1.8	60.4	60.4	57.0	3.37	17.921		
900.0	900.0	900.0	900.0	1.9	1.9	88.26	1.8	60.4	60.4	56.6	3.82	15.813		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	88.26	1.8	60.4	60.4	56.2	4.27	14.148		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	88.26	1.8	60.4	60.4	55.7	4.72	12.801		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	88.26	1.8	60.4	60.4	55.3	5.17	11.688		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	88.26	1.8	60.4	60.4	54.8	5.62	10.753		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	88.26	1.8	60.4	60.4	54.4	6.07	9.956		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	88.26	1.8	60.4	60.4	53.9	6.52	9.270		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	88.26	1.8	60.4	60.4	53.5	6.97	8.672		
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	88.26	1.8	60.4	60.4	53.0	7.42	8.146		
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	88.26	1.8	60.4	60.4	52.6	7.87	7.680		
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	88.26	1.8	60.4	60.4	52.1	8.32	7.265		
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	88.26	1.8	60.4	60.4	51.7	8.77	6.893		
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	88.26	1.8	60.4	60.4	51.2	9.22	6.557		
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	88.26	1.8	60.4	60.4	50.8	9.66	6.252		
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	88.26	1.8	60.4	60.4	50.3	10.11	5.974		
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	88.26	1.8	60.4	60.4	49.9	10.56	5.720		
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	88.26	1.8	60.4	60.4	49.4	11.01	5.486		
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	88.26	1.8	60.4	60.4	49.0	11.46	5.271		
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	88.26	1.8	60.4	60.4	48.5	11.91	5.072		
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	88.26	1.8	60.4	60.4	48.1	12.36	4.888		
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	88.26	1.8	60.4	60.4	47.6	12.81	4.716		
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	88.26	1.8	60.4	60.4	47.2	13.26	4.556		
3,100.0	3,100.0	3,100.0	3,100.0	6.9	6.9	88.26	1.8	60.4	60.4	46.7	13.71	4.407		
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	88.26	1.8	60.4	60.4	46.3	14.16	4.267		
3,300.0	3,300.0	3,300.0	3,300.0	7.3	7.3	88.26	1.8	60.4	60.4	45.8	14.61	4.136		
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	88.26	1.8	60.4	60.4	45.4	15.06	4.012		
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	88.26	1.8	60.4	60.4	44.9	15.51	3.896		
3,600.0	3,600.0	3,600.0	3,600.0	8.0	8.0	88.26	1.8	60.4	60.4	44.5	15.96	3.786		
3,700.0	3,700.0	3,700.0	3,700.0	8.2	8.2	88.26	1.8	60.4	60.4	44.0	16.41	3.682		
3,800.0	3,800.0	3,800.0	3,800.0	8.4	8.4	88.26	1.8	60.4	60.4	43.6	16.86	3.584		
3,900.0	3,900.0	3,900.0	3,900.0	8.7	8.7	88.26	1.8	60.4	60.4	43.1	17.31	3.491		
4,000.0	4,000.0	4,000.0	4,000.0	8.9	8.9	88.26	1.8	60.4	60.4	42.7	17.76	3.403 CC, ES, SF		
4,100.0	4,100.0	4,100.0	4,100.0	9.1	9.1	-166.71	1.8	60.4	63.0	44.8	18.17	3.466		
4,200.0	4,199.6	4,199.6	4,199.6	9.3	9.3	-168.13	1.8	60.4	70.6	52.1	18.52	3.814		
4,300.0	4,298.8	4,298.8	4,298.8	9.5	9.5	-169.91	1.8	60.4	83.4	64.6	18.82	4.433		
4,400.0	4,397.1	4,397.1	4,397.1	9.7	9.8	-171.63	1.8	60.4	101.4	82.4	19.08	5.316		
4,500.0	4,494.3	4,494.3	4,494.3	10.0	10.0	-173.11	1.8	60.4	124.6	105.3	19.29	6.458		
4,600.0	4,590.2	4,590.2	4,590.2	10.2	10.2	-174.30	1.8	60.4	152.8	133.4	19.45	7.856		
4,700.0	4,684.4	4,684.4	4,684.4	10.6	10.4	-175.23	1.8	60.4	186.1	166.5	19.57	9.509		
4,800.0	4,776.8	4,776.8	4,776.8	11.0	10.6	-175.96	1.8	60.4	224.2	204.6	19.64	11.419		
4,900.0	4,867.1	4,867.1	4,867.1	11.5	10.8	-176.52	1.8	60.4	267.2	247.6	19.67	13.588		
5,000.0	4,954.9	4,954.9	4,954.9	12.1	11.0	-176.96	1.8	60.4	314.9	295.2	19.65	16.022		
5,100.0	5,041.5	5,041.5	5,041.5	12.7	11.2	-177.38	1.8	60.4	364.9	344.8	20.06	18.187		

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

Company:	Great Western	Local Co-ordinate Reference:	Well Raindance FD 30-024HC
Project:	SEC.30-T6N-R67W	TVD Reference:	WELL @ 5012.4ft (RKB - 16.5')
Reference Site:	Raindance West Pad Sec.30-T6N-R67W	MD Reference:	WELL @ 5012.4ft (RKB - 16.5')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Raindance FD 30-024HC	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (11-13-13)	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 (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	
5,200.0	5,128.1	5,135.3	5,135.3	13.5	11.4	-177.70	1.7	60.1	414.7	394.2	20.50	20.227	
5,300.0	5,214.6	5,248.9	5,248.7	14.2	11.6	-177.78	-1.2	55.5	460.7	439.8	20.96	21.978	
5,400.0	5,301.2	5,368.9	5,368.0	15.1	11.9	-177.56	-8.1	44.3	501.5	480.1	21.44	23.395	
5,500.0	5,387.7	5,495.0	5,492.2	15.9	12.1	-177.09	-19.6	25.8	536.7	514.8	21.94	24.458	
5,600.0	5,474.3	5,626.5	5,619.8	16.8	12.4	-176.38	-36.1	-0.9	565.8	543.4	22.49	25.165	
5,700.0	5,560.9	5,762.4	5,749.2	17.7	12.8	-175.42	-58.0	-36.3	588.7	565.6	23.07	25.515	
5,800.0	5,647.4	5,901.4	5,878.1	18.7	13.3	-174.20	-85.3	-80.5	605.0	581.3	23.72	25.510	
5,900.0	5,734.0	6,042.3	6,004.5	19.6	13.9	-172.71	-118.0	-133.3	614.7	590.2	24.45	25.144	
6,000.0	5,820.5	6,160.7	6,107.4	20.6	14.5	-171.24	-148.9	-183.2	618.8	593.6	25.20	24.557	
6,100.0	5,907.1	6,259.7	6,193.0	21.6	15.1	-170.00	-175.1	-225.6	622.6	596.6	25.96	23.985	
6,200.0	5,993.7	6,358.7	6,278.5	22.6	15.8	-168.77	-201.3	-267.9	626.6	599.8	26.78	23.399	
6,300.0	6,080.2	6,457.7	6,364.1	23.6	16.5	-167.56	-227.5	-310.3	630.9	603.2	27.67	22.804	
6,400.0	6,166.8	6,556.7	6,449.6	24.6	17.2	-166.36	-253.7	-352.7	635.5	606.9	28.62	22.202	
6,500.0	6,253.3	6,655.7	6,535.2	25.6	18.0	-165.18	-279.9	-395.0	640.4	610.7	29.65	21.597	
6,600.0	6,339.9	6,754.7	6,620.7	26.6	18.8	-164.02	-306.1	-437.4	645.5	614.8	30.75	20.994	
6,700.0	6,426.5	6,853.7	6,706.3	27.7	19.6	-162.88	-332.3	-479.8	650.9	619.0	31.91	20.397	
6,800.0	6,513.0	6,961.5	6,801.1	28.7	20.4	-162.49	-351.6	-526.7	656.0	623.1	32.90	19.939	
6,900.0	6,599.6	7,066.8	6,895.1	29.8	21.0	-164.27	-345.3	-573.2	660.0	626.9	33.12	19.926	
7,000.0	6,686.1	7,158.1	6,973.6	30.8	21.4	-167.48	-319.9	-611.9	664.9	632.0	32.83	20.253	
7,100.0	6,772.7	7,232.1	7,032.7	31.9	21.7	-171.07	-286.5	-641.0	673.9	641.4	32.50	20.737	
7,200.0	6,859.3	7,290.1	7,075.0	32.9	21.8	-174.41	-252.8	-661.9	689.9	657.5	32.40	21.297	
7,300.0	6,946.1	7,337.2	7,106.3	33.9	21.9	168.27	-221.1	-677.2	714.1	681.4	32.67	21.859	
7,400.0	7,032.8	7,383.8	7,134.0	34.7	22.0	139.99	-186.3	-690.8	742.2	708.4	33.82	21.946	
7,500.0	7,115.3	7,431.0	7,158.6	35.4	22.1	117.89	-147.9	-702.9	770.7	735.5	35.25	21.868	
7,600.0	7,189.4	7,475.0	7,178.1	36.0	22.1	102.78	-109.6	-712.4	797.1	761.0	36.05	22.113	
7,700.0	7,251.1	7,525.0	7,196.0	36.4	22.2	92.71	-63.7	-721.1	819.1	783.1	35.96	22.777	
7,800.0	7,297.5	7,575.0	7,209.1	36.7	22.2	86.42	-15.9	-727.5	835.3	800.1	35.21	23.721	
7,900.0	7,326.1	7,625.0	7,217.2	36.8	22.2	83.06	33.2	-731.4	844.7	810.2	34.52	24.471	
8,000.0	7,335.4	7,675.0	7,220.4	36.8	22.2	82.19	83.1	-732.8	846.8	812.2	34.60	24.473	
8,040.7	7,335.4	7,700.0	7,220.4	36.8	22.3	82.19	108.1	-732.7	846.6	811.8	34.77	24.350	
8,100.0	7,335.4	7,759.3	7,220.4	36.8	22.3	82.19	167.3	-732.6	846.6	811.4	35.18	24.065	
8,200.0	7,335.4	7,859.3	7,220.4	36.9	22.6	82.19	267.3	-732.3	846.6	810.4	36.18	23.398	
8,300.0	7,335.4	7,959.3	7,220.4	37.1	23.0	82.19	367.3	-732.0	846.6	809.1	37.55	22.548	
8,400.0	7,335.4	8,059.3	7,220.4	37.3	23.6	82.19	467.3	-731.8	846.6	807.4	39.24	21.577	
8,500.0	7,335.4	8,159.3	7,220.4	37.7	24.4	82.19	567.3	-731.5	846.6	805.4	41.21	20.544	
8,600.0	7,335.4	8,259.3	7,220.4	38.1	25.3	82.19	667.3	-731.2	846.6	803.2	43.43	19.494	
8,700.0	7,335.4	8,359.3	7,220.4	38.6	26.4	82.19	767.3	-731.0	846.6	800.7	45.86	18.462	
8,800.0	7,335.4	8,459.3	7,220.4	39.2	27.5	82.19	867.3	-730.7	846.6	798.1	48.46	17.468	
8,900.0	7,335.4	8,559.3	7,220.4	39.9	28.8	82.19	967.3	-730.4	846.6	795.4	51.22	16.528	
9,000.0	7,335.4	8,659.3	7,220.4	40.6	30.1	82.19	1,067.3	-730.2	846.6	792.5	54.11	15.646	
9,100.0	7,335.4	8,759.3	7,220.4	41.5	31.5	82.19	1,167.3	-729.9	846.6	789.5	57.10	14.825	
9,200.0	7,335.4	8,859.3	7,220.4	42.5	32.9	82.19	1,267.3	-729.6	846.6	786.4	60.19	14.065	
9,300.0	7,335.4	8,959.3	7,220.4	43.5	34.4	82.19	1,367.3	-729.4	846.6	783.2	63.36	13.362	
9,400.0	7,335.4	9,059.3	7,220.4	44.6	36.0	82.19	1,467.3	-729.1	846.6	780.0	66.59	12.713	
9,500.0	7,335.4	9,159.3	7,220.4	45.7	37.5	82.19	1,567.3	-728.8	846.6	776.7	69.89	12.114	
9,600.0	7,335.4	9,259.3	7,220.4	47.0	39.1	82.19	1,667.3	-728.6	846.6	773.3	73.23	11.561	
9,700.0	7,335.4	9,359.3	7,220.4	48.2	40.8	82.19	1,767.3	-728.3	846.6	770.0	76.62	11.050	
9,800.0	7,335.4	9,459.3	7,220.4	49.6	42.4	82.19	1,867.3	-728.0	846.6	766.5	80.04	10.577	
9,900.0	7,335.4	9,559.3	7,220.4	51.0	44.1	82.19	1,967.3	-727.7	846.6	763.1	83.50	10.139	
10,000.0	7,335.4	9,659.3	7,220.4	52.4	45.8	82.19	2,067.3	-727.5	846.6	759.6	86.99	9.732	
10,100.0	7,335.4	9,759.3	7,220.4	53.8	47.5	82.19	2,167.3	-727.2	846.6	756.1	90.50	9.354	
10,200.0	7,335.4	9,859.3	7,220.4	55.3	49.3	82.19	2,267.3	-726.9	846.6	752.5	94.04	9.002	

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

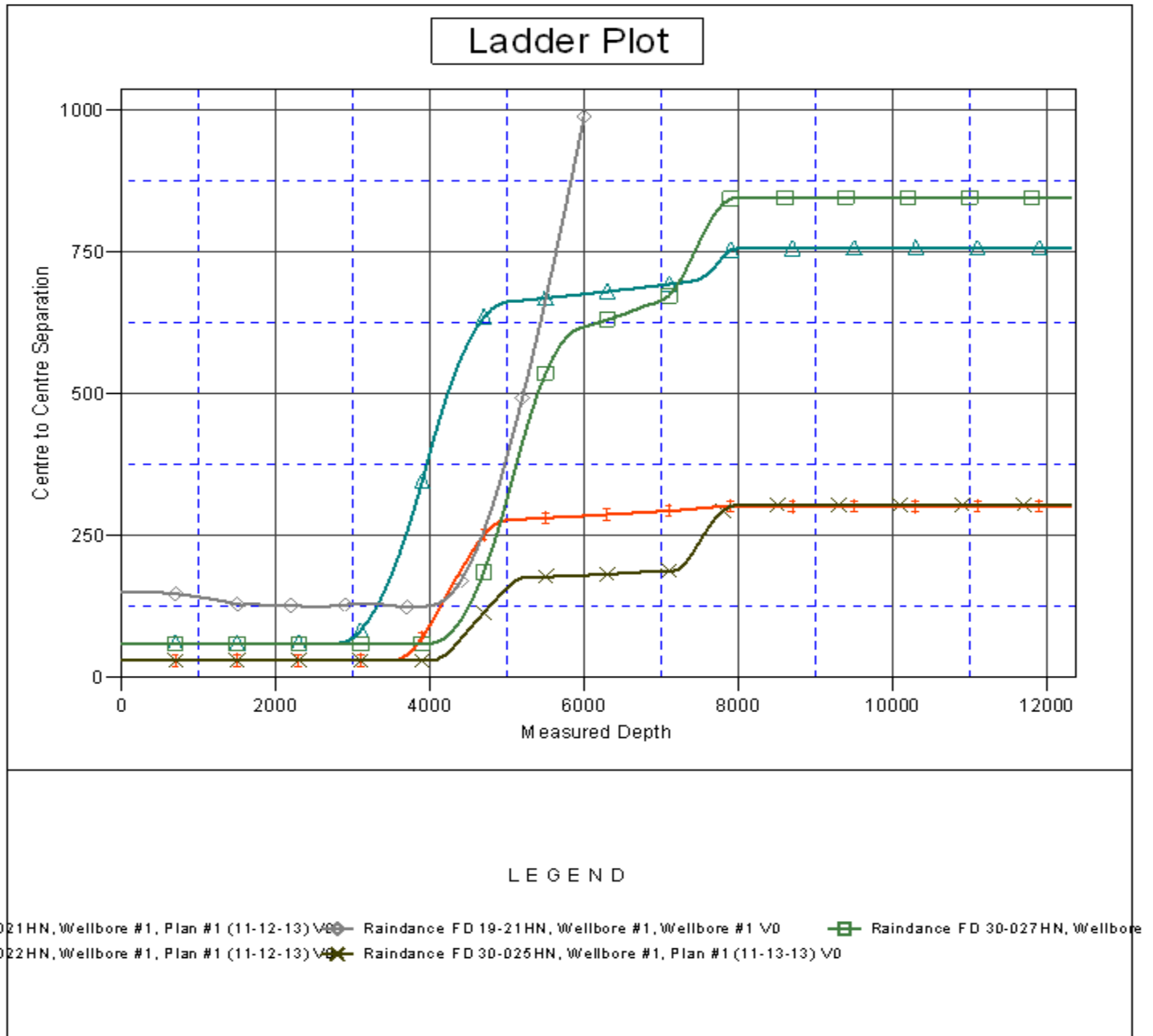
Company:	Great Western	Local Co-ordinate Reference:	Well Raindance FD 30-024HC
Project:	SEC.30-T6N-R67W	TVD Reference:	WELL @ 5012.4ft (RKB - 16.5')
Reference Site:	Raindance West Pad Sec.30-T6N-R67W	MD Reference:	WELL @ 5012.4ft (RKB - 16.5')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Raindance FD 30-024HC	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (11-13-13)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,300.0	7,335.4	9,959.3	7,220.4	56.8	51.0	82.19	2,367.3	-726.7	846.6	749.0	97.60	8.674	
10,400.0	7,335.4	10,059.3	7,220.4	58.4	52.8	82.19	2,467.3	-726.4	846.5	745.4	101.18	8.367	
10,500.0	7,335.4	10,159.3	7,220.4	60.0	54.5	82.19	2,567.3	-726.1	846.5	741.8	104.77	8.080	
10,600.0	7,335.4	10,259.3	7,220.4	61.6	56.3	82.19	2,667.3	-725.9	846.5	738.2	108.38	7.811	
10,700.0	7,335.4	10,359.3	7,220.4	63.2	58.1	82.19	2,767.3	-725.6	846.5	734.5	112.00	7.558	
10,800.0	7,335.4	10,459.3	7,220.4	64.8	59.9	82.19	2,867.3	-725.3	846.5	730.9	115.63	7.321	
10,900.0	7,335.4	10,559.3	7,220.4	66.5	61.7	82.19	2,967.3	-725.1	846.5	727.3	119.28	7.097	
11,000.0	7,335.4	10,659.3	7,220.4	68.1	63.5	82.19	3,067.3	-724.8	846.5	723.6	122.94	6.886	
11,100.0	7,335.4	10,759.3	7,220.4	69.8	65.3	82.19	3,167.3	-724.5	846.5	719.9	126.60	6.687	
11,200.0	7,335.4	10,859.3	7,220.4	71.5	67.1	82.19	3,267.3	-724.3	846.5	716.3	130.27	6.498	
11,300.0	7,335.4	10,959.3	7,220.4	73.2	69.0	82.19	3,367.3	-724.0	846.5	712.6	133.96	6.319	
11,400.0	7,335.4	11,059.3	7,220.4	74.9	70.8	82.19	3,467.3	-723.7	846.5	708.9	137.64	6.150	
11,500.0	7,335.4	11,159.3	7,220.4	76.7	72.6	82.19	3,567.3	-723.5	846.5	705.2	141.34	5.989	
11,600.0	7,335.4	11,259.3	7,220.4	78.4	74.5	82.19	3,667.3	-723.2	846.5	701.5	145.04	5.836	
11,700.0	7,335.4	11,359.3	7,220.4	80.1	76.3	82.19	3,767.3	-722.9	846.5	697.8	148.75	5.691	
11,800.0	7,335.4	11,459.3	7,220.4	81.9	78.2	82.19	3,867.3	-722.7	846.5	694.1	152.46	5.552	
11,900.0	7,335.4	11,559.3	7,220.4	83.7	80.0	82.19	3,967.3	-722.4	846.5	690.3	156.17	5.420	
12,000.0	7,335.4	11,659.3	7,220.4	85.4	81.9	82.19	4,067.3	-722.1	846.5	686.6	159.90	5.294	
12,100.0	7,335.4	11,759.3	7,220.4	87.2	83.7	82.19	4,167.3	-721.8	846.5	682.9	163.62	5.174	
12,200.0	7,335.4	11,859.3	7,220.4	89.0	85.6	82.19	4,267.3	-721.6	846.5	679.2	167.35	5.058	
12,300.0	7,335.4	11,959.3	7,220.4	90.8	87.5	82.19	4,367.3	-721.3	846.5	675.4	171.08	4.948	
12,314.3	7,335.4	11,973.6	7,220.4	91.0	87.7	82.19	4,381.6	-721.3	846.5	674.9	171.62	4.932	

Company:	Great Western	Local Co-ordinate Reference:	Well Raindance FD 30-024HC
Project:	SEC.30-T6N-R67W	TVD Reference:	WELL @ 5012.4ft (RKB - 16.5')
Reference Site:	Raindance West Pad Sec.30-T6N-R67W	MD Reference:	WELL @ 5012.4ft (RKB - 16.5')
Site Error:	0.0ft	North Reference:	True
Reference Well:	Raindance FD 30-024HC	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (11-13-13)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 5012.4ft (RKB - 16.5')
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000 °

Coordinates are relative to: Raindance FD 30-024HC
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.36°



Company: Great Western
Project: SEC.30-T6N-R67W
Reference Site: Raindance West Pad Sec.30-T6N-R67W
Site Error: 0.0ft
Reference Well: Raindance FD 30-024HC
Well Error: 0.0ft
Reference Wellbore: Wellbore #1
Reference Design: Plan #1 (11-13-13)

Local Co-ordinate Reference: Well Raindance FD 30-024HC
TVD Reference: WELL @ 5012.4ft (RKB - 16.5')
MD Reference: WELL @ 5012.4ft (RKB - 16.5')
North Reference: True
Survey Calculation Method: Minimum Curvature
Output errors are at 2.00 sigma
Database: Landmark
Offset TVD Reference: Offset Datum

Reference Depths are relative to WELL @ 5012.4ft (RKB - 16.5')
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Raindance FD 30-024HC
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.36°

